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THE MODEL OF INNOVATIVE DEVELOPMENT OF RUSSIAN INDUSTRIAL ENTERPRISES IN THE CONDITIONS OF RESOURCE CONSTRAINTS

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Abstract. The special feature of the current stage of the world economy's development is to increase the role of industry in the economic structure. Industry in Russia is going through a difficult period in its development. This is due to the negative impact of the whole range of macroeconomic factors on the economy. On the one hand, there is a deterioration of the state of affairs, and on the other hand, there are new opportunities for expansion. The scientifically based challenge is to define adequate and effective model of development of Russian Industry. The existing development opportunities are underutilized. The main problem is the low competitiveness of Russian goods and services and ineffective mechanisms for promoting. This is due to the presence of resource constraints in companies and a low level of innovation activity. We believe that improving the competitiveness of modern companies is directly related to their effective innovation. Objective. To develop a model of innovative development of industrial enterprises in the conditions of resource constraints. Methodology of research. It is proposed to use the following to construct the model of innovative development in the conditions of resource constraints: state regulation of the economy and entrepreneurship theory; cluster methodology and others. Using a set of theories and models allows us to construct a model of innovative development of industrial enterprises in the conditions of resource constraints with a high degree of objectivity. This model is unique in terms of methodology and can be universally applied.

Keywords: innovative development, industry, competitiveness, theory of modelling

JEL Classification: O3, O4

1. Introduction

Globalization is an objective trend in the economy's development, and the today's globalization environment is characterized by the change of its forms and consequences. It especially refers to industry, which is the basis of national and world economy (Veza et al., 2016). On the one hand, industrial product markets are expanding and losing their national or local features, and on the other hand, the terms and conditions for doing business and the competitive environment are changing. This is not always beneficial for the state of affairs and development prospects of Russian industrial enterprises. The existing development opportunities are not fully used. The main problem is low competitiveness of goods and services as well as Russian enterprises on the whole. The main reasons for that are resource constraints at enterprises and their low innovative activities. In our opinion, improvement of competitiveness of modern companies is directly connected with efficient innovative activities and employment of modern integration forms, which allows to overcome resource constraints to a certain extent.

In case of integration processes, providing conditions for business development on a certain territory according to investment attractiveness is becoming important. This requires constructing a model of development of industrial enterprises, adequate to the listed special features of globalization.

The existing theories and models of development of enterprises are as a rule focused on too wide-range or, on the contrary, local goals and operate within the system of certain constraints. This complicates the use of these models in the contemporary environment of highly volatile global economy and resource constraints.

The challenge to construct a model of development of industrial enterprises requires actualization. The basis of research is the hypothesis that competitiveness of national economies and global companies is closely connected with their innovative activities. Special attention is paid to the model of innovative development of industrial enterprises in the globalization environment.

The objective of the research is formation of a conceptual model of innovative development of industrial enterprises, adequate to the today's globalization environment, in the conditions of resource constraints.

2. Methods

The models of territorial development helping to create and efficiently use resources, innovative activities, formation of competitive advantages by integration of enterprises from various sectors of economy of certain countries, circulate more and more in world economy. Application of the internationalizing environment concept, introduced to determine factors, connecting dynamics of local entrepreneurship network and dynamics of world economy, seems relevant and important (Blandenier, 2005).

This environment should have an effective infrastructure, providing high-quality living conditions. The density of enterprises certified in accordance with ISO standards is a quantitative and qualitative indicator of the internationalizing character of this or that environment (Antipov & Gordeeva, 2017).

It is expedient to work out an economic development strategy, the basis of which is structurally balanced development of economy with optimum cooperation of all sectors of real economy, first of all, mineral and raw materials, and processing industries. We are speaking about formation of an integrated resource-processing model (Kimelman, 2012). It is appropriate to use M. Porter's cluster development theory here (Sroka & Cygler, 2014).

The theories of industrial development are inalienable in constructing a model; they are various and include the theory of cyclic development, scientific and technical development, knowledge economy, clusters, industrial organization, state regulation, etc. This is researched in more detail in the paper by E.N. Vetrova and L.V. Lapochkina (Vetrova & Lapochkina, 2016). We think it is expedient to use entrepreneurship, technological, strategic and institutional theories, the cluster model and the theory of industrial organization as a part of this research.

The entrepreneurship theory (Schumpeter, 2007) is based on the idea of a company as an area to apply enterprising initiative and resources that an entrepreneur has at his disposal or available for attraction, when new ideas are initiated in the conditions of their constraint, which determines the potential for development.

In case of the technological theory (A. Smith, A. Marshall, J. Hicks, J. Robins, E. Chamberlin, etc.), the organization is looked upon as a structure optimizing costs in case of the given output, which is provided by special features of production (Furman et al., 2002).

The subject-matter of research in case of the strategic theory (H. Mintzberg, K. Andrews, I. Ansoff, D. Quinn, M. Porter, etc.) is transfer of a company from one state into another, with the attention focused not on technological special features of the company but the process of taking decisions, its rational and analytical, motivational and cognitive characteristics.

According to the institutional theory, an organization is an economic unit of coordination with limits that can be defined and functioning more or less continuously to achieve goals or a complex of goals common for participants in the conditions of resource constraints (Robbins, 2012; Pogodaeva et al., 2017).

It seems appropriate to use the theory of industrial organization, which is best described in the paper by J. Tirole (Tirole, 1996), where three most important challenges and focal areas are examined: the theory of the company, its scales, kinds of activities, organization and behavior; the theory of competition in terms of the company’s acquiring market power, form of manifestation, factors of keeping and losing power, pricing and non-pricing rivalry; and the theory of relations of business and authorities, i.e. industrial policy.

The use of the listed theories in aggregate allows to form an objective conceptual model of development of industrial enterprises (Capello & Lenzi, 2013; Wang et al., 2016).

3. Results

The basis of this research is the hypothesis that competitiveness of national economy is directly connected with efficiency of its industry and the level of innovative activities. Let us examine the indices of global competitiveness and innovative activities to prove that (Tab. 1). The 2016-2017 Global Competitiveness Index (GCI) is headed by Switzerland for the eighth year in a row. Russia gained two lines in the ranking – moving up from the 45th to the 43rd place. The strong points of Russian economy are big numbers of people with higher education, development of infrastructure, improvement of business regulation indicators. However, low efficiency of state institutions, insufficient innovative potential, poorly developed financial market and deficit of investors’ trust to the financial system prevent Russia from using its competitive advantages.

The following was added to the said negative factors in the two recent years: decrease in domestic demand, economic sanctions imposed by North America and Western Europe as well as external uncertainly about the future prices for mineral resources. Representatives of business name corruption, inefficiency of the state machine, high tax rates as the key problems for economic development in Russia. These factors assist ineffective distribution of the country’s resources and prevent increase of competitiveness.

Table 1: Global competitiveness and innovative activities ranking

Country	Global Competitiveness Index (GCI)			Global Innovation Index(GII)		Bloomberg Innovation Index (BII)	
	2014-2015	2015-2016	2016-2017	2016	2017	2016	2017
Switzerland	1	1	1	1	1	5	4
Singapore	2	2	2	6	7	6	6
USA	3	3	3	4	4	8	9
Finland	4	8	10	5	8	7	5
Germany	5	4	5	10	9	2	3
Japan	6	6	8	16	14	4	7
Hong Kong	7	7	9	14	16	37	35
Netherlands	8	5	4	9	3	18	15
UK	9	10	7	3	5	17	17
Sweden	10	9	6	2	2	3	2
Norway	11	11	11	22	19	14	14
Denmark	13	12	12	8	6	9	8
Canada	15	13	15	15	18	19	20
Russian Federation	53	45	43	45	43	12	26

Source: self proceesed according to www.weforum.org , www.globalinnovationindex.org, www.bloomberg.com

Russia's ranking changed from the 45th to the 43rd, if you take GII. In 2017, Russia went down 14 lines in BII. The most changes took place in two characteristics: efficiency and share of processing industry in the overall output of products in this country. The crisis made nearly all sectors of Russian economy increase their efficiency, but that did not eliminate disproportions on the labor market. Slowing down economic growth rates and the following crisis made the overwhelming majority of sectors of the Russian economy more efficient. However, not everyone managed with the task (Tab. 2).

All that certifies unequal dynamics of Russian economy. That is confirmed by the World Bank data. The average annual growth rate of Russian GDP amounted to 4.8% from 2000 to 2010, and in case of world economy to 2.8% on the average per year. In the beginning of the 2010s, positive dynamics of Russian GDP started slowing down after the boost of the 2000s. In 2011–2016, the average growth of Russian GDP amounted to 0.6%, world GDP growth amounted to 2.6%. Russian economy had to adjust – especially after sanctions were imposed and oil prices went down. Most sectors managed to do that: the growth of their output or turnover adequately reflected on the number of people employed.

The research shows unimportant positive changes in industry thanks to active transformations, such as change of the state's participation in enterprises' activities (transformation into joint-stock companies, setting up state corporations, state, regional and targeted development programs, import substitution policy, etc.); integration of enterprises in both separate sectors and connected along the process chain; diversification of companies' activities based on technological and market changes; stimulation of innovative activities and development of small and middle-sized business in industry, etc.. Positive changes affected origination of two Russian companies – "Magnit" and "Nornickel", ranked 53rd and 63rd respectively among the top one hundred most innovative companies in the world, ranked annually. However, the carried-out changes are insufficiently effective.

Table 2: Efficiency of sectors in 2011-2016

Sectors	Gain in production, %	Change of the number of employees, %	Efficiency ratio
Public catering	+4.5	+1.1	+1.0
Processing enterprises	+2.1	-9.5	+1.1
Agriculture	+12.1	-20.2	+1.4
Retail trade	-2.6	+11.4	+0.9
Construction	-8.6	-11.9	+1.0
Mining	+5.1	+2.9	+1.0
Production of electric power, gas and water	-1.4	-5.4	+1.0

Source: self proceesed according to http://gtmarket.ru/, https://www.bloomberg.com/, http://www.rbc.ru/

The reasons are unstable macro-economic surroundings; deterioration of the conditions for doing business in Russia; immaturity of the domestic consumer market, lack of finally formed technical regulation system, requirements for industrial and environmental safety; high wear and tear of capital assets in the industrial sector of the economy and as a consequence technological and product backwardness; staffing problems at industrial enterprises; low innovative activities of most industrial enterprises; insufficient experience in commercialization of R&D results.

Consequently, the state's efforts are insufficient. Formation of a new development model based on innovative activities is required at the industrial enterprise level, as well as new organizational and economic mechanisms capable to increase efficiency of the carried-out transformations. We think that industrial enterprises require new strategies to activate innovative development in the conditions of resource constraints, in particular diversified integration strategies in the form of:

- consolidation of industrial enterprises for implementation of large-scale projects (consortium) permits to increase investment attractiveness of projects and attract required resources;
- consolidation of industrial enterprises in scientific activities to activate research and development (concern) will permit to improve innovative activities;
- consolidation of enterprises for joint use of production and social infrastructure, natural resources, setting up / development of joint production (industrial hub) will permit to increase output and efficiency;
- consolidation of enterprises from mining and processing industries (industrial complex) will permit to develop processing activities, consequently increase added value and GDP as a consequence.

Implementation of such strategies will lead to increase of innovative activities and consequently raise in global ranking. This in its turn will help increase investment attractiveness of the Russian Federation.

The key factors for development of industrial enterprises are development prospects for home and foreign market; interrelation of technological processes at industrial enterprises in allied sectors; interrelation of market and industrial infrastructure; possibilities to combine intellectual and strategic potential of enterprises for joint R&D and implementation of projects. The revealed factors are arranged according to the micro- and macro-levels (Tab. 3).

Table 3: Factors determining the state of affairs and development of industrial enterprises in the conditions of resource constraints

Factors	**Characteristic**	**Consequences**
Macroeconomic		
Globalization	Integration of enterprises	Market concentration, weakening competition
	Integration of sectors	Strengthening technological and market position
State regulation	Working out development strategy and programs, development of PPP	Intensification of development
Market situation	Development of mutual consumption	Development of home market
Technological development	Implementation of joint R&D and projects	Consolidation of material and technical, and intellectual capitals
Microeconomic		
Wear and tear of capital assets	More than 50%	Downward trend
Problems with personnel	Low wages, decrease of the number of employees	Significant role of trade unions
Technological activities	Growth factor	Upward trend
Innovative activities	Growth factor	Upward trend
Investment activities	Growth factor	Upward trend

Source: self proceesed according to (Perez, 2000), (Perez, 2010), (Perez, 2013), (Rodrik, 2009), Zhironkin et al., 2016), (Barysheva, 2017)

Providing certain conditions is required to implement the said strategies, and they can be provided as a part of the cluster model of industrial development, diversified integration at industrial enterprises, public-private partnership (PPP) on condition of granting tax privileges legislatively, guarantees for business and further advancement of legislation.

4. Conclusion

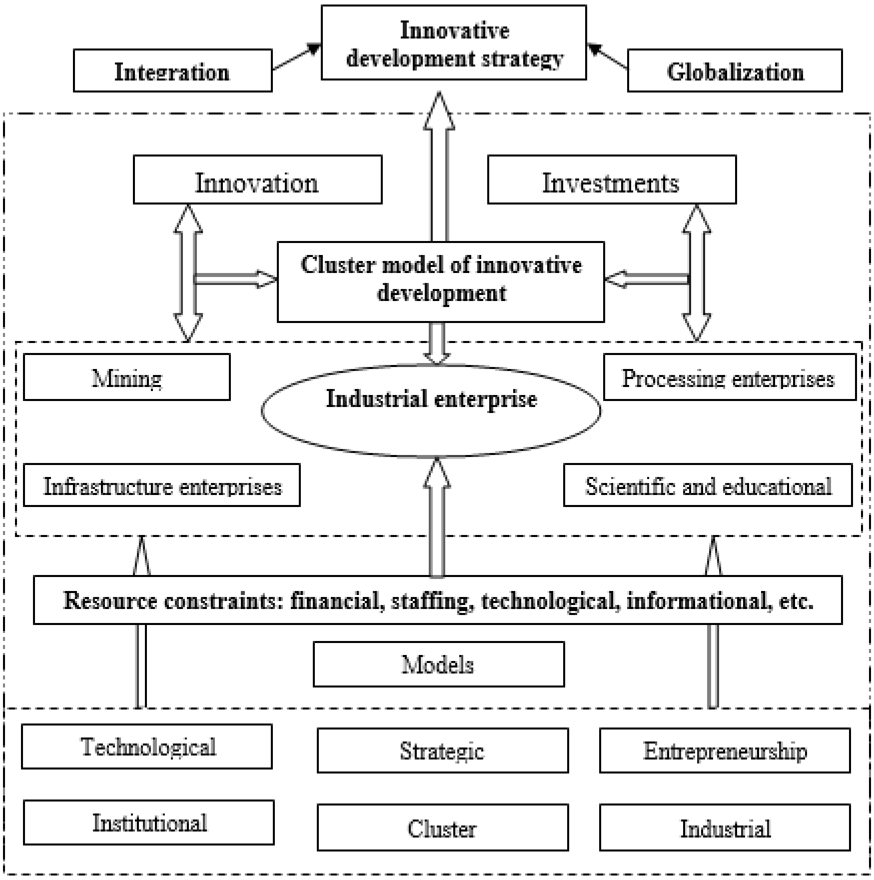
It is expedient to use entrepreneurship, technological, strategic and institutional theories, the cluster model and the theory of industrial organization when constructing the conceptual model of innovative development of industrial enterprises in the conditions of resource constraints (Fig. 1).

Each theory contributes to the model in its own way:

- the entrepreneurship theory permits to substantiate the necessity of innovative activities' increase;
- the technological theory determines the priorities when selecting the directions of innovative development;
- the strategic theory permits to choose the innovative development strategy;
- the cluster model supposes use of certain mechanisms to construct business processes between participants;
- the institutional theory permits to define the necessary institutions to implement the chosen development strategies, in particular, public-private partnership;

- use of the theory of industry helps effective implementation of the innovative development strategy at the enterprise.

Figure 1: The model of innovative development of industrial enterprises in the conditions of resource constraints



Source: self proceesed

If the PPP effect and the synergetic effect of integration of various models are combined, it is possible to get a considerably effective model in terms of budget efficiency's improvement; increase of investment attractiveness of enterprises; improvement of competitiveness of individual enterprises and sectors of Russian industry as a whole.

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THE URBAN ENVIRONMENT AS A RESOURCE TO INCREASE THE QUALITY OF LIFE IN THE CONTEXT OF GLOBALIZATION

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Abstract. The peculiarities of sociocultural development of society in the third Millennium can be attributed to the globalization of the economy, politics and culture that is reflected in the social settings of urban life. The attractiveness of cities is determined by the absolute advantages of urban life, which increases the pace of socio-cultural development of modern society, but urban life brings its own contradictions. The relevance of the study of quality of life is determined by changes in the sociocultural situation with its new understanding of the value of life. The conceptual task of spatial creativity in the context of globalization is to create a set of conditions that allows a person to live and feel comfortable. In terms of socio-cultural transformations of the modern world, it is legitimate to talk about the environment of life of the citizen, and about a qualitative change in the urban environment in which architectural objects are socially important markers, allowing to design the world of human life. The article describes the genesis of the concept of "quality of life" analyzed the essential characteristics of "quality of life", proposed approaches to the measurement of "quality of life". The main directions of transformation of the urban environment that contribute to improving the "quality of life" of the urban dweller.

Keywords: living standards measuring, urban environment, the quality of life in the city

JEL Classification: I31, F63, F64

1. Introduction

Urbanization is a dominant trend in the development of society in the late twentieth century and is accompanied not only by urban population growth, but the increase of urban areas. The paradigm of urban industrial stage of development was focused on creating conditions for economic growth by increasing and developing the production of goods. The postindustrial phase is aimed at getting the economic effect of the development of services knowledge of the modern territorial development in addition to material resources is largely based on intangible resources, including the quality of the urban environment, which is regarded as one of the conditions of innovative development of the economy.

The main resource of development of innovative economy are the most educated, skilled and creative personnel, who become the object of competitive struggle of modern cities, the accumulation of financial and innovative technologies. The quality and comfort of the urban environment act as one of the most important factors in ensuring the competitiveness of municipalities, regions and the country as a whole. Globalization creates conditions for competition, when migration is directed there, where to create more humane living conditions, forming the outflow or inflow of more mobile and active population.

Quality of life already largely determines the investment attractiveness of town, district, other than investment conditions, as it is increasingly clear that the comfort of the city, the district will concentrate most of the active population.

Philosophical encyclopedic dictionary defines quality of life as a sociological category expressing quality to meet the material and cultural needs of the people (quality of food, quality and trendy clothes, the comfort of home, quality of health, education, the service sector, the environment, the structure of leisure, the degree of satisfaction of needs in a meaningful communication, knowledge, creativity, labor, level of stress, patterns of settlement, etc.).

Additionally, the quality of life in the city has a direct impact on the improvement of the demographic situation. In unsafe, uncomfortable cities with bad air, lack of landscaping, lack of efficient educational institutions, kindergartens, centers of leisure for children, a family with two or more children will never become the norm, despite the most generous benefits from the state. Poor conditions for raising children, lack of comfortable living for families with children leads to very high expenses, which any state payments do not compensate for the costs.

One of the most important social functions of the city as an organized social space is the role of social shock absorber, which eliminates the rigid dependence of the quality of life of people from their income level. Comfortable urban environment, which is created by the introduction of innovative technological, managerial, social and urban planning decisions can greatly mitigate income inequality of the citizens. The urban environment reinforces or reduces existing social and economic contradictions due to the availability and quality of public spaces. In addition, the quality of the urban environment largely determines the attitude of the population towards state and municipal institutions.

Currently, scientists of different scientific areas, discussing the creation of the human environment, considering the urban environment as a way of harmonization of the individual in the urban world and the establishment of a qualitatively new living environment.

2. The genesis of scientific ideas about quality of life

The problem of creating more favorable conditions for human life were the centre of attention of representatives from different areas of science. To the XX century, philosophers, economists, sociologists, thinking about some of the population, operated with concepts: well-being, happiness, satisfaction. With the development of different areas of science have developed different concepts to create the most favorable conditions of life of society in the writings of representatives of foreign and domestic of the schools J. Galbraith, W. Rostow, D. Bell, J. Fourastie, E. Eppler, M. Gerson, H. Spingle, R. Inglehart, A. Maslow, S. Johansson, N. V. S. Soloviev, A. Berdyaev, I. V. Bestuzhev-Lada, etc. (Quint & Okrepilov, 2014; Kozyrev, 2015; Il'in & Morev, 2016).

Initially, the theory of the quality of life originated within the framework of economic thought and had basically value characteristics. English scholar Jeremy Bentham proposed a scale of "calculus of pleasure". J. Bentham highlighted the notion of the good as happiness of the individual, divided into four components: intellectual, social, moral, altruistic and tried to calculate the level of happiness of a person, highlighting parameters such as intensity, duration, and so on. In his works, Jeremy Bentham maximizing the happiness of the people in all directions are called goal States (Bentham, 1998).

In the early twentieth century, Arthur Cecil Pigou, the representative of the English school, for the first time introduces the term "quality of life", highlighting the indicators that determine the quality of life: the nature, working conditions, housing, пeneral order, relationships between people, among which specifies the environment (Pigu, 1985).

In the development of the problems of quality of life can be divided into four stages. For the first phase (late 50's – mid 60-ies of XX century) the main indicators of quality of life was material performance, and personality was viewed as a source of economic growth. In the second phase (mid 60's-early 70-ies of XX century) emphasis on intangible indicators and social conditions of human life. At the next stage (70s -90s of the last century) any in-depth study of the subject characteristics of the interaction of man and society. For the fourth stage of the developing currently relevant are intangible indicators characterizing the level of social programs, projects, and conditions of life (Thompson et al., 2012; Pershina et al., 2015; Maznitsa et al., 2016; Pershina et al., 2016).

The term "quality of life" does not have any regulation established definitions and is highly uncertain, depending on the facility and the research approach (Turok, 2004; Lenkovets & Kirsanova, 2014).

The polysemy of the concept of "quality of life" associated with various research approaches and points of view of researchers studying this category with various aspects: philosophical, economic, sociological, psychological, medical, ecological, geographical, town-planning (Budd & Hirmis, 2004).

3. System indexing "quality of life"

Measurement and indexing of quality of life important component of the social monitoring and allows to assess the condition and nature of the development of social processes in any country, in both analytical and prognostic aspects.

Common methodology for assessing the quality of life does not exist. The assessment of quality of life is difficult not only because of the multidimensionality of this concept. To date, to assess quality of life used a variety of methods for the measurement and aggregation. Each of them has its advantages and disadvantages, but none is generally accepted. Existing techniques vary greatly in quantity and composition of indicators and represent a set of objective and subjective parameters that characterize the maximum number of sides of human life. Scientists have offered various systems of indicators and parameters depending on the purpose of the study (the number of indicators varies from three to several dozen, and in the composition include indicators of economic, social, and physiological dimensions of quality of life).

American sociologist and publicist, creator of the theory of postindustrial (information) society Daniel Bell, developed a system of assessing the quality of life "social accounts system" and identified such indicators of the quality of life assessment, which in a postindustrial society, according to the scientist, can and should become the services provided education, health, leisure. In addition, D. Bell singled out the security, justice, spiritual well-being of the individual, the quality of cultural life, including education, the quality of the environment (Bell, 1999).

The first international system of indicators reflecting the quality of life of the population, appeared in 1960 at the UN. The latest version of this system was developed in 1978 and includes 12 main groups of indicators: demographic characteristics of the population, sanitary and hygienic living conditions, food consumption, housing conditions and availability of consumer goods durables, education and culture, employment and working conditions, income and expenditure, the cost of living and consumer prices, vehicles, recreation, physical culture and sports, social welfare, human freedom (Grigor'eva, 1999). Scorecard USA and consists of 13 sections. Methods for assessing the "quality of life" used in Japan considers the 35 parameter reducible to a single indicator, in Germany the number of indicators reaches 53. The organization for economic cooperation and development (OECD) publishes a quality of life index (Better Life Index), allowing to compare welfare between countries, based on 11 parameters identified as significant in the sphere of material living conditions and quality of life.

International information agency "Russia today" has developed a system of rating the quality of life in Russian regions based on 72 indicators, which are grouped into 11 groups that characterize the living conditions in the region. In recent years, increasingly satisfaction with the quality of the surrounding urban environment, is included as one of the criteria in the structure of parameters of quality of life. The perception of the individual's physical and psychological status, as well as its relationship to important characteristics of the environment of interest not only urban planners and architects, but also doctors, sociologists, psychologists, ecologists, geographers.

4. The quality of the urban environment

The quality of living conditions directly influences qualitative characteristics of the population, primarily health, educational and cultural level. Therefore, increasingly looking at the urban environment as a set of specific basic conditions, which influence the level and quality of human life, distinguish the group of terms which are relative to the formation of the quality of life is crucial.

During the development of the methodology for assessing the quality of the urban environment Ministry of regional development of the Russian Federation, the Russian public organization "Russian Union of engineers" and the Federal Agency for construction, housing and communal services of the Russian Federation was introduced to the scientific concept of "the quality of the urban living environment (residence)". The result of the development was the general rating of attractiveness of Russian cities, published in 2011.

Methods of evaluating the quality of the urban environment was approved in 2013 by the Ministry of regional development of the Russian Federation and is measured at the aggregate of the 41 indicators that are combined into blocks in the directions forming the 13 indices: dynamics of the population; transport infrastructure; natural-ecological situation; housing affordability; housing development; demographic characteristics of the population; innovative activity; engineering infrastructure; human capacity; social infrastructure; social dimension of society; the welfare of the citizens; the city's economy.

The Foundation of the Unified developement Institute in the housing sector and consulting Bureau "Arrow" in 2016 conducted a study and developed a technique of indexing the quality of the urban environment that allowed them to evaluate the cities with population over 250 thousand people in Russia from the point of view of their development. The purpose of the quality index of the urban environment not only how to appreciate the city, but also to understand where in the city is bad and why. The evaluation system consists of 120 indicators, each responsible for a specific type of urban space and represents the degree of quality of the environment one of the criteria.

Depending on data availability and new methods for the analysis of urban areas each year, it selects a set of 30 indicators in order to identify the main problems of city development. In the method of calculation of the quality index of the urban environment in an attempt to combine in one index statistics data is based on aerial photography and open data, e.g. from social networks.

The index evaluates five different parameters — safety, comfort, modernity, identity and environmental conditions. Developed evaluation criteria for housing, green space and water space, social-business, social-recreational and street infrastructure and city space. Usually ratings and similar ratings systems are developing in order to place all cities in a certain order according to certain parameters and announce the leader in a particular area. The developed system of indexing the quality of the urban environment aims to identify problem areas and focus for further modernization and quality improvement of specific areas.

5. Conclusion

Quality of life is an indicator of the basic values of human life. Analyzing the essential characteristics of the quality of life, some approaches to the measurement of quality of life, we can say that the concept of quality of life represents a new paradigm of development of urban areas and indirectly of the person. Opportunities for development are not driven by consumption growth and qualitative transformation of the ontological foundations of human life – relationships with family, harmony with itself and the world: overcoming exclusion, the fullness of life, etc.. Creating such opportunities requires a significant transformation of society and requires serious urbanistic and architectural researches and solutions. If to speak about the urban environment, and primarily about big cities, here you can find a huge number of opportunities for self-development of the modern citizen, however, however, these opportunities are often unavailable to urban residents in the power of unresolved transport problems or errors of spatial planning. The lives of citizens are subordinated to the rhythms of traffic flows, and the process of movement takes too much time and emotional energy. The decision in this case could be the enrichment of the urban environment residential areas spaces where there may be an interaction of people. Social alienation is another issue of modern society. The restoration of trust between people living in one segment of the urban environment – in the same yard or quarter will help public places close to the place of residence and create conditions for joint activities. Francis Fukuyama suggests that trust is an important economic resource. This resource can be the local community, including, including businessmen associated with their clients neighborly relations and personal relationships

(Fukuyama, 2004). Currently, the spaces of interaction of the city residents are playgrounds for small children and the yard apartment buildings. Today it is necessary to create such loci of joint activities for adults. We are not talking about places like clubs or houses of culture.

In our view the concept of quality of life is inextricably linked with the concept of the urban environment. Existing cities have an urban structure contrary to the principles of creating comfortable urban environment. The tasks of urban planners and architects of the third Millennium to transform the space of the city with the needs of modern man.

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AN IMPACT OF THE GLOBAL ENVIRONMENT ON THE GROWING IMPORTANCE OF SATISFIELD EMPLOYEES IN SLOVAK COMPANIES

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Abstract. As a result of globalization, an active population in the labour market can choose an employer not only from the domestic market but also from beyond the borders of their country. Skilled employees are therefore an important asset for every company so selecting and maintaining the employees are the most important HRM tasks in Slovak companies. Disinterest of Slovak companies in working conditions of employees have a negative impact on the costs of companies, employees performance and, in the long run, also on the corporate culture and reputation in the labour market. By identifying and satisfying employees needs, Slovak companies can create a competitive advantage over their competitors. The main aim of the paper is to create the employee satisfaction assessment methodology which can be used in the conditions of Slovak companies. The aim will be fulfilled by the analysis and application of the marketing mix tools used by Slovak companies in the field of HRM. Such methodology can serve as an important tool for companies interested in satisfying the needs of their employees. By assessing the factors in a matrix of importance and satisfaction, companies will be able to identify and address the factors that are important to their employees and, at the moment, dissatisfied them.

Keywords: labour market, employees, satisfaction, Slovak companies, marketing mix

JEL Classification: E2, J6, M5

1. Personnel Marketing and its use in enterprises

Personnel Marketing is considered to be a relatively new area of Human Resources Management (HRM) that has emerged by disengagement from Personnel Management. Enterprises have begun to perceive human capital as a competitive advantage on the market. The term Personnel Marketing was first used in German literature in the 1960s as a new way of gaining labour. Over time, this concept has spread to Polish and Czech literature and practice. After 1989, the Slovak economy began to open up to foreign investors, who brought new ideas of managing people, and thus "Personnel Marketing".

Nowadays, the issue is addressed by many authors, such as Lazear & Oyer (2004), Lengnick-Hall et al. (2009), Dublebohn et. al. (2009), Crowley & Bourke (2017). In Slovak and Czech Republic, the issue is addressed by Koubek (2009), Szarkova (2013), Olsovska et al. (2016), Marsikova & Myslivcova (2015).

Personnel Marketing helps to recognise the needs and desires of employees, both existing and potential, which can ensure a competitive advantage over other organisations (Szarkova, 2013; Alniacik et al., 2012). Delaney et al. (1996) and Huselid (1995) stated that enterprises could adopt different HRM processes to improve skills and improve the quality of their employees and thus their competitiveness.

Becker & Gerhart (1996) added that human resources should be seen as a potential source of growth in efficiency rather than the costs to be minimised. Employees create the value of the enterprise, so it is necessary to develop their skills.

Styblo (1993), Israelsen & Yonker (2017) argue that Personnel Marketing targets the future and tries to guess the real need of human resources in advance while considering business plans and strategies. Enterprises with strong Personnel Marketing are in the obvious advantage of being prepared to respond the competition and market development. Armstrong (2007) defined Personnel Marketing as the overall development of human potential expressed as the value of the organisation (Panova & Buber-Ennser, 2016).

Bláha et al. (2005) state that paying attention to human resources means not only accepting suitable employees and keeping them in the enterprise but also gaining them for a common cause, creating favourable conditions for their work (Cheema & Javed, 2017).

Appropriate work experience, professional growth and personal satisfaction, and building an enterprise as a community. He also states that higher loyalty and initiative characterize enterprises that pay attention and effort to Personnel Marketing and human resources by their employees, better work outcomes, greater willingness of people to work harder for business goals. Such enterprises are making more profits and better prepared for the future.

Popková (2013) have a similar opinion because according to them the main task of Personnel Marketing is to create an attractive image of an enterprise as an employer, the next task is ensuring an optimal amount of high-quality human resources (Esfahani et al., 2017).

1.1 Marketing Mix in HRM

Over time, employers have found that not the quantity but the quality of employees is important. To attract suitable employees, enterprises started to use marketing tools in the field of human resources. Kovarova (2009) and Nica (2016) state that a classic Marketing Mix can also be used inside the enterprises, not just in Customer Relations Management (CRM). Good marketing starts inside an enterprise where customer orientation changes into employee orientation. Marketing Mix tools can also be used in the internal marketing. The essence of Personnel Marketing is the use of marketing tools in human resources. Regarding Personnel Marketing, we are not talking about the market for products and services but about the labour market where labour demand meets job vacancies (Derecskei, 2015). In this case, job seekers are understood as customers. Classic Marketing Mix tools can be customized for Personnel Marketing needs and build a Marketing Mix in HRM as follows (Szarkova, 2013, Matulcikova, 2003):

- **Product (job position)** – an enterprise tries to fill a job vacancy from the labour market. A job vacancy can be filled from the internal or external labour market. The internal labour market is made up of employees who can be transferred to another job, and job-seekers outside the enterprise make the external labour market.

- **Price (motivation and reward)** – remuneration for a work performance. This reward can be granted in the financial (wages, salary increases, bonuses) and nonfinancial forms (promotion, praise, or various employee benefits). The remuneration system is a strategy of an enterprise remuneration. An appropriate strategy can attract the necessary and high-quality human capital, stabilise current employees, motivate them to more challenging tasks, and promote the growth of their qualifications.
- **Place (corporate culture)** – understood as a place of work. Job-seekers often choose to select a job based on the corporate culture and business image. Corporate culture includes corporate layout, workplace relationships, employee education and development, recognised values, what is considered good and bad in the business. Together with the image, it forms the main tool for developing Personnel Marketing.
- **Promotion (job offer presentation)** – it is a tool by which an enterprise presents a vacancy offer. This offer should be clear, comprehensible, motivational, and sufficient to attract candidates. It contains all job information, job requirements, as well as information about the enterprise and benefits to its employees.

2. Proposal of staff satisfaction assessment methodology in Slovak enterprises

Handling the process of measuring and monitoring employees' satisfaction, Slovak enterprises, without distinction of size and focus, should implement and use the following algorithm:

- define who is an employee,
- define the requirements of employees and signs of employee satisfaction,
- design and create questionnaires to measure employee satisfaction,
- determine the size of the sample of employees,
- choose the appropriate method of data collection and perform own data collection,
- establish procedures for data evaluation, including procedures for quantifying the degree of satisfaction,
- use measurement results and satisfaction monitoring as inputs for improvement of the processes.

2.1 Questionnaire

The questionnaire should be included in the Annex to the Internal Directive of the enterprise and consists of the rated categories listed in Table 1. The questionnaire contains an introduction, an explanation of the purpose of the survey, and instructions. Each evaluation criterion is rated from satisfaction and importance by points from 0 to 3 with 0 representing total dissatisfaction and lack of relevance of the given criterion, and 3 representing the highest possible satisfaction and the highest importance of the given criterion. In the end, there is room for any comments.

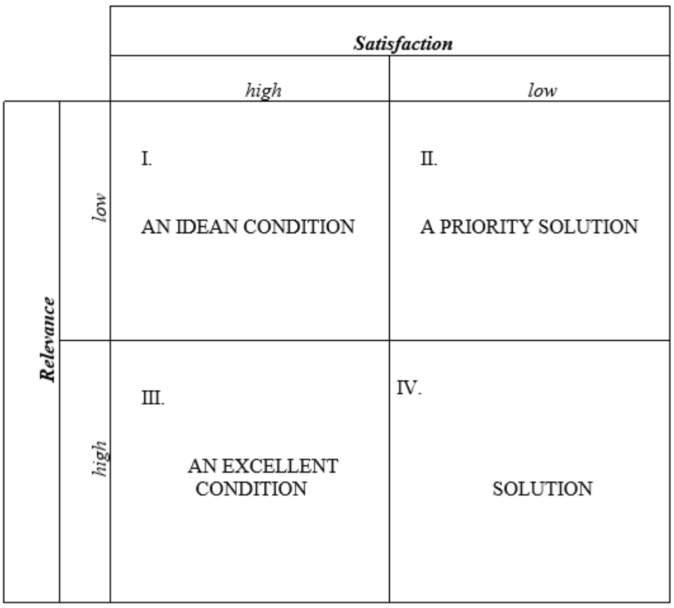
Table 1: Evaluation criteria of employee satisfaction

Evaluation criteria		Satisfaction				Relevance			
		0	**1**	**2**	**3**	**0**	**1**	**2**	**3**
1.	Financial evaluation (wages, bonuses, rewards)								
2.	Non-financial evaluation (a praise, car, phone, notebook								
3.	Career growth (training, courses, further education)								
4.	Canteen (choice of meals, quality of meals)								
5.	Employee benefits (spare time, paid overtime, sports and cultural events for employees)								
6.	Working time (flexible working hours, length of working hours, working from home)								
7.	Interpersonal relationships at the workplace (working climate)								
8.	Organisation of work (setting goals, division of work, way of fulfilling of goals, etc.)								
9.	Workplace employee communication (awareness)								
10.	Working environment (noise, temperature, cleanliness, lighting, equipment)								
Comments and suggestions to increase employee satisfaction:									

Source: self proceesed

The data from the questionnaire is to be statistically processed and graphically presented. For a better overview of individual criteria, we recommend that the resulting values of the criteria should be ranked in the appropriate quadrant in the resulting employee satisfaction matrix (Fig. 1), which will provide a more detailed view of each criterion.

Figure 1: The employee satisfaction matrix



Source: self proceesed

2.2 Selection of a research sample

The basic file is determined from the employees' records of the given enterprise for the reference year. The survey is anonymous, and its completion is voluntary. We recommend a sample size (base file) with a probability of 95 % and a 5 % variation.

2.3 Distribution, collection and transmission of questionnaire data

Methodically correct and effective is to provide the respondent with a questionnaire on the day the evaluation is performed, together with the instructions, which should ensure anonymity. For the processing of data, it is necessary to identify an employee who meets the requirements for data processing, material equipment such as software, computer, printer, internet connection.

2.4 Interpretation and publication of results

The interpretation of the processed data should be performed by the person who transfers the evaluated data to the outputs according to the purpose of use. It can also be the same person as the one processing the data. Outputs can exist in the form shown in Tab. 2.

Table 2: Use of information from the employee satisfaction survey

Purpose of use	Form of the results presentation	Results publication	Publication frequency
annual report	a written document, electronically	a website	annually
information for managers	a written document, presentation	meetings	monthly, quarterly,as needed
information for departments	electronically, controlled documentation	determined by the Quality Management department	constantly, taking corrective measures
the general public	a website, mass media	constantly	constantly

Source: self proceesed

Interpretation of the results should be performed by a person or some people who know the issue and can process the data in a form that is clear, legible and comprehensible for individual entities using the results of the satisfaction assessment. It requires knowledge of databases, graphic display of results and interpretative knowledge. Identifying responsible people and training is an important part of the whole survey.

In addition to the enterprise's Internal Directive, which should be available to all interested parties and conveniently located at the workplace, it is important to conduct regular training about surveying. It is also important to check the accuracy of the survey by employees of the Quality Management department.

3. Conclusion

Although Personnel Marketing is considered to be a relatively new area of management, enterprises are increasingly beginning to realise its importance. Employee focus, quality, education, and motivation are the key elements of the competitiveness in the market. Blaha (2005) and Youndt et al. (1996) agree that HRM is a strategically focused and continuously coordinated business activity that serves to attract and retain employees and creates the conditions for the best performance and contributing to business goals. Slovak enterprises that pay attention and effort to Personnel Marketing and employee satisfaction are generally characterized by higher loyalty and initiative of their employees, better work outcomes, and the greater willingness of people to work with business goals. Such enterprises are making more profits and are better prepared for the future.

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INTEGRATION INITIATIVES IN EURASIA AS A PLATFORM FOR DEVELOPING REGIONALISM

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Abstract. In the period of global stagnation, the trade liberalization and integration processes are distinguished by an evident member states' aspiration to create a new basis for growth. Thus, the new or developmental regionalism is an important concept for less developed, prematurely deindustrialized or "middle-income trapped" countries searching for external drivers of economic restructuring. Nowadays, the developmental policies experience a revival since they represent an alternative to liberalism normally abstaining from the interventionism that may help to overcome the economic crisis. The authors focus on the analysis of Eurasian integration processes paying attention to certain member state' political and economic characteristics considering them as prerequisites for an eventual realization of common developmental projects. Among economic parameters for the developmental regionalism, the leader's relative economic size, relative level of its development, low natural rent and industrial base has been considered, while the taken into consideration appropriate political factors were the presence of independent developmental elite, competent economic bureaucracy, effective public-private partnership, the level of public confidence, the interaction with the civil society. Comparing the potential of the Eurasian Economic Union, the China's initiative 'One Belt, One Road' (OBOR), the Regional Comprehensive Economic Partnership as well as an opportune free trade agreement on the Shanghai Cooperation Organization's basis, the authors revealed that although all the considered initiatives have some potential for regional pro-industrialization cooperation, a greater critical mass and a leader's developmental potential distinguish the OBOR and the RCEP.

Keywords: one belt and one road, regional comprehensive economic partnership, Eurasian economic union, approaches to integration

JEL Classification: F150, O110, O430

1. Introduction

In the first and second decade of 21st century the 'Big Eurasia' became a centre of new multilateral initiatives concerning mega-regional free trade agreements and integration. The novelty of ongoing intergovernmental cooperation genesis is represented by the active participation of by China that previously abstained as from a clear leadership role at the global scene as from the multilateral regional liberalization and/or integration initiatives. So, taking into consideration the US attempt to create the Transpacific partnership (free trade agreement), the Eurasian continent became a space of competition between new and old regional integration projects led by all big powers, if we add to research focus the European Union, the most developed and consolidated establishment by far, as well as the different agreements focused on the conjoint development and integration on the former Soviet Union territory, where under the Russia's promotional efforts an effective free trade zone has been realized. This situation has and will have a relevant impact the on the future economic perspectives of Eurasia, since it involves many developing countries, those economic situations may be improved by eventual impulses, generated from the outside. The new China's South South development agenda built on both Chinese competences and excessive internal supply in infrastructural industries represents a new chance for landlock problematic or less countries to be incorporated in the globalization process, although the result, whether positive or negative, of such inclusion will depend on the local capabilities to take the best from the regional expansion of the Asian industrial giant and to decrease the consequent risks of it. This opened option of developmental regionalism creates an alternative to the neo-liberal approach to global governance, in a sense, immanent for many key international institutions. Despite criticism regarding the possible inefficiency or unproven effectiveness of industrial and commercial interventionism as well as of other forms of structural policy, the ongoing world crisis necessitates a more intensive government action aimed to launch institutional support capable of creating the conditions for a return to sustainable growth. The China-led cooperation initiatives are aimed at the formation of the infrastructure and industrial core in the recipient countries of capital and proved to be successful in the East Asian states.

Unpredictably, the bilateral and multilateral economic cooperation, normally intensifying in the economically abundant periods, became the order of the day during the ongoing stagnation, since it allows to provide a better allocation of limited resources at the international level. The content of Chinese external expansion is based on its financial resources in both its own currency and its significant international official reserves. The Chinese expansion in the Eurasian space in a certain point meets the around-Russia integration projects such as the Commonwealth of Independent States and the Eurasian Economic Union. Being relatively liberal, prosperous and industrialized than its neighbours, Russia following the Soviet Union tradition financed and participated in building infrastructure such as telecommunication lines and networks as well as different type power plants normally in the framework public-private partnership. So, the Russian-led integration initiatives may be analysed through the developmental lenses, although the interventionist logic of government policy doesn't take a part of public discourse. Moreover, as a result of confrontation between Russia and the West, both the big Eurasian powers tend to cooperate more at the bilateral as well as on multilateral level like it occurs in the Shanghai Cooperation Organization, initially conceived as a political and security establishment, now considered to be an eventual platform for the liberalization of economic ties between member countries. So, the research paper focuses on the comparison of developmental potential in above-mentioned initiatives and projects concerning the developing countries.

2. Literature review

Because the boom of integration initiatives, the regional international economic and political relations become more focused on developmental issues. The developmental regionalism as a concept originally refers to a joint policy of economic cooperation, coordination and integration between the underdeveloped economies, aimed at accelerating the development rates of both the participating countries and the whole geographic region (Sloan, 1971). The developmental regionalism is based on the economic interventionism forming the progressive structure of the economy as well as on integration aiming to build a single economic space in the territory of several states through a gradual liberalization of international flows of goods, production factors, introduction of unique currency, etc. The developmentalism is an economic policy format that enabled Japan, South Korea, Singapore and some other countries in Asia and Africa to reach a fundamentally new level of welfare, characteristic of Western countries, i.e. to overcome the path dependence due to the formation of the production core through sound industrial policy and active support for exports (see, for instance, Kalinowski, 2015). The China's emerging leadership in the developmental regionalism may be envisaged in the large-scale initiative "One Belt, One Road" (OBOR) and the Asian Infrastructural Investment Bank (AIIB) both based on domestic industrial resources and financial capabilities (Yu, 2017). The main OBOR's is represented by the unification of political, infrastructural, trade, monetary and cultural aspects of interaction of the participating countries on a mutually beneficial basis, while the AIIB, one of the pillar of the so-called "South South Cooperation Development" that designed to promote the Chinese successful strategy of poverty reduction through structural transformation, industrialization, and export-based growth (Lin & Wang, 2017). The China's resources and competences generate the opportunity to launching economic growth by involving countries with a "low base effect" into global business cycles and value chains. The growth identification framework based on the "new structural economy" (see, for instance, Lin, 2017) promoted by China at the national and international within the framework of the World Bank, the AIIB and other newly established financial institutions and bilateral funds level together represent a doctrinal alternative to the pure neoliberal model in the period of ongoing global recession. The developmental policies behind integration processes in the current moment of time are affected by following functional characteristics: (1) incompleteness, alignment and inversion of the sequence of integration stages proposed by B. Balassa (Balassa, 1961); (2) geographical overlap of integration blocks; (3) "unilateral" integration, which has a clearly pronounced country-leader, whose goal is to promote its geo-economic and geopolitical interests – require new approaches in integration studies. Furthermore, this innovation is supported as well by the boost of integration processes in the Global South claims to be aware of research issues important for intergovernmental cooperation between developing countries (Bonilla Bola~nos, 2016). The first issue is the perception of integration is seen as a market-oriented process those benefits and losses should be attentively assessed, since the integration sometimes appears as a new form of dependence of developing countries. Second, the heterogeneity of levels of economic development should be taken into account as well, since the integration of developed countries is based on their interdependence, while the integration between developing countries is generated frequently generated by a need for economic growth and structural adjustment. Third, there is an appeal of interdisciplinary research, hence after the failures of internationalization in some countries, it leads to the emergence of more realistic assessments of the benefits of integration for developing countries and allows the development of own integration strategies and tools. Forth, the integration success/failure depends on both political and economic factors in the framework of structuralist approach. The Eurasian multilateral initiatives are in the centre of many researches that assess the progression (Lee, 2016) or results of integration (Bobowski, 2017). Many authors underline a presence of rivalry between different projects, realize a comparative analysis of ongoing integration proposals and illustrate country's choice between initiatives (Hsu, 2015; Lewis, 2013; Wesley, 2015; Wilson, 2015). Following the paths of previous studies, the authors provide a quantitative evaluation of the developmental agenda potential in the different integration projects and initiatives

3. Methods

The authors focus on, first, the political aspects of the countries participating in the integration initiatives. According to A. Leftwich (1995) there is a number of factors which contribute to the success of a development agenda, such as: the existence of a developmental elite, the relative independence of the elite and state institutions, a strong and competent economic bureaucracy, the control over civil society (primarily in the field of media and labour relations), the effective interaction with the private sector, repressions against the opposition and a high level of the trust of the common people. For the most part of these phenomena, the authors have found appropriate indicators, in particular, for the research purposes there were used the index of freedom of the press[1], the percentage in possess of leading party in the parliament[2]; the access to hygienic facilities; the protection of investors; the share and amount of taxes; the presence and size of IMF loans[3]. All indicators, except the index of freedom of the press and the IMF loans, were considered as positive. Since the developmental state normally has been realized in the autocratic regimes, the favourable level of the freedom of the press should be as less as possible. In a similar way, the less volume of the IMF loans means less dependence on the foreign (Western) states. Secondly, in the economic sense, the scarcity of natural resources, characterizing the most successful in the implementation of the industrialized country of Asia, has played an important role in the model of the developing state, the authors have included in the analysis the share of natural rent, share of fuel in exports, while for the assessment of developmental regionalism potential GDP, GDP per capita, value added in industry were considered[4]. All the indicators, with an exclusion for the industrial value added were considered as negative for the development agenda. The big GDP reflects a big size of economy that implies more foreign resources and efforts to reform. The high-income countries don't need to be developed or the cannot be developed by a country with a lesser income. All markers were normalized between 0 and 1. Results. The authors have analysed the developmental potential of the Eurasian Economic Union (EEU), the Regional Comprehensive Economic Partnership (RCEP), the "One Belt, One Road" initiative and the Shanghai Cooperation Organization member states. The assessment results are presented in Figure 1-4. The member states of EEC are Armenia, Belarus, Kazakhstan, Kyrgyzstan and Russia. The composition of "One Belt, One Road

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[1] Freedom House. https://freedomhouse.org/report/freedom-press/freedom-press-2016.

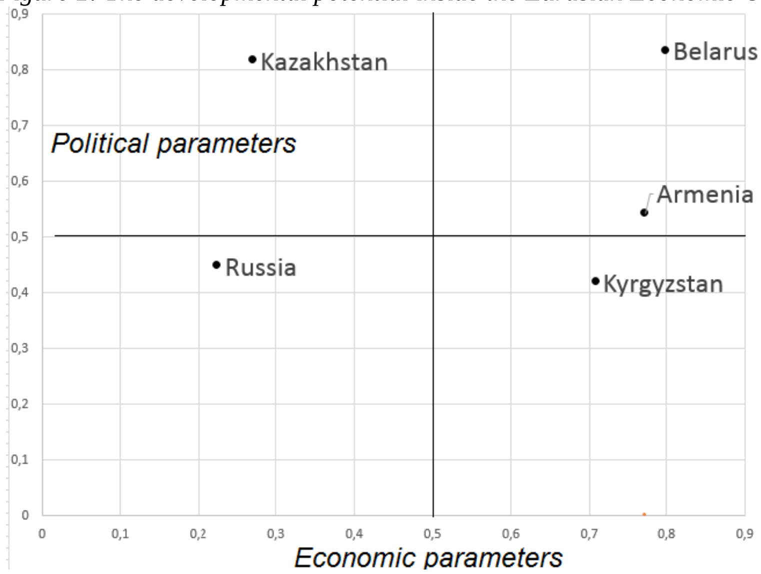
[2] Wikipedia sources concerning the country's legislative power.

[3] The DataBank of the World Bank http://databank.worldbank.org/data/home.aspx.

[4] The DataBank of the World Bank http://databank.worldbank.org/data/home.aspx.

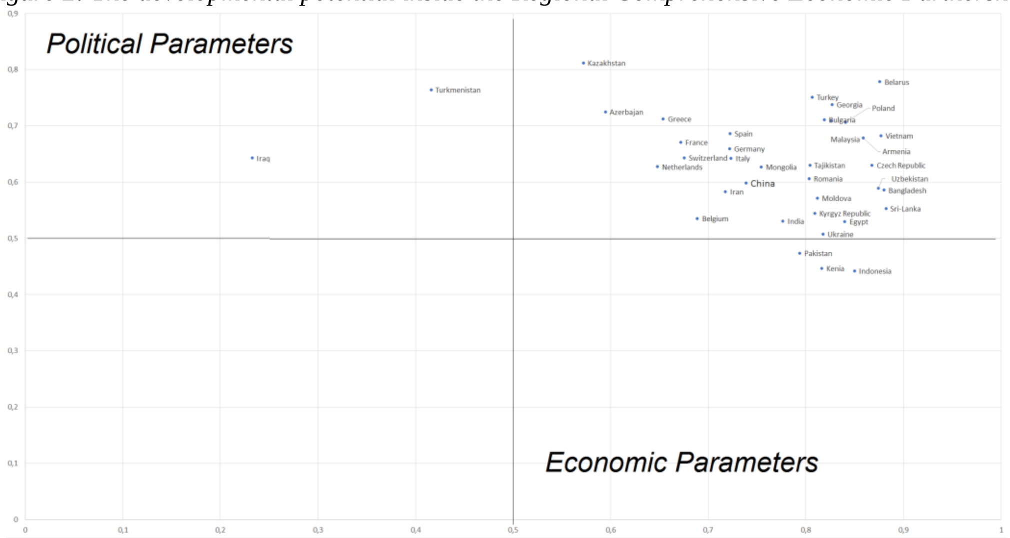
Initiative" dates to 2016 and includes 37 countries[5]. The RCEP is a proposed free trade agreement between the ten member states of the ASEAN and the six states (Australia, China, India, Japan, South Korea and New Zealand). The SCO consists of China, India, Kazakhstan, Kyrgyz Republic, Pakistan, Russia, Tajikistan and Uzbekistan. In this institution China officially proposed to establish a multilateral free trade agreement (FTA) facing the Russia's reluctance to do it in a bilateral level. For more information see Fig. 1 - Fig. 4.

Figure 1: The developmental potential inside the Eurasian Economic Union



Source: self proceesed

Figure 2: The developmental potential inside the Regional Comprehensive Economic Partnership



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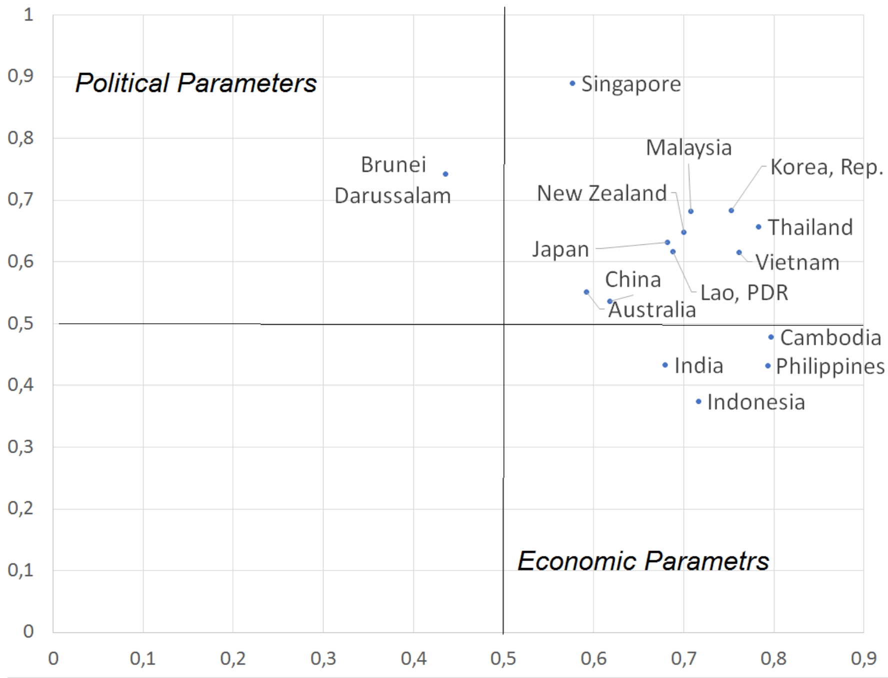
The figures allow to draw the following conclusions. First, China seems to be an appropriate developmental leader, since in all initiatives it appears in upper right quadrant demonstrating high levels of both political and economic requisites for development. Second, the most part of other nations have indicators of readiness even better then Chinese ones, so to

[5] The list of OBOR countries after the Forum in 2017 includes 67 countries. So, in the analysed sample there are more Western European countries thana in the current list.

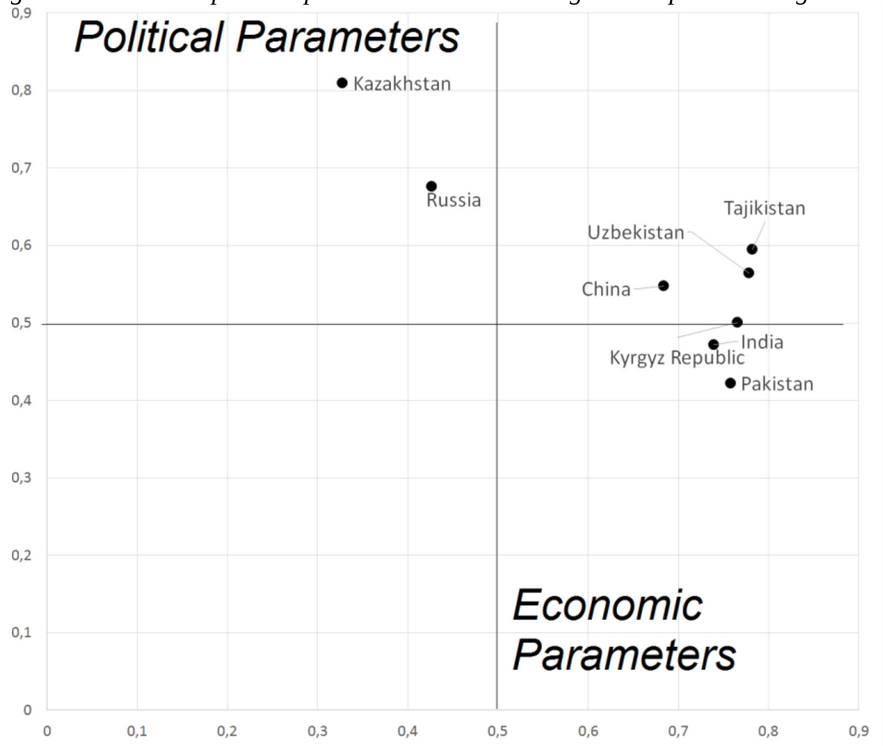
a certain extent we can conclude that they are ready to implement the developmental agenda. Third, the Russia's leadership in pursuing the developmental agenda seems to be problematic due to the economic structure suffering from the de-industrialization and raw materials dominance in production structure. The same conclusion may be done for other oil-exporting nations such as Brunei Darussalam, Iraq, Kazakhstan, Turkmenistan.

Figure 3: The developmental potential inside the Regional Comprehensive Economic Partnership



Source: self proceesed

Figure 4: The developmental potential inside the Shanghai Cooperation Organization



Source: self proceesed

The weak political institutions are typical for India, Indonesia, Kyrgyz Republic, Pakistan that participate in few initiatives, while Cambodia, Kenia, Philippines show to be politically weak just once. Therefore, the research carried out led to relevant results show quite good opportunities for the most considered associations and their member states to follow the developmental agenda**.**

4. Discussion

The integration associations under consideration have the potential for developing regionalism. There is a complicated situation in the EEU and the SCO, since Russia and Kazakhstan are not suitable for economic parameters, while Kyrgyzstan, India and Pakistan have problems with the institutional parameters. Thus, the prospects for Armenia and Belarus in the EEU are limited by the leader capabilities, although there may be a possibility for the expansion of their manufacturing sectors in the countries dominated by the mining inside the same integration bloc. Tajikistan and Uzbekistan have good developmental perspective within the framework of a potential SCO FTA.

The participants of the RCEP seem to be more consolidated, therefore for Brunei standing out by economic parameters as well as for India, Indonesia, Cambodia, the Philippines having institutions non-efficient enough there are certain opportunities to be involved in the progressive processes realised by their neighbours.

In the framework of the China's initiative "One Belt, One Road" the most part of considered countries are suitable for developmental propositions of China. Here, a paradoxical migration of Kazakhstan to promising countries by economic parameters is encountered. Further research is expected to focus on the study of convergence within blocks, returning to the basic definition of developing regionalism.

5. Conclusion

A low than before rate of global economic growth makes countries to look for new opportunities to come back on the path of sustainable development. The integration processes seem to be an appropriate tool in regard. The key aspect of current integration and cooperation agenda is represented by the China's new role in the global governance, that is inseparably linked to the advancement of the model of the "developmental state". The China's infrastructure projects draw the attention because of their resources and tasks scale as well by the number of countries involved in the project.

The Western model of economic expansion corresponds to the logic of the post-industrial paradigm and focuses on the development of human capital and promotes democratization and liberalization of public life in recipient countries as ideological moments. The Chinese strategy of internationalization is characterized by the interventionism and a tendency to preserve the political status-quo in the host countries to "guaranty" investment.

The research revealed the good perspective for the developmental agenda implementation provided by the readiness of both China's and most countries' economic and political institutions.

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THE PENSION RISKS' IMPACT ON THE LEVEL OF RUSSIANS LIFE

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Abstract. The problems of effective economic instruments to improve the Russians quality of life in recent years is becoming increasingly important. The processes of globalization that are taking place in the world and aimed at the formation of a high standard of living itensify issues economic mechanisms to protect the population of the country from pension risks. The complexity of creating an effectively functioning mechanism for pension protection of the population in Russia lies in the high regional differentiation. The main economic mechanisms of protection from pension risks with the purpose of improving the citizens quality of life were analyzed. The analysis of existing economic mechanisms of protection from pension risks in the territory of Russia made it possible to identify key problems, in particular low pension literacy of the population and distrust of specialized financial institutions; investment policy of the regions, which does not take into account the possibility of raising funds from non-state pension funds in regional projects; lack of a mechanism to support regional Non-state Pensions Funds (NAPFs). The study allowed to identify the main areas of protection from pension risks. These provisions were confirmed by the analysis of statistical data, as well as financial results of the pension insurance system. Thus, the study of existing economic mechanisms for protection against pension risks will provide theoretical and practical aspects of the algorithm for their application in the future for the purpose of improving the Russians quality of life.

Keywords: pension risks, quality of life, standard of living

JEL Classification: E24, H24, H55, J32

1. Introduction

A high level of the citizen's quality of life is a strategic guideline of socio-economic development of any socially oriented state, and thus is a measure of economic development for the country as a whole and its regions (Stiglitz et al., 2009).

According to the Constitution of the Russian Federation (RF), man, his rights and freedoms are recognized as the supreme value, and the Russian Federation itself legally formed as "a social State whose policy is aimed at creating conditions for a worthy life and a free development of man."

The importance and the priority of the population quality and standard of living as if not the most important, but the key target of the state policy reflected at the Russian legal documents (Constitution of the Russian Federation the Concept of long-term socio-economic development of the Russian Federation for the period until 2020) and international documents (Convention No. 117 of the International labor organization "concerning basic aims and standards of social policy" (concluded in Geneva 22.06.1962)).

Considering the living standards of the population as an economic category, which measures the proportion of the population with the necessary material benefits and services we focus on:

- financial component – the quantitative and qualitative characteristics of the volume, structure and dynamics of income, expenses, savings, investments, assets and liabilities of the population. The primary role pertain to the category of income (and degree of its differentiation), since all the rest of above mentioned categories are derived from it (Mytareva, 2016);
- different extant of the populations' susceptibility to pension risks depending on the life cycle stage of specific individuals (or whole households) and socio-economic level of the country and the pension system (Grigorieva et al., 2017).

The protection of citizens from pension risks in Russia is generated primarily through the public system (public system of mandatory pension insurance and pension insurance) and non-state system (voluntary pension insurance with the participation of non-state pension's funds and insurance companies). Currently in the country and its regions a process of targeted government stimulation of the employers and citizens involvement in the Russian pension system is actively realized. The processes of globalization and integration that are taking place in the world allow the Russian citizens to enter the international and foreign financial markets, which is an attractive alternative for the non-state pension formation in contrast to domestic financial institutions and instruments (Gorshkova et al., 2015).

1.1 Pension risks and pension protection of Russians

Under the pension risk we understand the probability of partial or total loss of individual's income due to the inability to work and earn labor income. People are vulnerable to poverty in the absence of income due to the age (childhood, youth and old age), health loss (temporary and permanent).

Pension protection is considered as a joint activity of the state, employers and citizens and their associations, the purpose of which is forming a source of passive income, the residual of labor income lost by the individual due to age and health.

Different forms of participation of state, employers and citizens in the pension protection of the population were established at the present time in Russia.

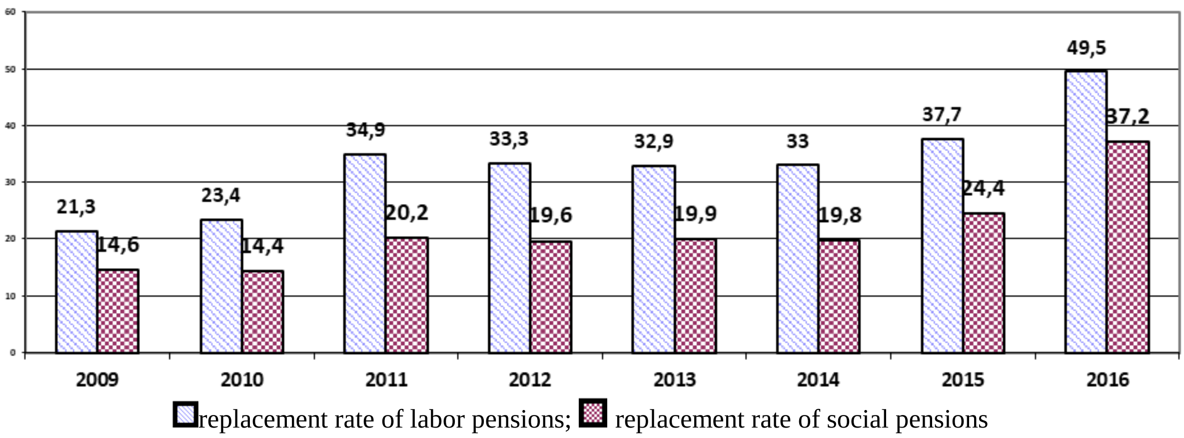
1.2 Features of state involvement in the pension protection of Russians

The Russian government in its social policy forms and develops the state pension system and pension insurance. For that purpose the legislation provides two mechanisms of pension protection - the state pension provision and mandatory pension insurance. State pension (SP) is a mechanism aimed at providing minimum level of pension protection by financial resources of the state. Pension protection is provided in the form of state pensions and social pensions. The first type of pensions is granted to certain citizens, the list of which is established by a special law (e.g., civil servants, etc.), and social pensions are paid to persons who are unable to form their pension rights under the system of mandatory pension insurance.

Financial sources of both types of pensions are taxes and charges that are accumulated in the Federal budget and subsequently transferred to the budget of Pension Fund of the Russian Federation for direct payment of pensions.

Another state mechanism for the implementation of the pension protection is mandatory pension insurance (MPI) (Bazzhina, 2015). This economic mechanism is based on the mandatory participation of the working population (employed and self-employed) and employers. In the framework of the MPI financial resources for the pensions' payment are formed due to insurance premiums from employers and population funneled to the budget of the Pension Fund of the Russian Federation. These contributions are accumulated in individual pension accounts and are expressed in pension points, which after the occurrence of the right to receive labor pension are transferred to pension payments (1 pension score = n rubles). Implemented by the state mechanisms of the pension protection show a low level of pension risk coverage, which is evident from the data presented in figure 1. Over the last 8 years there has been an increase in the replacement rate of lost income from MPI and SP pension, but only at the end of 2016, its level was able to overcome the threshold value of 40 per cent recommended by the Convention No. 102 of the International Labor Organization on Social Security Minimum Standards, and only by the employment pensions received from the MPI. The level of the replacement rate of social pensions remains low.For more information see Fig. 1.

Figure 1: The dynamics of replacement rate of lost income from MPI and SP pension, %



Source: self proceesed according to Ministry of Labour and Social Protection (2017)

1.3 The role of employers in Russians' social protection

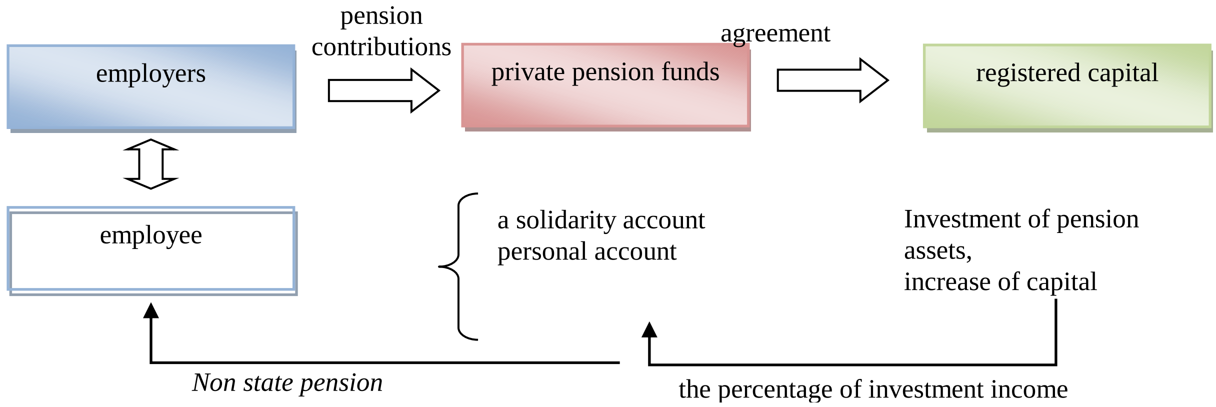
Employers participate in the pension protection of the Russian citizens on:

- Mandatory basis within the framework established by Russian legislation requirements, providing Extra-Budgetary Social Fund with financial resources– Pension Fund of the Russian Federation. In this case, employers are mandatory participants of the state system of the MPI.
- Voluntary basis, implementing corporate pension plans. Implementation of corporate pension plans is being realized by applying special pension products provided by

private pension funds (hereinafter PPF) or insurance companies (Sabitova et al., 2015). Such products in PPF include occupational pension schemes (plans, programmers), corporate pension programs. Insurance companies only offer one type of pension product - pension insurance. Major proposed pension insurance programs are defined contribution or defined benefit. Employers are encouraged to determine some parameters of the pension program, such as: lifetime pension with a guaranteed period of payments; pension with no guaranteed period of payment; the additional pension with guaranteed payment period.

Schematically the implementation of the pension protection by employers in the form of non-state pension generated as follows. For more information see Fig. 2.

Figure 2: The mechanism of non-state pension formation by employers



Source: self proceesed according to Chybalski (2015)

In Russia, the practice of forming an employer's pension protection has a short history, and still has not received general adoption. Only large Russian companies have a pension protection policy and create a corporate pension plans, for example, PJSC "LUKOIL", JSC "Gazprom", PJSC "Russian Railways", etc., for small and medium businesses, the implementation of such projects unprofitable due to high costs.

1.4 The role of citizens in their pension protection

The citizens along with government and employers can implement pension protection. As noted above, implementing the pension protection government guarantees a minimum level of protection against pension risks through SP and MPI. Taking into the account the low level of the pensions replacement rate in these state mechanisms of pension protection it is actual for citizens to use relevant pension arrangements of self-defense in the form of traditional and alternative pension provision (Chybalski, 2015).

A traditional pension mechanism of self-defense is the formation of pension in PPF and insurance companies. This mechanism is similar to the one, described above, where the initiator is the employer. In this case, the initiator will be a citizen (Eremina et al., 2017).

An alternative mechanism for the self-defense pension is the process of pension capital formation, based on relations among population and financial and credit institutions, which are not regulated by the legislation on pension provision and can multiply (and sometimes diminishing) formed capital of citizens (Geraci, 2015); this capital is being used as an additional income in the event of pension basis, namely "quasipensions". Thus, in Russia, population often buys property with the purpose of putting it in the lease and such lease payments are treated as passive income for retirees. Alternative or specialized financial institutions, which potentially can form the pension capital divided into banking, non-banking and investment institutions.

2. Main indicators of retirees quality of life level in Russia

Consider the Russian statistics regarding the retiree's quality of life. As of June 1, 2017, in Russia live 146.8 million people, of which about 43 million are retirees. The gender structure of retirees is characterized by a predominance of women. Per 1000 men aged 60 to 65 years of age there are 1522 women of the same age (Federal State Statistics Service, 2017). In 2016 the average size of pensions in Russia amounted RUB 12 391 (at the current exchange rate of the ruble 1 USD = of 57.67 rubles, and 1 Euro=RUB 69.1, it is 214.8 USD or EUR 179.3). Such pension is about 1.5 the subsistence minimum of a retiree and 1.6 minimum wage established by the Government of the Russian Federation. The average wage in 2016 in Russia was 36 743 RUB (or 637 US dollars or 531.7 Euros). Thus, the replacement rate averages less than 34%. And the ratio of net pension wealth (for its calculation survival period after retirement and the average pension are multiplied, and then the result is divided by the average salary) is 6 years. If you rely on this figure in the gender aspect, for men it is 4 years, for women - 5 years.

As a result, the quality of life of Russian retirees is low. So, according to "The Global AgeWatch Index," of international organization HelpAge, at the present time Russia takes the 78th place in the world from 91 countries in terms of the retirees' standard of living (the place between Nepal and Laos). Of the 13 criteria of this index the worst 90-th position Russia occupies in the social context, which includes accessibility of transport infrastructure, civil liberties, physical security, etc. Similarly the negative evaluation of the Russian retiree's quality of life announced in the Natixis Global Asset Management rating, according to which Global pension index – 2017 Russia ranks 40th out of 43 (Pavlova et al., 2017). The experts expect that in coming years in Russia the position of retirees will significantly worsen. Current and predicted problems of retirees induce them to continue to work even after the retirement. At present, nearly 75% of retirees continue to work and receive a pension and a salary. This fact is the justification for the idea of rising the retirement age in Russia. The main alternative to the Russian pension system development according to the government is rising the retirement age. Today the retirement age for men is 60 and 55 years for women. At the government level there are discussions about raising this level up to 65 and 63 years, respectively. Note that in 2016 the average life expectancy in Russia amounted to 71.87 years, and the survival period is 19 years. This increase in retirement age together with the increase of the required experience for the pension accrual will reduce the number of retirees by almost 4 million people or 9%. According to calculations, this will increase old-age pension insurance to 30%, or 4 thousand rubles. It also considers the possibilities: state incentives for more active participation of employers and citizens in the pension system (Romanenko et al., 2016); increase in insurance premiums for the self-employed; the introduction of effective employment contracts to budgetary organizations (Shkarupa, 2015). In general, the reforming of Russian pension system is aimed to achieve by 2030 the average size of a labor old-age pension minimum to 2.5 retirees' subsistence level of living.

3. Conclusion

The current problems of Russian retirees' low quality of life were caused by a number of reasons: a high level of labor force pension burden amid ongoing demographic decline; the failure of the public pension distribution system (this system existed in Russia until 2002); a failed Russia's transition to a funded pension system (its failure and ineffectiveness recognized in 2014 when it was frozen and the actual return to the distribution subsidiary system took place); a low level of private pension systems development (there are few pension funds and their investment activities are often unprofitable, the corporate pensions did not become popular, the majority of Russians do not form additional pensions, high competition from quasipension institutions and instruments); the low level of financial literacy among Russians (there is no culture of the pension protection formation, the Russians still believe that the state should provide a pension). All of the above raises the interest of Russians to the alternative traditional institutions and instruments of pension protection formation. In Russia, the acquisition of real estate for subsequent lease is popular. Such passive income is often informal, and is not subject to taxation and often plays the role of some quasipension. More wealthy Russians with the financial opportunities use the services of foreign pension and insurance companies and funds, seeking the way to avoid currency risk considering foreign companies more successful and reliable for investments. A key area of solving the above mentioned problems of Russian retirees low quality of life in formation of the cooperation mechanism between the state and specialized participants in the private pension system (PPFs, insurance companies) (Liu et al., 2016). The latter have a "long and cheap" money that the government could use under market conditions to attract long-term financing of socially important projects. We consider the inefficiency of the investment activities of private pension system's specialized participants as the main problem. The proper organization of investing process by specialized participants can lead to the profitability growth from their activity and socially important facilities (library, schools, parks, hospitals, sports facilities, etc.) will begin to appear in the society. The ROI growth will attract more participants (citizens and employers), and their increasing effective demand will run a flywheel of the related sectors of the economy development.

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BUSINESS ENVIRONMENT IN V4 COUNTRIES IN THE CONTEXT OF GLOBALIZATION

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Abstract. Forming of the environment, favorable for successful business development, is the major prerequisite for a stable and long-term growth of any national economy, increase of its competitiveness in the domestic and world markets. Problems of increasing the level of competitiveness of transition economies, which undoubtedly the economies of the V4 countries belong to, have long been of interest to the authors of this article (Gregova & Dengov, 2015). All four countries had approximately identical starting conditions. In each of them systematic economic reforms were implemented, accompanied by quantitative and qualitative changes in the transition from a centralized planned economy to a market one. At this stage it is important to estimate a condition of a business environment of the V4 countries, to compare them among themselves, to determine who and how successfully advanced in solving this task, and who is in the lagging behind. The authors compared quality of a business environment of the Visegrad Group countries on the basis of use of a global competitiveness index. As a result, on the basis of the analysis which was carried out with use of three world indexes of competitiveness: GCI, DB and an index of economic freedom, the authors came to a conclusion that the Czech Republic which showed the best result on two of three indicators achieved the greatest success in creation of a business environment, favorable for the competition. After it there are Poland and Slovakia which are a little yielding to it. The least competitiveness in the V4 group was shown by Hungary, which was the last in all selected indicators.

Keywords: The Visegrad Group, economy, economic policy, business environment, globalization

JEL Classification: O57, M21, K23, F02

1. Introduction

During the last quarter of the year, the V4 countries have developed close cooperation based on common values and interests (Khumalo & van der Lingen, 2017). The Community has become a symbol of both successful initiative able to realize common interests and a central element of cooperation in Central Europe. (Havu, 2016). On the occasion of the 25th anniversary of the Visegrad Group establishment, in June 2016 a conference with the participation of former political representatives and analysts of the member countries was held, where participants reminded themselves the successful cooperation of the Central

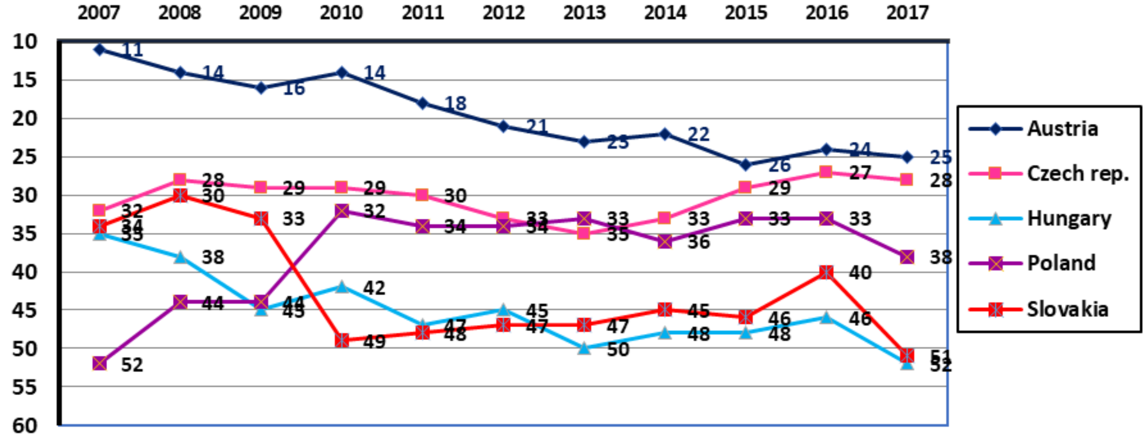
European states (Mahmood et al, 2017). All activities of the Visegrad Group are aimed at strengthening stability in the Central European region, mainly by enhancing the competitiveness of each country, which is also associated with appropriate business conditions (Vochozka, 2010). A high-quality business environment is a primary precondition for the development of efficient business and increasing the competitiveness of the country's economy. It creates the conditions for long-term sustainable growth. The subject of the article is the comparison of the business environment quality of Visegrad Four through one global index of competitiveness. As we tell about countries with similar input conditions, the article compares quality of business environment of these countries through four indexes narrowly focused on evaluating conditions that are friendly to performance of entrepreneurial activities (Escaleras & Chiang, 2017). Similar researches of various aspects of formation of a favorable business environment using competitiveness indicators are conducted by researchers from other V4 countries (Bruothova & Hurny, 2016; Ruzekova et al., 2016; Belanova, 2013; Spirkova et al., 2015). The value of improving the regulatory base for the successful catch-up development of the Visegrad Four countries is discussed in the article by Zemanova and Drulakova (2016), the importance of respecting the financial discipline – in the article by Andrejovska and Banociova (2014), a role of the developed transport system, primarily rail transport, – in the article by Dolinayova et al (2016).

2. Assessment of business environment

The assessment of business environment is tackled by several world institutions that compile different reports and country ranks according to the proper conditions for doing business. An important problem in this area is the complexity of the business environment, which limits the possibilities of its measurement and comparison in different countries. Mostly composite indices are used to assess the various factors and criteria, and therefore these indices can also produce different results (Szczerbiak, 2016). **The World Bank** monitors, evaluates and generates a database of business environments around 180 countries of the world under the name The Doing Business database and compiles the order of these countries according to the quality of their business environment, which in each country is currently assessed by ten areas, which are further defined by a set of indicators. In World Ranking Doing Business 2016, Slovakia finished as 29th out of 189 countries in the world. It was in the first thirty of countries with the best business environment. However, the view of Slovak entrepreneurs on the quality of the business environment is different; it is described by the World Economic Forum (Figure 2), which is created by surveys among entrepreneurs (unlike Doing Business rankings, which occurs from evaluations by institutions, lawyers, consultancy companies, and so on). The ranking shows that Slovakia has placed in the second fifty of chart. **The Swiss Institute for Management Development**, which publishes the World Competitiveness Yearbook (WCY) each year, also assesses the business environment. In 2017, the business environment of 63 countries was rated in pursuance of 327 criteria divided into four areas: economic growth, government efficiency, business efficiency and infrastructure. This year the Slovak Republic placed on 51st place among 63 countries. **The World Economic Forum** (WEF) publishes one of other business environment indices - Global Competitiveness Index - GCI. The index consists of eleven pillars: institutions, infrastructure, macroeconomic stability, healthcare and basic education, higher education, commodity market efficiency, labor market efficiency, financial market sophistication, technological readiness, market size, business efficiency and innovation. **The Heritage**

Foundation and The Wall Street Journal periodically publish the Index of Economic Freedom, which is based on the "10 Freedoms" rating: freedom of enterprise, freedom of international trade, fiscal freedom, government spending, monetary freedom, investment freedom , financial freedom, property rights, corruption, the labor market. See Fig. 1.

Figure 1: Comparison of the V4 countries and Austria (the main competitive region)

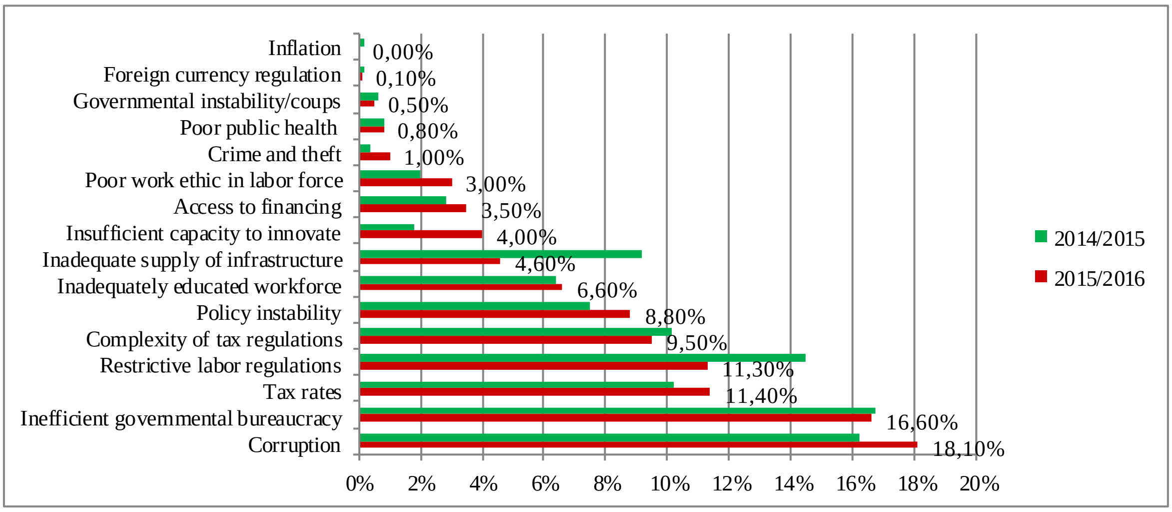


*Source: customized by World Competitiveness Yearbook 2007-2017 (*http://www.hayek.sk/)

The Business Alliance of Slovakia creates the Superindex traditionally from the freshest data of the four prestigious global ladders. Superindex is a unique assessment tool that combines the results of the Global Competitiveness Index (World Economic Forum), Doing Business (World Bank), the Heritage Foundation, and the Transparency International. According to the World Economic Forum respondents, i.e. entrepreneurs from 140 countries surveyed, had to choose the five most problematic factors for doing business in their country from the 16 proposed ones and rank them from 1 (most problematic) to 5. In Figure no. 3 it is possible to see the percentage score corresponding to the selected factors. In Slovakia, corruption is the biggest problem for more than 18% of respondents, the problem is long-lasting and, as seen from the figure in 2016, is the highest. A markedly positive year to year decline occurred in the perception of restrictive labor laws and inadequate infrastructure. The three most serious factors were also excessive bureaucracy and inappropriate tax rates. The overall assessment of economic competitiveness under the World Economic Forum shows that Slovakia should be improved mainly in areas related to public institutions and measures concerning the labor market and education. An area which Slovakia can be satisfied with is the development of the financial market, especially the availability of financial services. The three most serious factors were also excessive bureaucracy and inappropriate tax rates. The overall assessment of economic competitiveness under the World Economic Forum shows that Slovakia should be improved mainly in areas related to public institutions and measures concerning the labor market and education. An area which Slovakia can be satisfied with is the development of the financial market, especially the availability of financial services. A significant shortcoming in Slovakia is also the regulation of the business environment which, according to the Business Alliance of Slovakia (PAS), has not improved since 2006 and requires major reforms, especially in the field of judiciary, taxes and contributions, law making and enforcement, or the suppression of bureaucracy and corruption in Public Administration. Slovakia's other shortage in all the indices researched is corruption. Transparency International Slovakia regularly requests public opinion surveys thanks to which it monitors social perceptions of corruption in Slovakia. For 2016 Slovakia finished as 54th. This is a worsening on four points compared to 2015 when expanding number of countries from 168 to 176. This is the seventh worst placement from the

EU. Compared to past periods (2002, 2005, 2009), the problem of corruption is considered as the third of the most serious problems in Slovakia right after unemployment and living standards. The intensity of perceived corruption increased in almost all areas of life. For more information see Fig. 2.

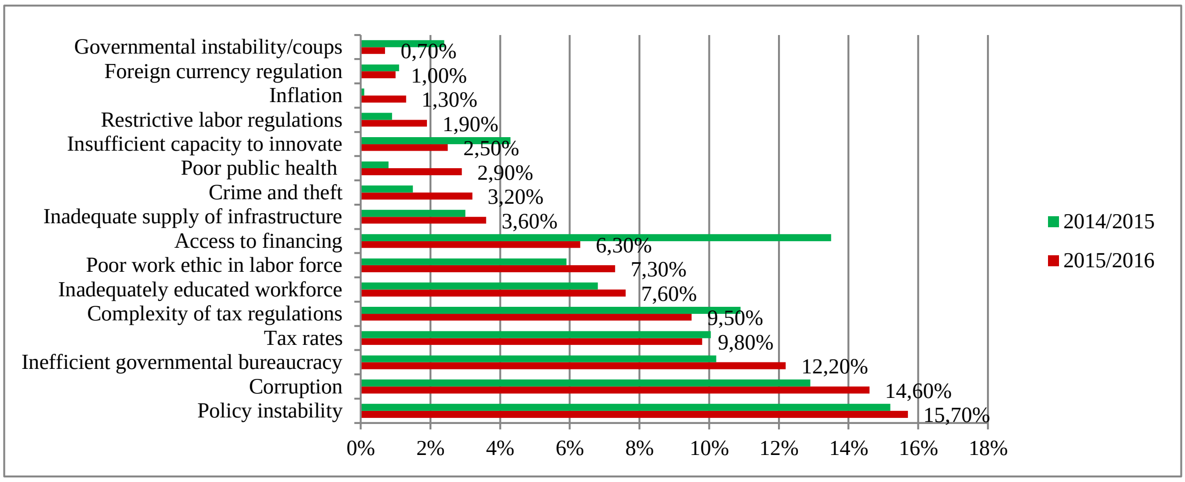
Figure 2: The most problematic factors for doing business in the Slovak Republic according to the WEF



Source: customized by http://reports.weforum.org/

In Hungary respondents perceive different business hardships than respondents in the Czech Republic and the Slovak Republic. 15.7% of respondents called political instability the most problematic issue, because most of the population is not satisfied with government policy and the economic situation in the country. The problem in Hungary is, inter alia, corruption and ineffective government bureaucracy. It is worth to mention the decline in tax rates and complex tax laws. This may have been caused by reduction in the personal income tax from 16% to 15% that occurred in 2016. The most marked drop has occurred in the area of access to finance, when the liberalization of the monetary policy of the European Central Bank in 2014 did not cause the Hungarian Central Bank to cut interest rates while the country's main interest rate was 2.1%. It was unexpectedly in March 2016, when the Central Bank reduced main interest rate to 1.2%. For more information see Fig. 3.

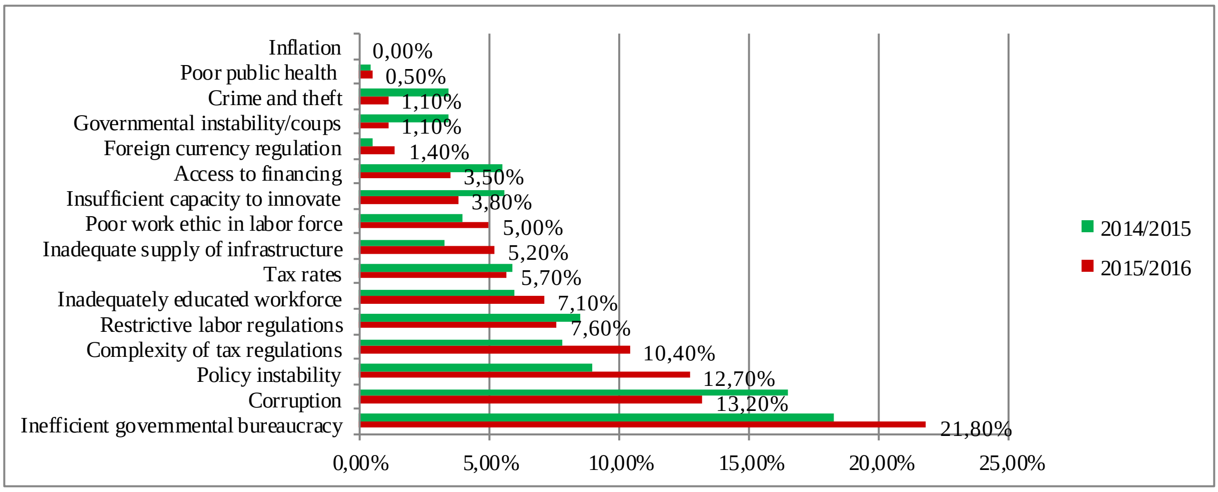
Figure 3: The most problematic factors for doing business in Hungary



Source: customized by http://www3.weforum.org/

In the last two pillars labeled as factors of maturity and innovation, where business sophistication was assessed, the Czech Republic was evaluated in general very positively, especially in terms of the quality and quantity of local suppliers, the maturity of the production process, and the extent of marketing. For more information see Fig. 4.

Figure 4: The most problematic factors for doing business in the Czech Republic



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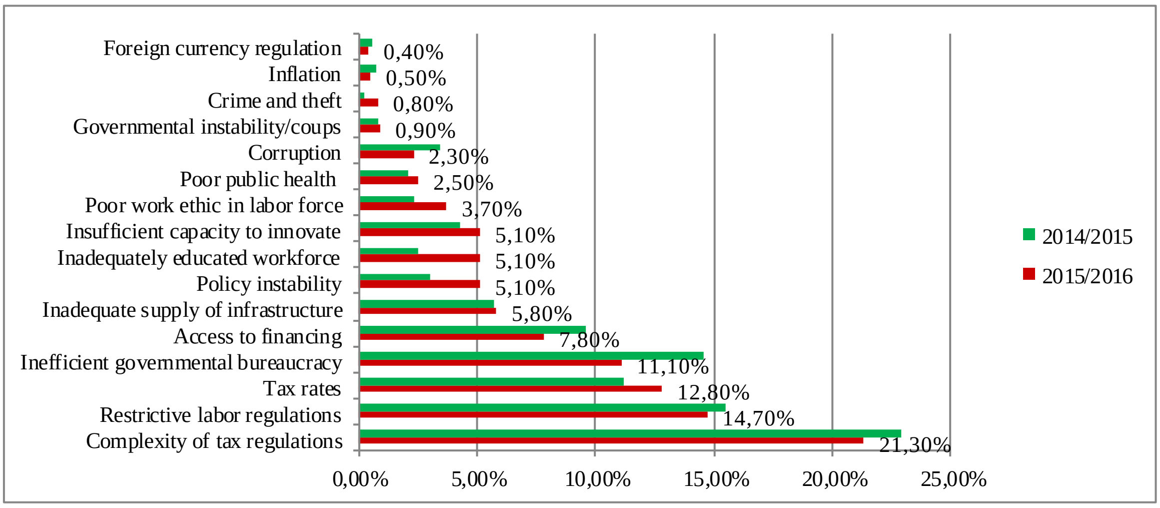
In the last pillar evaluated, innovation, the Czech Republic has achieved the worst position in procurement of advanced technical products and in the availability of scientists and engineers, and on the other hand the country's ability to innovate, patents and applications per million inhabitants, as well as spending on development and research was perceived positively.

Out of the sixteen factors offered (Figure 5) that most affected business in the Czech Republic, up to 21.8% respondents chose an ineffective government bureaucracy, which grew year to year to 21.8%. From the point of view of entrepreneurs, this could have been caused by the introduction of electronic revenue records in 2015. For more information see Fig. 5.

Figure 5: The most problematic factors for doing business in Poland

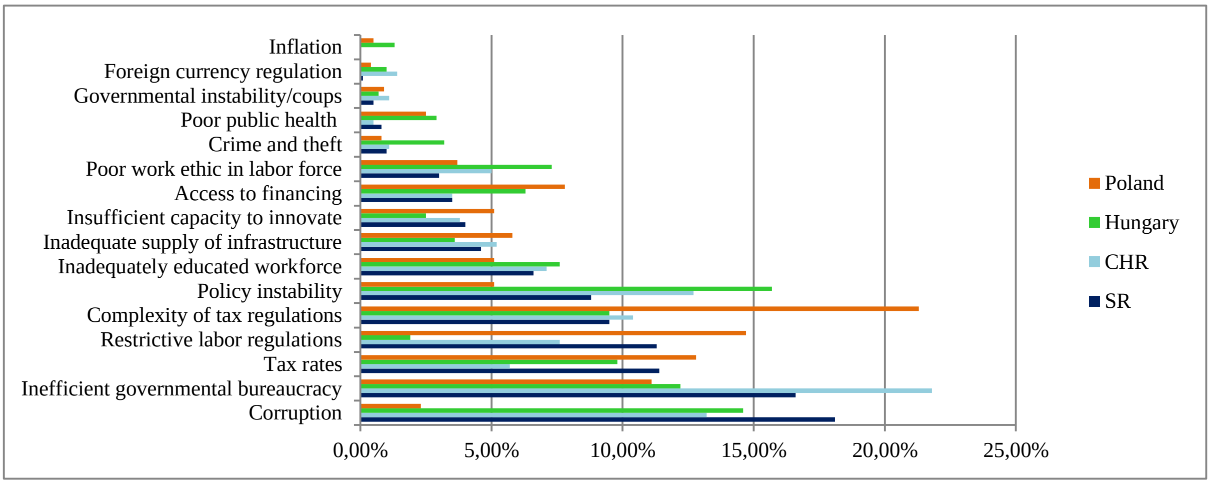


Source: customized by http://www3.weforum.org/

The most serious problems in Poland are complicated tax rules, restricting labor law and the tax burden itself, which represents 18% for individuals in the annual income up to € 20,106.26, over this income the income tax rate, is 32%. For legal entities the income tax rate is currently 19%, while in 2000 it was even 30%.

In Poland, the only country from V4, respondents do not consider corruption as a very serious problem because it is not widespread there, even though scandals also appeared there, but they were thoroughly investigated. According to the WEF assessment, Poland should improve itself mainly in the field of labor market, innovation and public institutions. It was positively perceived in market size, in higher education and in increasing qualifications.

Figure 6: The most problematic factors for doing business in the V4 region according to the WEF survey



Source: own processing

Fig. 6 shows the most problematic factors for the business environment, according to respondents in the latest survey of the WEF, for the lands of the Visegrad Region. The country which problems differ from the ones of the remaining V4 countries the most is Poland.

It is the only one that does not mention corruption among the most problematic factors, but the sore points in this country are complex tax rules, tax rate itself and restrictive labor laws. In Hungary the most perceived problems are ineffective government bureaucracy and political instability stemming from the policy of the current government. Corrupt scandals have reached the government level and the government, according to entrepreneurs, has even adapted legal standards to corruption. In the business environment of the CR inefficient bureaucracy, corruption and political instability are perceived as the most serious problems.

For entrepreneurs, bureaucracy is driven mainly from a large bureaucratic-control apparatus employing excess staff. Corruption in the CR is present in the political sphere and the new phenomenon is the so-called sides of oligarchs who have certain economic and media power, which seems to be very dangerous.

Political instability stems from dissatisfaction not only with the government but also with contradictory statements by the president. SR and the CR have quite similar problems when corruption and inefficient government bureaucracy, such as tax licenses and tax rates that are the highest in the V4 countries, are considered to be the most serious ones in the business environment (see Tab. 1).

Table 1: V4 Placement in reviewed areas of the survey Doing Business 2016

Indicator	SR	CZ	PL	HU	Best location
Start-up	68	93	85	55	New Zeeland
Licensing procedures	84	127	52	88	Singapore
Access to electricity	48	42	49	117	Republic of Korea
Property Registration	5	37	41	29	New Zeeland
Availability of credit resources	42	28	19	19	New Zeeland
Investor protection	88	57	49	81	Singapore, New Zeeland, Hong Kong
Tax obligations of enterprises	73	122	58	95	United Arab Emirates, Qatar
Crossborder trade	1	1	1	1	The EU + others
Enforcement of contracts	63	72	55	23	Singapore
Solution of insolvency	33	22	32	65	Finland

Source: own processing

The complete location of the V4 in the evaluated areas according to the survey Doing Business 2016 is showed in the table. Based on the analysis of the country's competitiveness including the business environment, it can be concluded that the CR became the most competitive country in the Visegrad Region, followed by Poland and SR. The least competitive country in the V4 region became Hungary, which ranked as a last. In any case, it can be said that in terms of the business environment, all four countries have the potential to improve these conditions.

3. Conclusion

The V4 countries have become a major automotive power within Europe. Last year 3,651 million cars were produced in the V4 region what is about one-quarter of Europe's total production. Automobile production employs more than 630,000 workers in the region and directly or indirectly affects the creation of more than 1.3 million work places. The share of the automotive industry in GDP production is also significant what has a major impact on the economies of individual V4 countries. The common problem of the V4 countries is, in their view, especially the acute shortage of qualified labor and coordination of the EU legislation related to the automotive industry. Representatives of the V4 automobile unions jointly called on governments to deepen cooperation and act together to maintain the growing trend and boost the competitiveness of the V4 automotive sector.

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MEASURING EFFICIENCY OF SELECTED MARKETING COMMUNICATION INSTRUMENT IN GLOBAL WORLD

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Abstract. In today's globalized economic environment, the use of marketing tools is a continuous process, which is to follow global trends and be able to flexibly respond to changes in the global market. Right and timely responses can contribute to gaining competitive advantage, especially because it strategically optimizes the choice of communication channels. The optimal combination of marketing communication tools is strategically important for developing a long-standing relationship with target groups. However, an ongoing evaluation of effectiveness is an important element of selected communication means and optimization suggestions. Measurement effectiveness is a prerequisite for streamlining reach and effect marketing activities. This article deals with measuring the effectiveness of online marketing in the business environment within the global market. The aim of article is to analyze the use of the chosen marketing communication tool, quantify its effectiveness in global conditions and propose possibilities for evaluation of its effectiveness. The first chapter deals with the introduction of problems and defining the specifications for measuring the effectiveness of individual marketing communication tools. The second part deals with methods and approaches of measuring efficiency using new methods of predicting the effectiveness of marketing communication activities, measuring the effectiveness of marketing communication and measuring the effectiveness of marketing communication on the Internet. In the third chapter, we analyze online promotion through Google Analytics. The conclusion of the article contains suggestions and recommendations for assessing online marketing and its effectiveness.

Keywords: efficiency, marketing communication tools, marketing on the internet, online marketing, Google Analytics

JEL Classification: M0, M3, O3

1. Introduction

Effectively chosen communication tools are necessary to achieve a competitive advantage in the global environment. Measuring the effectiveness of marketing communications on a global scale is not only about detecting the profitability of marketing communication tools but above all about revealing the possibilities of optimizing its resources. (Banerjee et al., 2016).

In this paper I focus on defining the specific properties of measuring the effectiveness of individual marketing communication tools, providing information on the possibilities and ways of measuring marketing communications at global level, as well as measuring marketing communication tools and overall promotion on the Internet. However the main part of the article remains the analysis of the marketing instrument, its effectiveness, and the subsequent submission of proposals and recommendations to improve the effectiveness of the instrument.

2. Problems in measuring the effectiveness of marketing communication tools in the world

According to the authors (Key & Czaplewski, 2017), we may encounter an internal insulated problem that arises from the fact that revenue is achieved by synergy and a combination of all or some of the marketing communication tools, and therefore we can not precisely determine the part that is gained from the impact of a specific marketing communication tool. The second problem is the external insulating problem that solves situations where the increase in sales is due to an objective change in environmental conditions. (Lazaroiu, 2016). Authors (Majtan & Frian, 2010) add that marketing communication is only one tool to increase the sales of products. Product price, its quality or competition are also included in the sale. (Grębosz & Otto, 2017) add another problem that is related to the fact that not all the factors of marketing communications that affect sales can be measured. Another reason is according to (Kordalska & Olczyk, 2016) that the effect of marketing communication can not be accurately expressed by just one quantitative indicator. Marketing communication can be effective, though not always this effect may be reflected in economic efficiency (Postelnic et al., 2015). Also the effect of marketing communication, respectively. its tools may not be unambiguous and often manifests itself with a certain time spacing of the so- (carry-over effect) claim (Jerman & Zavrsnik, 2012).

2.1 New methods of measurement of efficiency

Basic methods for measuring efficiency are, according to (Fernandez-Cavia et al., 2017), a method of evaluating communication effects and a time factor. However, these methods do not respect the specific limitations of marketing communications, so we look at modern approaches to measure the effectiveness of marketing communications using neural networks and data packaging analysis models.

2.1.1 Neural networks

The model we want to use in measuring the effectiveness of marketing communication must be based on the purpose for which the neural network will be used. (Cisko & Klieštik, 2013) claim that the economic disciplines point to the suitability of the following models: Linear Network (LN), Generalized Regression Neural Network (GRNN), Probabilistic Neural Network (PNN), Multilayer Perception (MLP), Radial Basis Function (RBF) and KohenNetwork (SOFM). For empirical studies, demand systems are relatively complex. It is often impossible to obtain analytical solutions for dynamic company price problems. Numerical dynamic programming techniques are useful in addressing these dynamic price problems. Particular attention should be paid to the functional form of network effects. (Rao, 2009) states Linear Network - Linear network effects are often assumed in analytical models. This means that the value provided by the network increases linearly with that base. (Mantri,

2014) approaches the issue of use, claims that a generalized regression neural network (GRNN) can approximate any arbitrary function from historical data. The main strength of the GRNN is that its internal structure is not dependent on the problem. This model allows you to solve any problems with monotonous features. Probable Neural Network (PNN) - is the GRNN analogue that is used to handle the classifying task type. The PNN is based on the estimation of the probability distribution of the different classes obtained from the training samples and the calculation of the non-linear decision boundaries that approximate to the optimal one. (Shahsavari et al., 2010) talk about Multilayer Perception (MLP) - the major goal of hybrid MLP and comparative cross-validation of individuals is to significantly reduce the error rate and runtime. Due to the significantly reduced running time and targeted search, more solutions can be evaluated over a short period of time. Radial Basic Function (RBF) - consists of an inlet and a hidden layer with radial units. (Blattberg et al., 2010) found that the RBF network is a simpler implementation than a multilayer perceptron, needs less memory, converges faster, provides slightly better predictions and achieves global minimum convergence. Kohen Network (SOFM) - SOFM adapts to prototype values for mirroring data, both in terms of representation by six segments, as well as in terms of typological arrangement along the grid, according to (Shahsavari et al., 2010). Each vector data is presented to the SOFM once again, each of which is associated with a prototype.

2.1.2 Analysis of data packages

According to (Jablonski & Grman, 2009), the DEA method is among the most important means of economic management around the world. It can measure the effectiveness of individual producers within a particular group. DEA models are based on the fact that for a given problem there is a set of production possibilities made up of all permissible input / output combinations. The set of production options is determined by an effective boundary. If the combination of inputs and outputs of the respective unit is at this limit, it is an efficient enterprise. If the unit is not effective (it is not at the production limit), it is necessary to adjust the size of its inputs or outputs. How to reduce or increase outputs can be found again using the DEA solution. The advantage of using DEA models to measure efficiency lies in according to (Majtan & Frian, 2010) in the allocation of different weights to production units, since different inputs and outputs are of different significance, different weights are assigned to them. These weights are obtained from optimization data using linear programming and are not just a subjective perception of the production unit.

2.2 Efficiency measurement on the internet

The Internet is increasingly providing a platform for effective marketing communication. It is easier to measure individual promotion tools with software tools. In this chapter, we evaluate software tools from Google.

2.2.1 Google Analytics

Measurement of efficiency based on the use of measurement codes has been the biggest boom according to (Janouch, 2014) since Google introduced its Google Analytics tool. It is free of charge and is one of the most used tools in the world. It is a tool that allows you to record data just thanks to the javascript code implemented on the site. (Little et al., 2013) speaks to about an audience that focuses on evaluating site visitors' demographics. Identifies the gender and age group used for effective segmentation for the following ads. The interest group determines the nature of the interest of the visitors, according to which we can also find potential competition. According to (Cutroni, 2010), demographic data is also identified in the audience, which provides information on which sites are accessed and which language they speak. Location information is detected using IP addresses associated with geographic locations. The Acquisition provides information on where they come from on site visitors. With this data, we can explore the visitor behavior until the desired goal - conversion is achieved. Visitor management consists of tracking channels that allow visitors to sort by the most used traffic sources. Behavior reports allow you to sort your visitors according to whether they are new or returned visitors. It also tells us the frequency of interest in the site. The most important thing, however, is to evaluate the conversions themselves. (Kim, 2017) states that conversions help us to understand the value of our online advertising.

2.2.2 Google Adwords

Google AdWords is an online advertising service developed by Google to advertise your ads. Advertisers pay for ad serving to site users. The system is based on cookies and advertiser keywords. AdWords provides a Conversion Tracking tool advertisers lets you track how many clicks lead to a conversion, such as increasing brand awareness. The following metrics (Little et al., 2013) identify whether an advertising campaign is effective and how it influences brand awareness. The first metric is interest - many authors now agree that the most important thing is creating a brand association. The views represent the number of people who have come into contact with a slogan or a link that's just for remembering the tag (Ortiz-Chaves et al, 2017).

The second metric is customer engagement - when we focus on branding, it is important for us to interact with website visitors. Reach talk about greater reach represent reaching more visitors, which may also mean more brand awareness. Frequency shows the average number of impressions of a particular ad for visitors for the period we've determined.

2.2.3 Google Adsense

Google AdSense provides site owners with the ability to effectively monetize their online content. AdSense is based on the attribution of text and content ads to a website based on the nature of their content and visitor data. Advertisers create and pay for ads promoting their products. The amount of profit is different for different ads, as advertisers pay different amounts for individual ads they use, claim (Cutroni, 2010). (Oze, 2017) implements Google using contextual targeting - Targeting uses keyword analysis, word frequency, font size, and overall structure of weblinks to determine what site is focused on and how ads are assigned to individual websites.

The second option is placement targeting - advertisers choose the specific placement of their ads or sub-sites for individual websites and their publishers where they want to place their ads. The third way is customized for advertising - advertising is tailored to advertisers according to their interests and demographics. Language targeting serves to identify the primary language of a page and to customize the content of the ad in the language that a visitor requests.

3. Evaluation

The goal of the analysis is to evaluate the effectiveness of on-line promotion through Google Analytics metrics and then to suggest recommendations and ways to make it more effective. ARMY ORIGINAL is an online store that sells through its own website: www.armyoriginal.sk. The company implements its web activity through Intelligent CMS system that manages open source content (MS-PL). It is built using ASP.NET MVC, which provides website developers with a simple and easy-to-use tool to create semi-staticwebsites or even complex systems by expanding the base with new modules.The analysis consists of evaluating the company's set conversions. Conversion is the goal the company wants to achieve and it is the realization of the purchase. The analysis will be carried out in 2015 and 2016.

3.1 Analysis of demographic data

Customer gender also plays an important role in the number of purchases made. It specifies the segment that we should focus on. The purchase was completed by 1,978 men and 735 women in 2015. In the following year, it was 5,452 men and 1,874 women that we can see the Tab. 1. Greater percentage change occurs in women, but men have made more purchases.

Table 1: Evaluation based on customer gender data

Male		
1. 1. 2015 – 31. 12. 2015	1 978	72,91 %
1. 1. 2016 – 31. 12. 2016	5 452	74,42 %
Female		
1. 1. 2015 – 31. 12. 2015	735	27,09 %
1. 1. 2016 – 31. 12. 2016	1 874	25,58 %

Source: Google Analytics

Tab. 2 shows the age structure of the customers who made the purchase. The most prosperous age category for the company is 25-34 year old customers who made 1 015 purchases in 2015 and 3,046 customers in 2016. Older categories make less purchases, which is also understandable in terms of product character.

Table 2: Target assessment based on age structure data

25 – 34		
1. 1. 2015 – 31. 12. 2015	1 015	39,54 %
1. 1. 2016 – 31. 12. 2016	3 046	42,63 %
36 – 44		
1. 1. 2015 – 31. 12. 2015	598	23,30 %
1. 1. 2016 – 31. 12. 2016	1 852	25,92 %
18 – 24		
1. 1. 2015 – 31. 12. 2015	710	27,66 %
1. 1. 2016 – 31. 12. 2016	1 287	18,01 %
45 – 54		
1. 1. 2015 – 31. 12. 2015	148	8,41 %
1. 1. 2016 – 31. 12. 2016	601	5,77 %

Source: Google Analytics

In terms of demographics, we have the ability to analyze Google Analytics and reach goals in terms of customer interests, see Tab. 3. The largest customer representation is made by customers who prefer watching TV, namely drama, comedy, science fiction and fantasy.

Table 3: Evaluation of the target according to the number of customers who belong to a particular interest group

TV Lovers/Sci-Fi & Fantasy TV fans			
1. 1. 2015 – 31. 12. 2015	3 327	1,20 %	268
1. 1. 2016 – 31. 12. 2016	20 379	1,32 %	40
% of change	512,53 %	9,38 %	570,00 %

Source: Google Analytics

However, Google Analytics shows interest groups based on the number of customers moving between individual interest groups and not by the number of conversions per group.

3.2 Geographic data analysis

Geographic data analysis consists of location tracking where visitors are at the time of access to the website and language of the webpage they are viewing. However, language data is distorted because the site offers only the possibility of translation into Czech and Polish, and visitors from other countries can only choose from these options. Therefore, i perform the analysis only based on the geographical location, see Tab. 4.

Table 4: Target evaluation based on customer's geographic location

Slovakia		
1. 1. 2015 – 31. 12. 2015	5 908	95,77 %
1. 1. 2016 – 31. 12. 2016	9 446	90,73%
Czechia		
1. 1. 2015 – 31. 12. 2015	91	1,48 %
1. 1. 2016 – 31. 12. 2016	650	6,24 %
Germany		
1. 1. 2015 – 31. 12. 2015	26	0,42 %
1. 1. 2016 – 31. 12. 2016	89	0,85 %

Source: Google Analytics

The number of purchases made is the largest in Slovakia, because it is a Slovak internet store that primarily brings high quality products on the domestic market. Purchases from Slovakia were made at 5,908 for 2015 and 9,445 for 2016.

3.3 Behavior analysis

Behavior analysis is a way of identifying visitors to new or returning visitors. It reflects how visitors behave on the company's website. How much time they spend on it and how many pages you visit on average. The rate of new customers, whose sessions in 2015 accounted for 243 924 sessions, and 385 257 sessions were made in 2016. Returning customers to the number of sessions is more. For new customers, the rate of immediate exit is around 40% in both years, returning visitors by 3.79% less for the year 2016. We also have metrics to measure the effectiveness of both the main page and its various subpages. However, sorting is based on the most unique display of a website rather than its value. The main site has the most unique views in 2015 it was 126 239 and in 2016 it was 196 487 views. Based on the analysis, we can state that ARMY ORIGINAL, a standard customer, is a 25-34 year-old man living in Slovakia, preferring to watch television. The result is also confirmed by the fact that ARMY ORIGINAL has focused precisely on this segment.

4. Conclusion

At present, the Internet platform is one of the most attractive and most used communication tools. The aim of this article was to analyze the application of the chosen marketing communication tool, quantify its effectiveness in the conditions of the given business, and propose ways to improve its effectiveness. We have found that data from the online marketing tool brings useful metrics to measure the effectiveness of online marketing, but they do not provide the ability to create advertising campaigns based on the metrics you've earned. These limitations specifically address the issue of optimizing search and providing the ability to create effective marketing campaigns. That's why I suggest linking Google Analytics with Google AdWords and optimizing with SEO and SEM. We know clearly and precisely in AdWords that we set a daily budget based on which we calculate maximum monthly costs. Another benefit is that we see how many people viewed our ads, how many of them clicked on your ad, made a certain action or downloaded your app. With all your AdWords exits, you know how many new customers or ads cost you and then decide how much money you spend on your ads. Also, if you manage accounts with multiple clients, you will definitely appreciate the My Client Center (MCC), which is a powerful tool for managing all your accounts in one place and with one login. You can also manage your offline accounts using AdWords Editor. Use of SEM should be considered if the search engine competitor for the keyword is too high and even excellent SEO optimization can not ensure that the site will appear in the first position. The SEO and SEM approach is of course suitable for combining, especially with newly created websites. Once SEO optimization takes place and the site strengthens its position in search results, it is possible to turn off SEM campaigns or reduce on SEM spending.

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INFLUENCE OF MARKETING COMMUNICATION ON CONSUMER BEHAVIOUR OF THE GENERATION Z AND INCREASING OF BRAND VALUE FROM PERSPECTIVE OF THE PRESENT GLOBALIZED SOCIETY

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Abstract. Marketing communication of brands greatly dynamizes the changes in today's global society. By means of properly targeting campaigns, it affects consumer behaviour across all age groups over the world. The current marketing communication of brands oriented primarily to the younger generation is from the point of view of media selection, but also the content of communication more courageous and closer to the target group. This also results from the international trend - high rate of internet consumption by the young generation (teenagers), which is connected almost continuously and can be traced almost anywhere. Brands through innovative campaigns and the use of the most advanced digital media and their forms (applications, games, POS materials, entertainment and viral content on social media) no longer only inform, but mainly entertain, are interactive, and have a significant share to consumer behaviour of the selected target group. They will become a "lovebrand" tag. For this reason, in recent years, higher demands are being made to develop the theory of branding, which today we do not have to perceive only as an economic factor but also as a factor deriving from the very idea of a communication campaign, positive attitudes, brand popularity, which should be part of a long-term brand strategy. This article points to the current global trends in marketing communication of the selected brand, their transformation into a communication strategy for selected market segments in the regarding of changes in consumer behavior and branding in the context of social, marketing and economic factors.

Keywords: generation Z, global brand, brand value, marketing communication, digital

JEL Classification: M30, M31

1. Introduction

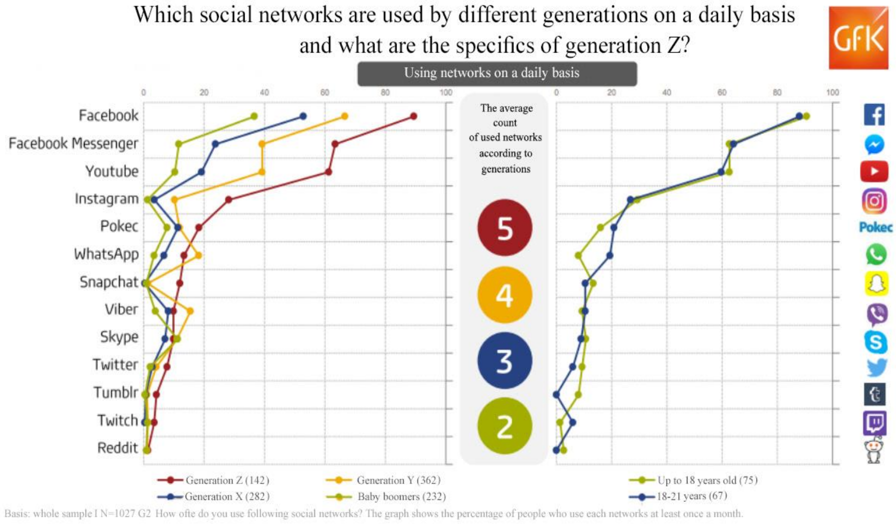
Building a strong and stable brand that will act in the minds of consumers as their “lovebrand” is currently based mainly on the relationship of the brand to the young generation and vice versa. Due to global trends, the branding as well as communication rules have changed radically over the last years. Emotional factors that create the highest brand value in consumer minds based on positive brand perception, knowledge, positive brand associations as well as long-term loyalty are emerging to the forefront. Increasingly, the criteria of brand authenticity, nature, diversity, credibility, locality and loyalty are becoming more and more important for the consumers. Media digitization has opened up the possibility for people to collaborate on branding. The "I talk, you listen" principle has changed to "let's talk together". Traditional media are not followed by the contemporary generation of teenagers. Instead, the social media have become the primary source of information, entertainment and communication for Generation Z (Muposhi et al., 2015). Facebook, YouTube, Instagram, or Snapchat, these are the media that make up its natural part. Brands can no longer engage in one-way communication. On the contrary, this generation likes to be a part of a story that is understandable to them, promotes personality and firmly anchored brand values (Edu et al., 2014). Whether the brand uses videos, photos or stories for communication, Generation Z needs to be able to identify with them.

1.1 Generation Z specifications

Generation Z is made up of people born after 2000 (the literature sometimes refers to the earlier years of birth, e.g. since 1994) and is also called "digital". While Generation Y grew up on television and the Internet was only another medium, for Generation Z and community it lives in, the Internet is the first choice. For the first time in modern history, generational knowledge and the hierarchy of power has been reversed. (Grecu, 2013). We know also differences between generations as stated Cennamo and Gardner (2008) these differences are confounded with changes due to ageing, experience, life stage and career stage. Even so, changes to work and the fact that each generation was introduced to work at differing points in time suggest that work value differences may exist between generations.

The 2016 GfK survey showed that the parents of the Generation Z spend on average about two hours watching TV, while the teenagers less than 75 minutes. It's about half an hour less than Generation Y. Young people, however, spend about an hour a day on YouTube. Other research results of this agency showed that the average teenager actively uses about five social networks, with up to half of them being accessed on mobile phones. 90% of young people are on Facebook on daily basis. While Facebook reigns over social networks, Instagram and Snapchat are also gaining in popularity. It is especially typical for young people that they consume much more content than they produce. Social networks are becoming their primary information channel. From the point of view of daily use of services, social networking is the most used. Google information searching, watching videos, listening to music or radio are next. These activities are also typical for Generation Y, but to a lesser extent. Reading news portals, writing blogs, online shopping or internet banking are among rarer activities. According to the survey, sending and receiving emails is quite interesting for Generation Z. The most popular online youth media is daily used Facebook, followed by Facebook Messenger and YouTube. The other media are used significantly less by young as well as older users, but many teenagers are exploring new channels - almost 30% use Instagram, nearly 20% are on Pokec and 12% on Snapchat. This trend is coming from abroad, where Facebook is popular, but despite strong competition, many new services are growing fast. Taking a closer look at Generation Z itself, we can see slight variations within it as well, which suggests further developments. If we compare the youngest users aged 18 and the eldest users of this target group, i.e. 19-21-year-olds, it is obvious that the first group uses, for example, Tumblr more, while the other one is slightly more active, for example, on WhatsApp. (https://medialne.etrend.sk, 2017). For more information see Fig. 1.

Figure 1: The use of social media by different generations



Source: www.gfk.sk, 2017

Generation Z is isolated by technology, but at the same time also most interconnected by it. According to the advertising agency J. Walter Thompson, year 2017 will therefore be important. As the oldest members of the Generation Z are gaining a spending power, companies will begin to switch their attention, which over the past years was focused mainly on the Millennials, to them. From the marketing agencies of the global companies we learn about this generation the following (http://strategie.hnonline.sk, 2017):

- From the communication point of view, it is very specific. It wants to belong, to be respected, and to share experiences with friends online.
- In communication, the content is important to it. It is necessary to observe, ask more questions, map the communities, identify their heroes, and know the rules and the language of the tribe.
- The brands could see the solution in more authentic communication, switching to digital, using the high-end technologies, vlogs, virtual reality or social networks.
- It is important to use the language of this generation along with the media it uses. Local stars, ambassadors who have grown directly from the crowd - vloggers and bloggers, are their idols.
- Each strategy for this target group must include elements such as brand honesty, high degree of distinctness from the other competitors, authenticity, and even social responsibility.
- Brand communication must be exclusively on the platforms used by Gen Z. One of the ways to approach Generation Z is to combine a variety of media in the campaign.
- This generation has an active and selective approach to content and likes to create it.
- It should be approached differently, but the principle remains the same: it has to be either funny or useful.

1.2 Brand and brand value

Brand is a combination of name, visual, audio and other sensory elements (Wiese & Kruger, 2016). These elements differentiate it from the competition, but they are also a guarantee of quality and security of choice (Valaei & Nikhashemi, 2017). For consumers, brand is an indicator, it creates a positive associations, reduces the risk associated with the purchase as well as the costs of searching for information. It is important that the brand builds its value, which Adamson (2011) understands as a certain promise, based on a functional benefits, i.e. product attributes, emotional benefits, i.e. the feeling coming from using the product. If the brand is not distinguishable by a product attribute, it can be distinguished by the image. Hrabačková and Sabo (2012) list the brand image as the fifth most important factor influencing the purchasing decision made by Slovak consumers.

„*A brand is what you are left behind after your factory has burnt down. This is a famous quotation by D. Ogilvy, which can best illustrate the core and value of the term brand. Each one is specific and the aim and endeavour of marketers is to create such a brand that will be of high value and the very name of the brand will represent the whole category for consumers.“* (Matúš & Matúšová, 2016)

Due to competition and higher customer demands, the need for building a brand in a long-term context has developed. *"Brand equity is very important for marketers because the brand equity can increase consumer preference towards a brand. Products with strong brand equity can give a strong foundation of brand and are able to develop the existence of brand in any competition in the long term."* (Prabowo, H. A., 2015)

„*Advertising, as an essential component of marketing communications, can enhance brand name recognition and create a reputation premium such that the brand commands a higher price relative to competing products with identical physical features. Strategically, brand-based advertising can create brand equit*y.“ (Chu, S. & Keh, H. T., 2006)

In response to the emergence of communities in our lives, the need for dialogue and consumer involvement in the whole process has become a new element of brand building. "*The brand value creation is highly dependent on practices of the consumers. If brands are communicated as open contexts and not as closed systems of values, they may be linked with emotionality of the consumers and thus fulfil the idea of lovemarks."* (Roubal, 2017) While brand is a signal given to the consumer by the producer, lovebrand is something within the heart of a consumer. The aim of the companies is to monitor the life of brands and through communication activities to build a brand that customers will love.

1.3 Communication strategies aimed at building brand values (Lovebrand)

In time of global brands and increasing demands of Generation Z consumers, it is necessary to take into account the specific factors when building the brand. Specific factor for brand building is the digitization of media, the second one is authenticity. The digitization of the media has brought the knowledge of the brands that consumers themselves voluntarily seek. The unidirectional story of brands ceases to work. The consumers want to participate in the creation of content which they can add and share. The result is a content created by people, which has the potential to become viral. But the more the world is globalized, the more consumers value local products and authenticity. This is a very long-term trend which is influencing branding. (Grešková, 2016) Minár (2017) claims that "*people like brands which* *give their consumers a story that persuades them that 'this brand understands me' better." "The quality, traditional, bio, local brands that give people meaning such as authenticity and reality are coming to forefront."* Social media like Facebook, Instagram, YouTube, and Snapchat are preferred. While Facebook is considered to be more popular, Instagram is trendier. What is popular on Facebook does not have to be on Instagram and vice versa. This was proved by the latest Socialbakers survey at the Engage Prague 2017 conference. The results of this survey showed that Facebook is used more for news reporting and community themes followed by celebrity news, entertainment and branding. On the contrary, Instagram is more about celebrities and brands. Useful tools in social media environment are photos, videos, stories (location stories, hashtag stories, even Snapchat group stories), live broadcasts, celebrities, influencers, hashtags, sponsored links, virtual tours, reviews. Authors Záziková and Kusá (2016) state that, according to the Forbes magazine of 2013, Generation Z is not subject to Facebook. Facebook is good, but this generation is dominated by Instagram. Nevertheless, in order to achieve effective communicattion it is recommended to use multiple channels simultaneously and create so called multiplatform campaigns. For reaching out to Generation Z, it is appropriate to use smartphones, mobile phones, tablets, laptops. However, it is important to keep in mind that Generation Z uses multiple devices at the same time, for example using tablet or smartphone while watching television. (Miklošík, 2015) Nowadays, YouTube is followed by the majority of young people in order to listen to music, watch the stories of YouTubers, vloggers or influencers. „*You need to be careful, though, as when giving the product to a YouTuber, you can kill your brand because the YouTuber is stronger than the brand*." (Pastier, 2017) YouTuber can act as content creator or content distributor in the campaigns. He can take up different roles including the role of a hero, topic ambassador or tester. The most successful Slovak YouTuber is currently Gogo with over 1.5 million subscribers. He is followed by Expl0ited (with 743 000 subscribers), Selassie (over 500 000) and Moma (327 000 subscribers). „*The Zs are the children of PC, GSM and Internet. The members of the Generation Z trying to comprehend the rapidly changing world and grow up in it are the generation of the future. One of the positive traits contributed to this generation by the Internet technology is that they are able to be interested in more than one subject at the same time. Their most distinct traits are socializing through Internet, consuming rapidly, practicality and speed, interactivity, efficiency, dissatisfaction and being result-oriented. They suppose anything possible in the World and can do everything thanks to their equipment. They are expected to live under better living standards, longer and be wealthier than the previous generations thanks to the advanced technology. Based on the specified traits of the Generation Z, they are expected to have characteristics such as multitasking, efficient technology utilization, individualism (not to like the teamwork), creativity, global point of view and preference of non-standard and personalized works."* (Berkup, S. B., 2014)

2. Communication strategy and factors of building Fusakle brand value

We could say that the brand market where also Fusakle brand operates has dynamically changed over the last decade. Currently, especially the young generation in Slovakia looks also for Slovak brands in addition to the standard foreign ones and appreciates the opportunity to wear and own something extraordinary. Despite being on Slovak market for relatively short time, the brand Fusakle has become extremely popular especially among the target group of younger consumers. This brand produces and sells stylish colourful patterned socks. The idea was to bring something new and unusual on the market while at the same time to get back to the traditional in the minds of consumers (hence the name Fusakle which is a dated Slovak word for socks) and restore tradition of the original Slovak production of clothes and accessories, which has gradually vanished and has been replaced by foreign brands in the shopping centres. Its founders claim: "*We travel a lot and we always like to bring a souvenir back home. We often bring some interesting socks. As the offer in Slovakia has been limited until now, it occurred to us we could build on the long-gone glory of Slovak textile industry and create a local brand that would be recognizable, competitive and mainly interesting for the locals.*" (www.fusakle.sk, 2017) The target group of the brand are people who: "*enjoy life, like to have fun, are open-minded, think outside the box, like to explore, express their opinion and show their mood...They are men and women, managers as well as workers. There is no difference in profession, or the gender. However, there is a difference in the perspective on life.*" (www.fusakle.sk, 2017) Through visuality, communication as well as brand values, the brand aims to reach the excellence among the competition on the market for consumers who are innovative, love fashion and follow trends, have style and like to express their mood and feelings. The factors of building brand value in relation to target group include:

Functional benefits:

- *Quality socks*
- *Slovak brand, a return to the traditions*
- *Unique style and imaginative design, new design every season*

Emotional benefits:

- *Individually customized product option*
- *Special editions (Valentine's day, "For Him and For Her," Slovak folklore, the beauty of Slovakia, ...), and a special gift pack*
- *Engaging customers in branding process (custom designs of fusakle, co-creation of communication content)*
- *Thematic communication and memorable language, e.g. "Fúzletter" (i.e. newsletter), socks' names: "Gentleman červenobodkáč", "Pééétržka"*
- *Authenticity and positive emotion in communication (realistic photos from real environment)*
- *Support for the social topics (Gay Pride)*
- *The feeling of being extraordinary coming from wearing comfortable, stylish, trendy Fusakle*
- *Sponsoring events for young people*

The Fusakle communication strategy is set up to give fusakle wearer a unique feeling. It is based on involving the customer in the process of: (i) Fusakle product co-visualization (sending own suggestions of folk designs in the #fusaklepodlamna competition); (ii) co-creating of communication content; (iii) encouraging customers to share their photos of Fusakle with hashtag #fusakle and #ziadnanuda. The primary tool for communicating this brand is its website where users can view and order the products or be informed about the latest products. Communication via social media such as Facebook and Instagram is popular among contemporary generation. While posts on Instagram are more tied to the stories and photos from the life of other users concerning travel, sport, leisure, shopping, socialising with friends, etc., the posts on Facebook are more about funnier events depicting the life with Fusakle. They also include competitions, product news, information from the backstage of sock production, information about Fusakle presentation sites, events and also videos. The content of these two social networks is not the same due to the fact that each one serves a different purpose. On Instagram, Fusakle brand posts nice, stylish, "engaging" photos that make it easy to create a "lovebrand."

3. Conclusion

Branding is an important part of differentiating the brand in the market. When consumers choose between products which are more or less similar, the brand and its name can ultimately affect the purchasing choice of people to the fullest extent. The challenge is to create brand relevance and value, to promote a positive perception of these values, increase brand awareness, strengthen the good reputation of the brand, increase customer loyalty, create the right position and identify with the target audience in order to sufficiently differentiate itself from the competition. In addition, it is important to build personality and value to create an emotional relationship with customers. This is particularly important for achieving the position of a lovebrand.

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THE CODEX ALIMENTARIUS COMMISSION AND THE PRECAUTIONARY PRINCIPLE

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Abstract. The Codex Alimentarius Commission established in the 1960s converted from an insignificant advisory body to the World Health Organization and to the Food and Agriculture Organization to a global standard setting body whose legally non-binding norms are enforceable in legal disputes resolved by the World Trade Organization. Some of these disputes could have been prevented had the Codex Alimentarius Commission included the precautionary principle in its recommendations and had it stipulated the conditions for the application of the said principle with respect to the protection of public health and consumer preferences. The aim of this paper is to discuss the role of the Codex Alimentarius Commission in applying the precautionary principle in international trade law, in particular with respect to global trade in foodstuffs. The paper will set out to outline the position and the powers of the Codex Alimentarius Commission. Subsequently it will address the standards of scientific risk assessment applied by this body to move on to a comparison of the principle of prevention and the precautionary principle as set out in some international treaties. Finally, the paper will conclude with a brief remark on the impact of the norms adopted by the Codex Alimentarius Commission on the Comprehensive and Economic Trade Agreement (CETA) between Canada and the European Union.

Keywords: Codex Alimentarius Commission, dispute resolution, precautionary principle, risk assessment, WTO

JEL Classification: K2, K33, I18, D81

1. Introduction

Despite the key role played by the Codex Alimentarius Commission (CAC) in setting global food standards (Godefroy, 2017; Ambrus, 2016), little attention has been paid to this body in legal scholarship. Therefore, the aim of this paper is to discuss the paper of the CAC in protecting both, consumers, and the public health with respect to international trade. The CAC adopts voluntary food standards, which can be enforced under certain conditions (Alemanno, 2016), in particular when WTO agreements refer to these standards (Grmelová, 2016). Hence, the CAC may decide indirectly whether trade disputes will be held with respect to the application of the precautionary principle which is seen by some as a disguised protectionist measure (a non-tariff barrier to trade), whereas by others it is perceived as a procedure which allows for a high level of protection of public health. The precautionary principle is applied in situations of scientific uncertainty as to the safety of certain foodstuffs or substances used in the treatment of foodstuffs. In the past, the European Communities (the predecessor of what is today the EU) applied unsuccessfully the precautionary principle in trade disputes with the US and Canada resolved by the Dispute Settlement Body (DSB) of the WTO with respect to a moratorium imposed on the imports of hormone treated beef and genetically modified organisms (GMOs) from North America (Grmelová, 2017). The paper will be structured as follows: First it will address the establishment, objectives and powers of the CAC, to move on to explain the precautionary principle in general, and the relationship between the CAC and EU´s concept of precaution, in particular. The paper will conclude with an account of steps to be taken to prevent future disputes concerning foodstuffs in international trade due to insufficient scientific evidence on the safety of these goods.

2. Activities and powers of the CAC

The CAC was established in the 1960s under the auspices of the United Nations associated agencies, the World Health Organization and the Food and Agriculture Organization (FAO) (Ramsingh, 2014) in order to implement the standards of the food program run jointly by WHO and FAO. The aim of this program was particularly to safeguard consumer´s health and to provide for fair trade in foods, to promote the coordination of food standards at international level and to propose food standards for the least developed countries which lack resources to implement their own food safety standards. The main standardization achievement that can be credited to the CAC consists in developing internationally recognized voluntary food safety standards referred to as Codex Alimentarius (Latin for Food Code). This body of work consists of 13 volumes which can be updated and amended continuously depending on new scientific evidence (van der Meuelen, 2010). The food safety standards are drafted by specialized committees which are presided by the Members to the CAC. Based on the statistics available as of the end of 2016 the CAC has 187 Member States and one member international organization, being the EU. The EU is represented in the CAC by European Commission´s Directorate General for Health (DG Sante). A number of other entities features an observer status in the CAC. These include particularly supranational corporations doing business in the field of food, biotechnology and chemistry industries (Halabi, 2015) which enjoy the status of non-governmental actors. As of the end of 2016 the number of observers to the CAC amounted to 240 entities. Their complete list is available at the homepage of FAO. The Codex committees deliberate up to 20 times per year, forwarding the drafts of their proposals to the CAC, which in turn decides to adopt them or not to adopt them following the consultation with its members. This standard setting procedure is rather lengthy, taking a couple of years to be completed. If the proposed standard has been adopted, it is included in the Codex Alimentarius. Most academics analyzing global food law believe that the CAC constitutes the central forum of global food safety management (Alemanno & Gabi, 2016). The activity of the CAC has been criticized by a number of scholars due to a lack of transparency in its decision-making process, due to a missing framework of its liability, and dubious independence of its scientific studies (Smythe, 2009; Winickoff, 2010).

3. Standards of scientific risk assessment applied by the CAC

The main challenge of adopting food safety standards by the CAC lies in the manner of dealing with scientific uncertainty when insufficient or contradictory scientific evidence is available as to the safety of new foodstuffs or procedures for treating foodstuffs. It is precisely the scientific uncertainty which creates room for the application of the precautionary principle used by the EU to prohibit the cultivation and imports of foodstuffs the safety of which can be disputed. Where scientific uncertainty persists (such as in the area of GMOs), the CAC is unable to adopt any standards at all, since the necessary quorum cannot be achieved among its members. The CAC has been discussing the issue of labelling GMOs for years, but there is insufficient consensus among its member to adopt mandatory labelling, which would be the preferred option for consumer on both sides of the Atlantic. So far, mandatory labelling of GMOs has been put in place in the EU, in the US, labelling of GMOs is not mandatory. When member states or member international organizations adopt precautionary unilateral standards due to scientific uncertainty in order to protect public health, these measures can be labelled as disguised non-tariff barriers to trade by the DSB of the WTO. The CAC believes that there is no need to incorporate the precautionary principle into its standards since the preventive principle embodied in its legal texts should be sufficient to protect consumer´s health. The procedures to carry out scientific studies drafted by the CAC have been included in the Codex Alimentarius Procedural Manual. The Procedural Manual defines risk analysis as a procedure consisting of three phases, the risk assessment, the risk management, and the risk communication. The same structure of risk analysis has been adopted by the EU in its General Food Law. The aim of the risk assessment is to identify possible risks associated with foodstuffs or substances used for treating foodstuffs and an effort to mitigate the possibility of their outbreak (van der Meulen, 2009). The Procedural Manual requires the individual phases of risk analysis to be carried out by different actors. This division of labor has also been adopted by the EU where the European Food Safety Agency is in charge of risk assessment, the European Commission is in charge of risk management together with the Council and the European Parliament, and finally the Member States are in charge of the risk communication, using EU wide databases, such as the Rapid Alert System for Food and Feed. Despite the institutional division for carrying different stages of risk analysis, there are some serious shortcomings in this procedure. In particular, there is no need to carry out a risk analysis of the so-called cocktail effect of different substances used for treating foodstuffs. Many of the substances authorized for treating foodstuffs, such as food additives, have defined acceptable daily intake levels which may not be safe if too many food chemicals are present in a particular food product. In practice, different chemical substances can interact in very different ways, either cancelling out their negative effects or, on the contrary, magnifying or even multiplying their adverse outcomes with respect to human health. Also, the risk assessment has often been delegated to producers and importers, the independence of which can be questioned, since their main objective is to generate profit, not to protect the public health. Thus, producers and importers may not disclose all the information available about possible negative health effects of their products.

4. The impact of WTO´s Sanitary and Phytosanitary Agreement on the nature of standards adopted by the CAC

The nature of standards adopted by the CAC has changed substantially following the adoption of the Sanitary and Phytosanitary Agreement (SPS Agreement) by WTO Members. Prior to the existence of the SPS Agreement, standards adopted by the CAC used to have clearly a non-binding nature. However, the SPS Agreement makes reference to standards adopted by the CAC. The compliance with these standards is considered to be in line with the obligations of the members to the SPS Agreement. Thus, the Codex Alimentarius standards have acquired a semi-binding nature. Where WTO members adopt unilateral measures applying the precautionary principle, these may be considered as disguised non-tariff barriers to trade by the WTO´s DSB as mentioned above. This has been the case of panel reports and appellate body reports adopted by the Dispute Settlement Body of the WTO in two different major food related trade disputes between the EU on the one hand and the US and Canada on the other, concerning the prohibition to import hormone treated beef and GMOs from the US and Canada to the EU. Instead of opening its market to these two commodities, the EU preferred to face retaliatory measures and to maintain its precautionary measures in place (Majone, 2003). Further work of the CAC has already been marked by significantly different approaches to precaution on both sides of the Atlantic and the EU finds it hard (if not impossible) to have the precautionary principle incorporated into the Codex Alimentarius standards (Young, 2013; van Schaik, 2013; and Fu, 2013). Obviously, the adoption of more stringent food standards as proposed by the EU would be detrimental to further development of international trade in foodstuffs. Global trade prospers the more, the less regulation is in place. Since the main objective of the WTO is to promote global trade, it will not promote the adoption of more stringent rules to protect consumers, since the protection of consumers is not one of its main goals.

The limits applied to more stringent national rules on food standards have been codified in Article 5.7 of the SPS Agreement as follows:

“In cases where relevant scientific evidence is insufficient, a Member may provisionally adopt sanitary or phytosanitary measures on the basis of available pertinent information, including that from the relevant international organizations as well as from sanitary or phytosanitary measures applied by other Members. In such circumstances, Members shall seek to obtain the additional information necessary for a more objective assessment of risk and review the sanitary or phytosanitary measure accordingly within a reasonable period of time.”

The main characteristics of Article 5.7 is the possibility to adopt temporary safeguard measures only. The provisional application of safeguard measures should allow for the performance of supplementary scientific studies to evaluate the (un)safety of the foodstuffs which have not been authorized by a member of the WTO. However, Article 5.7 of the SPS Agreement fails to specify, what the duration of the provisional period should amount to. The assessment of the length of the provisional period shall thus be done on a case by case basis. The current practice of the DSB of the WTO does not allow members to carry out additional scientific studies for a longer period of time, which may be necessary when very complex risks, such as those associated with the safety of GMOs, need to be evaluated (Grmelová, 2017).

To contrast the bias of short terms risk assessments, it may be relevant to state that the European Food Safety Authority (EFSA) standard period of food safety tests amount to 3 months. Yet, adverse effects of some foodstuffs (such as GMOs) may only become apparent after a longer exposure to these products. Research independent from biotech companies developing GMOs shows that laboratory animals started suffering from different types of cancer (depending on the gender of the rats) after being fed by genetically modified food for a period exceeding three months (Séralini, 2012). Yet, EFSA discarded Séraliny´s study as unscientific, even though its methodology has been more rigorous than that which the Agency relied on beforehand, a study commission by a major producer of GMOs, Monsanto (EFSA, 2012).

5. The incorporation of precautionary principle in the sources of law

The precautionary principal is often mentioned in international treaties without being properly defined therein. The Treaty on the establishment of the European Community as amended by the Maastricht Treaty (nowadays the Treaty on the Functioning of the EU) is a good example. It introduced the precautionary principle with respect to the protection of the environment. This principle, however, lacks a definition in the Treaty and its precise meaning is often deducted on the basis of a non-binding source of law, a Communication on the interpretation of the precautionary principle adopted by the European Commission in 2000 (European Commission, 2010). Also, the case law of the Court of Justice of the EU sheds more light into how the precautionary principle should be read. Different definitions of precautionary principle embodied in a number of international treaties, for instance, the Cartagena Protocol on Biosafety adopted in 2000, share a number of features in common.

First, a preventive measure (for instance an elevated tax burden) having a regulatory nature should be imposed upon the manufacturer of the product prior to obtaining additional scientific evidence on the safety of foodstuffs, chemical substances or innovative services. Second, a certain threshold of error should be expected as new technologies bring about complex systems of risk assessment for which no adequate methodologies are available. Third, the regulatory measures reacting to possible risks of new products or services should be proportionate, insofar as the proposed measures should not be disproportionate with respect to the expected benefits. Fourth, the burden of proof of the safety of new products and services should be borne by the manufacturers or service providers. Also, each preventive measure should be revised in view of the latest results of scientific investigation. Last but not least, the decision making process should be transparent and finally, it should focus on searching alternatives. For instance in case of disputed safety of GMOs, stress should be placed on promoting the creation of circular economy, which would enable a better management of agricultural surplus generated in developed countries and the re-distribution thereof in the least developed countries in need of food aid. Research indicates that the current production of foodstuffs is sufficient to feed the world even without GMOs, if agricultural products managed to be distributed in a more efficient manner (Cosbey, 2002).

6. The relevance of the CAC standards for negotiating and implementing transatlantic trade agreements

The significance of the standards adopted by the CAC is not limited to possible trade disputes which may arise on the basis of WTO law, in particular the SPS Treaty. It also stretches out to include trade disputes which may be generated by the implementation of the Comprehensive Economic and Trade Agreement (CETA) concluded between the EU and Canada in 2016, when its provisional application was launched with respect to the fields which fall within the exclusive competence of the EU. As for the remainder of this agreement, it can only start to be implemented, once the ratification process has been completed by all EU member states, usually consisting in a vote in the Parliament or in a referendum. Also, the CETA makes references to standards adopted by the CAC, thus reinforcing their semi-binding status. If we compare EU legislation on consumer protection in field of general food law with food standards adopted by the CAC, we will find a number of more stringent rules at EU level referring to the maximum residue limits of pesticides in foodstuffs, (Handford, 2015) in the prohibition to administer growth hormones to beef, and in a more complex process of authorizing chemical substances present in foods that could act as endocrine disrupters. (Malish, 2014). Also, the use of GMOs is extremely limited in the EU, where farmers use them mainly for feeding animals or for producing bio-fuel.

Even though the 2000 Communication of the European Commission on the interpretation of the precautionary principle stresses the readiness of the EU to promote this principle at international level, in practice, this promise fails to materialize. Not only has the precautionary principle not been expressly incorporated into the wording of the CETA between the EU and Canada, but the European Commission has even been accused of intentionally delaying implementing legislation on endocrine disrupters to make sure it would not compromise further negotiations of the said treaty (Stoll, 2016). The failure of the European Commission to adopted implementing legislation was successfully challenged by Sweden before the Court of Justice of the EU which found that the European Commission breached the founding treaties by not acting within the said deadline. As a reaction to this judgment by the Court of Justice of the EU, the European Parliament even proposed a motion of censure in 2016 (European Parliament, 2016) since it was convinced that the European Commission defended corporate interests more than those of the consumers. The failure of the Commission to take the side of the consumers is likely to foreshadow the manner in which it will act when implementing the CETA. Despite formal declarations by the European Commission that the CETA will not downgrade the existing standards of consumer protection set by EU law, these promises are unlikely to be kept in practice.

7. Recommendations

One of the ways of preventing future trade disputes while applying the precautionary principle in international trade would be promoting this principle as a general principle of law. The recognition of this principle is being repeatedly compromised by countries which export GMOs, in particular the US, Canada and Argentina. It is precisely the differences between the the concept of precaution which lie at the core of international trade disputes. The EU keeps repeatedly failing in pushing this principle through in international negotiations within the CAC or when trying to have the SPS Agreement revised to take account of the precautionary principle in a more specific manner. The incorporation of the so-called regulatory cooperation into the CETA is less than satisfactory. It should lead to preventing further trade disputes between the contracting parties by discussing planned legislation before adopting it, thus limiting the regulatory discretion of the EU. If the current level of consumer protection is to be maintained, national parliaments should not ratify the CETA which could also serve as a back door to importing American produce if the negotiations on the Transatlantic Trade and Investment Partnership between the US and the EU are not renewed.

8. Conclusion

The role of the CAC has changed substantially from the 1960s when it was established. From a hardly known advisory body, the CAC converted to the most important international forum for setting food standards which can be enforced under the WTO law and also under the CETA. The position of the CAC with respect to the precautionary principle is very reserved. Whereas the EU recognizes the precautionary principle as a general principle of law making it a binding source of law, the CAC does not share this view. Yet, the CAC standards are also binding on the EU as a member thereof. If the EU wishes to deviate from international food standards set by the CAC, it has to base them on science and can only maintain them if the scientific evidence justifying them is subjected to a period review. There is no room for consumer preferences in the context of developing food standards by the CAC. Only science based measures are authorized as possible deviations from the international standards. As the CAC standards are referred to in the CETA as well and the EU´s concept of precaution has not been incorporated into this agreement, European consumers will be on the safe side if their national parliaments reject the ratification of that agreement.

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WHAT IS THE OPTIMAL INDEBTEDNESS OF AN INDUSTRIAL ENTERPRISE?

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Abstract. Financial lever in international business simply means that an enterprise increases the profitability of its own equity via including foreign capital. That however, carries certain limits with it. In such a situation we assume that the enterprise uses the market potential as efficiently as possible. Further, we assume that the enterprise uses enough of its assets. Another necessary condition is adequate costs on such capital. The general truth is that the volume of foreign capital is increased when the enterprise has no internal sources, which could be engaged, and at the same time costs on equity exceed costs on offered foreign capital. Further on, it is suitable to mention the assumption that the enterprise has no obstacles in its access to capital (equity as well as foreign capital). Nevertheless, the truth still is that the optimal value of enterprise indebtedness in today´s globalized world always remains individual. The aim of this contribution is a recommendation of a suitable level of debt in an enterprise operating in manufacturing industry. The question of indebtedness rate is current of the whole globalized world. However, in case of this contribution we are only working with a sample of enterprises within the Czech Republic during the period of 2006 to 2015. Within the contribution, we compare the enterprise indebtedness and an adequate performance of the enterprise during a generated economic value added for shareholders as a top aim of current enterprises finding themselves in a phase of maturity of their life-cycle.

Keywords: economic value added, indebtedness, performance of an enterprise, capital

JEL Classification: C15, D24, G31, L25

1. Introduction

The concept of indebtedness is a part of financial analysis of enterprise expressing the relation between its own and foreign financial resources of an enterprise (Hackbarth & Mauer, 2012). However, in practice it is not possible for a company to finance its activities exclusively through its own resources or by external financing. It is therefore important to find an optimal share of outside capital and equity. Nevertheless, for many companies, this process may sometimes represent a difficult task (Narimanovna, 2012). The structure of funding sources or the capital structure, which finances business assets, is one of the main factors determining the competitive position of a company in the market and affecting the possibilities of its growth as well as expanding abilities of acompany (Bubic & Susak, 2016). In today´s complex business conditions, characterized by the globalisation processes and dynamic social economic relations prevailing on the market, there are a significant number of funding sources available to the enterprises in compliance with their requirements. These funding sources differ according to the type, maturity, interest rates and other contractual conditions (Stojanovic & Guzovski, 2013). The main reason why companies use outside capital to finance their activities is their relatively low price compared to the own resources (Tian, 2016). For assessing company indebtedness, some indicators are used, which are based on the data obtained from the balance sheet (Andrikopoulos, 2009). However, the optimal value of indebtedness depends on the company performance and rate of return (Chen & Liou, 2017). Finding an optimal indebtedness value, which is not always easy to determine**,** is a core task, as various optimization methods can be applied (Vanden, 2016). For example, the indicator of return on equity can be used as optimization criterion for calculating the optimal debt level (Jaroš et al., 2014). According to Ju et al. (2005), the optimal indebtedness level can be determined using a dynamic capital structure model calibrated to reflect the current business characteristics. Through this model, it is possible to calculate the optimal capital structure in a realistic view of the traditional compromise model. Other model approaches (compromise model, model of hierarchical order theory, information asymmetry models) are mostly focused on identifying the optimal ratio of debt with a fixed interest rate on the equity (Sivák & Mikócziová, 2002). Theoretically, outside capital (debt) usually represents the lowest cost of capital due to the tax deductibility. However, it can rarely be considered an optimal structure, as the risk of the company generally increases with the mounting debt (Craven & Islam, 2013). The equity and debt ratio vary according to the size of the company debt. Generally said, it is true that the debt and equity ratio increase with the mounting debt. Investors assume higher profit for higher risk. On the other hand, it must be pointed out that the ratio of debt development, level of indebtedness and equity is not linear (Vochozka & Petrách, 2016). The leverage effect in the company (i.e. increasing return on equity through outside capital varies in individual business sectors and confirms the impact of global financial and economic crisis on the level of company indebtedness. Financial leverage is associated with the positive impact on the profitability of companies in most business sectors (Strýčková, 2014). For most industrial companies, innovation is a key factor for their survival and growth (Filipová et al., 2016). Based on the analysis carried out by Berzkalne & Zelgalve (2013), it can be stated that the indebtedness level of innovative industrial companies negatively correlates with their profitability. During the financial crisis between 2008 and 2011, a divergent feature has emerged showing that more industrial companies that strive for innovation use more short-time debts. This may mean that during the economic boom, the companies finance their innovations using other sources rather than outside capital. The companies are advised to analyse and assess carefully possible innovation projects, and if their incoming cash flows exceed the required investment, it is recommendable to finance it using outside capital. The objective of the contribution is to identify and recommend the companies active in processing industry an appropriate indebtedness level.

2. Data and methods

Regarding the objective of the contribution, the authors are primarily interested in the effect the financial leverage has in the environment of companies active in processing industry. In a simplified way, financial leverage has a positive effect when the company increases the return on equity through outside capital**.** This is, however, limited. We assume that the company exploits adequately the market potential, i.e. it generates adequately higher sales when involving larger amount of equity. Furthermore, we assume that the company utilises adequately its assets, that is, all assets are considered to be operationally necessary assets. If this was not the case, the company should dispose of such assets. This would reduce capital intensiveness of its business and it no additional capital would thus be needed. Another precondition is reasonable cost of such capital. Generally, the quantity of outside capital is increased in case the company has not any internal resources at its disposal to use them and at the same time the cost of equity exceed the cost of the outside capital offered. It should be also mentioned that we assume there are no impediments to the access to capital (both own and outside). However, it is still a fact, that the optimal level of company indebtedness is different for different companies. In terms of financial leverage, it may have no effect under certain circumstances, or it may even have a negative impact on the return on equity. Brigham & Ehrhardt (2011) claim that the cost of both outside capital and equity increases with growing indebtedness. It follows that the optimal indebtedness level with the highest return on equity cannot be clearly determined. The situation is evolving differently with each company. In the contribution, the authors assume that the forces will have a similar effect within one field, especially in terms of the access to the own and outside capital (the efforts made to raise the capital, approximately the same cost, etc.). The authors seek for the companies with higher level of indebtedness and at the same time with a higher return on equity. There will be a set of 1.000 companies active in the processing industry between 2006 and 2015 available, or the data contained in their accounts involving the balance sheet, the profit and loss account and statements of cash flows. The data will be obtained from the Albertina database. First, the companies whose statement of financial accounts are not complete or whose statements do not correspond to each other were excluded. Subsequently**,** the company indebtedness is calculated as follows:

$$Indebtedness = \frac{outside\ capital}{Total\ assets} \tag{1}$$

We will also need to know the return on equity for each company, which will be calculated as follows:

$$ROE = \frac{EAT}{E} \tag{2}$$

where: *ROE = return on equity, EAT = earnings after tax, E = equity.*

First, we will try to find out if there is dependence between the indebtedness and ROE. This will be determined using correlation coefficient (so called Pearson correlation coefficient):

$$p\ x,y = \frac{E\ (XY)\text{-}E(X)E(Y)}{\sqrt{E(X^2)\text{-}E^2(X)}\ \sqrt{E(Y^2)\text{-}E^2(Y)}} \tag{3}$$

where: *X = indebtedness of enterprise,Y = ROE.*

In case the dependence between the two variables is significant, the parameters of regression curve are determined. Global or local peak of the curve will then represent the indebtedness value sought when the company reports the highest *ROE*. Hypothetically, it may happen that the financial leverage will have a negative effect. In such a case, we will look for a moment of the minimum negative effect.

If this is not successful and the dependence between the two factors is not significant (i.e. correlation coefficient is lower than 0.5), the companies will be divided into groups according to the indebtedness level in the intervals of <0;0.1), <0.1;0.2), <0.2;0.3), <0.3;0.4), <0.4;0.5), <0.5;0.6), <0.6;0.7), <0.7;0.8), <0.8;0.9) a <0.9;1) and so on. Then the dependence will be examined within the individual intervals and the same procedure will be applied. In case even this method is not suitable due to a low correlation coefficient, the companies within the individual intervals will be examined graphically, expertly. The highest ROE and the relevant indebtedness will be determined and we will generalize business recommendations.

3. Results

The original set of 1,000 companies was reduced by the companies whose statements were not complete or contained manifest errors. The set then contained 862 companies, which were subject to analysis. Based on the methodology, indebtedness correlation coefficient and ROE were calculated. The resulting value was 0.1232. We may therefore state that there is no mutual dependence between company indebtedness and ROE. Subsequently, other calculation was performed on the individual intervals of indebtedness. As ROE works with the results of the company´s operating, financial and extraordinary activities, it felt interesting to analyse the relation between the company indebtedness and its operating results, a factor resulting from the main activity of the company. The results are showed in Tab. 1.

Table 1: Dependence between company indebtedness and ROE and operating results of the company

Indebtedness		No. of enterprises	Correlation coefficient (ROE)	Correlation coefficient (operating results)
Lower limit of interval	Upper limit of interval			
0	0.1	112	0.26965451	0.233461865
0.1	0.2	89	0.012422859	-0.091385297
0.2	0.3	97	0.085746686	0.231994565
0.3	0.4	94	0.045535503	-0.139272165
0.4	0.5	73	0.07816155	-0.154981514
0.5	0.6	78	0.153132491	0.012857218
0.6	0.7	70	-0.05621236	0.009475355
0.7	0.8	56	-0.158932694	-0.21769557
0.8	0.9	63	0.060337394	-0.098897276
0.9	1	31	0.026026836	-0.002354813
1	1.1	23	-0.304585622	-0.052206295
1.1	1.2	13	0.297149661	-0.286854471
1.2	1.3	16	-0.309297481	0.124419875
1.3	1.4	11	-0.500080731	0.480650149
1.4	1.5	8	0,749078727	-0.723932543
1.5	1.6	6	-0.200349125	0.528044817
1.6	1.7	7	0.337287629	-0.294507207
1.7	1.8	5	0.661847693	-0.8158035
1.8	1.9	5	-0.274439814	0.322232939
1.9	2	3	0.363115486	-0.995321033
2	2	2	# DIVISION BY ZERO	# DIVISION BY ZERO

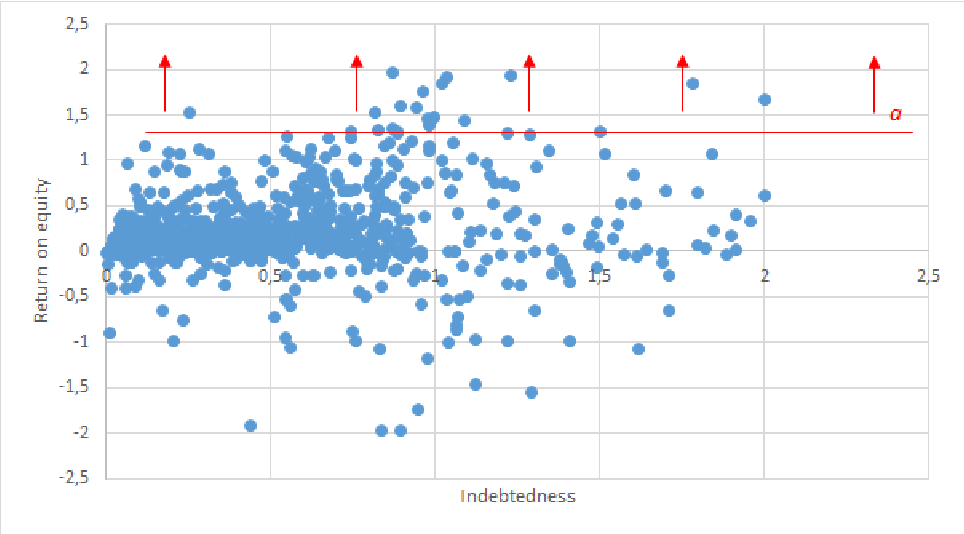
Source: author

N.B. Indebtedness 2 was identified only at two companies. As the debt ratio was the same for both companies, it was not possible to calculate the correlation coefficient.

The table shows that the company indebtedness correlates neither with ROE nor operating results of the companies. An indication of dependence could be seen only at the <0;0.1) interval, however, not even in this case the correlation coefficient is significant.

Therefore the third aforementioned procedure (graphical and expert analysis) was applied. Fig. 1 shows ROE of all companies contained in the test sample at a specific indebtedness.

Figure 1: Indebtedness-ROE dependence at individual companies from the test sample

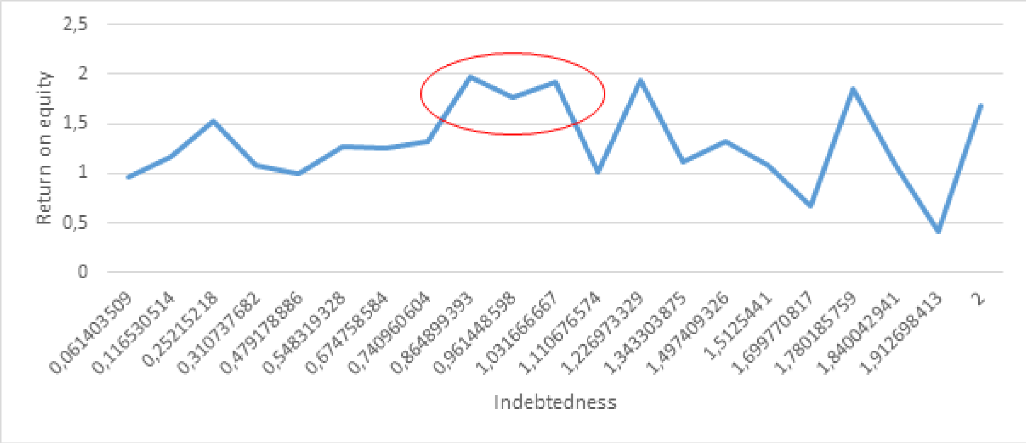


Source: author

The graph in Figure 1 shows that the authors are interested in ROE values of 1.4 and above. ROE above 0.1 seems to be relative high when compared to the investment alternatives in the market. However, going back to the objective of this contribution, it is necessary to determine the optimal level of indebtedness. Ideally, this is given by one point – that is, the point with the highest ROE value of the entire test sample. Since this point and this value are not compared over time and there is no valid sample available for this indebtedness level, the optimum can be given by chance. Therefore, there was determined an interval range between 1.4 to 2.0 ROE, which includes the performance of several companies of the test sample.

The disadvantage is that the resulting situation is not covered by only one short interval of indebtedness; on the contrary, the values are in the whole sample, that is, from the 0 level of indebtedness to 2.0. This can result in two logical conclusions. One of them could be a fact that there is no optimal level of indebtedness which would generate optimal ROE. The second possible conclusion could be the statement claiming that the conditions for creating ROE are highly specific and optimal values can be reached in each moment of the interval examined with other measures characterizing the company (total assets, volume of necessary assets etc.) involved. If we work with the second alternative, an analysis is required of the individual values highlighted in Figure 1, that is, the moments in the interval 1.4-2.0. Other interesting thing would be seen in a line graph. Fig. 2 shows the development of ROE value in dependence on the company indebtedness, where only maximum values of the examined interval (always after debt step of 0.1) are entered.

Figure 2: Maximum ROE in the monitored intervals of indebtedness in the monitored intervals of indebtedness



Source: author

Fig. 2 shows that the optimal company indebtedness is in the 0.8-1.1 interval, which is a relatively high indebtedness. If we pursued only the interests of the company owners, the management of the company would be advised to focus to achieve the 0.8-1.1 interval.

4. Conclusion

The objective of the contribution was to determine and advise the optimal level of indebtedness to companies active in the processing industry.

It may be concluded that the objective of the contribution was achieved. Using several methods it was determined that the optimal indebtedness of a company active in the processing industry in the Czech Republic is in the interval of 0.8-1.1. Those companies generated high ROE values, in particular in the interval of 1.7-2.0. These values represent up to 200% appreciation of capital invested by the company owners. If the company monitors the increase in value for shareholders, or rather benefit for shareholders, it should try to maintain this level of indebtedness. The given interval of indebtedness shows a positive effect of financial leverage. However, the indebtedness ratio is rather high, which is associated with high risk of non-payment by the company. Logically, the cost of capital would grow (Brigham & Ehrhardt, 2011). In the processing industry in the Czech Republic it is not the situation. The reason could be unhealthy financial environment, or on the contrary, high level of involvement of unpaid resources, mainly so-called permanent liabilities (especially liabilities to suppliers). The question arises, how long a company with a high level of indebtedness would be able to yield high performance. Of course, it may be objected that indebtedness and ROE are independent variables. This would, however, result in recommendation to maximize the company indebtedness. In other words, the indebtedness at the level of 0.8-1.1 is still considered optimal.

Based on the results of this paper, it would be worthwhile to verify Brigham and Ehrhardt´s statements on rising capital costs with increasing indebtedness under the conditions of Czech processing industry.

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IMPACT OF GLOBALIZATION ON THE FINANCIAL MANAGEMENT PROCESSES

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Abstract. Globalization is a term with which we currently meet in a professional and scientific environment, but also in everyday life. However, according to some experts, globalization is not a phenomenon of the present. We can register it even before the industrial period. Its current manifestations, which are also the subject of our paper, can be seen in the form of growth of economic activities across regional and national borders. It enables companies to establish themselves in foreign markets, increase profits and gain competitive advantages. The focus of our contribution is to present the impact of globalization in the economic field, especially in the area of financial management of enterprises. Financial management as one of the areas that the company needs to manage consists of planning, organizing financial processes, their leading and control. In our paper, we focus mainly on the processes of planning and controlling the results of the financial activity. We examine how the fact that an enterprise is owned or co-owned by a foreign investor affects the implementation of financial planning and financial control in the financial management process. In the paper, we test the hypothesis that companies with a share of foreign capital in equity use financial planning and financial control more frequently than firms without the influence of a foreign investor, and that foreign companies plan and control more financial indicators than domestic businesses.

Keywords: globalization, financial management, planning, control, financial indicators

JEL Classification: F69, G39, M19, M40

1. Introduction

Globalizácia patrí k javom, ktorý v súčasnosti vyvoláva množstvo diskusií. Stretávame sa s ňou v každodennom živote, v odbornom aj vedeckom prostredí. Definovanie pojmu úzko súvisí s uhlom pohľadu na globalizáciu, keďže sa ňou zaoberajú historici, ekonómovia, politici aj sociológovia. Aj z toho dôvodu neexistuje jednotná všeobecná definícia tohto pojmu. Podľa niektorých odborníkov však globalizácia nepatrí k fenoménom súčasnosti, a jej počiatky môžeme evidovať už v pred industriálnom období. Existuje skupina autorov, ktorí považujú globalizáciu za jav cyklicky sa opakujúci. Môžeme k nim zaradiť I. Clarka, R. Zevina, R. Wadea, P. Hirsta, G. Thompssona, prípadne I. Wallersteina (Scholte, 2000). S ohľadom na predmet svojho výskumu, vidia jednotliví autori základné prvky charakteristické pre proces globalizácie v rôznych oblastiach. Hirst, Thompson aj Wallstein ich nachádzajú v ekonomike. Wallstein vidí jej konkrétne vplyvy aj v procesoch medzinárodnej deľby práce a medzinárodného obchodu. Skúma tiež históriu globalizácie z hľadiska vývoja technológií a ich vplyvu na ľudskú spoločnosť. Prejavy globalizácie zo spoločenského hľadiska skúma tiež Hopkins, zameriava sa však na jej prejavy pri strete kultúr a náboženstiev. Druhú skupinu autorov tvoria tí, ktorí tiež považujú globalizáciu za jav objavujúci sa v minulosti, nie však jav cyklický, ale lineárny, ktorý sa prejavuje postupným rozširovaním globalizácie do ďalších oblastí. K zástancom tohto prístupu patria napr. R. Robertson, M. Porter, Ch. Chase-Duna (Mattová, 2006). Postupné rozširovanie rozčlenili do troch významných fáz, kde prvú fázu tvorilo rozširovanie náboženstiev, v druhej dochádzalo k rozširovaniu komunikácie prostredníctvom telegrafického spojenia, rádiovej komunikácie a leteckej dopravy. Jej súčasťou je tiež globalizácia peňazí a financií, zmena národných spoločností na nadnárodné, presadzujúce svoje výrobky, služby a tovar do celého sveta. Po roku 1960 nastala tretia fáza globalizácie, ktorá sa prejavila rozšírením elektronickej komunikácie, využívaním satelitov, optických káblov, televízie, internetu, expanzie globálnych trhov, tiež pôsobením medzinárodných organizácií zasahujúcich do každej oblasti ľudského života, a tiež objavením ekologických problémov a snáh ich riešiť. Vznik nadnárodných spoločností je jedným z prejavov globalizácie aj podľa Mackenzieho (2013). Existujú však aj teórie, ktoré hovoria o globalizácii ako o jave súčasnosti. Ich zástancovia sú napr. P. F. Drucker, A. King, B. Schneider (Scholte, 2000), stotožňujú sa v názore, že dnešná doba je dobou zmien, podnetom ktorých bol vznik vyspelých technológií, hlavne mikroelektronika, nové objavy v molekulárnej biológii. King a Schneider (1991) sa zaoberajú sa problematikou populačnej explózie, životného prostredia, pokrokom vo vede a technike, vzrastajúcou závislosťou národov aj ekonomickými zmenami. Beck (2007) hovorí o globalizácii ako o zahájení novej hry, s ktorou stratili platnosť pravidlá a základné pojmy starej hry. Hovorí o vzniku nového priestoru a nového rámca jednania, politika je zbavená hraníc a je odštátnená, moc má vo svojich rukách kapitál. Predmetom nášho záujmu sú prejavy globalizácie v ekonomickej oblasti, konkrétne v oblasti riadenia podnikov, s dôrazom na finančné riadenie. Súčasnými prejavmi globalizácie v tejto oblasti sú hlavne zníženie nákladov na dopravu a komunikáciu, na spracovanie a prenos informácií a uľahčenie a zrýchlenie medzinárodných obchodných a finančných transakcií a mnohé iné. Uvedené výhody významným spôsobom ovplyvňujú výsledky hospodárenia a výkonnosť podniku. Globalizačné vplyvy tiež možno pozorovať v rozširovaní metód a prístupov k riadeniu podnikov a ich výkonnosti (Lesáková, 2008; Burešová, 2013; Adamko, 2016; Hiadlovský et al. 2014). Výber nástrojov a metód, ktoré využívajú podnikateľské subjekty pri meraní a riadení svojej výkonnosti prešli niekoľkými vývojovými tendenciami aj s ohľadom na zmeny v cieľovej orientácii podnikov (Wagner, 2011; 2014). Výkonnosť podniku je silne ovplyvnená schopnosťou podniku vytvoriť a využiť konkurenčnú výhodu na trhu (Dobrovič, 2013; Bieliková, 2016). Richnák (2015) poukazuje na potrebu podnikov využívať pri riadení nové koncepty, ktoré sa neustále vyvíjajú, a tým umožňujú neustále zvyšovanie efektívnosti riadenia. Medzi tieto koncepty zaraďuje Lang (2007) manažment zmien, Shareholder value, Outsourcing, Benchmarking, Reinžiniering, Total Quality Management, Balance scorecard a iné. Súčasťou týchto konceptov riadenia je uplatňovanie základných postupov riadenia, ktoré začínajú plánovaním procesov a končia kontrolou plánov (Kiselev et al., 2016). Bolo realizovaných niekoľko výskumov v oblasti využívania metód a nástrojov riadenia. Marková et al. (2016) napríklad prezentuje výsledky výskumu zameraného na využívanie metód plánovania, rozpočtovania, kontrolingu a merania výkonnosti v prostredí mikro a malých podnikov. Výsledky ich výskumu poukazujú na veľmi nízku úroveň využívania týchto metód pri finančnom riadení tejto skupiny podnikov. K podobným výsledkom pri uplatňovaní nástrojov finančnej kontroly pri finančnom riadení podnikov všetkých veľkostných kategórií dospela aj Grofčíková (2016 A, 2016 B).

2. Cieľ, materiál a metódy

Cieľom príspevku je prezentovať výsledky výskumu zameraného na realizáciu procesov plánovania a kontroly výsledkov finančnej činnosti podniku. Zaujíma nás, ako skutočnosť, že podnik je vo vlastníctve, alebo v spoluvlastníctve zahraničného investora, ovplyvňuje realizáciu finančného plánovania a finančnej kontroly v procese finančného riadenia. Skúmame využívané metódy finančného plánovania, plánované a kontrolované finančné a ekonomické ukazovatele tak v absolútnej ako aj v relatívnej podobe. Predpokladáme, že vstup zahraničného investora do vlastníckej štruktúry podniku má vplyv na využívanie nástrojov a metód pri plánovaní a kontrole výsledkov finančnej činnosti podniku. Zahraničný investor prináša svoje skúsenosti z externého prostredia a ovplyvňuje svojimi požiadavkami procesy finančného riadenia, plánovania a kontroly finančnej činnosti podniku, požaduje pravidelné informácie o zhodnocovaní investovaných prostriedkov, čo sa premieta aj do počtu a frekvencie uplatňovania nástrojov a metód finančného riadenia, s dôrazom na finančné plánovanie a kontrolu finančného hospodárenia podniku. Predpokladáme preto vyšší počet a frekvenciu využívania týchto nástrojov v podnikoch s podielom zahraničného kapitálu na základnom imaní a tiež vyšší počet plánovaných a kontrolovaných položiek a ukazovateľov.

Primárnym informačným zdrojov sú údaje získané metódou opytovania formou dotazníka. Dotazníkový prieskum sme uskutočnili na výberovej vzorke podnikov so sídlom v Slovenskej republike. Vzorku podnikov sme vybrali jednoduchým náhodným výberom. Prieskumu sa zúčastnilo 224 respondentov všetkých veľkostných skupín s domácou (89,29 %) aj zahraničnou (10,71 %) majetkovou účasťou. Najvyšší podiel na úhrne respondentov tvorili mikro podniky (41,96 %). Malé podniky mali vo vzorke 32,14-percentné zastúpenie, stredné podniky mali 17,41-percentné zastúpenie, veľkých podnikov bolo 8,48 %.

Uplatňovanie plánovania a kontroly v procese finančného riadenia podnikov sme sledovali pomocou podielu podnikov, ktoré označili využívanie konkrétneho nástroja a metódy na celkovom počte podnikov, ktoré odpovedali na príslušnú otázku. Respondentov a ich odpovede sme rozdelili v jednotlivých veľkostných skupinách podnikov do dvoch skupín podľa podielu zahraničného kapitálu na základnom imaní podniku. Jednu skupinu tvorili podniky so 100 %-ným podielom domáceho kapitálu na základnom imaní (ďalej len domáce podniky), druhú skupinu tvorili podniky s podielom domáceho kapitálu na základnom imaní menej ako 100% (ďalej len zahraničné podniky). Pri odpovediach na otázky mohli respondenti vybrať jednu alebo viac možností z ponúkaných odpovedí, prípadne odpovedať otvorenou formou. Skúmali sme druh a frekvenciu finančného plánovania a kontroly plánov, a tiež konkrétne plánované a kontrolované položky.

Skúmame plánovanie a kontrolu 70 základných pomerových a rozdielových finančných ukazovateľov (z toho: 8 ukazovateľov likvidity, 12 ukazovateľov rentability a výnosnosti, 20 ukazovateľov aktivity a produktivity, 8 ukazovateľov zadlženosti, 7 ukazovateľov štruktúry majetku a zdrojov financovania, 9 ukazovateľov trhovej hodnoty, 6 ukazovateľov hodnotenia investícií) a plánovanie týchto položiek finančných výkazov: dlhodobé aktíva, obežné aktíva, vlastné imanie, záväzky, výdavky a príjmy, čisté peňažné toky, náklady, výnosy a zisk, príspevková marža, pridaná hodnota, prípadne iné položky, ktoré mohli respondenti doplniť.

Na základe našich predpokladov a uvedených východísk formulujeme nasledujúce hypotézy.

H1: Predpokladáme, že podniky s podielom zahraničného kapitálu na základnom imaní využívajú pri finančnom riadení finančné plánovanie a finančnú kontrolu častejšie, ako podniky bez podielu zahraničného kapitálu.

H2: Predpokladáme, že zahraničné podniky plánujú a kontrolujú viac finančných ukazovateľov ako domáce podniky.

Hypotézu H1 budeme vyhodnocovať pomocou čiastkových hypotéz, v ktorých budeme skúmať existenciu závislosti medzi existenciou podielu zahraničného kapitálu na základnom imaní a (H1.1) využívaním finančného plánovania, (H1.2) realizáciou kontroly finančných plánov a (H1.3) realizáciou finančnej analýzy. Hypotézy preskúmame pomocou Spearmanovho koeficientu poradovej korelácie (H_0: $\rho = 0$, H_A: $\rho \neq 0$). **Hypotézu H2** budeme vyhodnocovať pomocou čiastkových hypotéz, v ktorých budeme skúmať existenciu závislosti medzi existenciou podielu zahraničného kapitálu na základnom imaní podniku a (H2.1) počtom plánovaných finančných ukazovateľov, (H2.2) počtom kontrolovaných finančných ukazovateľov. Hypotézy preskúmame pomocou Spearmanovho koeficientu poradovej korelácie (H_0: $\rho = 0$, H_A: $\rho \neq 0$). Preskúmame poradie plánovaných a kontrolovaných položiek. Významnosť skupín ukazovateľov vyhodnotíme pomocou Friedmanovho a Wilcoxonovho testu. Hypotézy vyhodnotíme na hladine významnosti $\alpha = 0{,}1$.

3. Výsledky a diskusia

Finančné plánovanie a finančná kontrola patria k neoddeliteľným súčastiam procesu finančného riadenia. Sú vzájomne úzko prepojené a tvoria integrovaný celok, a významný nástroj riadenia a monitorovania výsledkov finančnej činnosti podniku a jeho výkonnosti. Podľa Kráľoviča (2006) je úlohou kontroly v plánovacej činnosti vyhodnocovanie stavu a priebehu plnenia úloh a cieľov plánu, príprava spoľahlivých informácií pred prijímaním rozhodnutí a opatrení na zabezpečenie žiaduceho stavu.

3.1 Vplyv zahraničného investora na procesy finančného plánovania

Finančné plánovanie môžeme vnímať ako formalizované rozhodovanie o spôsobe získavania kapitálu, o jeho investovaní do majetkových zložiek prinášajúcich požadovanú výnosnosť a tiež rozhodovanie o peňažnom hospodárení podniku. Súčasťou procesu finančného plánovania je tvorba finančných cieľov podniku a súhrn opatrení a činností na ich dosiahnutie. Finančný plán ako prostriedok určujúci kontrolné veličiny je dokument, ktorý sumarizuje súčasnú a budúcu potrebu finančných prostriedkov a existujúce a očakávané zdroje na ich krytie. Tieto kontrolné veličiny môžu byť stanovené v podobe finančných ukazovateľov v absolútnej alebo relatívnej podobe, prípadne vyjadrené aj slovným opisom. Pri výskume uplatňovania finančného plánovania nás zaujímalo, aký druh plánovania respondenti realizujú, a ktoré položky v absolútnej a relatívnej podobe plánujú. Na otázku, aký druh finančného plánovania respondenti realizujú, odpovedalo 99 % respondentov. 20 % z nich finančné plánovanie nerealizuje vôbec. Výsledky prezentujeme v Tab. 1. Podiely pre jednotlivé druhy plánovania sú vypočítané z počtov respondentov, ktorí využívajú finančné plánovanie.

Table 1: Využívanie finančného plánovania

Druh finančného plánovania	**domáci podnik**	**zahraničný podnik**	**spolu**
krátkodobé	70,78%	73,91%	71,19%
dlhodobé	31,17%	47,83%	33,33%
projektové	16,88%	30,43%	18,64%
Plánujú / Odpovedali	77,78%	95,83%	79,73%

Source: vlastné spracovanie výsledkov výskumu

Tab. 1 dokazuje, že finančné plánovanie pri finančnom riadení využíva vyšší podiel zahraničných podnikov v porovnaní s domácimi podnikmi. Pri testovaní H1.1 sme zistili, existenciu slabej pozitívnej závislosti realizácie finančného plánovania od existencie podielu zahraničného kapitálu na základnom imaní (r_s = 0,128, Sig. = 0,056). Realizácia finančného plánovania, bez vyhodnocovania a kontroly napĺňania cieľov formulovaných vo finančných plánoch, nemá pre podnik zvláštny význam. Kontrolovanie finančných plánov sme zisťovali samostatnou otázkou. Odpovedalo na ňu 92 % respondentov, z nich kontroluje finančné plány 80 %. Výsledky zistenia sumarizuje Tab. 2.

Table 2: Kontrola finančných plánov

Kontrola finančných plánov	**domáci podnik**	**zahraničný podnik**	**spolu**
nekontrolujú / plánujú	25,97%	8,70%	23,73%
kontrolujú / plánujú	92,86%	91,30%	92,66%
kontrolujú / odpovedali	78,14%	91,30%	79,61%

Source: vlastné spracovanie výsledkov výskumu

Predpokladali sme, že ak respondenti zostavovali finančné plány, nie vždy ich aj kontrolovali. sa nám potvrdilo. Z Tab.2 vidíme, že podiel domácich podnikov, ktoré nekontrolujú svoje plány je vyšší v porovnaní so zahraničnými. Testovaním H1.2 sme zistili, že neexistuje štatisticky významná závislosť medzi existenciou podielu zahraničného kapitálu na ZI a skutočnosťou, či podnik kontroluje svoje plány (r_s = 0,052, Sig. = 0,434). Testovaním H2.1 sme zistili, že existuje slabá, pozitívna, štatisticky významná závislosť medzi existenciou podielu zahraničného kapitálu na ZI a (a) počtom plánovaných pomerových finančných ukazovateľov (r_s = 0,220, Sig. = 0,025) resp. (b) počtom plánovaných pomerových finančných ukazovateľov vrátane vyššie spomenutých položiek z finančných výkazov (r_s = 0,264, Sig. = 0,000). Pri prieskume preferencií poradia dôležitosti plánovania finančných položiek sme využili Friedmanov test (Chi-Square = 98,829, Sig. = 0,000). Existuje štatisticky významný rozdiel v poradí dôležitosti plánovaných položiek. V Tab. 3 sú výsledky testu.

Table 3: Skupiny plánovaných položiek podľa významnosti

	domáce podniky	**zahraničné podniky**	**spolu**
1. skupina	N, Vn, Pr, Vd	N, Vn, ČPK, Vd, Zi	N, Vn, Pr, Vd
2. skupina	Zi, ČPK, OA, DA, VI, PH	Zv, VI, OA, PH, DA, PM	Zi
3. skupina	PM, iné		ČPK, Zv
4. skupina			DA
5. skupina			OA, VI, PH
6. skupina			PM, iné

Source: vlastné spracovanie výsledkov výskumu.[6]

[6] Pozn: náklady (N), výnosy (Vn), zisk (Zi), príjmy (Pr), výdavky (Vd), čistý pracovný kapitál (ČPK), obežné aktíva (OA), dlhodobé aktíva (DA), vlastné imanie (VI), pridaná hodnota (PH), príspevková marža (PM), záväzky (Zv), iné.

Podniky vnímajú ako prioritu plánovať svoje náklady, výnosy, príjmy a výdavky. Zahraničné podniky uprednostňujú tiež plánovanie zisku a čistého pracovného kapitálu. Rozdiel v preferovaní tiež možno pozorovať pri plánovaní dlhodobých aktív.

3.2 Vplyv zahraničného investora na procesy finančnej kontroly

Finančnú kontrolu, ako jednu zo základných funkcií finančného riadenia, poskytujúcu spätnú väzbu o realizovaných finančných činnostiach, chápeme ako neodmysliteľnú súčasť procesu riadenia. Jej cieľom je sústavné hodnotenie všetkých informácií o uskutočňovaných finančných procesoch, dosiahnutých výsledkoch finančnej činnosti, o ich riadení a o spôsobe napĺňania stanovených finančných cieľov, tiež príprava podkladov pred prijímaním rozhodnutí a opatrení na zabezpečenie finančných cieľov (Kráľovič, 2006). V prípade, že sa finančná kontrola zameriava na finančné hospodárenie spoločnosti, výsledky finančnej činnosti, skúma príčiny ovplyvňujúce priebeh finančných procesov, tvorí organickú súčasť ekonomickej kontroly, ktorú označujeme ako finančná analýza (Háčik, 1993).

Vo výskume sme zisťovali, či podniky realizujú finančnú analýzu a s akou periodicitou. Zaujímalo nás, ktoré z vyššie uvedených finančných ukazovateľov využívajú pri kontrole svojho hospodárenia. Komplexnú finančno-ekonomickú analýzu realizujú v 76 % respondentov, 96 % zahraničných a 73 % domácich podnikov. Najvyšší podiel respondentov (32,32 %) analyzuje finančnú situáciu podniku s ročnou periodicitou, 26,83 % respondentov podľa potreby, 17,68 % mesačne, 14,02 % štvrťročne a 9,15 % respondentov polročne.

Pri testovaní hypotézy H1.3 sme zistili, existenciu slabej pozitívnej závislosti realizácie finančnej analýzy od existencie podielu zahraničného kapitálu na základnom imaní (r_s = 0,163, Sig. = 0,014). Následne sme skúmali, či spoluvlastníctvo zahraničného investora má vplyv na počet ukazovateľov, pomocou ktorých podniky kontrolujú svoje hospodárenie. Testovaním hypotézy H2.2 sme zistili slabú pozitívnu závislosť počtu kontrolovaných finančných ukazovateľov od existencie podielu zahraničného kapitálu na základnom imaní (r_s = 0,243, Sig. = 0,000). Výsledky testu korelácie pre jednotlivé skupiny ukazovateľov sumarizujeme v Tab. 4. Z údajov môžeme konštatovať, že na zvolenej hladine významnosti 0,1 existuje slabá pozitívna závislosť medzi počtom kontrolovaných ukazovateľov v danej skupine a existenciou podielu zahraničného kapitálu na základnom imaní. Najvyšiu koreláciu sme zaznamenali pri počte ukazovateľov trhovej hodnoty, najnižšiu pri ukazovateľoch aktivity.

Table 4: Korelácia pre jednotlivé skupiny pomerových finančných ukazovateľov

			Ukazovatele aktivity	Ukazovatele hodnotenia investícií	Ukazovatele likvidity	Ukazovatele produktivity	Ukazovatele rentability a výnosnosti	Ukazovatele štruktúry	Ukazovatele trhovej hodnoty	Ukazovatele zadlženosti	Vlastné ukazovatele
Spearman's rho	ot3-zv	Correlation Coefficient	,143	,237**	,206**	,195**	,221**	,185**	,277**	,235**	,146*
		Sig. (2-tailed)	,051	,000	,002	,003	,001	,006	,000	,000	,029

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).
Source: vlastné spracovanie výsledkov výskumu.

Rovnako ako pri plánovaní, nás zaujímalo aj poradie kontrolovaných ukazovateľov. Ukazovatele sme vyhodnotili po skupinách, v členení pre domáce podniky, zahraničné podniky a podniky spolu. Friedmanovym testom sme zistili významný rozdiel v preferenčnom usporiadaní kontrolovaných skupín finančných ukazovateľov. Využitím Wilcoxonovho testu sme zistili poradie, pre ktoré boli určujúcim významné rozdiely v počte kontrolovaných ukazovateľov v jednotlivých skupinách. V prvej skupine ukazovateľov sa vyskytli ukazovatele likvidity a aktivity, druhú skupinu tvorili ukazovatele výnosnosti a rentability. V zahraničných podnikoch boli súčasťou druhej skupiny aj všetky ostatné ukazovatele.

4. Conclusion

Výsledky nášho výskumu poukazujú na skutočnosť, že globalizácia svojimi účinkami ovplyvňuje aj procesy finančného riadenia. Zhrnutím realizovaných testov môžeme konštatovať, že zahraničné podniky realizujú finančné plánovanie a finančnú kontrolu častejšie, ako domáce podniky. Tiež sme potvrdili predpoklad, že zahraničné podniky plánujú a kontrolujú viac finančných ukazovateľov ako podniky domáce.

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CHANGES IN TOURISM DEMAND OF THE VISEGRAD GROUP INHABITANTS IN THE CONDITION OF GLOBALIZATION

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Abstract. Globalization is accompanied with the mutual expansion of social, economic, cultural and lawful processes to one another. It refers to the opening of individual national economies to the world economy, with mutual strong cooperation. Globalization does not only nullify the borders and reduce trade barriers between countries but is also a sort of a generator of changes. Tourism represents an instrument for development and becomes one of the leading sectors in many economies. It is promoted as a positive means of economic development for the countries and communities who have lost their traditional industries, or for those who simply hope to improve their economic condition. Globalization impetus new trends in the tourism which are evident in the emergence of new needs, the behaviour of tourists and their preferences regarding the choice of tourism products. Globalization influences also the tourism development and tourism demand in Visegrad group countries. The aim of this paper is to examine the changes in tourism demand of the Visegrad group inhabitants in the condition of globalization. The article analyse the data from the European Commission, World Economic Forum and World Travel and Tourism Council. The data are processed by methods of descriptive statistics. The article presents changes in tourism demand of the Visegrad group inhabitants in 2008 and 2015.

Keywords: globalization, tourism demand, Visegrad group

JEL Classification: L83, O18, R11

1. Introduction

Globalization is a process of international integration, and its development is due to increased exchange of products, services etc. (Surugiu & Surugiu, 2015). It is a process, which increases the dependence of national economies and markets. Globalization is driven by high dynamics of goods, capital, services, labour, technology and know-how (Indrová, 2008). It is an irreversible process that affects all spheres of society, including tourism. According to Horner and Swarbrook (2003), Europe and the world are still heterogeneous, but they are slowly moving towards homogeneity, especially in terms of consumer behaviour. However, globalization is not associated only with the free movement of goods and services, capital, new markets, development of multinational companies, mass production, consumption and culture, but also with the negative consequences, such as globalization of underground, drugs, trafficking in human beings and weapons, money laundering, tax evasion financial fraud (Indrová, 2008) and global crisis (Nicula, 2009; Visser & Ferreira, 2011). Also, terrorism has evolved into a major global concern for the tourism industry (Liu & Pratt, 2017). These factors must be taken into account by those involved in the development of tourism, i.e. enterprises and destinations (Maráková, Kvasnová & Wolak-Tuzimek, 2016), as well as by tourism policy makers.

There are several key factors which have influenced the process of globalisation in tourism as well as the signs that affect both demand (changing consumer behaviour) and supply (changing the structure of the tourism sector). Globalization is considered to be a megatrend of the 21st century that affects business environment in which certain forces are the cause of growth in globalization. Even tourism is considered as a hyper-globalizer (Hjalager, 2007). Globalization in tourism is associated with:

- The infiltration of multinational companies (airlines, chained-brand hotels, tour operators, etc.) into the domestic market, the expansion of small enterprises across borders (foreign branches, investment abroad - capital movements);
- New destinations (regions, tourist centres) and changes in the tourism market (Europe, East Asian and America have a 90 % share in international tourism);
- The offer of homogenous and unified high quality branded products (creating a global brand and a strong image), pushing small and medium-sized enterprises out of the market as a result of lower costs;
- Changes in organisational structures, joint ventures, strategic partnerships, fusions to reduce costs and thus gain a competitive advantage. This applies not only to individual enterprises but also to destination (tourism centres, regions);
- Enterprise marketing management, interactive marketing and customer relationship management techniques;
- Demand concentration that allows differentiation of supply by the customer target groups, economies of scale (cost advantage), lower prices, the creation of "tailor-made products", and thus pinpoint customers;
- Changes in consumer behaviour, value orientated, more favourable product prices and quality services.

The share of V4 countries in the European tourism market was 5,68 % (nights spent at tourist accommodation establishments) in 2015 (ec.europa.eu/eurostat, 2016). Globalization in tourism is escalating process that goes through various phases and is accelerated, especially by ICT, development of transport and travel possibilities. In order to deal with the globalization, it is necessary to pay particular attention to the development of tourism demand at home and also at competitive tourism markets. It is essential to focus on the changes in the consumer behaviour of visitors (customers) in tourism.

2. Methods

The aim of this paper is to examine the changes in tourism demand of the Visegrad group inhabitants in the condition of globalization. The eastern part of Central Europe (including the Czech Republic, Hungary, Poland and Slovakia) are examined in this paper. The article analyses opinions of domestic and foreign authors, who deals with the signs of globalization in tourism (Gúčik, 1999; Horner & Swarbrook, 2003; Gúčik & Šípková, 2004; Wall & Mathieson, 2006; Hjalager, 2007; Maráková, 2009; Gúčik & Buranovský, 2011; Goeldner & Ritchie, 2014; Kostková. et al., 2015). The empirical research is based on Eurobarometer primary data published by the European Commission (2016) and data from the World Economic Forum (2009, 2016). In this paper, the methods of descriptive statistic are used.

3. Results

The Visegrad Group (V4) as a whole has seen in recent years a successful shift from the periphery towards the core of European integration (Gregová & Dengov, 2015). In V4 countries, tourism is at a different phase of development. These countries are in the competitive tourism market and therefore, they are trying to adapt to changing conditions. However, this development is not the same (Kiraľová & Malec, 2016).

Participation in tourism includes the proportion of a given population that makes at least one tourism trip of a specified minimum duration in a given reference period. The share of respondents who participated in tourism in 2008 and 2015 is captured in Tab. 1.

Table1: Share of respondents who participate in tourism in 2008 and 2015 in %

Respondents / Country	**Czech Republic**		**Hungary**		**Poland**		**Slovakia**		**V4 average**		**EU**	
	2008	**2015**	**2008**	**2015**	**2008**	**2015**	**2008**	**2015**	**2008**	**2015**	**2008**	**2015**
Travelled	62	79	45	64	52	72	58	74	54	72	71	73
Did not travel	35	20	54	36	45	26	36	25	43	27	28	26
Don´t know	3	1	1	0	3	2	6	1	3	1	1	1

Source: survey on the attitudes of Europeans towards tourism, 2009; Preferences of Europeans towards tourism, 2016 and own elaboration, 2017

Three-quarters of V4 respondents (72 %) participated in tourism in 2015. The highest share of respondents who travel was in the Czech Republic. The lowest share of respondents was in Hungary. The share of respondents who participated in tourism increased in the V4 countries (by 18 %) also in the European Union (by 2 %). However, more than a quarter of the V4 population (27 %) did not participate in tourism in 2015. The reasons for not participating in tourism are presented in Tab. 2.

Table 2: The reasons for not participating in tourism in 2008 and 2015 in %

Reason / Country	**Czech Republic**		**Hungary**		**Poland**		**Slovakia**		**V4 average**		**EU**	
	2008	**2015**	**2008**	**2015**	**2008**	**2015**	**2008**	**2015**	**2008**	**2015**	**2008**	**2015**
Financial reasons	35	30	60	53	52	36	37	54	46	43	41	39
Health reasons	24	24	15	29	16	26	19	31	19	28	21	15
Prefer to stay at home	8	16	8	7	9	10	12	20	9	13	9	14
Lack of free time (work, school)	5	12	4	8	11	19	12	19	8	15	10	13
Lack of free time (family)	-	17	-	11	-	14	-	17	-	15	-	10
Other	15	10	5	4	7	4	9	6	9	6	8	6

Source: survey on the attitudes of Europeans towards tourism, 2009; Preferences of Europeans towards tourism, 2016 and own elaboration, 2017

Almost half of V4 respondents (43%) who did not participate in tourism in 2015 mentioned financial reasons. The highest share of respondents, who did not participate in tourism for financial reasons was among Hungarian respondents. Apart from Slovakia, the share of V4 inhabitants who did not travel for financial reasons decreased. The second most frequent reason for not participating in tourism was health problem, respectively personal reason (28%). Compared to 2008, the share of respondents in V4 countries who did not participate in tourism for health reasons increased, with the exception of the Czech population. The share of respondents, who did not participate in tourism for lack of free time increased. This may be a cause of increasing stress and busy lifestyle.

Decision about the participation in tourism is determined, among other things, by available sources of information. Most-used sources of information for planning a holiday are presented in Tab. 3.

Table 3: Source of information for planning holidays in 2008 and 2015 in %

Source of information / Country	**Czech Republic**		**Hungary**		**Poland**		**Slovakia**		**V4 average**		**EU**	
	2008	**2015**	**2008**	**2015**	**2008**	**2015**	**2008**	**2015**	**2008**	**2015**	**2008**	**2015**
Recommendation of friends and relatives	28	58	38	52	39	61	38	46	36	54	55	51
Website reviews	-	43	-	21	-	36	-	23	-	31	-	34
Personal experience	29	42	27	27	28	30	34	30	30	32	32	33
Official websites	16	25	11	12	15	17	15	17	14	18	-	17
Travel agencies	7	9	3	7	9	10	9	7	7	8	18	13
Social media	-	11	-	13	-	17	-	7	-	12	8	12
News and TV	2	11	3	5	7	14	2	10	4	10	7	11
Guidebooks	5	5	5	4	5	5	3	5	5	5	7	9

Source: survey on the attitudes of Europeans towards tourism, 2009; Preferences of Europeans towards tourism, 2016 and own elaboration, 2017

The most important source of information for V4 respondents is the recommendation of friends and relatives (54 %, in 2008 36 %) and almost third of respondents (32 %) consider personal experience and website reviews (31 %) to be important.

Around 12 % of V4 respondents mentioned social media, 8 % travel agencies and 5 % used as a source of information guidebooks. Recommendations from friends, colleagues or relatives and personal experience are considered as the most important source of information.

Globalization influence also holiday duration. European tourists prefer short-term trips. The number of nights spent by respondents from V4 countries in 2015 is shown in Tab. 4.

Table 4: Duration of holidays in 2015 in %

Number of nights / Country	**Czech Republic**	**Hungary**	**Poland**	**Slovakia**	**V4 average**	**EU**
More than 13 nights	35	18	41	32	32	43
Between 4 and 13 nights	72	60	65	60	64	70
Lasting up 3 night	71	63	70	68	68	64

Source: survey on the attitudes of Europeans towards tourism, 2009; Preferences of Europeans towards tourism, 2016 and own elaboration, 2017

The most common average holiday's duration of V4 respondents in 2015 were short trips with less than 3 nights (68 %) and from 4 to 13 nights (64 %). Almost third of the V4 respondents (32 %) said that they had taken at least one holiday lasting more than 13 consecutive nights. The lowest share of respondents who travelled for more than 13 consecutive nights was in Hungary.

Participation in tourism and duration of holidays is influence by tourists' motivation. The motives for participation in tourism usually do not change, but over the years they adapt to changing conditions and trends (Tab. 5)

Table 5: Motives for participation in tourism 2008 and 2015 in %

Motives / Country	Czech Republic		Hungary		Poland		Slovakia		V4		EU	
	2008	2015	2008	2015	2008	2015	2008	2015	2008	2015	2008	2015
Rest and recreation*	33	-	49	-	49	-	39	-	43	-	37	-
Sun and beach	31	23	20	21	16	24	28	29	24	24	20	25
Visiting family, friends	6	17	13	28	12	24	12	17	11	22	16	23
Nature attractions	15	26	5	9	5	19	8	14	8	17	6	13
City trips	1	3	4	9	8	11	3	3	4	7	7	10
Culture and gastronomy	3	4	4	5	2	5	1	7	3	5	7	9
Wellness and spa	5	10	5	16	5	4	4	15	5	11	3	6
Sport-related activities	6	9	1	2	3	6	5	5	4	6	3	4
Events	-	3	-	5	-	3	-	4	-	4		3

*Note: * The 2015 survey did not explore rest and recreation.*
Source: survey on the attitudes of Europeans towards tourism, 2009; Preferences of Europeans towards tourism, 2016 and own elaboration, 2017

For V4 respondents, sun and beach (24 %), visiting friends and relatives (22 %) and natural attractions (17 %) were the main motives for going on holiday in 2015. Compared to 2008, the share of V4 respondents whose motives was visiting friends and relatives increased by 11 %. Respondents from the EU likewise preferred sun and beach, visiting family and friends and natural attractions.

Duration of holidays is associated with tourism spending. In 2015, for each tourism trip, Europeans spent on average 348 eur (ec.europa.eu). Tab. 6 presents the comparation of tourism spending of V4 inhabitants in 2008 and 2015.

Table 6: Domestic Tourism Spending in 2008 and 2015 in billion euros

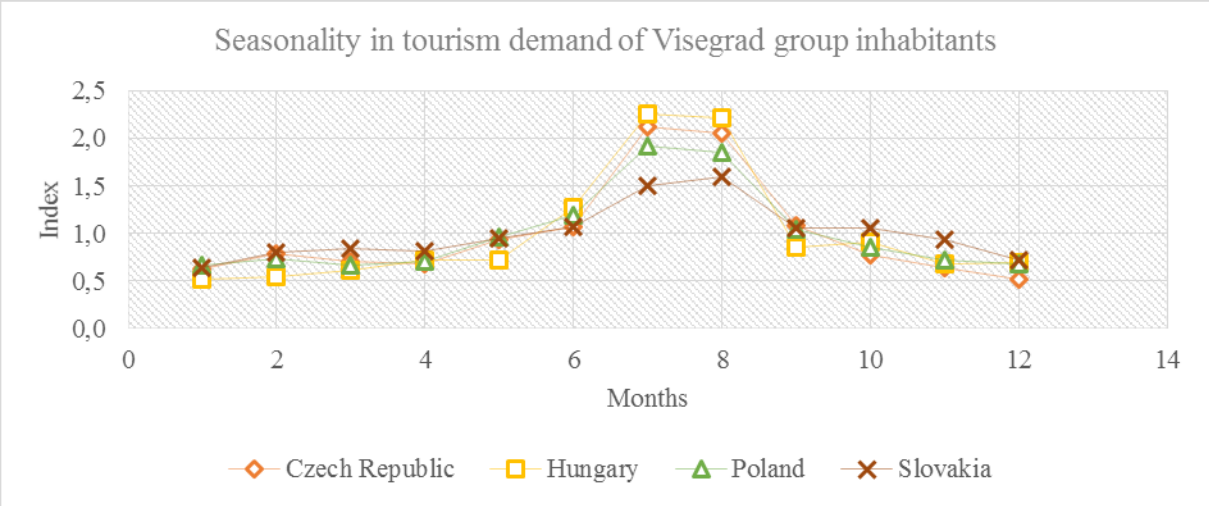
Country / Year	2008	2015	Change (%)
Czech Republic	3,485	3,718	6.66
Hungary	2,692	3,894	44.62
Poland	2,218	4,354	96.26
Slovakia	1,461	2,143	46.66
Variance	0.72	0.92	x

Source: World Travel and Tourism Council and own elaboration, 2017

Domestic tourism spending was highest in Poland (4,354 billion eur), followed by Hungary and Czech Republic. Domestic tourists in Poland increased their spending by 96.26 % over 2015–2008. The smallest increase in domestic tourism spending indicated Czech Republic. Variance expressed an increase in differences between spending by domestic tourists in V4 countries.

Seasonality has become one of the most distinctive and determinative features of global tourism industry. Seasonality can be evaluated by looking at the ratio of the number of nights spent during the peak month by those made during the weakest month. Tourism demand of V4 residents was concentrated in the third quarter, mainly in July followed by August (Fig. 1).

Figure 1: Seasonality in tourism demand of Visegrad group inhabitants in 2015



Source: ec.europa.eu and own elaboration, 2017

In 2015, seasonal fluctuations of V4 domestic tourists were particularly high where 33 % of annual nights spent were recorded in the two months, July and August. The highest seasonality of domestic tourism was in Hungary followed by Czech Republic and Poland. Tourism demand of V4 inhabitants in August was 3.18 times higher than the number of nights spent by domestic tourist in the weakest month (January).

4. Conclusion

The aim of this paper was to examine the changes in tourism demand of the Visegrad group inhabitants in the condition of globalization. We analyse the tourism demand of each Visegrad group country and compare it with the average tourism demand of European Union in 2008 and 2015.

More than seven in ten V4 inhabitants went away for at least one night in 2015, which is an increase from the year 2008. The proportion of V4 respondents who travelled for a minimum of one night increased from 52 % to 72 %. The lowest share of respondents who did not travel was in Hungary. Respondents from V4 countries who did not go on holiday in 2015 say that it was mainly for financial reasons (43 %), in EU (39 %). Other reasons were health reasons, lack of time or prefer staying at home.

The most important source of information for V4 respondents is the recommendation of friends and relatives (54 %, in 2008 36 %) and almost third of respondents (32 %) consider personal experience and website reviews (31 %) to be important. A short trip lasting 3 nights is the most popular type of trip for V4 respondents (68 %) followed by holiday lasting 3 – 14 nights (64 %). European Union residents have similar preferences. This is may be the effect of globalization, tourists travel more for a shorter period of time.

The sun and beach are the main reasons for going on a holiday followed by visiting family or relatives and nature attractions. The share of V4 respondents whose motives was visiting friends and relatives increased by 11 %. This may relate to the most important source of information which is the recommendation of friends and relatives.

Domestic tourism spending was highest in Poland followed by Hungary and Czech Republic. The growth of domestic tourism spending contributed to differences across Visegrad group countries. The highest increase in domestic tourism spending indicated Poland, Slovakia and Hungary. Tourism demand of V4 residents was concentrated mainly in July followed by August. The highest seasonality of domestic tourism was in Hungary followed by Czech Republic and Poland.

Part of globalization is the economic cycle, which aims to clear the market. In condition of globalization is essential to focus on changes in tourism demand, eliminate the differences between expected and offered services, pay particular attention to trends in demand as well as to relation between value and price. In order to understand tourism demand and consumer behaviour, tourism private and public entities have to consider these factors.

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ANALYSIS OF GLOBALIZATION BY WAVELETS THROUGH THE PRISM OF THE SELECTED EURO AREA COUNTRIES

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Abstract. Globalization is a very important issue. There are supporters and opponents. However, regardless of perspective, globalization is a process that gradually affects every one of us. Globalization is more or less present in every country. However, depending on its citizens and governors, it grows to a greater or lesser extent. Worldwide trade-to-GDP ratio rose from just over 20% in 1995 year to about 30% in 2014 year. Globalization, as every phenomenon has its advantages and disadvantages. Unfortunately, globalization is associated with new forms of risk and may, in the long run, be associated with increased social inequalities and other social problems. The subject of the study is an analysis of the intensity of globalization in selected euro area countries, and then grouping the analyzed countries into the groups with the highest and lowest globalization rates. The purpose of the study is to identify countries most similar to each other due to globalization.

Keywords: integration, globalization, wavelet.

JEL Classification: C01, C02, C31

1. Introduction

The main purpose of the study, using the analysis of wavelet is to identify the state (from the Visegrad countries) most integrated with Poland in the context of globalization. Then construct the wavelet trend for the globalization index and the prediction. Globalization in all its dimensions is not a homogeneous process and can to be tested on different planes and cross sections, it can be explored in various methods and tools. In the article, wavelet analysis was used as a research tool. The study was based on the KOF Index of Globalization, which was introduced in 2002 (Dreher, 2006) and is updated and described in detail in (Dreher, Gaston & Martens, 2008).

Globalization "is a process of interaction and integration among the people, companies, and governments of different nations, a process driven by international trade and investment and aided by information technology. This process has effects on the environment, on culture, on political systems, on economic development and prosperity, and on human physical well-being in societies around the world" (Levin Institute, www.globalization101.org). In other words, globalization is an economic, political and social process that takes on various forms and concerns diverse areas, including: finance; markets and strategies, and mainly competition; technology, research and development and knowledge; life styles, consumption patterns, and the consequences of globalization of culture; rule of law; political unification of the world. Following Clark (2000), Norris (2000) and Keohane and Nye (2000), it defines globalization to be the process of creating networks of connections among actors at multi-continental distances, mediated through a variety offlows including people, information and ideas, capital and goods. Globalization is conceptualized as a process that erode national boundaries, integrates national economies, cultures, technologies and governance and produces complex relations of mutual interdependence (Dreher, 2006; Clark, 2000; Norris, 2000; Keohane & Nye, 2000). Globalization is not new. "For thousands of years, people and, later, corporations have been buying from and selling to each other in lands at great distances, such as through the famed Silk Road across Central Asia that connected China and Europe during the Middle Ages. Likewise, for centuries, people and corporations have invested in enterprises in other countries. In fact, many of the features of the current wave of globalization are similar to those prevailing before the outbreak of the First World War in 1914. But policy and technological developments of the past few decades have spurred increases in cross-border trade, investment, and migration so large that many observers believe the world has entered a qualitatively new phase in its economic development. Since 1950, for example, the volume of world trade has increased by 20 times, and from just 1997 to 1999 flows of foreign investment nearly doubled, from $468 billion to $827 billion. Distinguishing this current wave of globalization from earlier ones, author Thomas Friedman has said that today globalization is "farther, faster, cheaper, and deeper." (Levin Institute, www.globalization101.org/)".

2. Wavelets

Wavelets we call function $\Psi(x) \in L^2(\mathbb{R})$, such that the system functions (Eq. 1):

$$B_\Psi = \left\{2^{\frac{j}{2}}\Psi\left(2^j x - k\right)\right\}; \quad j \in \mathbb{Z}, \quad k \in \mathbb{Z} \tag{1}$$

is an orthonormal basis in the space $L^2(\mathbb{R})$. Family B_Ψ will be called wavelet base.

The simplest wavelet is the Haar wavelet. "(…) In mathematics, the Haar wavelet is a sequence of rescaled 'square-shaped' functions which together form a wavelet family or basis. Wavelet analysis is similar to Fourier analysis in that it allows a target function over an interval to be represented in terms of an orthonormal function basis. The Haar sequence is now recognised as the first known wavelet basis and extensively used as a teaching example (…)" (Hadaś-Dyduch (2016c)).

The Haar sequence was proposed in 1909 by Alfréd Haar. Haar used these functions to give an example of an orthonormal system for the space of squareintegrable functions on the unit interval [0, 1]. The study of wavelets, and even the term "wavelet", did not come until much later. As a special case of the Daubechies wavelet, the Haar wavelet is also known as D2 (see more about wavelet in: (Dooms & Daubechies (2011) and Hadaś-Dyduch (2015a, 2015b, 2016a, 2016b, 2016d, 2016e). Daubechies' wavelets first row (db1) is the Haar wavelets. Daubechies wavelets is wavelets created by Ingrid Daubechies in 1988 year (Hadaś-Dyduch (2016c)).

3. Empirical analysis

The main aim of this article is the application of wavelet analysis to estimate the trend function globalization for cointegrated countries in terms of the studied phenomenon. In the first step, the cointegration between countries in the area of globalization was examined, and then the appropriate function of the globalization trend was assessed. The estimated wavelet function of the globalization trend is the basis for the prediction of the globalization index. In the article does not describe in detail the results associated with cointegration, because a two-step cointegration procedure Engel-Granger based on the Dickey-Fuller test is a known method in the study series cointegrated.

3.1 Empirical material

The research was based on the indicator of globalization, ie. The KOF Globalization Index. "The KOF Globalization Index measures the three main dimensions of globalization: economic, social and political. In addition to three indices measuring these dimensions, we calculate an overall index of globalization and sub-indices referring to: actual economic flows, economic restrictions, data on information flows, data on personal contact, and data on cultural proximity. (…) In constructing the indices of globalization, each of the variables introduced (...) is transformed to an index on a scale of one to hundred, where hundred is the maximum value for a specific variable over the 1970-2014 period and one is theminimum value (...)". (Dreher, 2006). Highe value denote greater globalization. The data are transformed according to the percentiles of the original distribution. The study was conducted for the Visegrad countries: Poland, Czech Republic Hungary, Slovak Republic.

3.2 Wavelet trend

Engel-Granger, based on tests Dickey-Fuller, was used to identify the most integrated state of Poland in terms of factors influencing globalization. The analysis of cointegration reports that Slovakia is the most integrated country in terms of globalization with Poland. Thus, it can be hypothesized that indicators, inter alia macroeconomic indicators influencing Slovakia's globalization, are very similar to Polish indicators in the same time period.

Due to the above mentioned links, one can estimate the common function of the trend of globalization for Poland and Slovakia, by analyzing the wavelet. The common function of the globalization trend for Poland and Slovakia will include data on: real economic flows, economic restrictions, data on information flows, data on personal contact and data on cultural proximity.

The function of the globalization trend, which will be estimated for selected indicators, in the general form has the form Eq. 2:

$$\tilde{f}(r) = a_{-2}\varphi(r+2) + a_{-1}\varphi(r+1) + ... + a_{2^n-1}\varphi\left(r - \left[2^n - 1\right]\right) \tag{2}$$

where: $a_{-2}, a_{-1}, ..., a_{2^n-1}$ - wavelet coefficients.

$$\varphi(r) = \frac{1+\sqrt{3}}{4}\varphi(2r) + \frac{3+\sqrt{3}}{4}\varphi(2r-1) + \frac{3-\sqrt{3}}{4}\varphi(2r-2) + \frac{1-\sqrt{3}}{4}\varphi(2r-3) \tag{3}$$

The article presents several variants of the globalization trend. Option one is a globalization trend based on indicators representing Poland and Slovakia. Also referred to as the globalization trend of Poland and Slovakia. In the next variant, the trend was based on indicators representing Poland and Hungary, and then the trend of globalization of all Visegrad countries was estimated.

3.2.1 Wavelet trend

The function of the globalization trend (Eq. 4, 5), estimated on the basis of the indicators characterizing the globalization index in Poland and Slovakia is as follows:

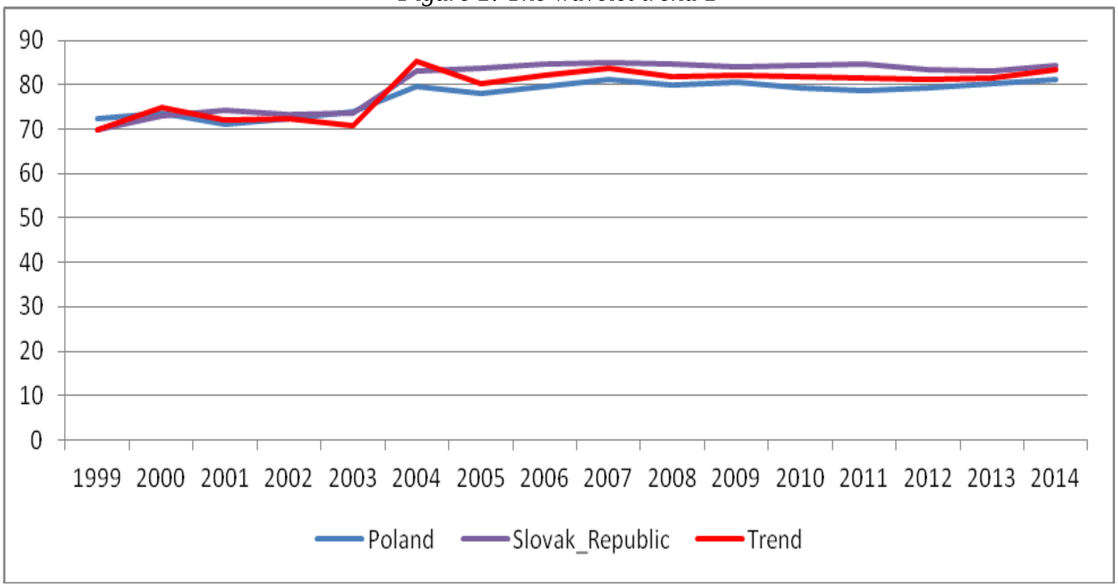
$$\tilde{f}(r) = 69{,}96\varphi(r+2) + 74{,}79\varphi(r+1) + 72{,}13\varphi(r) + 72{,}37\varphi(r-1) + \\ 70{,}02\varphi(r-2) + \ldots + 81{,}09\varphi(r-13) + 81{,}39\varphi(r-14) + 83{,}39\varphi(r-15) \quad (4)$$

where:

$$\varphi(r) = \frac{1+\sqrt{3}}{4}\varphi(2r) + \frac{3+\sqrt{3}}{4}\varphi(2r-1) + \frac{3-\sqrt{3}}{4}\varphi(2r-2) + \frac{1-\sqrt{3}}{4}\varphi(2r-3) \quad (5)$$

As you can see illustrated in Fig.1, wavelet function trend (according to Eq. 4 and 5) is very well matched to the actual data of globalization in Poland and Slovak Republic.

Figure 1: The wavelet trend 1



Source: own eleboration

On the basis of the estimated function (2) determined the indicator of globalization of other countries belonging to Visegrad Group. Errors forecasts expired estimated on the basis of function (2) is presented in Tab. 1.

Table 1: Errors

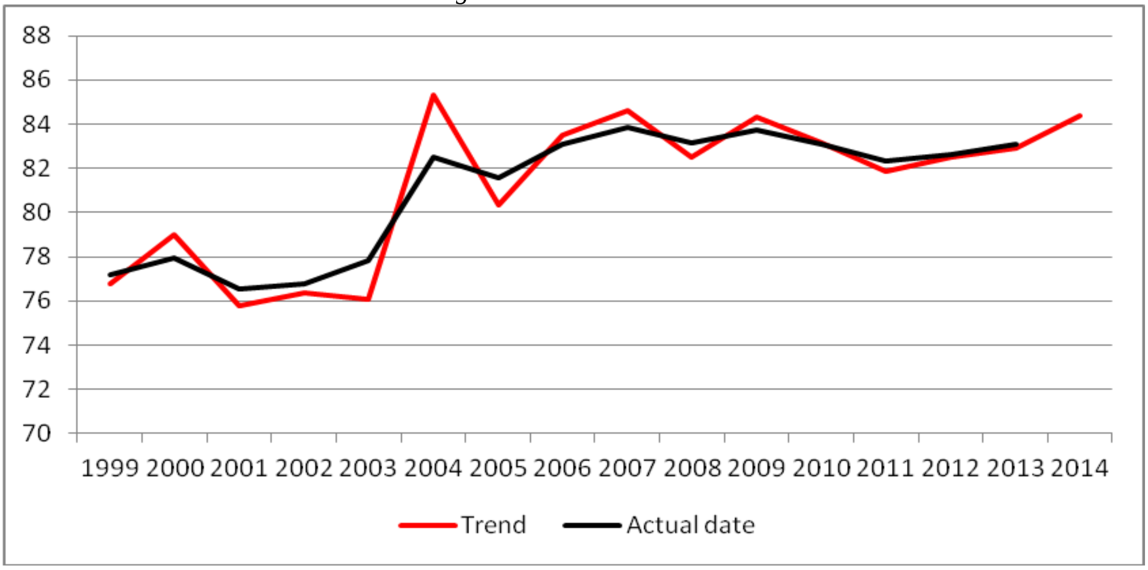
Country	Error				
	ME	**MAE**	**MAPE**	**RMSE**	**RMSPE**
Czech_Republic	19.8919	3.5944	0.0436	4.4600	5.4138%
Hungary	43.5198	5.7916	0.0682	6.5970	7.7735%

Source: own calculations.

The forecast of the globalization index of Poland based on the estimated function of the trend (2) gives the following errors: ME = 6.3087; MAE = 2.2178; MAPE = 0.0286; RMSE = 2.5117; RMSPE = 3.2383%. The forecast of the globalization index of Slovakia, based on the estimated function of the globalization trend, is less than the forecast for Poland. Predictions for Slovakia are as follows: ME = 4.8821; MAE = 2.0119; MAPE = 0.025; RMSE = 2.2095; RMSPE = 2.7419%.

For comparison, the globalization trend was based on indicators representing Poland and Hungary. Fig. 2 shows the result of the estimation. Forecasts calculated on the basis of the estimated globalization trend of Poland and Hungary are more erroneous than forecasts calculated on the basis of the globalization trend containing the globalization trends of Poland and Slovakia. The results are shown in Tab. 2.

Figure 2: The wavelet trend 2



Source: own eleboration

Table 2: Errors

Country	Error				
	ME	**MAE**	**MAPE**	**RMSE**	**RMSPE**
Poland	14.3997	3.6509	0.0471	3.7947	4.8924%
Czech_Republic	4.3355	1.5097	0.0183	2.0822	2.5275%
Hungary	15.6857	3.6509	0.0430	3.9605	4.6669%
Slovak_Republic	8.3007	2.1616	0.0268	2.8811	3.5753%

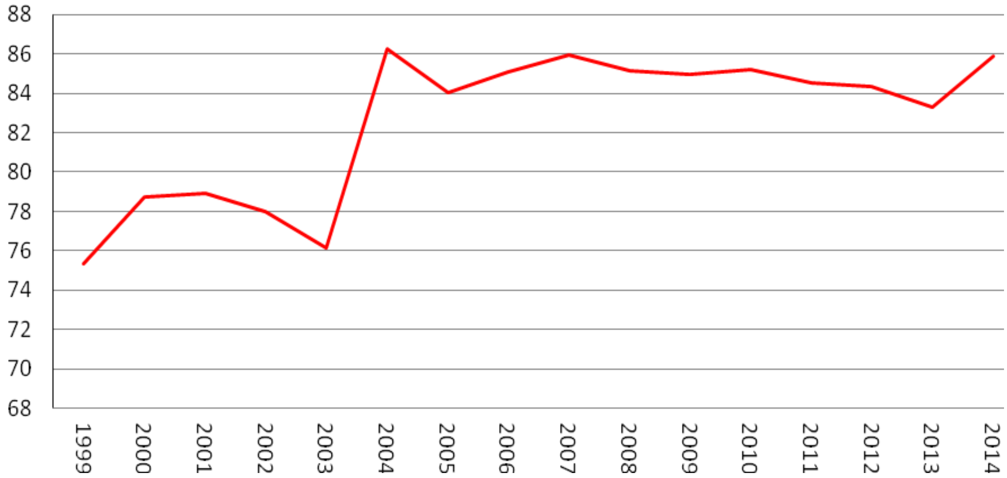
Source: own calculations

In order to see the degree of influence of globalization factors in countries such as the Czech Republic, Slovakia and Hungary, Poland has assessed the function of globalization based on indicators representing the three countries: the Czech Republic, Slovakia and Hungary. The function has the form (Eq. 6):

$$\begin{aligned}\tilde{f}(r) = 75.35\varphi(r+2) + 178.76\varphi(r+1) + 178.91\varphi(r) + 178.02\varphi(r-1) + \\ + \ldots + 84.55\varphi(r-13) + 84.31\varphi(r-14) + 85.87\varphi(r-15)\end{aligned} \tag{6}$$

The estimated wavy trend of globalization is illustrated in Figure 3. The trend illustrates the globalization trend of the three states at the same time: the Czech Republic, Slovakia and Hungary.

Figure 3: The wavelet trend 3



Source: own eleboration

On the basis of the estimated trend, the forecast of the globalization index for Poland was determined. The RMSE prediction error is 6.74% (Tab. 3).

Table 3: Errors

Country	Error				
	ME	**MAE**	**MAPE**	**RMSE**	**RMSPE**
Poland	27,4010	5,0475	0,0651	5,2346	6,7489%
Czech_Republic	2,7902	1,2615	0,0153	1,6704	2,0276%
Hungary	8,4560	2,3642	0,0279	2,9079	3,4266%
Slovak_Republic	7,9758	2,0340	0,0252	2,8242	3,5046%

Source: own calculations

4. Conclusion

The analysis based on wavelet trend function, let unequivocally verify the hypothesis about the dependence of indicators of several countries in the context of globalization. The results show that wavelets are an effective tool for exploring globalization. In addition, states within the Visegrad Group are characterized by similar relationships. It should be noted that for the construction of a wavelet function (trend wavelet) verifies the hypothesis chosen weakest parameters. Therefore, the results may be even better (that is, carry a lower error), after taking into account the stronger parameters, such as the use of more professional extension of data series in the process of determining wavelet coefficients. The presented glimpse into globalization is not the only way to analyze it. An interesting way of describing globalization and internationalization is given in Mahdi Ghodsi & Michalek (2016), Vukovic, Hanic, & Hanic (2017), Piekarczyk (2016), Janiga-Ćmiel (2017). In further studies, may be applied, the proposed method for the analysis of the relationship between the different regions in the context of a multi-dimensional, taking into account macroeconomic indicators and determine the best extension for a series of related. The study will be used results from earlier studies as well as some interesting methods used so far to the other tests for example (Balcerzak & Pietrzak (2016), Hadaś-Dyduch 2014, Pietrzak & Balcerzak, (2016a, 2016b), Biernacki (2007, 2009), Janiga-Ćmiel (2017)). Research has shown that globalization is very important, it gives a lot of possibilities.

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GLOBALIZATION TRENDS IN FINANCIAL ACCOUNTING AND TAXATION OF BUSINESS ENTITIES IN COMPLIANCE WITH THE IMPLEMENTATION OF EU DIRECTIVES AND UPCOMING RECODIFICATION OF TAX LEGISLATION IN THE CZECH REPUBLIC

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Abstract. The paper deals with selected globalization trends in financial accounting and taxation of business entities in accordance with the implementation of EU directives and the upcoming recodification of tax legislation in the Czech Republic. The accounting of business entities in the Czech Republic is getting closer to the International Financial Reporting Standards (IFRS), which proved the amendment to the Act on accounting and other related accounting regulations in 2016 and 2017. After introducing these harmonizing changes, the paper for example defines key issues of the relationship between financial accounting and income tax, which are being discussed by the experts. These issues concern proposed options of using economic results from the accounting under IFRS as a base for income tax in the context of the current solution when the IFRS is first transformed to Czech Accounting Standards for tax purposes, which results in unwanted construct of tax accounting. The paper also lists tax issues and proposals which are being prepared and discussed – mainly in relation to the recodification of income taxes associated with the implementation of EU directives in the tax area as well as changes in other tax institutes, which primarily lead to greater tax neutrality of direct taxes.

Keywords: financial accounting, International Financial Reporting Standards, harmonization, tax institutes, tax neutrality, recodification of tax legislation

JEL Classification: H25, K22, K34, M41, M48

1. Introduction

This paper aims to define and analyse current globalization trends in financial accounting and taxation of business entities in the Czech Republic in accordance with the implementation of EU directives and considered changes in the tax area. Since the accounting of business entities in the Czech Republic (hereafter only CR) is getting closer to the International Financial Reporting Standards (hereafter only IFRS), this paper deals with description and analysis of the issues associated with the relationship between financial accounting and income tax in relation to the proposed options of using the economic results ascertained from the accounting kept under IFRS as a base for income tax. The paper also lists tax issues and proposals which are being prepared and discussed, including proposals relating mainly to the recodification of income taxes associated with the implementation of EU directives in the tax area as well as changes in other tax institutes, which mainly lead to greater tax neutrality of direct taxes.

The area of financial accounting and taxation of business entities in the Czech Republic is constantly evolving in line with globalization trends and the implementation of relevant EU directives. Financial Accounting is a comprehensive system of records that provides information on the business entity's operation, data on the profit or loss and communicates relevant information to users. The output of financial accounting is, therefore, economic information presented in financial statements and annual report, on the basis of which all users (both external and internal) can make a variety of decisions. If a company fails to disclose its financial statements and annual reports, it can be viewed as a company where corruption and possible distortion of the economic state of the company can occur, including covering their bad financial situation or avoiding regular tax payments (McGee and Tušan, 2008 and Tušan, 2014). Accounting is dynamic, constantly evolving, creating new concepts and recording techniques. The trend of ever-growing world globalization is also coming to the play. This is also related to the fact that the accounting of business entities in the Czech Republic is getting closer to IFRS, which also showed the amendment to the Act on accounting (hereafter Accounting Act) and other related accounting regulations in 2016 and 2017 that brought a number of significant changes not only in the accounting (in more details states Hakalová, Palochová, Pšenková, 2016). The above-mentioned amendment to the Accounting Act within harmonization trends has again brought the financial accounting of business entities under the Czech legislation closer to IFRS, and, for example, brought the creation of new categories of accounting entities, the introduction of accounting criteria (accounting with simplified range of evidence), changes in the content of financial statements, and also the obligation to audit the financial statements and disclose it, and others. In addition to the Accounting Act, the changes have also significantly affected other accounting regulations, such as change in the format and structure of financial statements and across a range of accounting policies and practices.

IFRS is a set of standards issued by the International Accounting Standards Board (IASB) for the preparation and presentation of financial statements. IFRS are valid for all accounting entities, regardless of their size, i.e. that the accounting transactions has the same economic benefit and risks for any entity. The role of IAS/IFRS is to ensure that information obtained from accounting is comparable and comprehensible to all its users (Krajňák, 2014). The standards aim to achieve a high level of comparability and transparency of the financial statements worldwide, as the financial statements must be a true representation of the financial position, financial performance and cash flows of the accounting entity. With the emergence of multinational corporations and globalization of their economic activities, the competition between these companies is being expanded also on the competition between individual states (Blechová, 2016). Implementation of IFRS will improve competitiveness and help the company to improve its position; for the foreign user, the company will be more readable and more comparable to other entities (Hakalová, Losová, Pšenková, 2014). IFRS is a completely different system from the Czech national accounting legislation. It is not an accounting system that modifies accounting procedures, but an information system that adjusts final outputs. The practical application of IFRS is no simple matter, especially in view of significant differences between the scheme and Czech accounting standards. On the other hand, application of IAS/IFRS is associated with higher accounting quality than application of domestic standards (Barth, 2005). The need for harmonization and advancing globalization create constant pressure not only on the harmonization of accounting and reporting, but also on the harmonization in the tax area. This move clearly contributed to the acceptance of IAS/IFRS in many parts of the world (Ding, Hope, Jenjean and Stolowy, 2007) as global standards (Redmaye and Laswad, 2013). In 2017, both the professional public and the legislators in the Czech Republic and other EU countries are discussing the possibility of using economic results ascertained from the accounting kept under IFRS as a base for income tax. This option is in the long term also demanded by large entities that report accounting information under IFRS. Pursuant to Sec. 19 (9) of the Accounting Act, accounting entities that are trading companies and issuers of securities registered in a regulated securities market in the EU member states are required to apply and prepare financial statements under IFRS governed by European Community law. This option would only apply to a very narrow group of taxpayers. For illustration, the number of legal entities operating in the Czech Republic is shown in Table 1; however, it is necessary to take into account that only a very small part of joint-stock companies are issuers of securities registered on the regulated securities market. This can also be seen in Fig. 1.

Table 1: Legal entities doing business in the Czech Republic

Year	Trading companies total	Of that joint-stock companies	Cooperatives	State-owned enterprises
2010	347,753	23,991	15,690	358
2011	365,293	24,667	15,536	308
2012	382,478	25,057	15,362	289
2013	399,571	25,255	15,216	241
2014	419,444	25,439	15,154	223
2015	440,757	25,710	14,831	207
2016	462,099	26,005	14,446	199

Source: ČSÚ (2017) – own processing

Figure 1: Legal entities doing business in the Czech Republic

Source: ČSÚ (2017) – own processing

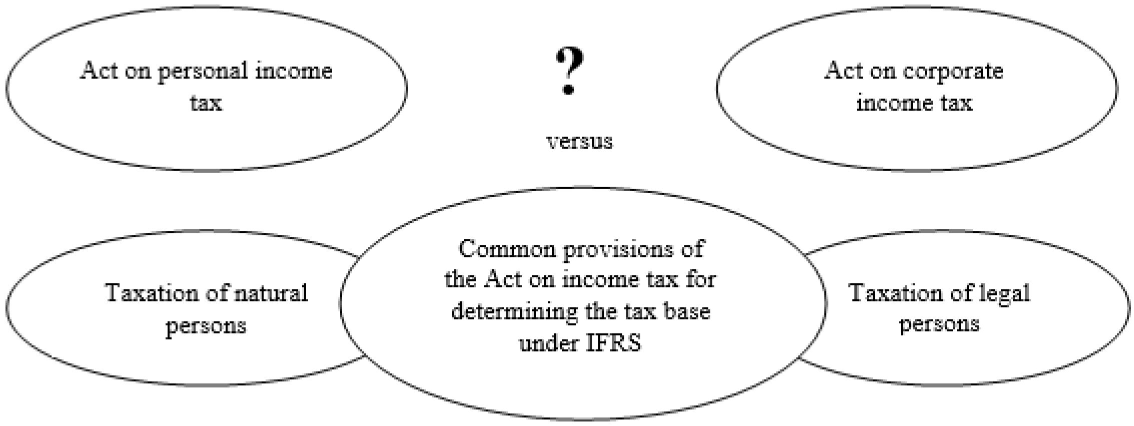
At present, the income tax base is determined under Section 23 (2) (a) of the Act on income tax from the economic result (profit or loss), always without the influence of IFRS, for taxpayers who keep accounts. The current solution, in which the IFRS is first transformed into Czech Accounting Standards for tax purposes, results in unwanted construct of tax accounting. Solutions to the relationship of financial accounting under IFRS and taxation in the area of tax base use can be divided into several model situations. The first option is a separate accounting and tax system, the second is an integrated accounting system and the third is called a hybrid system (Mejzlík, 2010). All options can bring both advantages and disadvantages. If IFRS were used as a basis for the corporate income tax base, it would be necessary to analyse whether the resulting deviations would lead to too great differences in the tax base and would not result in undesirable tax optimization. It should be noted that a number of countries are already approaching the solution when the result of the IFRS findings is the basis for determining the tax base.

To use IFRS as a tax base in the Czech Republic, it is necessary to analyse the following problematic areas:

- differences between Czech accounting legislation and IFRS (it should be noted that the differences remain despite the ongoing harmonization in many areas) and the effect of the identified differences on the income tax base,
- the existing Act on income tax and identification of relevant provisions that would be appropriate for taxpayers using only Czech accounting standards as well as for taxpayers keeping their books and reporting under IFRS,
- to find a solution to tax base determination for both groups of taxpayers - for those using IFRS or those using only Czech accounting standards,
- to supplement the existing Act on income tax and identify the relevant provisions that would apply only to taxpayers keeping the books under IFRS,
- to consider an option that it will be necessary to create two separate income tax acts, one of which will be for legal and the other separately for natural persons (see Fig. 2), or another combination.

The ideal option would, of course, be to have the same tax base regardless of whether the taxpayer keeps the books under Czech legislation or IFRS.

Figure 2: Act on income tax in CR - proposal for its distribution, or other combination



Source: own processing

Using IFRS as a basis for determining income tax base could bring a number of benefits, but of course it is also associated with disadvantages.

Benefits of using IFRS as a basis for determining the income tax base, for example, include:

- reduction in the administrative costs of taxpayers, especially large financial institutions (as mentioned also in Blechová, Janoušková, Sobotovičová, 2013),
- simplification for accounting entities keeping books under IFRS, when the need to control the transformation to the Czech Accounting Standards would pass.

Disadvantages of using IFRS as a basis for determining the income tax base, for example, include:

- increased costs on the part of the state when it will be necessary to train the tax administration staff in IFRS,
- necessity to monitor the changes in IFRS by the Ministry of Finance of the Czech Republic and to react very flexibly so that the changes are also reflected in the Act on income tax,
- violation of the principle of tax neutrality,
- if the result under IFRS would be the basis for the income tax, it would only apply to larger taxpayers who constitute only a very small group of taxpayers.

From the above it follows that the disadvantages prevail. From a practical point of view, given the above-mentioned issues, the option to initially use IFRS for tax purposes only for some accounting entities is being considered, first for financial institutions (banks, insurance companies) and later IFRS is considered to be used for consolidated entities and audited commercial corporations. This implicates that the use of IFRS for tax purposes is a topical issue, but it raises a number of problematic points. These are mainly different views on intangible assets as the IFRS definition differs from national regulations; for the use of IFRS in the tax area it would be necessary to respect the accounting aspect in the Act on income tax. Other problematic areas are found, for example, in items of goodwill, research and development, borrowing costs, reserves, or employee benefits and valuation of tangible assets. This is only a minor view of existing differences between IFRS and Czech accounting legislation. It is therefore clear that legislative changes need to be made, which would be a relatively demanding process that entails the need to constantly monitor changes in the development of IFRS as well as rapid response and the application of these changes in the tax area. IFRS procedures can have significant tax implications, which could be a complication in terms of tax collection and the amount of the state budget.

2. Upcoming changes in taxation

Every year, the Czech tax system undergoes a number of legislative changes that reflect tendencies leading to increased tax neutrality, especially in the area of direct taxes but also in indirect taxes. In 2017, there were again a number of significant changes not only for payers of personal income tax but also corporate income tax. On 4 April 2017, the Chamber of Deputies approved a long-awaited package of tax changes, which came into force on 1 January 2017 and 1 July 2017, which also affects the business environment. Significant changes to the personal income tax include especially the rules on the determination of the tax using a lump sum, claiming expenses as a percentage of revenue, the tax benefit for dependent children, discounts on placement of a child, changes in claiming pension and life insurance limits and a change in the structure of the tax return form for personal income tax. As already mentioned, the tax package brought a number of significant changes to tax optimization, which lead to increased tax neutrality in the area of direct taxes. In accordance with the analysis, significant changes in corporate taxation include mainly the issue of depreciation of technical improvement by an economic user, the change with the increase of the co-ownership share and the setting of the depreciation period of intangible assets (as a minimum); there is also a change in the taxation of advance payment of the profit share (regulation related to tax deducted from advance payment and the situation in which the transfer of a share in a business corporation took place) and others.

At present, the Ministry of Finance of the Czech Republic (hereafter only MF CR) is preparing two new major tax-related projects which comply with EU Council directives. The first concerns the the obligation to implement the ATAD (EU Council Directive 2016/1164 of 12 July 2017), which sets out rules against tax evasion practices that have a direct impact on the functioning of the internal market in the Act on income tax. This directive is based on the BEPS project and aims to fight the tax evasion. The implementation deadline is 31 December 2018 with the effect from 1 January 2019. This implementation is a relatively demanding process. The MF CR prepared a working material for possible introduction of selected measures in the Czech Republic. The material provides brief information on the various areas of the initiative, the main purpose of which is to prevent the transfer of profits to other, more tax-friendly countries. The key issues to be addressed are schemes that can lead to double non-taxation, also taxation of controlled foreign companies (CFC), deduction of interest on loans and their limitation based on the achieved operating profit and avoiding the creation of a permanent establishment. The European Commission is also considering a mandatory notification of tax optimization schemes as instruments used for tax optimization. It is also worth mentioning the proposal of exit tax, i.e. when changing the tax domicile, such change would be considered as a sale and subject to tax. In June 2017, a multilateral treaty to implement the measures against Base Erosion and Profit Shifting (BEPS) was signed in Paris, which will have an impact on the application of double taxation treaties. The Czech Republic has also joined this international initiative of 67 countries. Based on the BESP initiative, the treaty had been established since 2013 at OECD and G20. In the future, it should serve as a versatile tool against aggressive tax optimization. The effectiveness of the treaty confirms the amount of tax evasion that occur in this way. Due to the nature of tax evasions, their exact amount cannot be quantified, but there is a general consensus that their volume is unfortunately considerable. For example, according to the International Monetary Fund the estimates of loss from the transfer of corporation tax profits per year amounts to 509 billion USD for OECD countries and 213 billion USD for developing countries, which accounts for 0.6% of GDP in OECD countries and 1.7% of GDP in developing countries (MF ČR, 2017). The second major project of the MF CR is the preparation (recodification) of the new Act on income tax, which aims to its simplification. In connection with the newly prepared Act on income tax, which is a long-declared priority, the MF CR introduced a reviewed version of the document called "Souhrn řešení inovace regulace zdanění a zpojistnění příjmů" in 2017. This document represents a new direction of the Act on income tax. As already mentioned in the paper, some entities (banks, insurance companies) could determine the tax base from the profit or loss based on IFRS. Other interesting facts in accordance with the analysis include:

- introduction of voluntary consolidation in the area of income tax (3 possible levels of consolidation are considered, from a simple transfer of tax bases to one entity up to a consolidation known from accounting, more for example (Hakalová, 2010),
- changes in the area of assets (decrease in number of depreciation groups, the option of "pool depreciation"), re-definition of technical improvement, tax deductibility of expenses for assets as they are incurred,
- In the area of receivables, the cancellation of tax adjustments and the definition of receivables that can be written off are considered, with emphasis being placed on the unambiguous definition of the moment when the tax receivable can be written off for tax purposes (mainly administrative simplification).
- the option to carry forward tax losses for an unlimited period of time,
- the extension of the time period for determining tax (the possibility to give up a prior period tax loss in exchange for the time period for determining tax).

3. Conclusion

It is clear that globalization and harmonization in the area of accounting and taxation contributes to improving global conditions for trading in the EU, increasing the competitiveness and willingness of foreign investors to invest in and outside the EU. The harmonization, not only in the accounting but especially in the taxation, is a relatively demanding process and brings a number of issues and problematic areas. The use of the economic results ascertained from the accounting kept under IFRS as a tax base is a relatively problematic issue, including the problematic context that the authors have been trying to draw attention to. This option would certainly be welcomed by large accounting entities, given the benefits mentioned in the paper, but on the other hand it is also necessary to draw attention to the disadvantages. It should be taken into consideration that the accounting principles arising from IFRS may have very significant tax consequences. Another problem is the demanding legislative process and the readiness (or unreadiness) of the tax administration for this option and changes in the development of IFRS and their rapid implementation into the Income Tax Act. The problem of tax harmonization is a complex and long-term process as well as a sensitive issue, given the possible interference with the fiscal policy of individual countries within the EU. The authors highlight some of the pitfalls which are currently being discussed by the professional public. As already stated by authors in the paper, the approved tax package in the Czech Republic in 2017 brought a number of significant changes concerning tax harmonization and optimization, which lead to increased tax neutrality in the area of direct taxes and together with the forthcoming recodification of the Act on income tax in the Czech Republic definitely represent a new, though difficult to solve, direction in tax harmonization in the Czech Republic.

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THE ANALYSIS OF VARIABILITY OF UNEMPLOYMENT IN EUROPEAN ECONOMIES AFTER THE 2008 GLOBAL CRISIS

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Abstract. We assess and compare the unemployment development after the latest 2008 Global Crisis within two groups of European economies: 1) the countries entering the Eurozone before and inclusive of 2002 and 2) European countries with currency sovereignty. Given the obvious differences in the economic structure both between the stated groups of states and inside of them we examine how the Global Crisis influenced the unemployment variability. Firstly the key determinants of European unemployment are stated, including a summary of the main findings regarding the labour markets after the 2008 Global Crisis. The following econometric analysis focuses on the stated two groups of countries in order to reveal changes in the variability of unemployment in the period from 2008 to 2016, which is measured as a proportion of unemployed persons of active population. The methodologic approach to the variability measure leans on the analysis of sigma convergence/divergence outlining possible decreasing or increasing trends in unemployment and beta convergence/divergence investigating whether the unemployment rates in individual countries that were more affected by the crises decrease faster or slower than in the less affected economies of the given groups. This method enabled us to detect the apparent trends inside and between the examined groups. The findings are discussed within the complex state of affairs of the product and unemployment development in European economies.

Keywords: unemployment, Global Crisis, convergence, euro currency, sovereign currency

JEL Classification: E23, F01, F66

1. Introduction

The effects of the 2008 Global Crises have proved to have a serious impact on the European economics in terms of deepening the heterogeneity among EU economies from the several related macroeconomic aspects – the productivity, the unemployment, balance sheet, inflation, public sector debt, etc. The 2008 Global Crisis was launched by a financial crisis a year earlier, severely hitting financial markets, followed by a real production drop, which led to the growth of unemployment. These consequences were highly heterogeneous relying on various factors such as dependence on international trade, natural resources, banking system liberalization, etc. The deepening heterogeneity in labour markets was worsened by the feeble revival of EU economies compared, for instance, with US economy. Though the 2008 Global Crisis had an enormous effect on labour markets in both EU and US regions, two years after the outbreak of the financial crisis US economy proceeded more quickly than that of Europe, which was struck by a sovereign crisis (Nye, 2010). Unlike Europe, the US has stayed one of the most competitive economies for several reasons one of which is the labour flexibility that is not functional in the EU (O'Reilly et al., 2015). This impact on the labour market was heterogeneous both between and within the EU countries. The determining factors of unemployment have been studied in national and regional dimensions (see e.g. Feldmann, 2009; Kiselakova et al., 2016). The key determinants are regarded as the active labour market policy (Garcilazo and Spiezia, 2007), the social and unemployment benefits, benefit duration, wage taxation (Bassanini & Duval, 2009), degree of labour market centralization and union power (Howell & Rehm, 2009). Marelli et al. (2012) summarised other factors related to the interaction between institutional arrangements and economic shocks, the evolution of unemployment over time by interacting institutions and changes in institutions, the effects of downturns on labour force participation and the dualism between regular and flexible jobs in eastern and Western Europe. The question arises to what extent the worsening performance of labour markets after the outbreak of the 2008 Crisis was accompanied by disparities across the countries of the EU region. It is worthwhile to profoundly investigate possible deviations in the behaviour of unemployment in the group of states with euro currency compared to the group of EU member states holding sovereign currency. Given the obvious differences in the economic structure both between the stated groups and inside of them (Cuaresma, 2014) we expect this differentiation to project into the evidence on how structurally different economic regions have coped with the latest global economic crisis from the viewpoint of unemployment.

2. Data and methodology

The macroeconomic analysis of the variability in unemployment of EU countries is based on panel data available from public databases Eurostat (2017). From it the annual average unemployment rates of the EU selected economies stated in percentage of active population are summarized in Tab. 1 (euro-economies) and Tab. 2 (EU economies with own currency).

Table 1: The percentage of unemployed active population of surveyed euro-economies in 2008-2016

Economy/Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Austria (AT)	4,1	5,3	4,8	4,6	4,9	5,4	5,6	5,7	6
Belgium (BE)	7	7,9	8,3	7,2	7,6	8,4	8,5	8,5	7,8
Finland (FI)	6,4	8,2	8,4	7,8	7,7	8,2	8,7	9,4	8,8
France (FR)	7,4	9,1	9,3	9,2	9,8	10,3	10,3	10,4	10,1
Germany (DE)	7,4	7,6	7	5,8	5,4	5,2	5	4,6	4,1
Greece (GR)	7,8	9,6	12,7	17,9	24,5	27,5	26,5	24,9	23,6
Ireland (IE)	6,4	12	13,9	14,7	14,7	13,1	11,3	9,4	7,9
Italy (IT)	6,7	7,7	8,4	8,4	10,7	12,1	12,7	11,9	11,7
Luxembourg (LU)	4,9	5,1	4,6	4,8	5,1	5,9	6	6,5	6,3
Netherlands (NL)	3,7	4,4	5	5	5,8	7,3	7,4	6,9	6
Portugal (PT)	8,8	10,7	12	12,9	15,8	16,4	14,1	12,6	11,2
Spain (SP)	11,3	17,9	19,9	21,4	24,8	26,1	24,5	22,1	19,6

Source: Eurostat, 2017

Table 2: The percentage of unemployed active population of surveyed EU economies with sovereign currency in 2008-2016

Economy/Year	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Bulgaria (BG)	5,6	6,8	10,3	11,3	12,3	13	11,4	9,2	7,6
Czech Republic (CZ)	4,4	6,7	7,3	6,7	7	7	6,1	5,1	4
Denmark (DK)	3,4	6	7,5	7,6	7,5	7	6,6	6,2	6,2
Hungary (HU)	7,8	10	11,2	11	11	10,2	7,7	6,8	5,1
Norway (NO)	2,5	3,2	3,6	3,3	3,2	3,5	3,5	4,4	4,7
Poland (PL)	7,1	8,1	9,7	9,7	10,1	10,3	9	7,5	6,2
Romania (RO)	5,6	6,5	7	7,2	6,8	7,1	6,8	6,8	5,9
Sweden (SE)	6,2	8,3	8,6	7,8	8	8	7,9	7,4	6,9
United Kingdom (UK)	5,6	7,6	7,8	8,1	7,9	7,6	6,1	5,3	4,8

Source: Eurostat, 2017

The trend of unemployment from the outbreak of the 2008 Global Crisis to 2016 is described by means of the regression model (1) to capture the relation between unemployment (U) in the initial year 2008 and the change in U from 2008 to 2016:

$$\mathrm{U}_{i,T} - \mathrm{U}_{i,0} = \alpha_1 - \beta_1 \cdot \mathrm{U}_{i,0} + \varepsilon_i \tag{1}$$

where *i* refers to the economy, *0* and *T* refers to the two time instants, U is the criterion of an annual unemployment rate in percentage terms, α_1 is a constant parameter. This regression function enables us to analyze the convergence/divergence trend over the monitored years t = 0,1,2, ... T.

The convergence according to (1) assumes a negative value of β_1 parameter, the existence of which signals that the economies more severely struck by unemployment tend to reduce it faster on average than economies that have not been significantly burdened by it. In fact, the parameter β_1 reflects what part of difference was actually eliminated "on average" towards the steady state. The steady state of an economy is considered in the long term, in which real output equals the potential output of the economy at the level of the natural rate of unemployment. In the short term, however, the deviations of reality from the equilibrium exist objectively, not only in terms of the nonzero production gap (Schmitt-Grohé & Uribe, 2003). The stated interpretation of the formula (1) is an adaptation of an originate concept of convergence of economic performance that leans on neoclassical model of growth for which a free and "self-cleaning" market mechanism is supposed (Barro & Sala-i-Martin, 1992; Sala-i-Martin, 1996); herein the convergence criterion is real gross domestic product usually expressed per economically active capita. In our adapted version the *beta* convergence is defined as a situation in which the unemployment rate decreases faster in more affected countries than in the less affected countries (i.e. in the economies not affected by severe unemployment). If β_1 coefficient is significant and negative, and the coefficient of determination R^2 is high (i.e. straight lines capture the variability of the variable parameter U well), it can be assumed that convergence occurs within the meaning described above. However, it does not mean that the dispersion of U reduces among economies as a whole. This can be captured by means of the concept of σ-convergence, which allows recording the decreasing/increasing variability of U; this attitude is based on the variability expression of U as the standard deviation σ from the average annual U in (%) at the times t and T. The convergence in unemployment rates in a group of economies is true if the condition (2) is met:

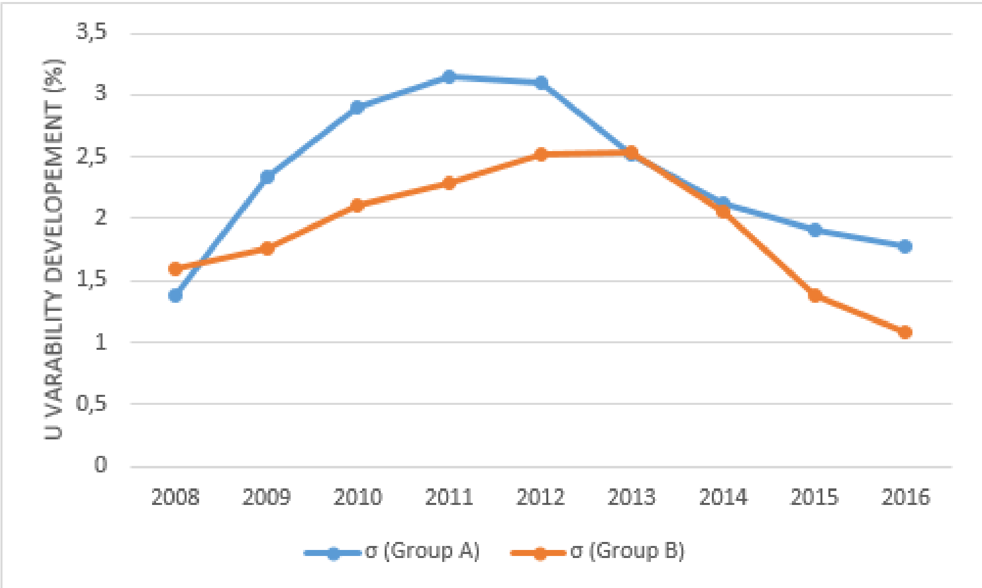
$$\sigma_t \geq \sigma_T, \tag{2}$$

where t < T, σ_t, σ_T are standard deviations of average annual unemployment in years t, T, respectively. Sigma convergence criterion is used here as a complement to beta convergence. It occurs if the variability of the set of monitored economies decreases in terms of the level of the criterion of unemployment.

3. Results

If sigma convergence of U in a group of economies occurs, we also detect beta convergence; but, not vice versa. For that reason we firstly analyse the development of variability σ (%) from the average U in the years 2008 – 2016 according to (2) in the group of economies entering the Eurozone before and inclusive of 2002 (Group A - see Tab. 1) and EU countries with currency sovereignty (Group B - see Tab. 2). The consequences of the outbreak of the 2008 Global Crisis projected into the sharp rise of unemployment in 2009, which culminated between 2012 and 2014 in most tracked economies (see Tab. 1 and Tab. 2). The course of variability σ (%) of the examined parameter U is shown in Fig. 1for the tracked economies of Group A (the upper curve) and Group B (the lower curve), from which is seen that the convergence condition (2) has not been met in the case of Group A (for t = 2008, T = 2016 applies that t(2,06) < T(5,81)); the decreasing trend in the variability was not recorded until t = 2013 (t(7,62) > T(5,81)). In the case of Group B the convergence criterion is met within the examined period (t = 2008, T = 2016, for which t(2,08) > T(1,087) applies).

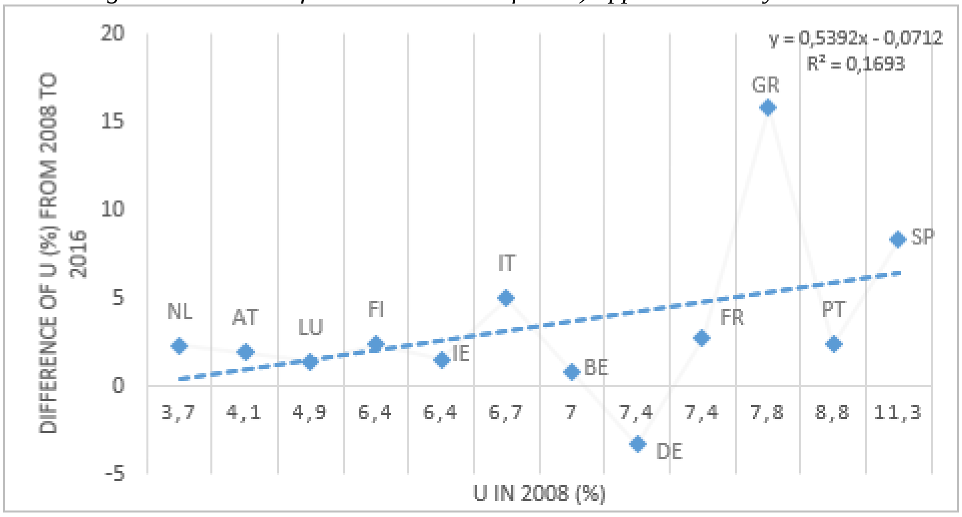
Figure 1: The variability of U in Group A countries (the upper curve) and Group B countries (the lower curve)



Source: own elaboration

The regression model (1) capturing the relation between U in the initial year 2008 and the change in U between 2008 and 2016 signals the opposite trends in development of U between the examined groups. Fig. 2 represents the relation between the initial year 2008 and the change of U between 2008 and 2016 in view of in the selected euro-countries marked as Group A.

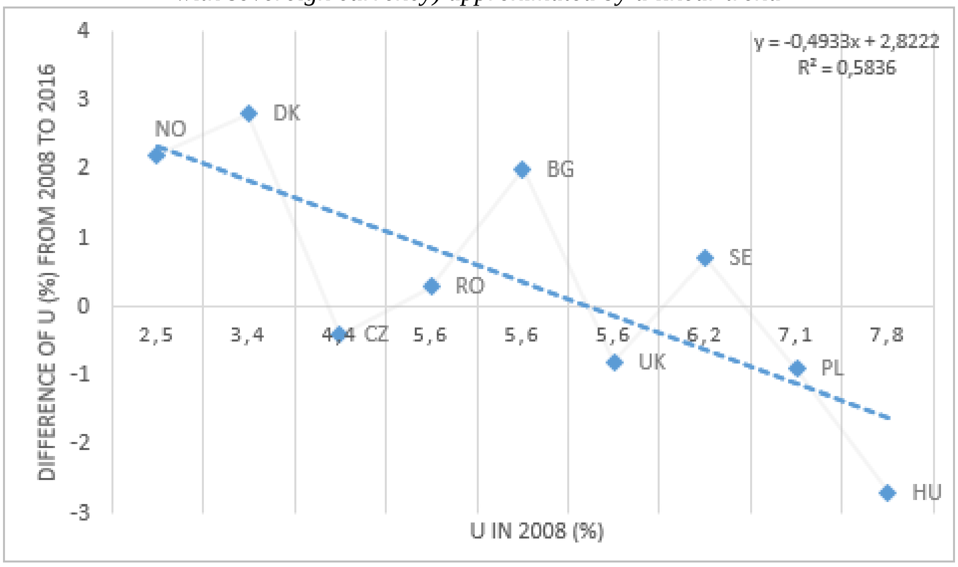
Figure 2: Relation between U in 2008 and the U change in the period 2008-2016 in Group A (the euro-countries entering the Eurozone before and inclusive of 2002) approximated by a linear trend



Source: own elaboration

Similarly, Fig. 3 represents the relation between U in the initial year 2008 and the change of U between 2008 and 2016 in the selected EU countries of Group B, which have currency sovereignty.

Figure 3: Relation between U in 2008 and the U change in the period 2008-2016 in the Group B (EU countries with sovereign currency) approximated by a linear trend



Source: own elaboration

4. Results discussion

The critical milestone of a different course of variability σ in U (expressed in %) between the groups of EU countries A and B was the outbreak of the 2007 financial crisis representing a negative economic shock that hit all EU economies with different intensity (see Tab. 1 from the viewpoint of unemployment development). The examination of the variability in unemployment between the researched groups according to the standard deviation from the average U rate in the years 2008-2016 show different trends in the ability to restore their original condition in 2008. This is obvious from Fig. 1 illustrating the dispersion of U among

Groups A and B as a whole, from which the increasing variability of U in the case of Group A (divergence trend) and decreasing variability of U in the case of Group B (convergence trend) can be read. The investigation of β convergence confirms the σ trends in both groups of countries (see Fig. 2 and Fig. 3). In Group A the analysis revealed a special position of Germany (see Fig. 2). Despite the outbreak of the 2008 Global Crisis the German unemployment rate declined (between 2008 and 2016 it dropped by 3,3 %) unlike other countries of Group A that experienced growth in U of different intensity. Between 2003-2008 the German economy, which is conceived as a hegemon by many authors (e.g. Krotz & Maher, 2016), suffered low economic growth accompanied by high unemployment as a result of the so-called "location crisis", a term used in conjunction with Germany's fading attractiveness as a business location (Sinn 2013), which made the unemployment on average higher than in the rest of the EU economies. Since 2008 the situation has changed its direction – Germany's positive economic evolution is attributed to the introduction of the single euro currency, which led to cheaper German production compared to other member states followed by the boom of German exports (Sinn, 2003). Germany had taken full advantage of the foreign trade, which strengthened even more when weaker economies such as Greece, Italy, Spain, Portugal, Ireland and also France lost the opportunity to weaken their own currencies (Grauwe & Foresti, 2016); this quickly projected in the diverse development of U rates between Germany and the rest of the countries of Group A. This urges us to reflect on the question: Why the latest recession particularly hit only some countries while other states like Austria, Netherlands, Luxemburg, Finland and Belgium were not affected to such an extent? The elimination of currency risk together with low interest rates led to huge credit and investment expansion especially in Greece, Italy, Portugal and Spain (Krugman, 2013); the expansion of euro credits led to a gigantic bubble, which burst in 2008 pulling these economies into a deep recession. Herein the euro currency acted as a powerful amplifier of the economic cycle: in times of boom it accelerated growth and in times of crisis it deepened the recession (Gibson, 2014). Why were Austria, Netherlands, Luxemburg, Finland and Belgium not affected in the same way? Hašková in (2016) proved that these economies were well synchronized with the cyclical position of Germany, for which reason they did not deviate significantly from the German cyclical trend in production and with it the associated level of unemployment, unlike the other examined countries. Fig. 3 captures β convergence trend among the economies of Group B, particularly influenced by the decrease of unemployment in CZ, UK, PL and HU in the monitored period. These economies more severely struck by unemployment after 2008 reduced it faster on average than economies that were not significantly burdened by it. However, the rise in unemployment in the rest of Group B was very moderate compared to the U rise in Group A - the maximum increase in unemployment was recorded by Denmark (2,8%), which is less than one fifth of the Greek unemployment growth. Let us raise the question of whether the financial crisis would have harmed the countries of Group B more seriously if they had adopted the euro as a common currency. The answer is "probably yes". Namely, the euro removed many barriers which could have led banks, insurance companies and pension funds to acquire more risky investments in their portfolios. The fact that financial institutions in the countries of Group B stayed relatively "healthy" was possibly a consequence of the relative isolation of financial markets due to the existence of their national currencies. This argument is supported by Milesi-Ferretti & Tille (2011) who conducted an econometric analysis from which it emerged that countries with high degrees of financial integration through debt and banking were more affected by the financial crisis, and countries with large net liabilities in debt instruments suffered a sharper decline in capital inflows.

5. Conclusion

The assessment and comparison of the unemployment development after the outbreak of the 2008 Global Crisis was carried out within two groups of European economies: the countries that entered the Eurozone before and inclusive of 2002 and the European countries holding their national currency. The question was raised to what extent the outbreak of the 2008 Global Crisis was accompanied by unemployment disparities across the countries included in the formed groups. Given the evident differences in the economic structure both between the stated groups of economies and inside of them the examination was focused on how the Global Crisis influenced the unemployment variability. Firstly, the key determinants of European unemployment were stated and the main findings regarding the labour markets after the 2008 Global Crisis were summarized, which was followed by economic analysis leaning on the expression of the variability measure by means of the method of sigma and beta convergence/divergence in the period 2008-2016. Sigma convergence analysis of unemployment between the searched groups was accessed according to the standard deviation from the average unemployment rate; the results showed diverse trends in the ability to restore the original condition of the unemployment rate in 2008 - the dispersion of U among economies holding euro indicated the increasing variability in U; in the case of the countries with national currency the decreasing trend of variability of U was proved. These results were confirmed by beta convergence signaling that the unemployment rates in individual countries more affected by the crises did not decrease faster than in the less affected economies holding euro currency – beta convergence thus could not be proved; in the case of the economies with sovereign currency the convergence was identified. In order to explain the reasons for these results, the paper discussed the special position of Germany whose unemployment rate declined in the surveyed period despite the 2008 Global Crisis unlike other countries with euro currency. The question was raised whether the financial crisis would have harmed countries with national currency more if they had adopted the euro as a common currency. The findings were discussed within the complex state of affairs with a view to the product and unemployment development in the European Union.

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CONSUMER BEHAVIOR IN CONTEXT OF GLOBAL TRENDS IN THE MOBILE HEALTH MARKET

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Abstract. The new millennium brought many changes regarding consumer behavior. As the current world in the digital age changes due to technology and the online environment so does the current consumer who is becoming more demanding and more responsive. The internet and mobile phones have penetrated the consumer´s lives which have a significant impact on global technological development and changes both in society and social trends. One of the areas affected by these changes is mobile healthcare as a new and rapidly evolving area that has a potential to contribute in transforming healthcare and improving its quality and efficiency. Mobile healthcare through sensors and mobile applications collect important health, physiological and environmental data together with lifestyle data about day-to-day activities. The degree of intensity and technology implementation, devices and applications in the field of mobile health varies and is influenced by several factors. The aim of this scientific contribution is to identify decisions to purchase such a wearables, by a comparison of knowledge from available resources, results of international studies and the secondary resources about factors influencing the consumer's decision to purchase wearables enabling the monitoring of body functions. At the same time, authors aim, by an empirical analysis of the current state of the examined issue, to anticipate changes that will influence the development and direction of consumer behavior in the mobile health sector.

Keywords: consumer behavior, mobile health, mobile applications, lifestyle

JEL Classification: F01, I12, M31, P46

1. Introduction

Innovation and the development of information and communication technologies bring changes to all areas of our everyday life. The potential use of information and communication technologies shift human society into a new dimension, called the digital era. This period brings many changes not only for companies but also to the consumer. The Internet, social media and social networks, smart mobile phones, digital media convergence, and many other innovative technologies and applications change the way consumers behave. The use of digital technologies has enormous potential not only for businesses but also for consumers use. For example, the Slovaks are becoming more and more digital and more advanced towards using modern information and communication technologies. Based on the results of the Digital Economy and Society Index (DESI) 2017, which assesses the progress made by EU member states in the digital domain, Slovakia has the best results regarding Internet usage compared to the other EU countries. Also Slovaks have a decent level of digital skills. It means that more than half (55%) of Slovaks have basic digital skills (European Commission, 2017).

Higher consumption and technologically advanced countries are experiencing more significant changes in social values and attitudes. Consumer behavior is largely influenced by lifestyle, the way consumers live, what products and services they buy, what they think and how they consume them. It is a way of life that is influenced by many factors such as perception, learning, motives, attitudes, values, culture, reference groups, and social status. According to several authors (Malíková & Rybanský, 2016), (Richterová et al., 2015), people are now more engaged in their health, nutrition, care of their body and this trend will continue. We can proudly say that health becomes a new lifestyle. In the hierarchy of values of consumers resulting from the orientation on themselves and health care, consumers will increase their awareness in nutrition, food safety and quality of life. Recent changes have also been made to health and fitness. The trend of "Natural fitness" meaning outdoor walking, running and cycling instead of visiting a gym. Consumers have become interested in the concept of holistic health and well-being (Higham, 2009).

The above-mentioned global changes in consumer behavior are manifested in the mobile health sector, which is currently dynamically developing. World Health Organization (WHO) marks mobile health as *“medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices. Mobile health involves the use and capitalization on a mobile phone’s core utility of voice and short messaging service (SMS) as well as more complex functionalities and applications including general packet radio service (GPRS), third and fourth generation mobile telecommunications (3G and 4G systems), global positioning system (GPS), and Bluetooth technology“* (WHO, 2011). The European Commission in the *Green Paper on mobile health* complements this WHO definition and states that *“mobile health also includes applications such as lifestyle and wellbeing applications that may connect to medical devices or sensors (e.g. bracelets or watches) as well as personal guidance systems, health information and medication reminders provided by SMS and telemedicine provided wirelessly“* (European Commission, 2014).

2. Methodology

The submitted scientific contribution aims to identify, by the knowledge available from the information sources, the results of the global studies and the secondary research carried out. The factors influencing the consumer's decision to purchase wearable devices allowing the monitoring of body functions. Based on an empirical analysis of the current state of the problems examined, they predict changes that affect the development and direction of consumer behavior in the mobile health sector. To achieve this goal, we used the basic methods of scientific research - abstraction, synthesis, induction, deduction, comparison and description. Through abstraction, we have been monitoring substantial and consistent information published in various literary sources so that we can define the basic concepts and categories of the problem under consideration. We realized the analysis as a step-by-step collection, sorting, evaluation and subsequent interpretation. We used the synthesis to find out the links between the delineated elements, signs and their connections, and then reproduce the studied area with their essential features and relationships.

3. Mobile health global market and solutions

Mobile health (or "mHealth") is currently coming to consumers mainly in the form of applications and facilities for monitoring, preserving and analyzing life functions. Several research studies highlight the importance of mobile health to improve health and raise the living standards of different segments of the population and emphasizes the importance of mHealth applications and facilities not only to maintain a healthy lifestyle but also to support the treatment of various types of illness. (Armin et al., 2017; Chen et al., 2017; Tikkanen & Barnhouse, 2017; Nikou, 2015). We consider it important to focus on mHealth applications and wearable devices designed to monitor, store and analyze health data.

Mobile health solutions support the changing role of patients becoming a more active recipient of an increasing responsibility towards their health. Maintain sensors that detect and report vital functions and mobile applications helps to encourage them and follow the diet and take pre scripted medication.

3.1 Mobile health applications

Worldwide, a large number of mHealth applications are available to consumers. According to the *mHealth App Developer Economics 2016* study, nearly 260 000 mHealth applications were available in 2016 from 58 000 application developers who were downloaded 3.2 billion times in total. The majority (51%) of mHealth applications publishers are the technology companies or app developers. The share of applications publishers coming from the traditional health care industry (insurance companies, hospitals, independent practitioners, medical devices manufacturers, medical administrators, nursing, pharmaceuticals, telehealth services, sports and fitness companies) has slightly increased to 28%. (Research2guidance, 2016).

Among mHealth applications, there are differences in the extent of their usability. There are several criteria for evaluating the functionality of mHealth applications, but *"multi-functionality is not always required to meet the purpose of an application and therefore should not be considered the single factor in the evaluation or rating of mHealth applications. The capacity to monitor and assist consumers in managing their health is greater in multifunctional mHealth applications than those who only seek to inform and educate"* (IMS, 2015). See Tab. 1.

Table 1: Dimensions of mHealth Applications Functionality

Inform:	*Provide information in a variety of formats (text, photo, video)*
Instruct:	*Provide instructions to the user*
Record:	*Capture user entered data*
Display:	*Graphically display/output user entered data*
Guide:	*Provide guidance based on user entered information, and may further offer a diagnosis, or recommend a consultation with a physician or a treatment*
Remind/Alert:	*Provide reminders to the user*
Communicate:	*Provide communication between healthcare providers and patients*

Source: self proceesed according to http://www.imshealth.com/

However, users of mHealth applications are particularly concerned about data security issues that they share either directly or store in the cloud. Several authors point to the need for safe storage and use of health data by mHealth applications. (Bhuyan et al., 2017; Mense et al., 2016; Morera et al., 2016). Application security will be important for consumers in the future, especially secure transmission and storage of data and reuse of data by third parties.

3.2 Wearables as a part of mobile health solutions

For mobile health, there is a high potential of wearables that integrate mobile technologies with sensors that can record human life data. Loadable devices can be divided into the following groups:

1. *Health and fitness facilities* - among them are counting of steps, measuring distance travelled, calories burned, heart rate measurement, and so on. They can connect to an intelligent phone or tablet, and then create an analysis of monitored phenomena using the application.
2. *Smart watches* - also have a health and fitness feature and can partially replace the cell phone or tablet features.
3. *Smart glasses* - though they have already appeared on the market (google glass), but have been downloaded and they are still working to improve them.
4. *Worthwhile Jewelry Technologies* - Functions are similar to smart watches, allow access to SMS messages, email, Facebook, diary, and so on.
5. *Intelligent clothing and textiles* - Products incorporating digital elements (sensors or micro controllers). Through them, we can monitor the health status (temperature, heartbeat) and also fitness activities.

There are several challenges in the wearables market in Slovakia. The main thing is penetration into the domestic market, where wearables will have to find their application and their owners. Most people in wearables are considering buying smart watches (29%), smart bracelets (18%) and fitness trackers (14%). At present, the most powerful potential of wearable electronics is in small everyday sports activities that will help the user to maintain a healthy lifestyle. Taximeters, calorie intake meters, or gentle vibrations to alert you that you have been out for a long time. All of these are minor health features that make life more enjoyable to the user. Fitness trackers will help users to measure sporting performances. (IPSOS, 2016). See Tab. 2.

Table 1: Top wearable Devices by Product, Volume (in millions of units) and Market Share

Product	***Shipment Volume 2017***	***Market Share 2017***	***Shipment Volume 2021 (forecast)***	***Market Share 2021 (forecast)***
Watches	*71,4*	*56,9 %*	*161,0*	*67,0 %*
Wristbands	*47,6*	*37,9 %*	*52,2*	*21,7 %*
Clothing	*3,3*	*2,6 %*	*21,6*	*9,0 %*
Earwear	*1,6*	*1,3 %*	*4,0*	*1,7 %*
Others	*1,6*	*1,3 %*	*1,4*	*0,6 %*
Total	***125,5***	***100 %***	***240,1***	***100 %***

Source: self proceesed according to http://gadgetsandwearables.com/

Some studies were conducted to investigate how consumers evaluate the wearables or how the characteristics of the device, the context and the user can support the adoption and the sustained use of health and fitness wearables. Results from Jung et al. showed, that display shape and standalone communication are more critical factors influencing respondents' smartwatch choices than brand and price (Jung et al., 2017). Canhoto and Arp found out, that features that signal the device's ability to collect activity data are essential for adoption, whereas device portability and resilience are key for sustained use. (Canhoto & Arp, 2017).

4. Discussion

Technology not only plays a crucial role in the transformation of consumer behavior but also opens up entirely new shopping opportunities. It changes how people shop and travel, work with service providers and even the public sector. The digitalization and ubiquity of computers and mobile phones have not changed just the way consumers behave but also think. Smartphone usage also changes consumer behavior, as the internet and digital technologies have increased the demand for personalized information and on-demand services (Žák, 2014). Immediate access to product information is gaining, customers can see in real-time not only basic product data, price and availability, but they can also share consumers. Global studies were conducted to identify and segment the mHealth users with focus on health behaviors and overall mobile/technology adoption. The aim of these studies was to understand general habits when it comes to mHealth and identify opportunities to make it easier and more convenient for people to manage their health and wellness through mobile devices or fitness trackers. The *Ketchum mHealth Monitor* has reviewed consumers' adoption of wearable technology, applications and artificial intelligence for personal health and wellness and has identified 5 types of mHealth users (Stetzer & Middleton, 2016):

1. *Discerning Digitals: These are the super users who love being constantly connected, but may also struggle with feeling too available. They are advocates of mHealth but still like face-to-face contact with medical professionals.*
2. *Swayable Seekers: This group wants to expand their smartphone repertoire beyond just making calls. They feel confident about managing their health and get a lot of their medical info online. The majority feel like they have a lot to learn about using mobile tech for their health.*
3. *Health Tech Hesitators: This group admits they don't manage their health very well and aren't happy with their physical well-being, and they're not exactly comfortable sharing information online either.*
4. *App-athetic Agnostics: These people love mobile technology; many just don't use any type of mHealth, nor do they care to in the next year.*
5. *Low-tech Lifers: These are the traditionalists who don't think mHealth has had a positive impact on their lives, nor do they foresee it having a positive impact in the future.*

Users will be key point to expanding mobile health. They decide which applications and devices will be acceptable for use. And marketing activities of the mHealth providers must be strongly focused on users.

5. Conclusion

Wearables and mHealth applications provide an enormous amount of data that can be analyzed either in real time or backwards, and combine them with the needs of doctors with contextual and historical information - of course, assuming the patient agrees. In the future, we expect that the number of wearable devices will increase and the level of their interaction with users will increase too. The development of mobile healthcare on a European scale will, in particular, affect solutions in areas such as data protection and security of health data, EU legal framework, patient safety and transparency of information, reimbursement models and access of web entrepreneurs to the mHealth market.

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DEVELOPMENT OF THE EUROPEAN PROJECT ERASMUS+ ECMT- EVALUATION BASED ON STUDENTS´SELF- REFLECTIVE LEARNING JOURNALS AND ESSAYS

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Abstract. Nowadays, the process of economic globalisation increases, therefore global issues and important decisions in business, politics, education, health, and culture tend to affect citizens across borders. New attitudes and skills are required to work in global teams and deal with business partners or customers across cultures. The question of setting up an international business and effective communication between people of different nations is essential. The article tackles a new international project (IP) which significantly contributes to the development of intercultural and communicative competence while solving and creating case studies in multidisciplinary and multicultural groups. During the course programme, students are given a balance of experience and theoretical issues, have an opportunity to introduce the various actors of the programme and set clear guidelines. The programme Erasmus+ IP involved intensive two weeks of working together both of students and teachers from six different institutions and different disciplines in order to reflect and develop their communication skills while working in multicultural workgroups. The project accepted and financed within the programme Erasmus+ Strategic Partnership involves universities from Finland, France, Germany, Scotland, Belgium, and Poland. The aim of the article is to analyse the self-reflective journals and essays being a very effective way of students´ reflection on their learning experiences and making them engaged in the learning process prepared by students from the Czech and Finish teams to be able to compare different educational and business backgrounds.

Keywords: communication, Erasmus+, international business project, self-reflective journals, skills

JEL Classification: A12, A23, F16, F66, I20

1. Introduction: The process of creating and developing the Intensive Programme

Nowadays, the process of economic globalisation increases, therefore global issues and important decisions in business, politics, education, health, and culture tend to affect citizens across borders. New attitudes and skills are required to work in global teams and deal with business partners or customers across cultures (Bobakova & Chylkova, 2014). The question of setting up an international business and effective communication between people of different nations is essential to ensure that all parties emerge with the same understanding. Without the right approach, cultural differences can greatly affect governments, businesses, organisations and individuals (Heinz, 2014, A; Draghici & Ivascu, 2016).

The current Intensive Programme is a continuation of the previous course ***Effective Communication in Multicultural Teams*** held between 2012 and 2014 in Roanne, France, Salzburg, Austria, and Joensuu, Finland. It brought together six higher education institutions which develop a common course module to be recognised in each of the curricula of the partner institutions (5 ECTS) (Heinz & Chylkova, 2016). The programme Erasmus IP involved intensive two weeks of working together both of students and teachers from six different institutions and different disciplines in order to reflect and develop their communication skills while working in multicultural workgroups (Heinz, 2014, B). At the same time they received input from teachers and practitioners from various backgrounds, who encouraged them to adopt a wide range of approaches. However, the most significant benefit could be identified in the acquired intercultural competence (Bencikova & Poliak, 2016). The project was aimed at providing a hands-on experience over a ten-day-period to enable all the participants to develop and reflect on the necessary skills and strategies to achieve effective intercultural communication, using case studies and games (Robinson, 2011).

Currently, the project submitted, accepted and financed within the programme Erasmus+ Strategic Partnership involves Karelia University of Applied Sciences, Joensuu (Finland), Université Jean Monnet de Saint-Etienne (France) Technische Hochschule, Wildau (Germany), University of the West of Scotland, Paisley (Scotland), VIVES University College, Kortrjik (Belgium), and Politechnika Poznańska, Poznań (Poland). The project develops cooperation focusing on Intensive Programmes, preparation and implementation of common courses related to start-ups, sharing curricula, workshops for teachers, and creating a common communication platform for all the participants of the project. The main goal of the project is promotion of business education realized during common English workshops for students developing knowledge and skills in the area of management, marketing, communication, etc., using innovative teaching methods like for example case studies (Heinz & Orszulik, 2014, B). The Intensive Programme itself enables recruitment of 6 students from each partner universities every year who will work in multicultural teams on their real start-ups under the supervision of international tutors and entrepreneurs, which helps participants of the IP course to change their attitudes and values (Heinz & Orszulik, 2014, A).

2. Method of research

In the last decade, reflective techniques help teachers to recognize patterns of thought and behaviour that shape students´ thinking and actions, but especially shows how students perceive what they are learning and how they connect the new knowledge to the old one and what their attitude to that they are learning is (Cocca, & Cocca, 2016; Mladkova, 2016; Zelenkova, 2016).

As Zimmerman states, self-regulating academic learning is a distinctive feature of students´ capability for acquiring knowledge and skills (Zimmerman, 2010). One of the reflective methods is the learning journal, also called a diary or a self-reflective journal. Self-reflective learning diaries enable tutors to find out students´ attitudes, feelings, and also their views related to the progress they made in the area of intercultural communication, developing their specialist, and language skills. Students can express themselves without fear and embarrassment, and improve their language skills. Moreover, writing a diary contributes to students´ becoming more autonomous, taking control of their own learning, and in this way becoming more self-motivated. It has also been proved that students are more likely to value what they are learning and to enjoy the achievement process more when the dominant reasons for learning are task oriented and analysed (Covington, 2010).

By the conclusion, readers should have a clear, specific idea of how the experience affected learners and particular ways they have made progress. In a reflective essay, it is recommended to approach the conclusion by talking about how students plan to use what they learned from this experience in the future, in future classes, jobs, relationships and other aspects of life (Evans, 2009).

3. Results

The presented research is related to the analysis of students´ reflective learning journals and essays created during the IP course held in Joensu, Finland in March 2017. The target group involves 2 teams of participants – the Czech and the Finnish ones. Conducting the analysis, it was necessary to set criteria of evaluating students´ learning. They are connected to the following areas: 1. Pre-course activities–expectation and estimation of the course content, 2. Acquired knowledge about yourself, 3. Relationship with others, 4. Personal development, 5. Innovative pedagogical methods, 6. Culture issues, 7. Impact on future life, 8. Language proficiency, 9. Especially appreciated issues, 10. Overall evaluation.

3.1 Czech students´ feedback

The Czech team consisted of five males and a female and represented various stages of tertiary education. Only one member of the team comes from Kazakhstan studying in the Czech Republic, the others are Czechs or Slovaks. The students had had a lot of experience with working in the project the Business Gate and in the AIESEC and two of them were co-founders of a private limited company developed during the internship in a company in Oulu, Finland. Concurrently, the students work for the Business Gate established in Karvina in 2016.

Unfortunately, pre-course activities and estimation of the content of the project were discussed only by two Czech students who expressed their low self-confidence in terms of the English language and low level of education in the CR. They were also afraid of negative stereotypes related to the Czechs and their potential impact on cooperation in multicultural teams. Other views involved personal features like for example being shy and not willing to participate in communication games, but there was also an opinion that soft skills are not important for establishing a business. The students admitted that the Czech team was not very well organized during the pre-course activities.

Students were aware of the benefit of the IP in terms of their making bigger progress in comparison with the previous opportunity to work in a multicultural team. As majority of the recruited Czech students had been working in the Business Gate before, they highly appreciated their professional experience acquired in the past. They also declared that after the IP hands-on experience they will be able to solve problems in the future.

Relationship with other comprised both formal and informal working on the start-up in multicultural teams. Students admitted that there was a lot of quarrelling in teams, but after a workshop on empathy, cooperation in the team improved. They came to the conclusion that being patient with people and praising them for their effort belong to crucial team working skills together with the ability to involve other team members in team work, motivating them to discuss, especially in the case when team members lacked English proficiency.

Personal development is the area where respondents were able to list the biggest number of benefits beginning with leadership skills, sharing responsibilities, listening to team members, providing feedback, collaborating, and motivating to identifying their own weaknesses. Students could see themselves as part of a process even if they had to step out of their comfort zone, they became more motivated, acquired better conversation skills, and especially changed the way of thinking about entrepreneurship, which seems to be the most valuable issue.

Students were especially surprised at the use of ice breakers, but finally were able to appreciate their implementation at the beginning of communication in multicultural teams. They also reported about non-traditional workshops in business education and compared the traditional form of lectures used in the Czech Republic to be provided only basic theoretical information and developing it in practical setting in the team.

Students´ culture experience is reported within a comparison of culture differences. Students stated that Polish culture is very close to Czech one and the biggest differences were observed in Scottish culture. They appreciated getting familiar with Finish local habits and noticed that people in more developed countries share know-how with others more willingly than in other cultures.

In this category, students proved that the IP was really motivating in terms of their future lives. They appreciated a new view of entrepreneurial mind-set, teamwork, people from different cultures, but the most important impact can be seen in the skills connected with opening an own business in the future, including trying new things, failing, improving, making visions, and creating. Students also discovered that listening to people is important as they are the source of wisdom and power.

In the area of communication in English all the respondents stated that they improved their skills significantly not only in common conversation, but also in using advanced English together with business one. For most of them the IP course meant breaking the language barrier.

The most appreciated issues of the IP involve meeting Finnish entrepreneurs, professional debating about the AREL and CANVAS models, interactive workshops about communication and team cooperation, getting a valuable feedback from teachers, entrepreneurs and investors as well as being awarded prizes as team members.

Majority of students unanimously listed that the IP course was the best experience in their lives as they acquired more experience than during the whole bachelor study. Very positive is being in touch with other students and keeping up cooperation with them. Only one student reported that the IP course was just a confirmation that he is on the right track.

3.2 Finnish students´ feedback

The Finnish team involved ten students of both regular and distance studies. The members of the team represented various nationalities including Erasmus+ students in Finland from China, Holland and Russia. Two of them are board members of non-profit organizations, the others have experience in personal selling, inventory management, developing a business on-line, and event organization.

Generally, there was a lot of criticism related to the pre-IP activities. According to students´ opinions the Finnish team got stuck in the preparation period as unscheduled issues had led to the loss of motivation. It was stated that Claroline, a communication platform, was too difficult to use, and students had to communicate via emails. However, a student expressed a view that problems always can lead to a better performance, which is a positive point.

The Finnish students are aware of the fact that after the IP course their ability to look at business ideas has improved and it is not only entrepreneurial skills that will help them to reach goals in their lives, but also social skills must be taken into consideration. There was an opinion of an Asian student who claimed that it is necessary to be more patient with himself and others as well.

In the point related to relationship with others the opinions have been divided. While for some students team working was the best life experience as it took advantage of the diversity, another opinion showed tension in the team caused by the phenomenon of exploitation within some professions. However, a positive attitude prevailed with the optimistic point related to the fact that team work can be fluent and easy if people enjoy working together.

A member of the Finnish team showed a very critical approach telling that only some workshops within the IP were beneficial, others proved that teachers did not have necessary knowledge. There were also comments about the recruitment of students who did not have specialization in an area yet, therefore they could not contribute to the project significantly. However, the other students appreciated knowledge acquired in the entrepreneurial mind set, customer perspective, company storytelling, and pitching, which seem to be very important for personal development and the future career.

For a Finnish student innovative methods used within the IP were not interesting as in Joensuu there is regularly held an Innovation Month that brings more inspiration than the IP. For an Asian student all the methods were new and inspiring, while the person with the Russian background stated that the education system in Europe is completely different from the Russian one and seems to be better. However, students agreed that the workshops led by professionals treating students as colleagues without autocratic judging were the most contributing.

The Finnish team members especially appreciated helpful teachers from abroad and they tend to think that the relationship between teachers and students in Finland is not too friendly. Some students admitted that the national stereotypes have been partly confirmed and the Czechs and the Belgians behaved more like the Finnish and the Germans being highly motivated to work on the project, while the Poles, the Scottish and the French had a more relaxed attitude towards the teamwork and the output of the IP.

The Finnish students agree that the IP will have an impact on their future lives in terms of meeting people with different abilities, but a common goal, a new look at being an entrepreneur, and a new way of thinking and acting. They also recommend to learn how to be able to listen more attentively and how to stimulate people to speak. They came to the conclusion that not entrepreneurial skills, but also communication skills are extremely important when people work in multicultural teams.

The Finnish team appreciated listening to various accents of English and reported that the Germans, the Belgians and the Czechs seemed to be very passionate about using English, while the Scottish paid no attention, and the Polish were silent most of the time. They also think that less is more and recommend to follow the KISS principle – keep it short and simple. Some participants of the course had a bad command of English and it was difficult for them to understand instructions during the IP course.

The Finnish students value contacts with students from other countries, especially with those who were highly motivated to reach success and get a prize. They also noticed that a failure is necessary to be successful in the future and considered tutoring of teams to be a very useful activity.

The overall evaluation comprises both positive and negative points. For part of the Finnish team the IP course was the best thing during their study, but at the same time the most exhausting experience. Negative opinions involve the fact that the communication platform was too complicated to use, changing of tutors did not ensure continuity, and students should be recruited more carefully in the future to be on the same level of knowledge and language terms.

3.3 Evaluation of the IP based on the students´ feedback

Both Czech and Finnish teams admitted that the pre-course activities were not developed in a proper way in terms of organization and communication among the members of the future multicultural teams, which means that this period of the IP should be devoted much more attention. Czech students expressed their fear of not being self-confident and lacking various skills in comparison with the estimated level of students from other universities. They also agreed that having professional experience before participation in the IP was very important for them and listed listening to other team members attentively, supporting and being patient with them is the most significant item in relationship building. Most Czech and Finnish team members evaluated their personal progress related to the ability to become part of the process of company establishment as well as acquisition of specific professional and social skills. Innovation related to teaching methods was highly appreciated by Czech students, but the Finnish seem to be involved in innovative teaching on a daily basis.

Czech and Finnish students appreciated a new view of entrepreneurial mind-set, teamwork, people from different cultures, but the most important impact can be seen in the skills connected with opening an own business in the future, including trying new things, failing, improving, making visions, and creating. There are differences in English competence between the Czechs and the Finnish with the Finns being more advanced and self-confident in using the language, which can also be observed in the level of the written language used in self-reflective essays and diaries. Both teams agreed that meeting Finnish entrepreneurs, professional debating about business models, and getting a valuable feedback from tutors were the most valuable issues of the IP. Finally, the IP course was evaluated extremely positively by Czech students and fairly positively by the majority of Finnish team as the best experience in students´ lives.

To summarize the comparison of Czech and Finnish opinions, it can be stated that a certain degree the difference between Czech and Finnish students´ views is related to a different social, economic and entrepreneurial background in the Czech Republic and Finland, which is definitely connected with different historical development, related especially to the entrepreneurial mind set and the length of its existence.

4. Conclusion

After the analysis of Czech and Finnish students´ self-reflective essays and diaries it can be stated that the Czechs have made a bigger progress in numerous aspects of business education as their starting point was different from the Finnish one. The Finnish students seem to be accustomed to more innovative teaching methods and they also have an opportunity to work in international groups of students every semester.

A very important outcome resulting from the analysis of students´ diaries indicates some weak points related to both organization of the IP course and its content. The recommendations for all the staff involved in the preparation and running the IP in the following 2018 year involve improving of the communication platform, better organizing of pre-course activities as well as more careful choice of topics and forms of mini-lectures, seminars, and other IP activities.

However, almost all the students strongly recommend participation in Erasmus+ IPs as a unique experience that is not involved in the regular university curricula and can be more beneficial than traditional tuition.

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MIGRATION OF NURSES: SERIOUS GLOBAL HEALTH PROBLEM

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Abstract. Migration of nurses is a serious global health problem which affects not only the healthcare itself but also the economy, politic, culture, history etc. The topics such as globalization and healthcare markets are subjects to discussions, given the economic and demographic forecasts, especially in Western countries. Globalization and migration are not the new concepts, but it gives more and more into the context of many issues, both at the level economic and social needs. And considering to the development of globalization trends, it is expected that this concept is being discussed more and more often. This topic is not easy to solve by reason of the fact that it demands multisite and transdisciplinary research. The migration in the healthcare markets is linked with positive and negative effects. The impacts of international migration of nurses are very complex both for health workers and for the countries involved. The need for nurses is high and migration of the nurses is very often, on the other hand there are not so many scientific papers in this area in comparison with research of migration of physician and this fact open the space for the new professional studies. The paper defines the interaction between globalization and migration in the healthcare markets, describes the profile of the nurse migration, analyses the reasons and impacts of the migration of the nurses in selected European countries and compares the results. There are used data from OECD, Eurostat Database, World Health Organization and statistical methods in this paper.

Keywords: globalization, migration, nurses, healthcare markets, brain drain

JEL Classification: C1, E6, F6, J6, I1

1. Introduction

In the current situation, highly skilled migration represents an increasingly large component of global migration streams (Iredale, 2001). Globalization is one of the factors which can be attributed to a global nursing shortage in changing world. There is increasing demand for health-care workers (especially in OECD countries) as a result of rising incomes, new medical technology, increased specialization of health services and population ageing (OECD & WHO, 2010). But the number of the nursing workforce has failed to keep pace with that growing demand. Policy decisions to contain public healthcare costs have had a detrimental effect, bringing insecurity to existing nursing posts, recruitment freezes and redundancies, alongside limitations on training capacity and the numbers of nurses being trained (Simoens et al., 2005). This paper begins with a brief overview of the current view on globalized world and migration of nurses on healthcare markets. Then, the methodology and results of the empirical study are presented and discussed. At the end of the paper we mentioned some suggestions for future research and points to possible limitation of the study.

2. Selected aspects of current relationship between globalization and migration of nurses

Many research studies highlights the problems of migration of health personnel; see for example Dragoi (2015), Eyal & Hurst (2008), Ahmad (2005), Hejduková & Kureková (2016) etc. How Salai (1996) or Hejduková (2009) mentioned, it is important to recognize that the quality of health care is one of the key factors in the development of the country. The very significant aspect of migration of health personnel we can see in the phenomenon "brain drain" which is problem of many countries. Bach (2003) states that health sector work is characterized by both a highly interdependent labour process and the proliferation of specialized professional roles with long lead times in terms of training. Prescott & Nichter (2014) mentioned that many research highlight the migration of doctors (in many causes the doctors are employed in similar job positions in comparison with "old" country), but not less important is the problem of migration at the level of nurses: many nurses cannot pass exams for this job abroad, training is expensive, time-consuming. Nursing workforce policies are far from uniform across countries even with similar levels of development (Buchan et al., 2015). From reason of this some nurses migrate as domestic helpers or caregivers (Pratt, 1999) or at worst the nurses are leaved the health sector and are employed in low paying retail positions at the mall, food service in fast food chains.A nurse's motivation to migrate is multifactorial. There exist not only financial incentives. We can see barriers that discourage or slow the migration process. The migration flows vary in direction and magnitude over time, responding to socioeconomic factors present in source and destination countries (Kingma, 2007). Extreme nurse shortages in many countries, due to bad payment and dissatisfactory work environment, are reasons for the demand, additionally to the general demographic transition in the population with increasing demand for services, but at the same time decreasing supply of professional nurse services (Buchan, 2002). The significant increase in the international flow of nurses in recent years has heightened concern about the impact of migration on the nursing workforce and health systems in both the nurses' home country (the source country) and the destination countries (Willetts & Martineau, 2004, Buchan et al., 2003). These and other problems in the healthcare markets are opened the space for an overview about the migration of nurses, its problematic sites and solutions.

3. Methodology, research questions and data collection

The purpose of this study was to investigate and compare migration of nurses in selected European countries. Since the migration of nurses is still perceived as an important phenomenon of globalization in Europe, the descriptive (initial mapping of migration) and explanatory (clarifying differences in migration of nurses in different countries) research approaches have been chosen.

This study provides answer to the following central research question: How did the nurses' migration on healthcare markets evolve? In addition to the central research question, the following specific research questions were formulated:

- Which selected countries in Europe had positive net migration?
- How did the migration of foreign nurses develop in selected countries?
- How did differences in salary affect migration of nurses from the Czech Republic?

Based on the literature review and given the specific research questions, two null hypotheses were formulated:

Hypothesis A: Net migration does not correlate with migration of nurses.

Hypothesis B: Differences in salary does not affect migration of nurses from the Czech Republic.

There is used the problematic of push-factors and pull-factors in this study. Push-factors, which arise from the situation in donor countries and pull-factors, which draw people to destination countries, mostly appear as a combination. Kline (2003) distinguishes between three groups of push- and pull-factors:

- educational factors (many nurses go to improve their professional development),
- economic or social factors (low wages, wars, deprivation or social unrest),
- personal safety factors (on the one hand as an escape to get political safety, but on the other hand also for their health - the danger to be infected with HIV or TB).

The migration of health personnel is complex issue and there is a wide spectrum of potential uses of statistics. For purpose of this study were chosen following variables, their description and data source are in Table 1.

Table 1: Variables and their description

Variable	Description	Unit	Source
Net migration	The indicator is defined as the ratio of net migration (including statistical adjustment) during the year to the average population in that year.	Per 1 000 inhabitants	EUROSTAT
Foreign nurses	The number of doctors who have obtained their first medical qualification (degree) in another country and are entitled to practice in the receiving country.	% of total	OECD
Inflow	The number of nurses who have obtained their first medical qualification (degree) in another country and are receiving a new authorisation in a given year to practice in the receiving country.	The number of nurses	OECD
Salary	Salaries as % of total public health expenditure.	%	WHO - HFA

Source: own based on Eurostat, OECD, WHO-HFA

4. Results and discussion

Question No. 1: Which selected countries in Europe had positive net migration?

To answer research question 1 were calculated basic statistics of net migration, the reference period is from 2000 to 2015 and the basic statistics are represented in Table 2. The results indicate that most countries have positive net migration in average. Only three of them have negative net migration: Estonia, Latvia and Poland.

Table 2: Net migration and basic statistics

Country	Mean	Std. Dev.	Min	Max	Country	Mean	Std. Dev.	Min	Max
BE	4.469	1.738	1.3	7.9	LV	-7.450	4.067	-17	-3.6
DK	2.919	1.666	0.9	7.4	NL	1.306	1.620	-1.6	3.6
EE	-2.088	1.598	-4	3	NO	6.019	2.818	1.8	9.4
FI	2.150	0.904	0.5	3.3	PL	-0.356	0.248	-0.9	0.1
FR	1.669	1.146	0.3	3.2	SI	2.319	2.769	-0.3	9.2
DE	3.050	3.664	-0.7	14.1	ES	7.025	8.038	-5.4	17.9
GR	0.425	3.650	-6	5.8	SE	5.063	1.822	2.7	8.1
HU	1.375	0.455	0.3	2.1	UK	3.875	0.952	2.4	6.1
IT	4.631	4.657	0.5	19.7					

Source: own based on Eurostat

Question No. 2: How did the migration of foreign nurses develop in selected countries?

Variables Foreign nurses and their inflow to others countries were chosen for evaluations over time. The variables were used to compare and to describe the development of migration on healthcare market over time and across international borders in selected Europe countries.

As a reference period for further analysis were selected years from 2010 to 2015, but unfortunately not all data were complete at national level, so we had to reduce some of examination periods and it may lead to difficulties with comparison within countries. Even for Slovenia there was no data for annual inflow, for Spain there was only available observation for 2011. The two indexes were used for description of the development of variables over time:

- the relative change and
- the average annual growth, furthermore the graphical demonstration of the absolute trend was depicted (see Figure 1).

Based on calculated mean value of net migration it may be assumed that the average annual growth variable foreign-nurses even variable inflow would be highest in countries with quite high net migration and vice versa. The results showed that the highest growth of ratio of foreign nurses was in Belgium between 2010 and 2015. In 7 countries was the growth over 15 %, there are 6 countries with negative values of the average annual growth. The highest decline was in the Netherlands, it declined by 92.3 %.

It seems thus that there is not positive correlation between net migration and growth of ratio of foreign nurses in selected countries. The supreme annual inflow was in Germany and reached almost 404 %. For Poland, Belgium and Estonia was the average annual growth over 100 %. We can see that the highest annual decline was in Greece and Latvia.

Figure 1: Foreign-trained nurses and flows in selected countries

	% of foreign-trained nurses				Foreign-trained nurses - Annual inflow		
	Relative change	Growth	Trend		Relative change	Growth	Trend
Belgium 2010-2015	16,51%	118,69%		**Belgium 2010-2015**	15,87%	101,11%	
Denmark 2010-2014	-3,82%	-12,95%		**Denmark 2010-2014**	-25,38%	-38,89%	
Estonia 2010-2015	37,94%	129,63%		**Estonia 2010-2015**	0,00%	100,00%	
Finland 2010-2012	17,92%	36,81%		**Finland 2010-2012**	17,07%	22,49%	
France 2010-2015	2,80%	15,57%		**France 2010-2015**	7,06%	38,48%	
Germany 2012-2015	5,36%	16,97%		**Germany 2012-2015**	71,46%	404,07%	
Greece 2010-2015	-0,55%	-3,20%		**Greece 2010-2015**	-43,27%	-90,00%	
Hungary 2013-2015	10,37%	21,82%		**Hungary 2013-2015**	10,87%	22,92%	
Italy 2010-2015	0,00%	-2,92%		**Italy 2010-2015**	-19,67%	-70,69%	
Latvia 2010-2015	-4,63%	-24,14%		**Latvia 2010-2015**	-16,73%	-85,71%	
Netherlands 2010-2014	-40,70%	-92,27%		**Netherlands 2010-2014**	-11,13%	-43,96%	
Norway 2010-2015	3,32%	15,65%		**Norway 2010-2015**	-7,46%	-28,34%	
Poland NA	NA	NA		**Poland 2010-2014**	-4,35%	133,33%	
Slovenia 2010-2015	-0,94%	-4,59%		**Slovenia 2010-2015**	NA	NA	
Spain 2011	NA	NA		**Spain 2011**	NA	NA	
Sweden 2010-2014	0,77%	4,53%		**Sweden 2010-2014**	10,76%	37,80%	
United Kingdom 2014-2015	7,49%	7,49%		**United Kingdom 2010-2015**	40,73%	40,73%	
Legend		(-∞;-0.15> (-0.15;0>		(0;0.15> (0.15;∞>			

Source: own based on OECD

The development of absolute values could be seen in mini-graphs in Figure 1. The absolute value was highest in the UK and the lowest was one in Estonia and Slovenia. For countries with positive net migration we expect growing value of the foreign nurses and inflow as well. This expectation was tested within Hypothesis A.

Hypothesis A: Net migration does not correlate with migration of nurses.

For verifying this hypothesis was used Pearson correlation coefficient (PCC), we tested if there is positive linear dependence between variables: net migration, foreign nurses and inflow. Data set obtained panel data set from N=7 countries (Belgium, Estonia, France, Greece, Italy, Latvia, Norway) and from period T= 7 years (2010 – 2015). So final data set consist of 49 observations (NxT). PCC indicates positive linear dependence between variables and the value are between 0.4 and 0.59 indicates moderate correlation and values between 0.6 and 0.79 indicates strong correlation. The PCC are considered statistically significant at the 5% significance level, so we are able to reject null hypothesis. Therefore, we conclude that net migration correlates with migration of foreign nurses.

Table 3: Correlation matrix of variables: Net migration, Foreign nurses, Inflow

	Net migration	***Foreign nurses***	***Inflow***
Net migration	1		
Foreign nurses	0.4294	1	
	(0.0021)		
Inflow	0.6427	0.4608	1
	(0.0000)	(0.0009)	

Source: own based on Eurostat, OECD

Question No. 3: How did differences in salary affect migration of nurses from the Czech Republic?

It was observed that the largest number of Czech nurses frequently migrates to the United Kingdom, Germany, Italy, United States and Switzerland. The problem with incomplete data was one of the reasons why we reduce our examination of pull and push factors only (differences in salary) on outflow from the Czech Republic. The period for testing hypothesis B contains years from 2003 to 2009 (T= 7) and we used variables salary, inflow from Italy, United Kingdom and the Czech Republic.

Hypothesis B: Differences in salary does not affect migration of nurses from the Czech Republic.

We assume that the difference between Salary in the Czech Republic and selected countries may act as pull factor for the inflow of the Czech nurses. Differences in salary were calculated as percentage difference between salary in Czech Republic and host country. For verifying hypotheses B was used pooled OLS. The results with the calculated coefficient of regression, standard error, R-squared and P-value are shown in the in Table 4.

Table 4: Diffrence in Salary as pull for nurses flow from the Czech Republic – pooled OLS

	obs	**coef**	**se**	**R2**	**p-value**
diff_salary	14	22.193	23.498	0.263	0.364
*** p<0.01, ** p<0.05, * p<0.1					

Source: own based on OECD, WHO - HFA

According the results, it is clear that at the 5% significance level we are not able to reject null hypothesis B. Thus we are able to claim according these data that the salary in the Czech Republic did not affect inflow and outflow of doctors in the Czech Republic. But if we use our estimated model for extrapolation, we can say that if the difference between salaries grows by 1 pp it can lead to increase of flow from the Czech Republic by 22.2.

5. Conclusion

Health worker migration is an inescapable feature of the health sector and globalization because an important impact of globalization is evident in human capital (Hejduková, 2015). A significant component of any state policy agenda is an enhanced recognition of the importance of improved working conditions and more effective HR practice to encourage retention of health workers in both source and destination countries (Bach, 2003). Nurse migration affects different countries in different ways – there exists troubling pattern of growing disparity in which poor countries with the fewest nurses are losing them to wealthy countries with more nurses (Pittman et al., 2007). The aim of this paper was to investigate and compare migration on healthcare markets in selected European countries. Two hypotheses were formulated in this study. They allowed us to conclude that net migration correlate with migration of foreign nurses and the differences in salary in Czech Republic did not affect flow to selected countries. This results based on macroeconomics data about healthcare staff is inconsistent with many facts which are presented by professional public in the health service. We can conclude that the migration is predicted to continue until developed countries address the underlying causes of nurse shortages and until developing countries address conditions that cause nurses to leave. The results of our study show interesting information about healthcare migration and push and pull factors. There are many theoretical studies but without sufficient statistical and empirical bases in this field. This fact provides us wide range of possible extension of this study. There exist also limitations of our study – for example as is defined by World Bank Inadequate data systems in many countries prevent effective monitoring of these workforce flows.

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THE IMPACT OF GLOBAL COMMUNICATION ON THE VALUES OF THE YOUNG GENERATION

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Abstract. Global communication represents a new phenomenon of modern society that influences substantially the value structure especially of the young generation. Differences in cultural background and value structure of various ethnics represent huge risks of possible confrontations sparked off by global communication means, too. Society-wide, it is necessary for the diverse cultures to get to know each other and develop harmonious relations with willingness to compromise. Global communication thus should create conciliatory environment and support the process of bringing these diverse cultures together, rather than to instigate separation and mutual hostility. The world is highly heterogeneous, on one side there are rich cultures with overproduction and overconsumption, on the other side there are poor countries that want to change this status using the global communication means. All these processes are connected with the increased influence of media, especially the newest ones stemming from the digital, internet environment. The so called "digital revolution" – erasing distances and boarders between countries, regions and continents – is a part of a global communication and influences substantially the value structure of the young generation in postmodern society. This document describes possible development projects focusing on sustainable development that should ensure quality life of future generations, based on formation of values complying with the cultural traditions and opening the diverse cultures to other using the global communication tools.

Keywords: social innovations, values, communication, globalism, postmodern society

JEL Classification: R23, J19, O35

1. Introduction

Global communication is a new phenomenon in modern contemporary society, which has a substantial influence on the value structure of young people in particular. (Santos & Lucas, 2017). The differences in the cultural backgrounds and values structures of various ethnic groups represent significant risks of confrontation which could be inflamed precisely through global means of communication. It is, however, desirable for different cultures to get to know one another and to create harmonious and compromising relations across society. As such, it is necessary for global communications to create an amicable environment and to be a means of bringing people together and of recognising different cultures and not to foment division and animosity. The world is highly heterogeneous; on the one hand rich cultures are connected through overproduction and overconsumption, while on the other hand poor states wish to influence this state of affairs using global means of communication. All of these processes are associated with the waxing influence of the media, especially the newest types of media which function in the digital internet environment. (Pitt & Treen, 2017). The so-called "digital revolution" has overcome distances and the borders between countries, regions and continents, is part of global communications and has substantially influenced the value structure of the young generation in the contemporary post-modern society. The global movement of people has led to the fact that individual states have become multicultural societies consisting of members of different cultures. Contacts are constantly developing within the framework of international cooperation, which has contributed to the unceasing geographic growth in the labour market. It is therefore necessary to prepare this human capital not only from a specialist and linguistic point of view, but also from the point of view of the specific cultural characteristics of the individual nations. This involves preparation for life in a multicultural reality and preparation for the social, political and economic aspects of interaction between people within the framework of a different cultural environment. (Alexy, 2006) The global environment can not only be analysed from an economic point of view, but also from the point of view of its intercultural nature and intercultural communication. The globalisation processes of the 1990s were accepted with euphoria from the point of view of the economy. The ability to be able to communicate, produce, trade and use social networks on an international scale without any problems was an open and interesting challenge for every society in the world. (Kallier, 2017) Nevertheless, the first demonstrations against the manifestations of globalisation appeared at the end of the 1990s, for example in December 1999 upon the occasion of the meeting of the World Trade Organisation (WTO) in Seattle. The demonstrators clearly expressed their dissatisfaction with the growth in unemployment as a consequence of the relocation of production to places with cheaper labour costs or as a consequence of unequal subsidies for the production of products and the sale of these products at "dumping" prices. (Stiglitz, 2006) From a political standpoint, these processes were hidden under the so-called liberalisation of international trade. Even though the individual states were aware of the risks (for example, a loss of their economic identity in specific branches), the global processes continued, whereby the people were served the positive aspects rather than the negative ones. Discussions about globalisation therefore have not abated and many authors have different opinions on this matter. Some authors (Langley, 2000) have focussed on the relationship between the state and the globalising market and spoken of the advent of a qualitatively new situation; a global economy whose power disrupts the state's position of power. On the other hand, sceptics (Wade, 1996) have claimed that the standing of the state has not changed and that it is not possible to speak of a homogeneous global market. (Císař, 2003) No matter how the discussions have been led, it is clear that this issue is of critical importance for the human population and it is necessary to constantly study it and to analyse it from various points of view. The topic of globalisation is very current from the point of view of interculturality and subsequently from the point of view of intercultural communication in association with the gradual expansion of the European Union and the currently increasing weaves of migration (Lee, 2017). According to Welsch (1995), the term interculturality comes from the traditional idea that cultures are a kind of island, strictly delimited and separate entities, which can ignore or underestimate one another, fight each other or endeavour to understand one another and exchange values, models and ways of acting and living. The concept of interculturality looks for a way for these different cultures to coexist and a way for them to communicate. (Oklander & Oklander, 2017) It proceeds from the assumption that the more intensive the intercultural contact, the more precise the mutual understanding and more probable the option of eliminating various conflicts. Getting to know and respect foreign cultural phenomena forms the platform for dialog, but this presupposes an intercultural upbringing and education. This is also very current in the Czech Republic. The numbers of foreigners living in the Czech Republic has been constantly rising. In 1993, just under 78 thousand foreigners were living legally in the Czech Republic, but in 2015 this figure was more than 850 thousand according to the data from the Ministry of Internal Affairs of the Czech Republic. It is surprising that people are able to communicate relatively well from a linguistic point of view despite these effects of globalisation which have continued to accelerate. Nevertheless, this is not sufficient for achieving common goals and cohabitation. The differences between individual cultures, which manifest themselves in mutual communication, do not simply disappear, but on the contrary they often appear at a stronger degree than the original culture could have admitted. (Nový et al, 2005).

2. The material and methodology

The main methods which were used when working on the aforementioned theme involved a structured analysis and a simple description of the facts, as well as the synthesis method and logical and deductive approaches with the goal of identifying and formulating the impacts of global communication on the formation of the relationships of the young generation which has influenced their value structure in the post-modern society. The theme has been arranged into a unique meaningful whole which identifies the basic impacts of current communication in the global environment on the life values of the young generation in accordance with the logic of the facts and the deduction of the results from the analyses of the expert scientific texts.

3. The results and discussion

Intercultural relations are predominantly based on the exchange of mutual values and life models which create a link between various entities and look for methods of enabling the coexistence of different cultures with the aim of detailed mutual understanding and as such not to give rise to the causes of communication breakdowns and resulting conflicts. Europe, which has had to accede to the introduction of certain migration rules in its democratic approach to the penetration of foreign cultures and ethnic groups into its continent, can serve as an example, especially due to the fact that Europeans are submissive and conservative in their behaviour and do not make the relevant effort to preserve their identity and traditional European values in relation to migrants. On the other hand, however, they have made clear their deeply entrenched distrust of foreigners and even their hatred in some European destinations.

The opposite pole to Europe is North American society which arose thanks to significant immigration and appears to be an intercultural society. The search for the forms of values and their contents along with attempts to analyse the differences between them have been included among the basic conditions for establishing communication in certain social and cultural environments. Conflicts in this environment predominantly occur as a result of insufficient understanding of the contents of the values, because people do not behave spontaneously and reflexively, but often make conscious decisions on their actions and they connect them with certain intentions, with a certain gaol and with associated expectations. The choice arising from the decision-making process arrives and it always involves a choice between the possible and the admissible and tolerated or feasible alternatives, not only in the sense of a choice of the possible target orientations, but also the available or accessible means. (Prudký, 2009)

It is precisely the differences in the cultural background and in the value structure of various ethnic groups which present significant risks of confrontation, which may result in unfriendly relations and conflicts between domestic and foreign cultures. It is therefore desirable for different cultures to get to know one another and to create harmonious and compromise relations. The key impacts of these undesirable phenomena of global communication fall upon the young generation. The young generation in developed countries, i.e. including the Czech Republic, are growing up in a so-called consumer society. This is characterised by the mainstream culture of most of the countries in Europe and the USA, especially in the large cities in these countries. Their strong economic environments create the conditions for the higher production of products and for higher consumption on the part of customers. People no longer only purchase the things which they need to live, but also things which they enjoy and which bring them delight and happiness. Most of society behaves in this manner. This behaviour is based on the following principles of post-materialism: technological innovation; changes in the professional structure; economic growth; an increase in the level of education; the development of means of communication.

The consumer society naturally forms the needs and influences the values of the young generation, which lives in an environment of overproduction (more products are made than the overall social need and this represents bigger profits for companies) and overconsumption (more products are consumed than the overall social and individual needs and the purchasing power of citizens and this represents the greater use of non-renewable resources and waste).

The media truly significantly influences the formation of the needs and values of the young generation. The expansion of the use of advertising, the promotion of certain product brands, the use of social networks and digital means of communication all support the development of the "consumer" society and undoubtedly create this one-sided lifestyle. It can be simply stated that the media significantly supports the development of marketing and communication skills, as well as the development of "consumerism". The young generation is developing its own behavioural model, which can be characterised as "methodological collectivism". This involves individuals who monitor their own benefit, but whose actions are nevertheless influenced by the opinions and values of their environs. This essentially means that the behaviour of the individual is not independent and that it is influenced precisely by his or her environs in the form of various regulators, styles and sanctions. (Prudký, 2009B) Hofstede (2006) also states that the predominant part of humanity (especially the young generation) in our world lives in societies, in which the interest of the group outweighs the interest of the individual. In these collectivist societies, this means that the individual identifies to the greatest extent with the group in which he or she lives, most frequently with the family.

3.1 The value structure of modern society

A number of authors (Hofstede, Inglehart, Schwartz) have concerned themselves with an investigation of the approaches to values and their breakdown. The research into this area has always been undertaken with a specific goal, whereby the key goals have certainly included the discovery of approaches to arranging the starting point for the operationalization of the values in social research on the one hand and the comparison of the acquired results about the form and structure of the values on the other hand. (Prudký, 2009) Investigations into these contexts provide substantial and valuable information about the anticipated behaviour of society, its culture and its individuals. As such, Hofstede (2000) has introduced a terminological structure for viewing values.

Table 2 The structure for viewing values

The nature of the value	**Desired**	**Desirable**
The dimension of the value	intensity	direction
The nature of the norm corresponding to the value	statistical, phenomenological, pragmatic	absolute, deontological, ideological
The associated behaviour	choice and allocation, graded efforts	approval or rejection
The predominant result	actions and/or words	words
The terms used in the measurement processes	importance, success, attraction, preference	good, correct, agreement, wish, condition
The emotional significance of the term	activity and evaluation	only evaluation
The person which the measurement procedures refer to	I, you	people in general

Source: compiled based on Prudký (2009 B)

Values can also be divided into instrumental and terminal values according to Rokeach (1973). Terminal values are related to the final state, to the desirable state of existence or being. This involves values focussed on personality (wisdom, self-respect) or on society (equality, freedom). Instrumental values are associated with methods of behaviour which lead to securing an end state. They may be moral values (integrity, usefulness to others) or values associated with self-realisation and intelligence (ambition, ability, creativity). Terminal values define the status which it makes sense to strive for. Instrumental values show the method, means, behaviour and actions which enable that state to be reached. (Prudký, 2009 B)

3.2 The value structure in the Czech Republic

It is possible to use the research into European values as applied to the Czech Republic dating from 1999 to give some idea of this. In that period, it was undoubtedly clear that the most declared and investigated values included: family, work, friends and acquaintances, free time, politics and religion.

In the case of the **family**, the measured value preferences (factors) were especially: a successful marriage, common interests, rational discussions in the family; mutual respect and understanding; a good sex life; tolerance for infidelity.

In the case of the **work** value, the measured value preferences (factors) were especially: an initiative-based approach to work; the option of professional advancement; interesting work; the opportunity to have responsibility; pleasant co-workers.

In the case of the **friends and acquaintances** value, the measured value preferences (factors) were: the opportunity to meet up with friends; mutual assistance and respect.

On the other hand, a number of value preferences (factors) were designated as unjustifiable across the stated values. These included: public littering, exceeding the speed limit in residential areas, driving under the influence of alcohol or narcotic substances, travelling on public transport with purchasing a ticket, casual sex, homosexuality, divorce, euthanasia , prostitution, suicide. In today's modern society, most inhabitants of the Czech Republic tend towards being non-confessional (without faith) with preferences such as entertainment, a well-paid job which they enjoy, consumption and freedom. The traditional values are slightly played down, but they still play an important role. The values can be assessed from various points of view. If we proceed, for example, from needs, it is necessary to state that needs are part of personality like a bipolar relationship between availability, which particularly involves a physical orientation (food, drink and sex), and interest, which is associated with the ability to interiorize the examples of the significant personalities in the group. Values and value orientation are closer to goals. They arise through the interiorization of ideals and their concretization in principles and convictions. It can be said of values that they are the source of attitudes or abstractions from attitudes and convictions related to specific objects. It is possible to summarise the following facts about values: (i) Values are general goals which a person strives to achieve (health, happiness, peace, family); they may be formulated as goal values; (ii) Values are a means through which a person achieves something important for him or herself (education, standing at work, honest actions); (iii) Values are something, because of which it is worth striving for an objective or avoiding it (the experience from smoking, beauty, the financial price of a painting, a book as a source of entertainment or education); (iv) Values are criteria used to evaluate various objects or significant events (value preferences and orientations are created here); (v) A value is something which gives our life meaning.

From the point of view of the value function, values substantially constitute a superstructure to the personality formation and they can sometimes be stronger than our biologically anchored needs (for example, laying down one's life for one's country, for truth, an ideal or, to put it another way, out of faithfulness to the values which we have identified with). Despite this, however, it is necessary to note that values and value orientation have by nature an existence which is closer to goals. Values may be general and specific goals which a person strives for in accordance with the environment, which said person grows up in. (Hes, 2014 based on Prudký, 2009 B) The current division of values may be inspirational for the young generation and these values are as follows: values as positive or negative attitudes, values as goals, values as a tool for orientation, values as objects of interest, values as criteria for differentiation

3.3 The young generation X and Y and global influences

The young generation (generation Y) is exposed to strong global influences which have a significant impact on them in specific life stages. The values aspect teaches each of us, and therefore also the young generation, what kind of a world we live in and how to exist in it and does so throughout all our lives. Behaviourists and anthropologists speak of so-called "imprints", i.e. critical moments, when our human cerebral hardware creates our own thought software. For example, imprints can be shown in animals using cases of the fixation of young on their mothers. Generation Y (years of birth: 1980-1995) represents a generation of questions and questioning unlike generation X (years of birth: 1965-1980) which has been called the "undefined generation" and has been distinguished by new approaches to the fast changing world and the overall independence of young people. They bring to society the questioning of existing approaches to work and politics and they require more authority and freedom. They work for less money in their productive age, they generally have more work, while a lack of long-term certainties is replaced by an increase in personal freedom.

Generation Y is different. It constantly moves among doubts; why are we here, where are we going, where is my cell phone and my PC? This generation has arisen from generation X which has resolved the new additions as a consequence of a mid-life crisis and starting a family at the last minute. That is why generation Y is distinguished by certain common (global) characteristics such as sharing life values, listening to the same music, knowing the same cultural programs and works, even though they were born on different continents and in countries with different traditional cultures. General freedom and a long absence of world conflict has made generation Y into a so-called "civil generation" which has come together against the backdrop of digitalisation in communication and does not trust in family, career, education or even the state they grew up in. They are able to change their minds, if it is advantageous for them to do so, they try to reach an understanding more than to have the last word and they generally come across in the eyes of the previous generation as being spineless and indecisive. It is interesting that not even basic needs (sex) interest them as much. They want to work from home and their communication is characterised by social networks and the number of applications on their cell phones. Maybe this involves the first generation where the brain and its activities have been formed by information technology and a vision of realistic globalisation changes. Generation Y wants change, but it does not know which change. It wants power, but it does not see the responsibility behind it. It is involved in international activities, is cosmopolitan and nobody can generally guess what can be expected from this generation in the future. This generation Y, called the internet generation by some authors, has a different idea of the previous generation's value structure. The generally do not acknowledge the value system according to Spranger, which consists of values such as truth, beauty, usefulness (profit) and a love of people, power and God (wisdom). Generation Y values free time most of all. For them, work is merely a means to paying the bills. They do not share in the growth and traditions of enterprises or companies. They are even willing to sell off a family firm which the previous generation has built up over several decades. Their diligence is not ethical, they are capable of asserting themselves at the expense of others, including those who have assisted them in their career advancement. However, they require appropriate financial remuneration. Sociological research by leading scientific institutes has shown and confirmed similar findings to those of the Association of Graduate Recruiters, according to which school leavers expect everything to fall into their laps. They consider themselves to be highly talented in the labour market, but employers label them as people who are out of touch with reality, self-absorbed, volatile and insatiable. As such, they prefer to find people with a better work ethic and morale and they predominantly favour generation X when interviewing for job openings

4. Conclusion

Contemporary society is passing through a period of "global modernisation" which has manifested itself externally in the generation of groups of inhabitants who especially promote a holistic type of lifestyle. The factors of globalisation which have influenced our society for more than 20 years are constantly changing their dynamic. They have been connected through communication systems which support consumer consumption and exert pressure on the entire population using methods of inducing fear about the individual and the society as a whole. Conflicts in today's global society are not usually conditional upon any differences in the level of civilisation, but come from differing value orientations which are associated with social, economic and cultural poverty and with a deficit of sufficient levels of education.

Contemporary society has created a mechanism consisting of various pieces of advice with which one is completely overwhelmed and which lead one to an absolutely consumer-driven life via obtrusive recommendations and examples of consumption. The ability to make adequate, good quality and responsible decisions and choices and also to reject such decisions or choices has been reduced within the framework of the values orientation and the competence of the citizens. The modern global society has lost the ability to responsibly and competently support the value orientation of the population and self-control for the aforementioned reasons. The young generation will become increasing interconnected through advanced information and communication technology and it is up to them and the examples set by individuals or groups to what extent they are willing and able to adopt the cultural and social heritage with the aim of creating their own value structure supported by the historical development of our society. The role of the education system, which should in no way forget these significant historical references, is irreplaceable in this regard. Czech society appears to be somewhat closed and indifferent to the members of other cultures. It is not able to exert a large degree of empathy towards foreign cultures and customs. Perhaps this is given by historical experience when Czech society was and is under the dominance of more powerful entities from Germany and Russia. The generations which experienced the world wars or the totalitarian policies are amongst those which have difficulty understanding the contemporary form of the society's development. They were affected by a lack of basic foodstuffs and constant fear for their safety, they were denied freedom of speech and their own personal growth and everything took place under strong mental and emotional control which lead to stagnation in the development of both society and the individuals. The current generation Y has already grown up directly in the consumer lifestyle of the post-modern society which is characterised by an improvement in the quality of life, the overproduction of consumer goods and the intensive effects of marketing and communication tools. The basic global tendencies of this society, which are critical for the development of generation Y, include: the fundamental global transformation of transportation and communication; new information and technology bringing new features to production (full automation without the need for a human workforce) and in consumption (see above – overconsumption); mass consumption brings with it an emphasis on social and economic status, lifestyle and personal identity; a large selection of individual styles. At the same time, the following can be ranked among the value preferences of the young generation: free time activities; digital communication, dependency upon social networks; forms of lifestyle, entertainment, shopping; career, work; tourism. On the other hand, there is the risk of the uniformity of society, digital dementia, unethical conduct and behaviour, a lack of interest among the generation in the family, the state, culture or religion, egocentrism and selfishness. The global consumption trend is unsustainable for the young generation. Ecological threats in the form of the accumulation of waste, poor management or even wastage of essential resources such as water and natural raw materials and the pollution of the atmosphere and the environment in general. Positive trends can be seen in the state strategies for the future. Almost all state projects emphasise permanently sustainable development aimed at preserving the quality of life for the generations to come.

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SIGNIFICANCE OF LIQUIDITY MANAGEMENT IN TOURISM BUSINESSES IN THE ERA OF GLOBALIZATION

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Abstract. In the era of globalization, financial management including liquidity management is highly important for stability and successful development of businesses. It is necessary to bring the significance of liquidity management also to small businesses´ attention. Liquidity constitutes an ability of a business to meet its short-term obligations whereas insolvency is not always caused by a business itself but it can also be a consequence of insufficient liquidity of subjects in its environment. The submitted paper "Significance of liquidity management in tourism businesses in the era of globalization" examines the mutual interrelation between liquidity and selected activity ratios, namely the average settlement period for debtors and average settlement period for creditors. Within the scope of liquidity ratios, three ratios are calculated – the cash ratio, quick ratio and current ratio. Appropriate liquidity management is to ensure an adequate relation between business´s liquidity and activity ratios. The aim of the submitted paper is to verify the relationship between financial liquidity and activity ratios and identify strength of their mutual relationship by means of coefficients of correlation. The sample consists of 72 micro-enterprises operating in tourism (SK NACE 55 – Accommodation) based in the Prešov municipality. The input data for the sample compilation come from the database of the portal indexpodnikatela.sk. The results of the realized research can help to identify potential problems resulting from liquidity management. In the conclusion, some possible areas of solutions to the identified problems are outlined.

Keywords: liquidity ratios, activity ratios, tourism industry, microenterprises

JEL Classification: G30, M21, Z30, Z32

1. Introduction

Present time is characteristic of constant changes not only in an economic area. Firms have increasingly to be more flexible and follow the current development not only inside a business but also in its environment (Elexa & Maková, 2015, p. 88). Globalization is one of the reasons (Knight, 2000, p. 12). Small and medium-sized enterprises are faced with the critical question of how to react to the changes caused by the process of globalization (Lesáková, Ľ., 2016, p. 1179). Due to it, the nowadays businesses environment is characterized by volatility in markets, political instability, rapid technological changes, constrained capital availability and growing business risks. At the same time, stakeholders require sustainable business value enhancement. These conditions have increasingly called for reshaping the responsibilities and roles of financial managers. Under the present global competitive pressure, companies have to manage all aspects of their performance in a very serious, responsible and innovative way to stay in the game (Hiadlovský et al., 2016, p. 799). Businesses need strong financial management. It is crucial for business survival, development, sustainability and long-term competitiveness. With the ever-increasing pace of globalisation, a treasury function has become strategic in financial management (Polak et al., 2011, p. 48). Ensuring sufficient liquidity to meet all business´s obligations, effective management of payments, receipts and financial risks is one of cardinal areas of the treasury function in the global era. Financial management including effective liquidity analysis and management is a key to business´s survival in the global market economy (Saridakis et al., 2012, p. 530). However, firms have to become aware that financial analysis indicators cannot be expected to reveal all financial problems. The advantages of financial analysis include its comprehensibility and availability of data from the company's accounting records (Pur et al., 2015). The results of a previous survey (Pur et al., 2015; Gundová & Medveďová, 2016) have confirmed that companies mainly use the financial analysis to measure their performance and management efficiency. They typically use it as a financial management tool. The survey further shows that assessing performance based on financial indicators still prevails and the use of the financial analysis in the future is still very likely. The aim of the article is to verify the relation between liquidity financial ratios and activity ratios and identify a rate of their correlation. The research sample consists of microenterprises operating in tourism. We decided to carry out the research in this sector as during the last decades, the tourism industry in Central and Eastern European countries has gained an increasing importance. Maráková et al. (2016, p. 92) say that tourism is currently among the most dynamically growing branches of the national economy and a major sector of employment. Because of the diversity of businesses and activities inside this sector, tourism can be considered an effective engine for emerging sectors and for the economy as a whole. Furthermore, due to its diverse, beautiful nature and valuable historical and cultural inheritance we think that this sector does have growth potential, high efficiency and thus, opportunities for significant contributions both to the national GDP and added value (Buiga et al., 2017). In the conclusion of the article, we point out to a distinction between liquidity management in small enterprises and that one of large enterprises.

2. Theoretical background of liquidity and activity ratios

The literature offers different definitions of liquidity. Pur et al. (2015) define it as a company´s solvency. Zwissler et al. (2013) say that it is permanent solvency of a firm. Solvency is the firm´s ability to meet its obligations fully as they fall due. In the article we prefer the definition of Lesáková et al. (2007) who consider liquidity to be a general firm´s ability to meet its short-term obligations. We see the liquidity analysis as an evaluation of a rate of the firm´s ability to settle its obligations, resulting from business activities, in cash. Generally, we can state that a financially stable firm is able to meet its obligations in time while a financially distressed firm is not. This ability is affected by several factors, including the assets structure and adequate and regular cash inflows as most important. Managers have to ensure an effective course of business. If discrepancies among current assets items and short-term liabilities arise, they will negatively influence firm´s growth and profitability. It can also lead to financial distress or even bankruptcy (Khatik & Varghese, 2015). Effective liquidity management thus play a key role for maintenance of firm´s prosperity and its very survival. Sufficient liquidity is substantial particularly for small enterprises. Ekanem (2010,) argues that liquidity is a matter of life or death in these businesses as a small enterprise can survive for the long term without being profitable, however, can become bankrupt for a single day if it is not able to meet a key obligation. Smaller enterprises are much more responsive to the existence of bad debts compared to large ones since they usually have less customers. Effective liquidity management is a crucial component for the overall firm´s ability to meet its short-term liabilities by means of easy to sell assets. Within the scope of financial management, liquidity management plays a significant role particularly during the economic and financial crisis for which decreased cash flows and deteriorating market conditions are typical (Almeida at al., 2014; Błach, J. et al., 2014). To manage and evaluate liquidity, a business can use different analytical tools. The liquidity ratios can be classified as static and dynamic ones depending on the financial statement based on which they are construed. In the article, we focus only on the static indicators, specifically on the ratios such as the cash ratio, quick ratio and current ratio. Except that liquidity ratios affect profitability ratios (increased liquidity could endanger investments and thus also business profitability), we can also see a relationship between liquidity ratios and activity ratios, namely between the average settlement period for debtors and average settlement period for creditors. The average settlement period for debtors predicates of customers´ payment discipline and it indicates time from the invoice issue to its collection. The average settlement period for creditors reflects solvency of a business. The average settlement period for debtors shorter than that one for debtors is beneficial for a firm´s financial situation. In this case, a firm collects cash before it pays off its debts. The indicators average settlement period for debtors and creditors are significant for the evaluation of time difference from the generation of an account receivable to its collection and from the generation of an obligation to its settlement. This discrepancy directly affects business liquidity. Knápková et al. (2013) argue that if the average settlement period for creditors exceeds the total inventory and accounts receivable turnover, the trade credit finances accounts receivable and inventories which is efficient. Such a situation, however, may show itself in low liquidity values. There is a relationship between liquidity and activity and it is essential to find a compromise between them.

3. Aim and methods

The aim of the article is to verify the relation between liquidity financial ratios and selected activity ratios (the average settlement period for debtors and creditors) and identify a rate of their correlation. The database indexpodnikatela.sk is an input data source for the construction of the research sample. The sample consists of 72 microenterprises operating in tourism having the registered office in the Prešov autonomous region. We decided for this sector because tourism is a perspective sector of the national economy in the current highly competitive environment influenced by the need of cooperation and coordination of its development (Maráková & Medveďová, 2016). Based on the SK NACE classification the enterprises belong to the division 55 Accommodation. The values of liquidity ratios (cash ratio, quick ratio and current ratio) and selected activity ratios (average settlement period for debtors and creditors) for 2015 were calculated for the analysed 72 enterprises. The methodology of calculation of selected financial ratios was determined based on the methodology of the indexpodnikatela.sk portal. We have formulated two hypotheses.

H1: We assume that there is a statistically significant relation between the financial ratios of liquidity (cash ratio, quick ratio, current ratio) and average settlement period for creditors.

We base the article on the assumption that the lower the value of liquidity ratios is, the longer is the average settlement period for creditors. It results from the formulated assumption that we assume the indirect relationship between the liquidity ratios and average settlement period for creditors.

H2: We assume that there is a statistically significant relation between the cash ratio and average settlement period for debtors.

As the sample contains businesses operating in tourism (the sphere of services) typical with the majority of cash collections, we will focus only on the relationship between the cash ratio and average settlement period for debtors. We assume that the lower the value of the average settlement period for debtors is, i.e. the more often it collects cash, the higher is the cash ratio. We assume the indirect relationship between the cash ratio and average settlement period for debtors. We will test the hypotheses validity by means of the correlation analysis. Its primary aim is to identify the strength, intensity of correlation characterized by the correlation characteristics. By means of the statistical software SPSS we verify the normality of the selected financial ratios. We established the zero and alternative hypotheses (H0 = the normal distribution of the analysed financial ratios; H1 = Non H0). Based on the result of the Kolmogorov-Smirnov test we can reject the zero hypothesis concerning the normal distribution of the analysed financial ratios. If applicable that the sample has not the normal distribution, it is appropriate to use the Spearman correlation coefficient.

4. Results and discussion

By means of the statistical software SPSS, we determined the average, standard deviation and median of the liquidity ratios (cash ratio – L1, quick ratio – L2, current ratio – L3) and activity ratios (average settlement period for debtors - ASPD and average settlement period for creditors - ASPC) for the analysed enterprises in 2015. See Tab. 1.

Table 1: Descriptive statistics of financial ratios

	L1	L2	L3	ASPD	ASPC
Average	1.6036	2.2937	2.3713	101.6111	507.5833
Standard deviation	0.3961	0.4436	0.4446	48.0579	95.6578
Median	0.2810	0.8765	1.0300	18.0000	129.0000
Industry median (2015)	-	0.7200	0.8600	32.71	311.62

Source: own elaboration based on SPSS and the universal register Cribis

As it results from the results presented in Table 1, the average cash ratio (L1) is 1.60, however half of the analysed enterprises showed only the value of 0,28. The average quick ratio (L2) is 2.29 but the median of these enterprises was 0.87. The median of the analysed sample is higher than the median of all enterprises in the category 55 Accommodation in 2015 (0.72). The average current ratio (L3) is 2.37 while the median of the sample is 1.03. This means that half of the enterprises are able to meet all their short-term obligations after the current assets conversion, yet the other half may have serious problems with these payments. When comparing the ratios based on the medians of all enterprises in the industry Accommodation and catering services according to autonomous regions in the Slovak Republic in 2015, we find that the median of the quick ratio (0.79) and current ratio (1.01) in the Prešov region reach the fourth (quick ratio; L2) and third (current ratio; L3) highest values in comparison with other regions in Slovakia. If we compare the medians of liquidity of all enterprises in the industry Accommodation and catering services in the Prešov region and our sample of enterprises in this region, we find that the values are very similar. This confirms the correctness and appropriateness of the sample. The average settlement period for debtors (or payment discipline of customers) was 101.61 days in 2015, i.e. the number of days for which cash bound in accounts receivable is collected. 50 per cent of analysed enterprises showed 18 days and more for which they collect cash from their customers and 50 per cent of enterprises showed this period 18 days and less. The average settlement period for creditors was 507.58 days, which is a much higher value than the average settlement period for debtors. This trend may be seen as positive on the one hand as the average settlement period for creditors is much longer than that one for debtors. On the other hand, however, too long settlement period for creditors affects goodwill and image of a firm towards its environment and current as well as potential suppliers. The results of the turnover ratio analysis show that half of enterprises reached the average settlement period for debtors of 18 days and more and that one for creditors 129 days and more, which means that enterprises used available relatively cheap sources of finance. The median of the average settlement period for debtors for the whole industry in 2015 was 32.71 days, which is almost twice higher than the median of the sample. The median of the average settlement period for creditors of our sample was 129 days. Compared to the median of enterprises belonging to the category 55 according to the SK NACE classification in 2015 in the value of 311.62 days it is approximately twice lower. This can be judged positive, although if the average value exceeds 500 days, businesses can become financially distressed when meeting their obligations. If we compare medians of these ratios for all enterprises in the industry Accommodation and catering services among the regions in Slovakia, we find that the median of the average settlement period for debtors for the Prešov region reached the third highest value of 21.28 days. This is also higher in comparison with the median of all enterprises for all regions. The median of the average settlement period for creditors of 176.83 days for enterprises in the Prešov region is the third highest compared to other Slovak regions in 2015. The value for the research sample was even lower (129 days) which can be regarded positive and, also in comparison with the median of all enterprises in all regions the value is almost twice lower.

Table 2: Spearman rho

		ASPD	ASPC
L1	Correlation coefficient	-0.101	-.764**
	Significance (two-sided)	0.397	0.000
	N	72	72
L2	Correlation coefficient	0.143	-.806**
	Significance (two-sided)	0.231	0.000
	N	72	72
L3	Correlation coefficient	0.130	-.821**
	Significance (two-sided)	0.278	0.000
	N	72	72
** Correlation is significant on the 0.01 significance level (two-sided).			

Source: own elaboration based on SPSS

In a next step, we verified the relationship between the liquidity and activity ratios. We formulated conclusions pursuant to the “freer” scale of correlation coefficient values as financial management cannot be seen as an exact science (coefficient value from 0.7 to 1.0 -

strong correlation, from 0.5 to 0.7 - medium correlation, the value from 0.3 to 0.5 - moderate correlation, and the value from 0 to 0.3 - weak correlation (Závarská, 2011, p. 198)). Based on the determined values of correlation coefficients we find that there is a relationship between the liquidity and activity ratios. There is a statistically significant (Sig. = 0.000 < 0.01) strong indirect relationship between all three liquidity ratios and the average settlement period for creditors. There is the value of rho = - 0.764 for the cash ratio, rho = - 0.806 for the quick ratio and rho = - 0.821 for the current ratio on the 0.01 significance level which confirms the strong relationship (0.700 < rho < 1.000). Based on the results we can reject the zero hypothesis (rho = 0) and accept the research hypothesis H1. On the 1 per cent significance level we can confirm that there is a strong indirect relationship between all three liquidity ratios and the average settlement period for creditors (Sig. = 0.000 < 0.01). The results of the correlation analysis did not confirm the statistically significant relationship between the cash ratio (L1) and the average settlement period for debtors (Sig. = 0.78 – 0.397 > 0.01), therefore we reject the research hypothesis H2 on the 1 per cent significance level. It is characteristic for microenterprises in tourism and within its framework in accommodation that they record lower values of accounts receivable in their balance sheets since they usually collect cash for their services. On the other hand, they agree on certain maturity for their obligations, thus they use the trade credit as a relatively cheap source of finance. This positively affects their profitability. The low share of inventories in their current assets is also characteristic for these enterprises. It is therefore necessary to focus particularly on sufficient cash in relation to the need to pay current expenditures and currently payable obligations in liquidity management. The results of our research indicate the existence of the significant indirect relationship between the average settlement period for creditors and business liquidity. Though, it is essential to emphasize that microenterprises offering accommodation services in tourism have to maintain sound supplier-customer relations while the businesses trying to agree on as long maturity as possible with their suppliers prevail. Naturally, they should observe the agreed maturity. Businesses should be very particular about observing fundamental financing rules and use short-term resources such as the trade credit only for financing operational needs. Albeit we stated that the volume of accounts receivable in the analysed enterprises was generally rather low, it is inevitable to give proper attention to their management, monitor the financial situation of customers so that the firm does not become secondary insolvent.

5. Conclusion

In literature, we can find different definitions of the term globalization. As Lesáková (2016) says, globalization is an important phenomenon, that cannot be ignored, because every country – regardless of size and level of economic development – is affected by globalization. Globalization can influence economies on the national as well as international levels in the transformation in a variety of ways (Križan et al. 2016; Hiadlovský et al., 2016; Knight, 2000). SMEs should react to changes in the business environment. They can also do that by means of changes in their financial management, the significance of which has increasingly grown in current turbulent conditions. In the article, we were concerned with liquidity management, analysed the relation between liquidity and the selected activity ratios based on the sample of microenterprises operating in the industry of accommodation services with their registered office in the Prešov region. The results confirmed the existence of the statistically significant relationship between the average settlement period for creditors and business liquidity. Since it is typical for the analysed enterprises to have the low volumes of accounts receivable and inventories, they should focus mainly on cash management and the effective use of the trade credit in their liquidity management, however observing the agreed contractual terms. Treasury management and particularly management of liquidity including related risk management has to be brought to small enterprises´ attention. These enterprises cannot be perceived as reduced versions of their large counterparts but as businesses, which are different from large ones in many aspects. In like manner, requirements for liquidity and related risk management are also different. It is required to focus on the tools and methods of liquidity management, which are appropriate for small enterprises. Inadequate working capital management results in the inefficient use of sources of finance bound in non-productive assets. Granting the trade credit to customers is a standard in the majority of industries and can support sales. If, however, accounts receivable are doubtful, costs of debt recovery, or even loss resulting from bad debts occur. On the other hand, the use of the trade credit granted by suppliers offers cheap sources of finance to a business, resulting in cost of capital decrease. If a business does not observe agreed conditions, it may experience financial distress. Hence, it is necessary to manage working capital in such a way that results in the efficient use of particular items of current assets, sufficient liquidity and satisfactory profitability.

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TRENDS IN GLOBAL ACCOUNTING SYSTEMS

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Abstract. The global economy is constantly developing and companies operating on world markets are still increasing. This development requires consistent financial reporting across the world. Reliable and comparable financial data can direct the company in the right direction, especially when deciding to move property to another part of the world. Transparent and consistent financial data can contribute to the stability of the world economy or at least to allow investors and other entities to better assess risks. The Global Accounting Standard would also make it easier for accounting units to enter new markets. In the past, it has been demonstrated several times that different reporting methods can lead to a different interpretation of the status of entities or to complicate the expansion of companies to new markets. It is therefore desirable to unify the accounting systems, in particular the most important ones: IAS / IFRS and US GAAP. This paper deals with issues of international regulation and accounting harmonization. It divides the historical development of the IAS / IFRS and US GAAP accounting systems into stages, shows significant milestones in development, and defines the individual joint projects of the IASB and FASB Councils arising during the convergence process. Based on an analysis of the current state of projects under these accounting systems has been to create an overview of the new standards (revised) and further discusses the possible impact of these changes on corporate financial reporting of the European Union.

Keywords: globalization, harmonization, development, accounting, standards

JEL Classification: M21, M41

1. Introduction

Účetní systémy IAS/IFRS a US GAAP se začaly profilovat samostatně, i když na první pohled se jedná o velmi podobné systémy – text každého standardu reprezentuje názor jejich tvůrců na způsob vykazování a prezentaci účetních informací jednotlivých subjektů formou doporučení, Rada pro tvorbu standardů finančního výkaznictví US GAAP tzv. Financial Accouning Standards Board (dále jen Rada FASB) vznikla v roce 1973, Výbor pro mezinárodní účetní standardy IAS/IFRS tzv. International Accounting Standard Committee (dále jen Výbor IASC) taktéž. Oba účetní systémy obsahují nejprve dokument s koncepčními východisky a dále výčet jednotlivých vyhlášek resp. standardů. Přes společnou koncepci však v jejich obsahu existovaly rozdíly, jejichž stírání si stále více vyžaduje globalizace světových trhů. Tento příspěvek si klade za cíl provést deskripci historického vývoje výše uvedených účetních systémů, definovat společné projekty v rámci procesu konvergence a vytvořit přehled společně formovaných předpisů včetně určení jejich dopadu na účetní výkaznictví podniků EU.

2. Metody a zdroje

Pro zpracování tohoto příspěvku byla použita metoda Desk research založená na komparační analýze zejména primárních dat IAS/IFRS a US GAAP, ale také sekundárních zdrojů, které o dané problematice pojednávají. Autoři nejprve zjišťovali, jaké vědecké práce byly v oblasti vztahu účetnictví a globalizace, harmonizace a konvergence účetních systémů provedeny do současnosti. Komparace zdrojů zveřejněných v databázi Web of Science a Scopus obsahuje následující tabulka (see Tab. 1):

Table 1: Vědecké práce na téma harmonizace, globalizace a konvergence účetních systémů

Autor	Studijní oblast	Druh výzkumu	Cíl
Bloomfield, Matthew J.; Brueggemann, Ulf; Christensen, Hans B.; et al.	Vliv harmonizace právních předpisů na migraci pracovníků	Analýza iniciativ EU	Prokázat, že pracovní migrace v oboru účetnictví se významně zvyšuje ve srovnání s jinými profesemi, přičemž tento účinek je důsledkem harmonizace spíše než nárůstu poptávky po účetních službách
Agasisti, Tommaso	Harmonizace účetnictví a daní ve veřejném sektoru	Analýza dokumentů a textů, komparační analýza	Poskytnout komplexní pohled na současný stav evropského účetnictví ve veřejném sektoru
Domaracka, Denisa; Hunyady, Katarina	Vliv mezinárodních auditorských standardů na odhalování podvodných aktivit	Komparace auditorských standardů, dedukce návrhů	shrnout odhalování podvodných aktivit a prevenci jejich výskytu auditem účetní závěrky, jakož i soudním auditem
Mokošová, Daša	Účinnost mezinárodního výkaznictví	Analýza dokumentů a textů	Deskripce procesu zvyšování odpovědnosti za efektivnost IASB
Bradford, William; Chen, Chao; Zhu, Song	Sbližování Číny s IFRS	Analýza výkazů kótovaných společností	Dokázat, jak sbližování s Mezinárodními standardy účetního výkaznictví (IFRS) ovlivňuje úlohu správy konzervativního účetnictví, pokud jde o politiku dividend
Rieg, Robert; Gruber, Thomas; Reissig-Thust, Solveig	Analýza konvergence manažerského a finančního účetnictví podle německých právních předpisů, IAS/IFRS a US GAAP	Regresní analýza	Dokázat, že účetní výkaznictví založené na německých účetních standardech (HGB) vykazuje vyšší míru konvergence než společností, které účtují podle IFRS nebo US- GAAP
Malaquias, Rodrigo Fernandes; Vergara, Nelida Raquel; da Silva, Eliane Cristina	Analýza znalosti o mezinárodním účetnictví mezi účetními studenty z dvou zemí: Brazílie a Paraguay	Dotazníkové šetření	Dokázat, že intenzita znalostí konvergence a užití IAS/IFRS je v přímé úměře k vnímání významu výkonnosti účetního výkaznictví
Ke, Bin; Li, Yubo; Yuan, Hongqi	Konvergence čínských účetních standardů s IFRS	Analýza citlivosti	Dokázat, zda konvergovaná účetní pravidla zvyšují užitečnost finančního výkaznictví

Consoni, Silvia; Colauto, Romualdo Douglas	Vliv procesu konvergence s IAS/IFRS na účetní výkaznictví brazilských kótovaných podniků	Regresní analýza	Ověřit, zda sbližování s Mezinárodními standardy účetního výkaznictví vedlo ke zvýšení kvality dobrovolného zveřejňování informací
Wojcik, Dariusz	Globální účetnictví - vyhodnocení potenciální účinnosti zpráv jednotlivých zemí	Desk research	Analyzovat dostupnost geografických informací o podnikových aktivitách

Source: own proceesed, 2017

Z výše uvedené tabulky je patrné, že oblast konvergence, globalizace a harmonizace řeší řada zahraničních autorů. Z výzkumných metod převažují explanační – teoretické metody.

3. Výsledky a diskuse

Za účelem dosažení cíle bude deduktivní metodou analyzován vývoj světových účetních systémů a proces vzájemné konvergence, což vyústí ve vytvoření přehledu o změnách v těchto systémech a jejich vlivu na výkaznictví podniků EU.

3.1 Analýza vývoje světových účetních systémů

Ze studia dokumentů mapující vývoj světových účetních systémů byla vytvořena níže uvedená časová osa. Nad časovou osou jsou uvedeny významné milníky IAS/IFRS, prostor pod časovou osou je věnován US GAAP (see Fig. 1):

Figure 1: Vývoj účetních systémů s vyznačením milníků

	Vznik IASC			Vznik SAC	Vznik SIC	Reorganizace IASC Návrh použití v EU	Norwalk Agreement	Vznik Monitor. rady	Novelizace Koncepčního rámce
	1973			1995	1997	2000	2002		2015
1934	1973	1978	1991				2002	2009	2015
Vznik US GAAP	Vznik FASB	První koncepční prohlášení	Zahájení mezinárodních aktivit				Sarbanes-Oxley Act Norwalk Agreement	Kodifikace US GAAP	Nové standardy: Finanční nástroje, Leasingy

Source: own proceesed, 2017

V rámci systému IAS/IFRS lze identifikovat první etapu let 1973-2000 definovatelnou jako období snahy o vybudování nezávislé organizace bojující za důvěryhodnost účetních dat. Konec 20. století byl poznamenán dohodou IASC s IOSCO o doporučování standardů burzám. Rokem 2002 začíná etapa intenzivní konvergence s US GAAP, která vyústila do povolení SEC neamerickým společnostem sestavovat výkazy s použitím IFRS. Posledním významným milníkem je publikování Exposure Draft s návrhy pro revidovaný

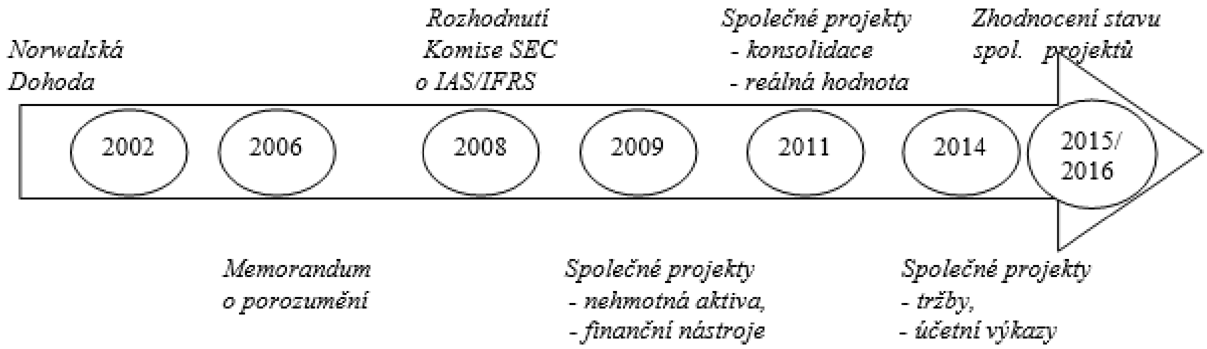
Koncepční rámec v roce 2015. Účetní systém US GAAP se začíná vyvíjet dříve, období věnující se budování struktury a vytváření jednotlivých standardů se datuje již do období let 1934-1973. Následující etapa začíná založením Rady pro účetní standardy (FASB) a je ve znamení budování autority a zahájení spolupráce s IASC. Významným milníkem je rok 2002, kdy byl v návaznosti na pád společnosti Enron a dalších významných firem přijat zákon

„SOX“. Další významnou skutečností tohoto roku je zahájení etapy intenzivní konvergence s IASB. Poslední etapa je charakteristická zlepšováním efektivnosti procesů resp. standardů. Z uvedeného obrázku je zřejmé, že oba účetní systémy prošly dlouhým obdobím vývoje a následkem toho jsou propracované soubory standardů účetního výkaznictví.

3.2 Proces konvergence a konvergenční projekty

Dle odborníků (Weygandt et al., 2015) by oba světově uznávané účetní systémy měly využívat pouze jednu sadu univerzálních účetních standardů, a to z důvodů stále častější expanze podniků na zahraniční trhy, fúzí, akvizic, obchodování na finančních trzích a v neposlední řadě udržení kroku s informačními technologiemi, které činí obchodování jednodušším. Proces vzájemné konvergence účetních systémů IAS/IFRS a US GAAP lze pro přehlednost zaznamenat v následující časové ose, spolu s vyznačením hlavních milníků (see Fig. 2):

Figure 2: Konvergenční proces na časové ose



Source: own proceesed according to Deloitte (2016)

Výsledkem syntézy jednotlivých činností Rad IASB a FASB je tabulka prezentující přehled společných i jednostranných úkolů (see Tab. 2):

Table 2: Přehled krátkodobých konvergenčních projektů

Společné projekty	Jednostranné úkoly	
	Rada FASB	**Rada IASB**
Snížení hodnoty aktiv	Výzkum a vývoj	Ukončené činnosti (IFRS 5, rok 2004)
Státní dotace	Investice do nemovitostí	Výpůjční náklady (IAS 23, rok 2008)
Daně ze zisku	Ocenění reálnou hodnotou pro finanční nástroje	Vykazování podle segmentů (IFRS 8, rok 2008)
	Následné události	Společné ujednání (IFRS 11, rok 2011)

Source: own proceesed according to Deloitte (2016)

Rada pro tvorbu standardů účetního výkaznictví (IASB) vydala z každého uvedeného projektu konkrétní standard, který je v tabulce uveden v závorce spolu s datem vydání. Z tabulky je zřejmé, že proces konvergence nespočívá pouze v plnění společných projektů, ale také jednostranných úkolů, které vyústí ve vytvoření buď zcela nových standardů či v novelizaci stávajících standardů.

Další tabulka prezentuje oblasti zájmu, které nastolila Evropská komise a Komise SEC. Tyto společné projekty mají za cíl ustanovit pravidla platné pro oba účetní systémy (see Tab. 3):

Table 3: Přehled společných projektů IASB a FASB

Projekt	**Stav projektu**
Nehmotný majetek	Rozhodnuto o vynechání tohoto projektu ze společné agendy (2007)
Podnikové kombinace	Vydán společný standard (2008)
Koncepční rámec	Z části dokončeno, práce na dalších částech byla přerušena
Konsolidovaná účetní závěrka	Vydán společný standard (2011)
Ocenění reálnou hodnotou	V US GAAP řešeno od 2007, vydá společný standard (2011)
Finanční nástroje	Vydán IFRS 9, v blízké budoucnosti není plánovaná spolupráce
Pojistné smlouvy	Spolupráce ukončena
Prezentace účetní závěrky	Provedeny změny ve výkazu o úplném výsledku, spolupráce byla ukončena
Leasing	Vydání standard IFRS 16 (2016)
Penzijní plány	Spolupráce ukončena
Závazky a vlastní kapitál	Spolupráce ukončena
Výnosy a jejich uznávání	Vydán standard IFRS 16 (2014), který je zcela obsažen v aktualizaci ASU 2014-09

Source: own proceesed according to Deloitte (2016)

Proces konvergence s sebou přinesl jisté výsledky ve sblížení IFRS a US GAAP, avšak stále nebylo dosaženo identických standardů, z čehož lze vyvodit závěr, že proces konvergence se stále více začíná vnímat jako sblížení mezinárodních standardů na stejných obecných principech, než stanovení stejných standardů pod oběma účetními systémy.

3.3 Změny v účetních systémech a jejich vliv na účetní výkaznictví podniků EU

Tento text se zaměřuje na významné změny v účetních systémech IAS/IFRS a US GAAP, charakteristiku hlavních příčin a vliv na účetní výkaznictví evropského prostoru. See Tab. 4.

Table 4: Nově vydané standardy IFRS

Standard	**Hlavní příčina**	**Vliv na výkaznictví podniků EU**
IFRS 9 – Finanční nástroje	Proces konvergence (kromě vybraných částí)	Změna přístupu k finančním aktivům a způsobu jejich klasifikace, zavedení nového modelu znehodnocení založeného na očekávaných ztrátách, nikoliv na již vzniklých ztrátách
IFRS 14 - Časové rozlišení při cenové regulaci	Jednostranná práce Rady IASB	Prozatímní standard, Evropská komise jeho schválení neprosazuje z důvodu nevýznamného počtu podniků aplikujících tento standard
IFRS 15 - Výnosy ze smluv se zákazníky	Proces konvergence	Jiný čas a struktura zaznamenávání výnosů, jednotný přístup k vykazování výnosů , zvýšené požadavky na zveřejňování informací
IFRS 16 - Leasingy	Proces konvergence	Možnost oddělení leasingové a neleasingové části smlouvy, striktní oddělení leasingu od služby
IFRS 17 – Pojistné smlouvy	Potřeba revidovat IFRS 4	Vliv na načasování, výši a volatilitu vykazovaných zisků a také ocenění pojistných závazků a tím i kapitálu pojišťoven

Source: own proceesed according to IASB, 2016

Z prostředního sloupce uvedené tabulky je zřejmé, že s výjimkou IFRS 14 jsou standardy výsledkem procesu konvergence. Dále jsou analyzovány stávající standardy, jež byly v posledních letech výrazně změněny. Standardy uvedené na jedné řádce byly novelizovány ke shodnému datu (see Tab. 5):

Table 5: Aktualizované standardy IAS/IFRS

Standard	Hlavní příčina	Vliv na výkaznictví podniků EU
IFRS 10, IAS 28	Díky novelizacím se dané standardy přibližují k vyhlášce Rady FASB. Novelizace jsou tedy krokem ke zlepšení již existujících standardů, kde některé z nich jsou výsledkem procesu konvergence (např. společný standard týkající se Konsolidované účetní závěrky)	IFRS 10: Zobrazení výsledku z prodeje či vkladu dceřiného, přidruženého či společného podniku. IAS 28: zohledňuje změny způsobené vydáním standardů IFRS 10, IFRS 11 a IFRS 12
IFRS 5, IFRS 7, IAS 19, IAS 34		IFRS 5: vliv na klasifikaci aktiv, IFRS 7: vliv na vykazování servisních smluv, IAS 19: vliv na použití diskontní sazby u závazků z penzijních plánů na trhu složeného ze zemí shodné měny (např. Eurozóna), IAS 34: vliv na zveřejnění v mezitímní závěrce
IAS 16, IAS 38		IAS 16, 38: vliv na odepisování a amortizaci
IFRS 11		Doplněna metodika, jak účtovat při koupi podílu ve společném ujednání do svých výkazů
IAS 16, IAS 41		Vynětí plodících biologických aktiv z dikce IAS 41, zařazení do IAS 16 – vliv na ocenění
IAS 27		Umožňuje používat k ocenění metodu ekvivalence
IAS 1		Významnost zveřejňovaných informací
IFRS 10, IFRS 12, IAS 28		IFRS 10: objasňuje, které dceřiné společnosti jsou povinny připravit konsolidovanou účetní závěrku, IFRS 12: vyžaduje více oddělených informací, IAS 28: použití ekvivalenční metody
IAS 7		Zaznamenávání závazků v příloze
IAS 12		Vyjasnění odložených daňových pohledávek (při nevyužití daňových ztrát), účtování výsledkových transakcí

Source: own proceesed according to IASB, 2016

Změny uvedené v již existujících standardech musí ve všech případech objasnit, jaké jsou požadavky k použití nově upraveného standardu – může se jednat o zkrácení ilustrativních příkladů, nebo o změnu obsahu textu. Níže uvedená tabulka uvádí změny ve standardech US GAAP, které primárně nemají vliv na účetní výkaznictví podniků Evropské unie. Pro konzistenci této kapitoly jsou zmíněny aktualizace pro rok 2016 (see Tab. 6):

Table 6: Změny ve standardech US GAAP

Standard	Datum aktualizace	Hlavní příčina
ASC 842 (leasing)	2016-02	Sblížení s IFRS 16, přesto však vykazují odlišnosti
ASC 350 (nehmotný majetek), ASC 805 (Podnikové kombinace), ASC 810 (Konsolidace), ASC 815 (Deriváty, hedging)	2016-03	Jednostranná práce Rady FASB, cílem je aktualizace a zjednodušení

ASC 815 (derivátové smlouvy)	2016-05	Jednostranná práce Rady FASB
ASC 815 (opce ke koupi a na prodej v dluhových nástrojích)	2016-06	Jednostranná práce Rady FASB
ASC 323 (ekvivalenční metoda a společné podniky)	2016-07	Jednostranná práce Rady FASB
ASC 606 (výnosy ze smluv se zákazníky)	2016-08	Sblížení s IFRS 15

Source: own proceesed according to FASB, 2016.

Z prováděné analýzy změn v jednotlivých systémech vyplynula skutečnost, že aktualizace prováděné jak v IAS/IFRS tak v US GAAP nemají až tak razantní dopad na účetní výkaznictví podniků EU, avšak při tvorbě zcela nových standardů (vzniklých spoluprácí obou rad) dochází k podstatnému vlivu na výkaznictví podniků EU.

4. Conclusion

Vzájemná konvergence účetních systémů IAS/IFRS a US GAAP má zcela jistě smysl a její přínos nelze popřít. Jde o velmi komplexní problematiku, která ovlivňuje tisíce společností, investorů, vlád, státních orgánů a dalších uživatelů po celém světě. I když v posledních letech byla vydána celá řada nových společných standardů a novelizací, cesta ke zcela jednotným a tedy globálním účetním standardům bude pravděpodobně ještě dlouhá.

Ackonowledgment

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THE CONTROLLING SYSTEM - A PERSPECTIVE FOR PUBLIC INSTITUTIONS IN ROMANIA

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Abstract. A typical feature of the private sector, controlling is becoming increasingly well-known in the field of public administration. In today's global world, the continuous improvement of the decision-making system has been, in the past decades, one of the main concerns of public management. Romania is no exception. Prior to Romania's accession to the European Union, the Romanian public management underwent a process of transformation, a process which continued afterwards as well, as an efficient, transparent, and effective management is a priority objective for all governments. This paper aims to address this new concept for the Romanian public sector, the basic elements of controlling, starting from planning and budgeting, and ending with reporting. In this paper, we aim to emphasise the fact that the basic ideas of controlling can be transferred to the public sector, the 3E (effectiveness, efficiency, economy) model being an appropriate one. Apart from the hierarchisation of the impact-related goals and the efficiency of processes and costs, various interests (of the public administration, of the citizens, of representatives of interest groups) may be considered as well. The objective of the proposed scientific approach is to make a significant contribution in terms of improving the activities of public institutions in Romania, as introducing modern controlling methods and techniques (which were successfully applied in the private sector), could be beneficial for the public sector as well.

Keywords: : public institutions, budgeting, controlling, cost accounting

JEL Classification: M11**,** M40, M41

1. Introduction

The globalisation phenomenon has resulted, for organisations, in an increasing need for information. This information can certainly be obtained from the field of accounting as well, which has seen many changes over the last twenty years. In some countries, including Romania, there are several underlying reasons for the accounting reform - the aggressiveness of the competition, new technologies, the dictatorship of financial accounting, and the increasing role of managerial accounting (Bieńkowska, 2012). All these factors have also caused a shift from a cost-based competition to a srategy-based competition . Cost-related knowledge is, after all, a basic component of decision-making. Managerial accounting is designed to provide the most accurate information about the processes that bring value to an organisation. The need for a new system that guides the organisation, that issues early warnings of possible crises, that anticipates and that is not just reduced to controlling, but that also detects, has led to the emergence of the concept of controlling. Modern companies have a highly complex organisational structure. It is known that the duties of the management of a company consist of guiding it so that all the subsystems contribute to achieving the objectives of the entire system. This is why management needs more and more tools to substantiate information, set goals, and control and coordinate goals. This is why the company's management needs the support of a "professional". Compared to an "amateur", professional characteristics are ascribed to a "professional". The same applies in practice, professional controllers are expected to have a higher level of performances compared to beginners, but they must also possess highly specialised competencies and, last but not least, they need to have certain skills. As a personal opinion, controlling is seen as a profession, and in order to pursue this profession, professional training is a must, as is being acquainted with the specialised terminology and, finally, putting the concepts into practice.

2. Research methodology

Our approach has as its starting point the essential concepts and the motivation of choosing this area - the controlling - in the beginning phase in Romania. Controlling (derived from Eng. 'to lead, to adjust', and not 'to control') is a complex system that supports decision-making. Controlling refers to a set of activities that are required in order to lead and coordinate the activities of the company. Far from referencing the punitive aspect of 'control', controlling has the role of coordinating all the processes of a company in order to reduce costs, maximise revenues and achieve the strategic goals of the company. If we were to give a definition of this concept, the one given by IGC (International Group of Controlling) in the Controller Dictionary would be the most comprehensive: "controlling is the whole process of goal setting, planning and control in the financial and operational fields. Controllers provide the management with complementary business management services for goal- and control-oriented planning, and are jointly responsible, together with the managers, for attaining those goals".

In English-speaking countries, controlling has made its presence known as a management position. It is perceived as a management control process and is considered a management subsystem. The term ”controlling” is also used in other fields, such as electronics or mechanics. In cybernetics, ”controlling” means ”adjusting”(Eschenbach & Siller, 2014).

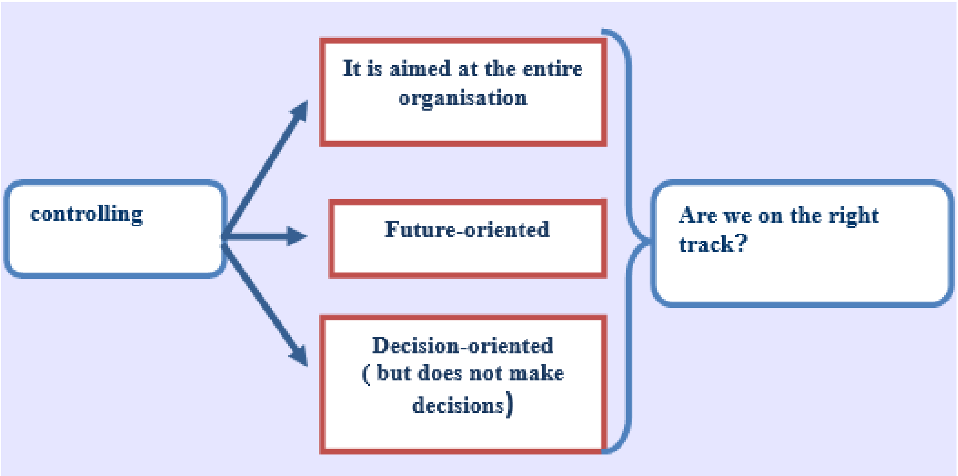
In what concerns the economic field, however, the system-oriented definition of the concept predominates, namely the one referring to leading and regulating systems and processes.

In German-speaking countries, controlling refers to ensuring sustainable profitability. In the management process, controllers act as the partners of the managers.

Controlling consists of a series of activities that are required to lead and coordinate the activities of the organisation. Far from referring to the punitive aspect of ”control”, controlling has the role of coordinating all the processes of a company in order to reduce costs, maximise revenues and achieve the strategic goals of the company.

Controlling has three main features (Sgardea, 2009). See Fig.1:

Figure 1: Features of controlling



Source: own interpretation

As for the place of controlling within the organisation, there are controlling theorists who place a controlling department next to each of the company's basic departments (financial, personnel, production, etc.), the controlling department being an auxiliary element; this approach is mistaken, as there has to be a single controlling department for the entire company, which must be open to all the activities and processes of that company.

As a vision, controlling should take into account the continuous improvement of the processes and functions of the company and provide an early warning system for issues that may arise within the company, either case-based, or across the entire company.

The decision-oriented nature of controlling places it next to the management**.** The controlling department acts as a consultant to the management: it prepares the decision, as well as all the information that the management needs to make the decision, but the controlling department **will not make any decision**. Instead, the management will make the decision based on the data provided by the controlling department.

By combining these three features, the controlling department must answer this question asked by the management: *Are we on the right track?*

The net result of the 'fruitful' process, both for the practice side and for study and research, can be summarised as follows: (i) controlling has made itself known internationally, in medium-sized and large organisations, in non-profit organisations and in the healthcare system, and even in public administration, both as a function and as a profession (Eschenbach & Siller, 2014); (ii) the controllers are the contact persons for all the strategic and operational management levels; (iii) the concept of controlling must be understood as 'crisis prevention' and not as a sort of 'firefighting service in times of crisis' (iv) and, last but not least, it is an important field of study in universities, as well as in training and professional development organisations.

3. Results and discussion

The implementation of controlling in public institutions is set in motion by two situations: the high (and ever increasing) level of indebtedness, and the poor/bad quality of the services of the public administration, which are strongly criticised by citizens (Horvath & Parteners, 2009). Compared to private organisations, service programmes are not clearly defined in the majority of public organisations. Another reason would be the IT&C technology that, in many organisations, especially in those based in rural areas (even today, in Romania) is in the early stages of implementation. A change in attitude in the public environment involves, first and foremost, a reform of public management. The New Management Model (NMM) brings about a reform of the public organisations. Figure 2 illustrates the elements of the new management model. In fact, this model would be the starting point for the implementation of the controlling system in public organisations. See Fig. 2.

Figure 2 Elements of the NMM

- The clear distinction of accountability, between administration and policy,
- Reducing central control while providing better support to decentralised areas,
- Contract management,
- Development of the organisation,
- Service-oriented actions
- Training of staff
- Introduction of management tools that are oriented towards the profitability of the organisation such as: cost calculation, yield, budgeting, indicators, reporting

Source: self processed according to Horvath&Parteners (2009)

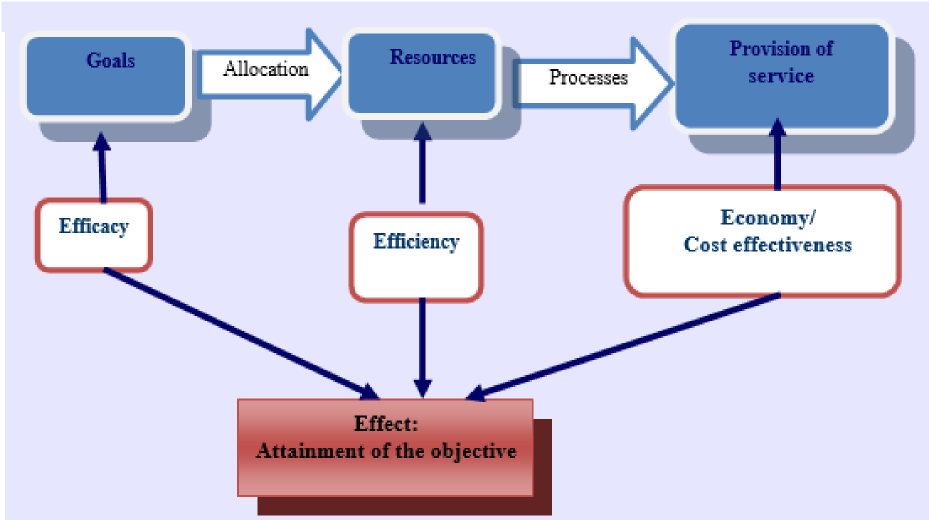
Thus, the basic ideas of controlling can be transferred to the public sector, given that the public institutions have certain *particularities*, such as: (i) the activity of public institutions is partially or entirely financed from public funds; (ii) unding from public funds is based on budget planning; (iii) expenditure projections are mainly extensions of the current service programmes or of planned and approved investment programmes, which are under the control of the public institution. The revenue projections on the other hand are, in part, based on economic assumptions which are not under the control of the public institution and in part on political assumptions regarding the level of taxes and duties, which are set by the applicable laws (Constantin & Tulea, 2012); (iv) the implementation of the budget consists of the collection of budget revenues and the commitment of the approved budget expenditures, and this operation is approved by the Ministry of Economy and Finance and by the budget appropriation authorising authorities[7].

The NMM proposes a series of challenges, and analysing them could prove useful. Starting from the premise that the traditional approach to public administration should be changed, the new model proposes a set of principles and values to guide the reform of the system. Briefly, the NMM features are as follows (Horvath& Pateners, 2009): (i) particular attention to the substantiation and achievement of goals; (ii) emphasis placed on the individual accountability of public managers in relation to the attainment of goals; (iii) increasing the level of managerial autonomy and flexibility; (iv) introducing performance indicators to measure the degree of attainment of the fundamental and individual goals; (v) integrating the 3E's into management thinking (economy, efficiency and effectiveness); (vi) market orientation and the shift of focus, from the way processes are conducted, to the extent to which social needs are met, as evidenced by the results obtained. Budget performance is a form of budgeting that correlates the allocation of funds to the measurable results (Business Consulting

[7]The leaders of public institutions who have competences and responsibilities in the preparation and appropriation of the budget and the way in which the assets of the institution are managed.

Institute,2010). The phrase defines the allocation of funds needed to attain goals and the measurement of work, efficiency, and effectiveness. This definition incorporates different models and approaches to budget performance. For public control, the 3E model has proved to be, according to Becker and Weise, as mentioned by Horvath in his paper an appropriate reference framework (Horvath&Parteners, 2009). Based on the planned goals, resources (both material and human) are made available, which are then transformed into services, as a part of the process. The services performed have effects that are of interest to the organisation's management. The focal point of the controlling activity is the planning of strategy and goals, as well as the successful attainment of said objectives. Fig. 3 presents a 3E model from the controlling perspective. The new management model requires permanent planning and a budgeting system within the planning process, and combining financial and specialised responsibility play an important role in these actions. As a starting point, the specialised areas have to decide independently whether they want to provide the services using more staff or more capital. Making such a decision requires a clear concept of which services can be made available and at what costs. For continued efficiency, the management of public institutions could receive training regarding an up-to-date, progressive, clear, action-oriented reporting system. Adopting procedures should not increase bureaucracy, but provide guidance to the management and to specialists - when needed. Also, they should not discourage creativity and individual initiative, as long as they contribute to the achievement of individual and institutional goals. The result of this process could be controlling through procedures (regulations), and it would be suitable to the public sector. The compliance with rules can ensure the leading of this type of organisation (Ani & Gaita, 2015).

Figure 3: The 3E model from a controlling perspective



Source: own interpretation, after Horvath&Parteners (2009)

As for planning and budgeting, and ultimately reporting in public institutions, they are based on the budget and taxation policy. The current *legal framework* used to define the concepts, goals, principles, and rules regarding the budget and taxation policy, the budget and taxation strategy, the bases used to prepare multi-annual budgets and the efficiency of the use of public funds is regulated by Law 69/2010 on budget and taxation responsibility. This law supplements the two other basic laws of the budget system: Law 500/2002 on public finances and Law 273/2006 on local public finances, both as subsequently amended and supplemented.

If we were to try to interpret this from the point of view of *controlling*, medium- and long-term sustainability is only achieved through a transparent and permanent monitoring of public money. A good management of the resources allocated to the public sector could be included in the package of tasks assigned to controlling. And finally, the effective management of public finances is a way to use the allocated resources in a prudent fashion. As for planning, information comes from accounting in the private sector as well, and then it turns into concrete goals. By continually and carefully monitoring planning and by assessing deviations, the controlling system performs its function as an early warning system: it alerts the management when certain elements of planning are not being systematically fulfilled, or, after the assessments made by controlling, when they cannot be fulfilled with the data available at that time. In the public sector, however, plans are developed for periods ranging from a few months to five years and they are widely used in all the organisations included in the public sector. They have a low level of detail and are mandatory in nature. As for the budget system, in the private sector, the entire process can be considered as starting from the preparation, decision, control and analysis of budgets.

In Peter Horvath's opinion, *"the budgeting system is the subsystem of the planning and control system to which planning and formal goal-oriented control can be subordinated."* In terms of components, the budget is made up of the planned profit and loss account, the planned cash flow and the planned balance sheet (Cimpoeru&Cimpoeru, 2015) In the public sector, the budgeting process represents all the actions and measures taken by the competent institutions of the state in order to implement the financial policy applied by the government (Constantin&Tulea, 2012). The budgeting process involves the existence of financial resources and their allocation for the purpose of providing citizens with public goods and services. All public financial resources and public expenditures are reflected in the general consolidated budget, that includes all the budgets that reflect the revenue and expenditure flows of the public sector.

There are differences, in terms of the content of the budgeting process, depending on the category of budgets to which it refers, but there are also many common elements that relate to a decision-making process. According to the methodology established by the Ministry of Economy and Finance, the traditional form of budget structuring for a public institution is as follows: income (chapters, subchapters, paragraphs) and expenditure (with a functional classification: chapters, subchapters, paragraphs and economic classification: title, article, paragraph). Three actions must be taken, continuously and systematically, for a programme of a public institution:

- defining the intended results of a programme;
- measuring the performance of the program, by comparing the obtained results with the expected results;
- reporting the results to decision-makers who can act on this information.

Once the data collection and analysis is completed, the reports are prepared. Information should be presented in a way that is easy to understand, that allows for the comparability of the data, that meets the users' need for information and helps them draw relevant conclusions. The reporting system must indicate what the expectations are and what actually happened, but it must also explain the differences. Reports make extensive use of graphs, charts, photos, maps, and tables that provide comparative data. In the private sector, the BSC (balanced scorecard) model is very common in reporting. When drawing up the report, particular attention should be paid to explanations presented in narrative form.

This information should explain the reasons that led to the differences, the factors that affect the results and the data quality limits. Factors that cannot be controlled by the institution or over which the institution has little control must be identified. Any changes related to the definition of the data, to the units of measurement and to the collection methods must also be identified. Finally, the proposed actions for improvement, as well as any obstacles that may stand in the way of improvement should be described. We wanted to mention these three activities - planning, budgeting, reporting - first of all because they are somewhat different depending on the sector (private vs. public), and secondly because they largely constitute the domain of the controlling activity.

4. Conclusion

The controlling system demonstrates its usefulness starting from the reference concept, where a case is made for elements such as confidence, the values assumed by controlling, the form and style of communication, as well as the concrete benefits they provide and which are materialised in the reports. However, for a controlling system to be effective within an organisation, it has a number of requirements.

A first requirement would be to be accepted, both from the perspective of the activity conducted and from the perspective of the accountable parties, and this acceptance must be supported by the management. Orientation towards process ensures success. The process involves collecting, assessing, and processing the information, completed with the outcome of the investigations, and the whole process must rely on communication. Positioning controlling at a high level will influence the processes that take place within the organisation. The new management model also brings about the need to implement the controlling system in organisations. The institutionalisation of controlling in the field of public organisations in Romania would be a step in the direction of the improvement of the activities conducted in public institutions, a first step towards perfection. We believe that, in the future, the controlling concept - considered, so far, as being specific to the private sector - could help improve the activity of the public sector.

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CONSUMPTION OF SLOVAK HOUSEHOLDS IN RELATION TO THE QUALITY OF LIFE IN TERMS OF GLOBALIZATION

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Abstract. Consumption of goods and services is an integral part of every society member. It tells us about various standards of consumer behavior, which are modeled on the one hand, on the other hand consumer perceptions, preferences and financial ability to meet these preferences. If we look at consumption as a comprehensive way of meeting needs of members of society, which is realized in a particular period and stage of economic development, consumption can be seen as a model for the distribution and use of goods, services and other forms of wealth in the society. In terms of enhancing the quality of life and achieving its effective forms should be the relationship between consumption and quality of life in a balanced relationship. The basis of this relationship should be the achievement of a functional balance between consumption patterns and quality of life conducive to the fulfillment not only of reproduction but above all the development needs and human values. Basis of examination of the consumption in relation to the quality of life are money expenditures of Slovak households, which are divided into three spheres, in the sphere of non-working time, leisure time and cross-sectional expenditures. By analyzing the three spheres, we evaluate existential aspect of the quality of life of our households. The aim of this paper is to create a partial picture of the formation of the quality of life in terms of changes in consumption, while providing a prediction of possible developments in this area.

Keywords: consumption of Slovak households, quality of life, cash expenditure of households, structure of expenditure, models of consumer behavior

JEL Classification: D10, D12, D19, I31

1. Introduction

Today, the importance of exploring various aspects of quality of life is growing, because on the one hand there are huge chances of developing quality of life,[8] and on the other, new types of threats and barriers are emerging in the development of existing human potential.

[8] The main positive effects of globalization include, for example, a higher level of education, an increase in subjective quality of life, or an expanded leisure time.

In the 1990s, at the time of intensifying globalization, there was a tendency towards a universal lifestyle to homogenize the quality of life. At the same time, the opposite trend began to move towards the promotion of one's own individual or national culture. Social development and the quality of human life - the lives of individuals and national societies are becoming the central objective of European integration trends. (Tokárova, 1999) Social development and quality of life are central to European integration structures. The globalization of the world economy and the emergence of the information society together create a new image of today's world, change both working and personal lives. It emphasizes the continuity of quality of life with the concept of sustainability. (Mella & Gazzola, 2015)

If the quality of life is linked to innovation and the modernization of the needs' structure, with the possibilities of their saturation in a given society, it means that it creates its material basis and allows us to analyze the quality of life from the point of view of consumption. Examining the quality of life in the context of consumption has its historical and substantive content - in the 1960s, the concept of quality of life was linked to consumption. At that time it was used as a critique of mass consumption (Galbraith, 1967)

Even today, the quality of life, based on the level of satisfaction achieved, has its merit and relevance not only because consumption is a real part and important domain of quality of life, but also for its simple data availability, quantification and comparison.

1.1 Optimal state - functional balance

Satisfaction of needs is one of the basic priorities of human existence. It is expressed as consumption, which forms an integral part of the life of every member of society. Consumption not only explains the degree of satiation of human needs, but also, by its size, structure and level, it contributes significantly to shaping the quality of life. When evaluating the quality of life from the point of view of consumption, its existence page is evaluated.

Quality of life is an abstract and complicated concept, the definition of which requires a multidisciplinary approach. It is presented as a very broad category that carries with it a persistent problem of seeking a universal definition expressing its complexity. (Wu & Yao, 2006)

With the deepening knowledge of the quality of life and its diverse understanding, a wide range of content definitions have emerged, ranging from clearly subjective feelings of survival to the understanding of quality of life as a set of objective conditions for an individual's life or a particular social grouping.

In the broadest sense, quality of life can be defined as a certain, attained level of human life domains that take into account important social values and goals. In this context, quality of life is defined as an individual perception of one's own position in life in relation to a particular culture, value system, life goals, expectations, standards and interests (WHOQOL, 1997)

In our contribution, quality of life is perceived on the one hand as an expression of the desire of a person for a good and satisfying life, and on the other hand, consumption as a part of it, its fulfilment, and often also as a substitute for the sum of these expectations and aspirations. In a simplified form, the quality of life is a good and satisfying life and, in this context, consumption.

While consumption is an important component and a natural part of the quality of life, it can not replace it. There is a very important, interdependent relationship between consumption and quality of life. From the point of view of improving the quality of life and achieving its effective forms, the relationship between consumption and quality of life should be a balanced relationship. Focusing only on the material side of consumption and the trend towards self-consumption can be described as unwanted developments in terms of personality development.

The solution to this relationship should be to achieve a structure of consumption and quality of life that would contribute to meeting not only the reproductive but above all developmental needs and values of man. This trend is far from being included in the real life activities of our households. In certain extreme situations, in a state of emergency or wealth, consumption can be deforming. On the general level, the optimal state is the functional balance of consumption and quality.

For Slovak households, achieving this functional balance is a relatively complex problem. In the short term, consumption in Slovak households is determined mainly by the size of their income and changes in the prices of goods and services. In the long run, consumption is influenced by demographic trends and built-in consumer habits. The current quality of life of most of our population is a compromise between relatively small realistic financial possibilities and relatively large living aspirations and needs. (Fidrmuc & Senaj, 2010)

2. Quality of life in terms of consumption

If we look at the quality of life through its 5 components, we take into consideration the needs, living conditions, the social environment, value orientations and life activities when examining it. The beginnings of any life process are, above all, the needs, and from their satisfaction are emerging the impulses for the emergence of new needs of a diverse nature. Meeting the needs is one of the basic priorities of the existence of man as well as the functioning of the economy. The level of satisfaction achieved attains the economic development of society, the level of living of its members, and the quality of life. Generally, the determinants of life satisfaction vary by a country's level of economic development. As countries develop, certain needs are satisfied and stop being important contributors to life satisfaction while others take their place. (Bhuiyan,& Szulga, 2017)

In relation to the quality of life, consumption has an irreplaceable function because it tells of the material aspect of meeting the needs and desires of a person. By comparing data on the quality of life of households in relation to their consumption, we create an image of an existential quality of life. For this purpose, monetary expenditures of households broken down by the basic spheres of the way of life are used - for non-working time, free time and cross-sectional expenses (Holková & Laluha, 2009).

The structure of non-working-time expenditure is dominated by activities aimed at satisfying basic material and reproductive needs. These consist of food and non-alcoholic beverages, alcoholic beverages and tobacco, clothing and footwear, housing, water, gas and electricity, furniture and furnishings, as well as health. In the second sphere of quality of life, leisure is generally understood to be part of the day when one delivers, at his (her) own discretion, choices and opportunities to activities that contribute to his (her) relaxation, self-realization and self-satisfaction.

The structure of expenditure consists of expenditure on recreation and culture, education, hotels, cafes and restaurants. The third sphere of quality of life is the cross-sectional area that occupies activities and activities that blend in with other spheres of life, and which contribute to the modernization of the way of life. In terms of expenditure, this area is made up of transport, communications and various services. See Tab. 1.

Table 1: Cash expenditures of Slovak households by spheres of quality of life in 2009-2015 (%)

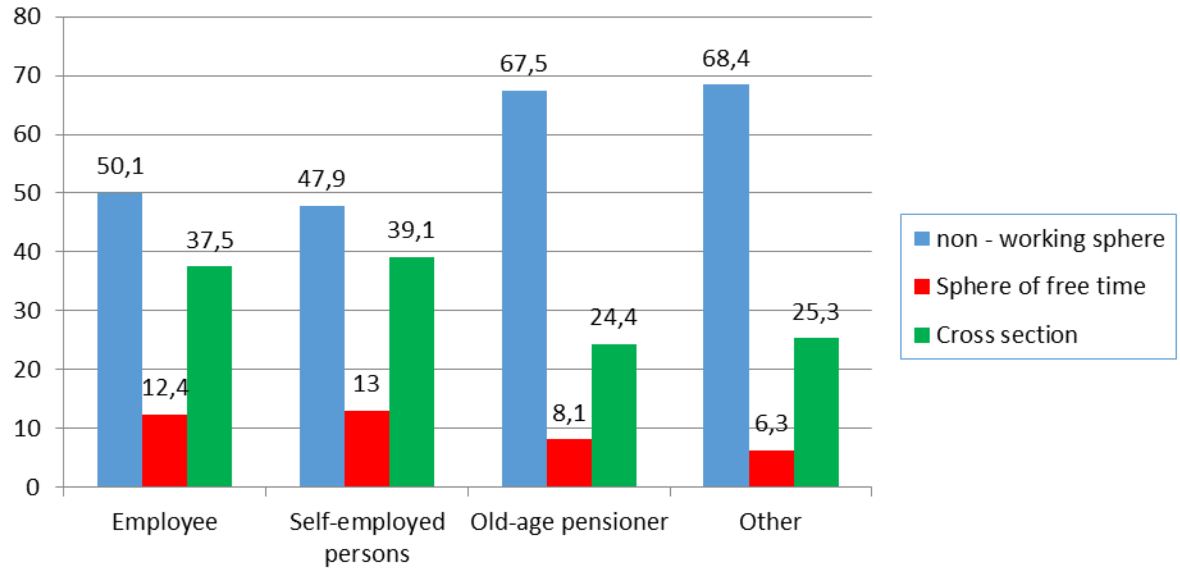
Spheres of quality of life	2009	2010	2011	2012	2013	2014	2015
Non-working sphere	56,6	58,0	57,2	57,6	57,6	57,7	56,1
Sphere of free time	12,3	12,4	12,9	12,7	12,9	12,9	11,6
Cross section	31,1	29,6	29,9	29,7	29,4	29,4	32,3

Source: selected and calculated from Family Budget Statistics 2009-2015, Statistical Office of the Slovak Republic.

The data from Tab. 1 indicate that the monetary expenditures of Slovak households, according to the defined spheres of quality of life, are directed mainly at non-working time in high relation, they express the high financial difficulty of satisfying the basic needs. Leisure spends are very low, falling to 11.6 % of total spending in 2015, spending on modernizing lifestyles is inadequate. The low level of spending on the cross-section indicates a limited possibility of improving our households' lifestyle. (Surmanova et al., 2015)

Based on the expenditures according to these spheres of quality of life, we distinguish three models of consumer behaviour of our households: economical, luxury and conservation model of consumption (Holková & Laluha, 2009). Most households in Slovakia are characterized by an economical model of consumption and the resulting reproductive model of quality of life, which is aimed at satisfying mainly basic reproductive needs, is a manifestation of delayed consumption and the lack of personal development of its members. This model limits the improvement of the quality of life of our households, proving the relatively high proportion of overtime spending and low proportion of leisure spending. See Fig.1.

Figure 1: Money expenditure by spheres of quality of life and type of households in Slovakia in 2015 (%)



Source: selected and computed from Household Statistics Household Statistics 2015, Statistical Office of the Slovak Republic

Differences in quality of life can also be monitored by household type (see Fig. 1). From the point of view of the level of quality of life monitored by individual spheres, self-employed households have relatively most appropriate composition of expenditures, which is related to their financial capacity to implement activities contributing to the modernization of life. The unfavourable situation can be observed in the household of farmers (Other), where the share of non-working time spends 68.4 %, and 6.3 % of the total spending for free time. A similar trend can be observed for pensioners. (Lesáková, 2014)

3. Prerequisites and bases for improving the quality of life in Slovakia

One of the profiling trends in changes in quality of life in the long run could be a trend for the Slovak population to expand the desirable changes in consumption patterns that would lead to improving the quality of life and the universal development of man. The real prerequisite for the fulfilment of this trend is the creation of economic conditions that will ensure the dynamic growth of household incomes. By entering this trend we could expect the following changes:

- the reproductive model of quality of life will no longer be dominant, the elements of the development model of quality of life, which is mainly related to the middle and upper part of the middle class in society,
- the social basis of the conservation model will be reduced, part of the population will shift to a fuel-efficient consumption model,
- the social base of a luxury model and prestigious consumer activities will expand. (Sirgy, 1986)

From the point of view of improving the quality of life, then, it would be a form of consumption that would contribute to the satisfaction of the material and spiritual needs in the sessions and the structure leading to the development of the creative potential of man, his self-realization and, at the same time, he would contribute to his sense of well-being and happiness.

A key assumption for this vision of the quality of life of the population in Slovakia is, in our opinion, the growth of the economy and the increase of household incomes, which would lead to the creation of real material conditions for the gradual transfer of the main part of the population from the reproductive model of quality of life and the temporary preference of the consumer or consumer tendency so called development model of quality of life.

The orientation to the development model of quality of life furthermore assumes:

- changes in value orientations,
- a balanced relationship between materialistic and post-materialistic values,
- the penetration of technologies into everyday life activities and the efficiency of the necessary non – working time,
- changes in the scope and content of leisure time, increased spending on education and culture,
- healthy, rational lifestyle,

- environmental quality of life.

The interaction of these elements of quality of life is a motivational impulse for the dynamics of the whole society. For Slovak society, despite the various present assessments of its state, it is able to adapt and integrate into the given transformations, because the current quality of life of Slovak households creates preconditions for it. However, this is not enough, for the practical implementation of the trend of improving the quality of life in terms of the quality of life of the advanced EU countries, it is essential to substantially increase investment in science and research, to significantly increase investment in all forms of education, to increase human resource development needs, and human capital in the conditions of global competition, which also requires the improvement of the complex infrastructure in which the everyday way of life of our population is realized.

Previous considerations on improving the quality of life and the transition from reproduction to the quality of life development model based on the underlying assumption and dynamic economic growth that would allow for job growth, income growth, reduced social inequalities. (Konig & Dovaľová, 2016)

4. Conclusion

Consumption expresses how to use the material and spiritual wealth of society in meeting the needs of its individual members, who differ in realizing consumer interests and goals. In relation to the quality of life, consumption has an irreplaceable function because it tells of the material aspect of meeting the needs and desires of a person.

From the assessment of the quality of life of Slovak households on the basis of its material aspect, the current quality of life of our households is under the dominant pressure of the classical structure of consumption. Our economy is dominated by an economical consumption model that is geared to satisfying mainly basic reproductive needs. This consumption model limits the improvement of the quality of life of our households in the direction of the development model of quality of life, which is a relatively large share of non-working expenses and low share of leisure expenses. The economical model of consumption and the resulting reproduction model of quality of life is, on the one hand, a high financial difficulty in satisfying the basic needs of Slovak households, on the other hand, it is a manifestation of delayed consumption aspiration and lack of personal development of their members. In the context of improving the quality of life, it is important that the relationship between consumption and quality achieves a functional balance in terms of contributing to the fulfilment of reproductive but, above all, human development needs. Such a trend in the quality of life of most of our households has not yet been captured in the real conditions of the Slovak society.

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DECISION-MAKING ABOUT CREATING AND SUSTAINING STRATEGIC ALLIANCES IN GLOBAL ECONOMY

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Abstract. In current international economy, the more and more attention is paid to the quantity but mainly to the quality of business relations. It is therefore no surprise that in today's global economy the new trend of business environment is the collaboration. The success of every company is based on its cooperation strategy. Thanks to coexistence companies can use shared environment (to combine sources, create common results, use benefits, etc) to gain an edge on the market. Strategic alliances, as one type of cooperation, are the efficient tool for creating long-term sustainability of the company. The focus of this paper is to analyse the environment of strategic alliances. The reason why we decided to choose this area of research problematics is the general known assumption that the company which does not have implemented an efficient working strategy cannot be successful in current competitive world. After discussing theoretical background of strategic alliances authors suggest the decision-making model for creating and sustaining a strategic alliance. The model is based on the idea that when evaluating an alliance, it is not important how long does it last, but the most important fact is whether it fulfils expectations from partners are met. Except for this, authors also define problem areas in creating and efficient working of these alliances. By applying the proposed model there is an assumption of creating the synergy, synergistic effect and increased competitiveness of the company.

Keywords: cooperation, strategic alliance, decision-making, synergy, costs, affecting elements of alliances

JEL Classification: C53, D23, L10

1. Strategic alliances

The company success is based on its strategy. Clausewitz (18.-19. century) uses word „strategy“ in connection with war. He considers the military strength as a tool, by which it is possible to convince politically others about own goals. (Heuser, 2007) Current competitive environment is similar but in different meaning: competitive fight for customer, increment of profit and acquisition of many other benefits. The strategy management acts as a process of creating right and wrong decisions. These decisions depend on knowledge and especially on capabilities of the human potential in the company. If company strategy reflects activities for fulfilling goals and vision, then lasting competitive advantage is possible to achieve only through strategy (Porter, 1996; Souček, 2005). The management of alliances should be related to synergy. Cooperative relations create certain benefits. Companies look for necessary resource, in many cases. According to Ireland, et al. (2002) most alliances end up in failure. We agree with statement of authors Kale & Singh (2009). These authors identified a large number of alliances with goal to security and spread competitive advantage and growth, which is a clear paradox of failing alliances. Alliances do not depend only on goals, which are defined at the beginning of relationship, but also on initial circumstances of alliance. The success of collaboration depends on selecting the right co-partner, mainly at the beginning of relationship. Current situation is one of critical point of effective strategic management, based on several authors (Pearce & Robinson, 1991; Thompson & Strickland, 1992; Minzberg et al., 1999; Dess et al., 2004; Wassmer, 2008). This article deals with assessment of actual situation of decision making, whether it is possible to create successful strategic alliances. Through strategic alliances it is possible to face several challenges of the current global environment.

2. The Process

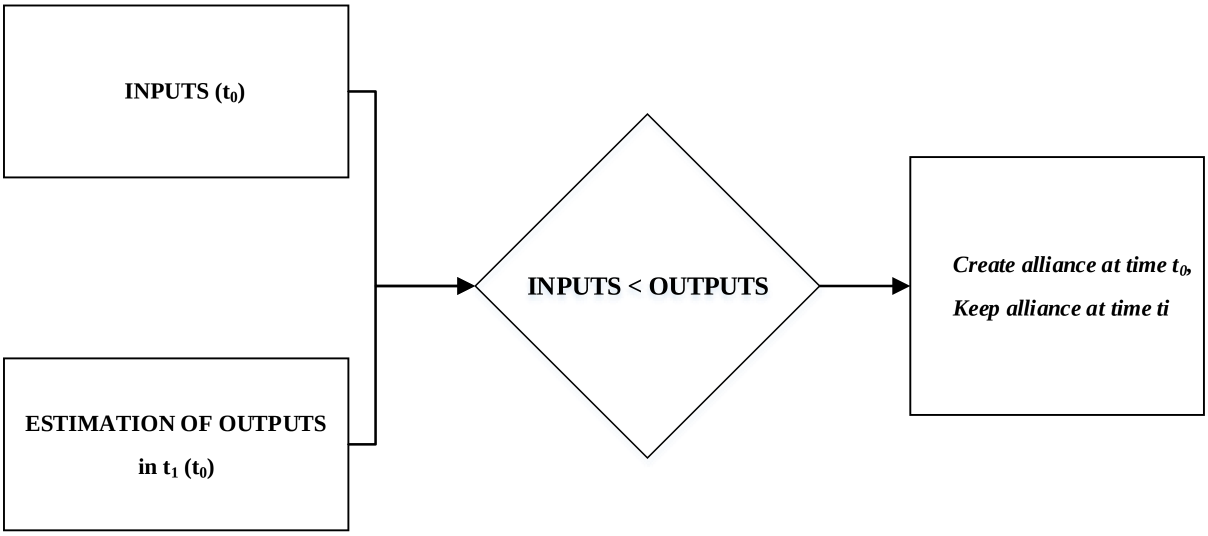
2.1 Creation of alliance

The conceptual process of creating a strategic alliance is as follows. Let x be the naming for the strategic alliance that the company plans to create. Let $C(x)$ be the cost of creating this strategic alliance. From our research of strategic management and cooperative forms, the following should be drawn. The research problem was the access to cooperation as well as the state of co-operation in selected companies of the Slovak Republic. We publish the results of our research - as an example, we will mention two texts: Cooperation management on construction business market in the Slovak Republic – an insight from a company (Soviar et al., 2017); Impact of strategic management on cooperation relationships: case study of the Slovak environment (Ferenc et al., 2017). The costs for creating a strategic alliance may include: recruitment of inexperienced staff, administrative services, product portfolio reconfiguration (expansion, management), legal services (law), marketing costs (rebranding), creation and management of communication and information channels, provision of process and business interconnection tools, provision of performance measurement (alliance assessment) removal distrust, training and motivation of the company's human potential. Next, let $B(x)$ be the expected benefits of the next possible alliance X. It is important to remember that no joint generated historical data are available in the process of creating such an alliance and therefore can only be predicted, expected in the future. The data that may be included in this decision are indirect data from similar connections, as well as the industries where these companies are located. For this reason, they need to be estimated. This can be done by subjective methods or by objective methods. It is important to perform: A) Analysis of primary and secondary data from the environment; and B) Analysis and prediction of the future benefits of the alliance and - in particular by quantitative analysis. If the cost for creating an alliance and expected future benefits are quantified in financial form, then it is possible to compare $C(x)$ and $B(x)$, i.e.: If it is true that

$$C(x) < B(x) \tag{1}$$

then it pays off to make alliances and enter it. On the contrary, in case where C*(x)* costs are higher than the benefits resulting from the alliance (B*(x)*), then creating a strategic alliance is not recommended. The entire process of decision-making and strategic alliance formation is illustrated in Figure 1, where inputs represent the costs of C*(x)* that have to be spent for joining the alliance, and outputs represent the expected B*(x)* benefits of this alliance.

Figure 1: The decision-making process about creating the strategic alliance



Source: own proceesed

2.2 Maintaining of the alliance

Actual process of creating strategic alliances is wort to implement, i.e.: whether it is advantageous for a business to remain in an alliance for a period time. This should be done on a regular basis, most frequently during periods when financial statistics for the previous period (quarter, year) are available. This is necessary as the company may be counterproductive to remain in the alliance that brings more disadvantages than advantages. We suggest two options for deciding whether the firm should remain in the strategic alliance in the next measurement period: A) Measurement based on historical data; B) Calculation of future benefits.

2.2.1 Measurement based on historical data

In this case, the company compares the actual costs that had to be incurred for the entry, e.g.: forming or maintaining an alliance over the previous period on the one hand, and the real benefits the company has gained from this alliance on the second hand. It is important for the costs and benefits to be quantified in financial form and to come from a previous period. On base of this data one can then decide in time t_n whether to stay in the alliance for further period t_{n+1} can be expressed as

$$C_{t(n)}(x) < B_{t(n)}(x) \tag{2}$$

2.2.2 Calculation of future benefits

The problem with the first approach is that even though the alliance was profitable in the previous period, it may not be profitable for the next one. We identify factors, which change alliance environment, e.g., the management changed the company's strategy in time t_n; the new CEO was hired; the company have changed the shareholders or other possible external and internal factors of the environment, might been changed. That is why we propose a second way of deciding whether to keep the alliance in time t_{n+1}.

$$C^\wedge{}_{t(n+1)}(x) < B^\wedge{}_{t(n+1)}(x) \tag{3}$$

In this case, the costs and benefits are future - this is time $n + 1$, i.e. it is not possible to know the actual values of these parameters. However, the company has data from a strategic alliance for previous periods.

This is important because the estimation of future costs as well as future benefits from this alliance are based on historical data. From the point of view of future costs, the use of exponential equalization models (Brown, 1956), (Brown 1963) and Box-Jenkins models (Box & Jenkins, 1970) seems to be the most appropriate. When estimating future benefits, it depends on whether we expect a meaningful change in the internal structure of other company.

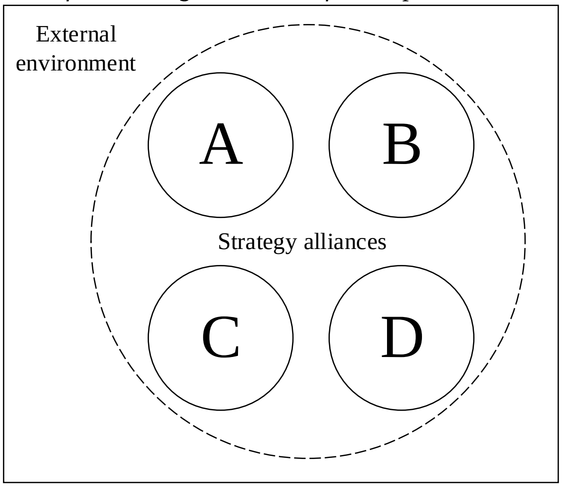
If not, it is also appropriate to use time series models. However, if a meaningful change in the company's internal structure is expected, the use of causal models or subjective methods is recommended.

3. Discussion

There are various problems in creating an alliance. It is possible to categorize these problems into two groups: problems exiting internal and external business environment. Internal´ problems are related to processes inside the company. Internal factors, which may affect creating or continuing an alliance, include: the number of stakeholders involved in the company, the number of active cooperative links, the culture of the organization, the maintenance of regular and bilateral information and communication links, the acquisition of knowledge and experience, the linking of processes, the human potential of the enterprise, the combination of resources, trust, compliance with rules and standards, but also common visions, goals, and the establishment and maintenance of a common cooperative strategy. Internal problems are those that can be solved relatively easier than external problems. This is because of the fact they are related to problems that company can directly influence.

The external factors are those that are not solvable by the firm itself but the firm is influence by them or by consumers or by a third party (e.g.: government). These factors are often very limiting and influence business as well as creation of alliance. External factors that may affect strategic alliance creation are: the political situation, the economic situation in the country, the legislation in the country, the emergence of current trends in society, the impact of current and future competition, the market development (market opportunities), the R & D in individual industries, the company development and the customer needs.

Figure 3: Illustration of the strategic alliance of 4 companies in a market environment



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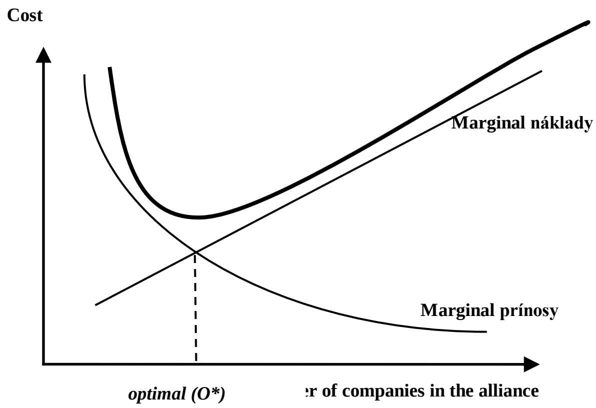
Another important problem within formation of alliance is the size of alliance. i.e.: number of co-participants. The problem is what is the optimal size of the alliance related to cost and benefits from these relations. Zhang (2008) explored strategic alliances and concluded: it can be found that the stability of alliance would be promoted when the numbers' flexibility in decision and the uncertainty of benefit increased; while the lack of their specific investments resulted in the alliance's instability. Obviously, this will be highly dependent on the values of the variables entering a process of an alliance, but the concept of the optimal size of an alliance can be illustrated as follows:

We suggest that in case of formation small size alliance (2,3 companies) usually very high benefits come from these relationships. Counter, costs for creation of such an alliance is relatively low. This process of positive difference (high benefits and low costs) is gradually decreasing till the optimum – point O. To this point, it is beneficial for the company to create the alliance. Vice versa, from this point marginal benefits are relatively low and costs for creation of alliance are high. But costs are higher as expected benefits of extending the alliance to another player. The whole process is illustrated in Figure 4.

Figure 4: The optimal size of the strategic alliance



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The most important scope of joining companies in alliances is co-existing of cooperation and competitiveness. In this shared environment, companies can create expected and unexpected results. The size of strategic alliances, internal and external factors influence formation, running and ending of relationship between cooperating companies in alliances. Current authors who observe and thoroughly investigate the environment in question have observed the following influencing factors for creating a sustainable strategic alliance:

- Authors Raza-Ullah et al., (2014) state emotional condition as a psychological factor, which affects intensity of the tension of collaboration.
- The risk of misuse of resources begins to be tolerated in front of the increasing need for resources. While in forming linkages terms of negotiation, which depends on the necessary resources, defense mechanisms and alternative partners. These data were found in the 25-year studies of five technology-based enterprises (Katila et al., 2008; Holt, 2004).
- Kale & Singh, (2007) implies that the alliance learning process acts as one of the main mechanisms through which the alliance function leads to greater alliance success. This learning mechanism of individual partners in organizations as well actor governance structure, conflict management, and strategic and operational problems - these belong to the problems of alliances at present (Dagnino & Ferrigno, 2015).
- The positive results of the alliance affect trust, conflicts, commitment and communication. These interaction elements act on individual satisfaction and increase willingness to reform the alliance (Sanchez-Navas & Ferras-Hernandez, 2015).
- The members of alliances gain knowledge from other partners, while credibility facilitate the acquisition of knowledge. They also face the risk of leak knowledge from partners, where leakage undermines the company's competitiveness (Jiang et al., 2016).

Our research in the field of strategy management confirm several actual scientific outputs from this environment. The main fundamental areas of successful management are: enhancing cultural awareness and tolerance; decision-making about number entrance of partners; an appropriate combination and fair exchange of resources; and the creation of an environment of mutual trust and open culture.

Strategy alliances arise base on various problems and changing situation of environment. By means of these alliances it is possible to face a number of challenges in the current global environment, among which belong: increasing business risk; low cost orientation; the use of market opportunities and possibilities for expansion; innovation, product and material development; reputation; problems (financial, material, human); short growth and sustainability, lack of knowledge and skills, and much more.

4. Conclusion

The business relations based on collaboration need share their internal environment with external. A success of this cooperation penetration is to measure common results, which cooperation actors achieve through joint strategy management in a level of cooperation. We wanted to point out strategy management as a vital part of cooperation success of alliances. Strategy management can be an instrument for long-term sustainability of companies under suitably set of conditions in collaborative environment of alliance. This statement is so far only theoretically grounded. In the future research, it is necessary to deal with supporting exact facts and appropriately used statistics in the field of quantitative research. We also claim from the area of a complex theoretical investigation that, without an effectively implemented strategy, the strategic alliance is not successful.

The collaboration environment pointing out formation of synergy between individual members of the alliance. There can be create unexpected results. In many cases, it is just about solving problematic situation as well as changing behavior. Therefore, it is necessary to collect more data, continue to explore and connect knowledge of strategic alliances and synergies - which can bring successful strategic management model.

Acknowledgment

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DEVELOPMENT OF REGIONAL UNEMPLOYMENT IN THE CONDITIONS OF SLOVAKIA IN THE CONTEXT OF GLOBAL CHANGES

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Abstract. The objectives of the Lisbon employment strategy have also been a challenge for the Slovak Republic in drawing up plans in this area, defining strategic objectives and priorities and taking measures to implement them. The main priorities were the creation of new jobs (increase in demand for work), education and training for the labour market (improving the quality of job offers). The main labour market problems are mainly long-term youth unemployment, unemployment by gender and regional disparities. The Lisbon Strategy has contributed significantly to the increase of employment in the Slovak Republic. The one of whose goals was to achieve a 70 % employment rate. Achieving a high level of employment is conditional on a successful implementation of the strategy as a whole, yet it is important to highlight a number of key actions that can significantly affect the specific area of employment. The aim of the paper is comparison of unemployment by chosen age group of the population at the individual districts of Slovakia in 2004, 2009 and 2015 and the subsequent identification of possible impacts of the global economic crisis on the development of unemployment of these groups in the context of the current economic development in Slovakia. The object of the research was specific unemployment rates of men and women in the chosen age groups in the 79 districts of Slovakia. Mathematical and statistical methods, such as cluster analysis, have been used for the study. The results of cluster analysis show differences between the districts of Slovakia.

Keywords: Lisbon employment strategy, specific unemployment rate, district, cluster analysis

JEL Classification: E24, R58, C60

1. Introduction

The unemployment is considered to be one of the most significant issues of a current market economy. The effort to create new job opportunities resulting in the unemployment decrease is presenting the serious social but as well as economic problem. Nevertheless the unemployment is a natural phenomenon and the attribute of a free society based on the market economy and democracy. The unemployment as a factor of significant change in a way of life is an event which requires a huge adapting effort focused on a newly created situation. The unemployment attributes are negatives presented by a decrease in the standard of living, the exclusion from social relationships and disrupted life certainties (Dirgová, 2009, Pongrácz, 2015). The unemployed persons, mainly as regards the long-term unemployment are obliged to face the negative results arising from the loss of work: the loss of work habits, addiction to the social benefit system, knowledge loss, changes in behaviour, changes in the health and others (Palátová, 2016). Unemployment is considered to be one of the most important and undesirable aspects of globalization for its citizens (Novotný, Kruml, 2015).

2. Development of regional unemployment in the conditions of Slovakia

The development of the regional economy structure in Slovakia is influenced by the changes which were brought by the transition from a centrally managed economy to a market economy. The concomitant phenomenon is a considerable intensity of differentiated tendencies, regional polarization and the rise of regional disparities (Rajčáková, Švecová, 2010). The unemployment shall be considered as one of the basic indicators of regional disparities. The global economic crisis was one of the expressive economic problems which significantly affected the labour market in Slovakia. In October and November 2008 the news about problems in companies, their subsequent restructuring and dismiss of workers began to occur. At the beginning of the year 2009 the situation started to be more dynamic. The restructuring pursuant to the Integrated labour union (2010) especially affected the engineering and automotive industry – not even the major manufacturing companies as their subcontractors. Companies more often announced the employee's redundancies including the announcement of collective redundancies. The number of people who were involved in the collective redundancies reached the amount of 40 839 persons for the first nine months of the year 2009. It is approved as well as by Lubyoová, Štefánik et al. (2015) according to whom the economic break in the year 2008 caused the significant problems in Slovakia and only in 2014 the sign of recovery in the labour market began to be evident despite the fact that the boost economic performance was reflected already in 2010. This development approved again the poor cohesion of employment and economic growth which reasons are largely related to long-term structural problems in the labour market. As regards the unemployment there exist substantial regional deviations in the Slovak Republic. The regions with a high unemployment rate are concentrated mainly in the Eastern, Southern and Central Slovakia. Vice versa the Western Slovakia is presented by the lowest unemployment rate, especially the districts of Bratislava. The situation is significantly worse in rural areas than in urban areas. The unemployment rate in rural regions is several times higher than the unemployment in urban areas and it is higher than the average of the Slovak Republic. The crucial factors of increase in regional polarization of rural areas are structural difficulties of huge, dominant employer subjects in a region, infrastructural backwardness (Qineti et al., 2011) and slow integration in the labour market of handicap social groups and ethnical minorities which are mainly concentrated in the countryside (Buchta, 2012). It is also approved by Martincová (2002) according to whom the majority of regions with the highest unemployment rate have at disposal the labour force with a specific profile of education and qualification due to the prior mono industrial structure. Except for that the deepening of territorial imbalance contributes to the disadvantages of rural regions pursuant to Gecíková, Papcunová, Balážová (2010) as well as a higher capital concentration in the urbanized areas providing certain comparative advantages in the form of agglomerate effects on one side and insufficient economic utilization of existing natural and labour sources in the countryside on the second side.

3. Methods

The research object was the structure comparison of unemployed men and women in the districts of the Slovak Republic in the period of years 2004, 2009 and 2015. The structural changes were observed for the age groups 15 - 24, 25 - 35, 35 - 49 and the age group over 50. Data were obtained from available public databases of the Statistical Office of the Slovak Republic and the evidence of the Central Office of Labour, Social Affairs and Family. The acquired data were primary calculated in the programme Excel and subsequently analysed in the programme SAS. The method of average linkage was utilized for the individual cluster creation which use according to Stankovičová and Vojtková (2007) leads to the similar results as the method of furthest neighbour. Its principle is inhered in the aggregating of two clusters to one new cluster if there is an average minimal distance between them. The distance between clusters (1) is defined as the average from inter cluster distances of objects d_{ij} , i.e.:

$$D(C_h, C'_h) = \frac{1}{n_h n'_h} \sum_i \sum_j d_{ij} , \tag{1}$$

where n_h and n'_h are the numbers of objects in the cluster C_h and C'_h .

The cluster analysis and its outputs are simultaneously the input elements for the expression of levels and developments of interregional differences in Slovakia. It is indispensable as well as for the reveal of mutual and differentiated reasons of lags respectively progress of particular regions. The higher number of indicators is used (as regards their availability in time and in regional dimension), the regional status and the development in Slovakia are more complexly described (Chomjaková, Suchý, Kožiak, Daxnerová, 2016).

4. Results and discussion

The comparison of structure of unemployed people revealed that in a long-term period the highest ratio of unemployed consists of persons in the age group of 35 - 49. For men of this age group it oscillates at the level of 30% while for women at 36%, and in the year 2004 it exceeded 40%. When assessing the structure of unemployed men as regards the age the lowest proportion has the age group of the youngest men which is from 10,34% (2015) till 26,21% in the analysis period. The highest proportions of unemployed young men which are exceeding 25% are disclosed in the district Stará Ľubovňa for a long-term period. The next crucial determination is the fact that while the ratio of unemployed men in the age of 15 - 24 obtain the lowest values in Bratislava districts the proportion of unemployed men in the age over 50 years obtain the highest values in these districts. After comparing the age structure of unemployed women in the individual years it can be stated that the lowest ratio is reported in the lowest age group of the women at the average 15 % and the highest ratio (38%) in the age group of 35 - 49 years old women. By the mutual comparison of minimum and maximum values we have found out, that mainly in the youngest age group of the unemployed women exist deviations, when in the year 2015 in the district Bratislava 1 the ratio of this group achieved 5,79% but in the district Turčianske Teplice the ratio of this group presented

20,10%, that it mean, that each fifth unemployed women was at the age from 15 till 24. In the age group 35 - 49 this deviation is considerably lower, the lowest ratio of unemployed women in this age obtained the value 30,64% in the district Košice and the highest values in the district Ružomberok at the level of 44,80%. Based on the before mentioned the proportions of unemployed are changing in time but as well as in particular districts in the Slovak Republic.

In the following research we focused on these changes which were analysed at the sample of 70 districts in the Slovak Republic, the typical city districts Bratislava and Košice were excluded from the research file.

Table 1 presents the summarized results of comparison of changes in the development of analysed indicators. The ratio of unemployed in the age group 15 - 24 decreased in the year 2009 in comparison with the year 2004 for men in 46 resp. for women in 53 districts. In the same age group when comparing the ratios for the years 2015 and 2009 the before stated phenomenon repeated; the ratio of unemployed men decreased in 55 districts and the share of unemployed women decreased in 56 districts of the SR.

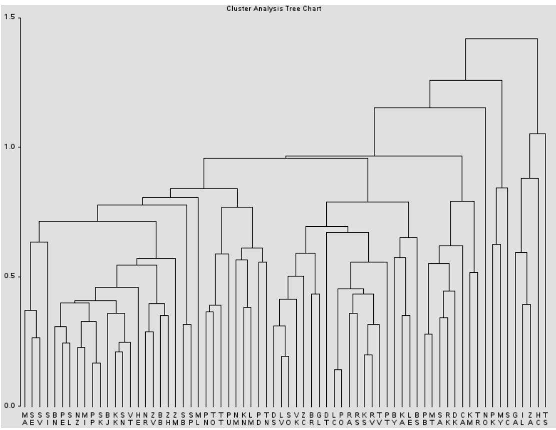
Table 1: Numbers of districts in the SR with decrease (-) resp. increase (+) of unemployed ratio in compared years

		Age group							
		15 - 24		**25 - 35**		**35 - 49**		**over 50**	
		men	**women**	**men**	**women**	**men**	**women**	**men**	**women**
2009 vs. 2004	**-**	46	53	8	41	**69**	66	13	1
	+	24	17	62	29	1	4	57	**69**
2015 vs. 2009	**-**	55	56	54	39	15	38	24	7
	+	15	14	16	31	55	32	46	**63**

Source: Statistical Office of the SR, own processing, SAS output

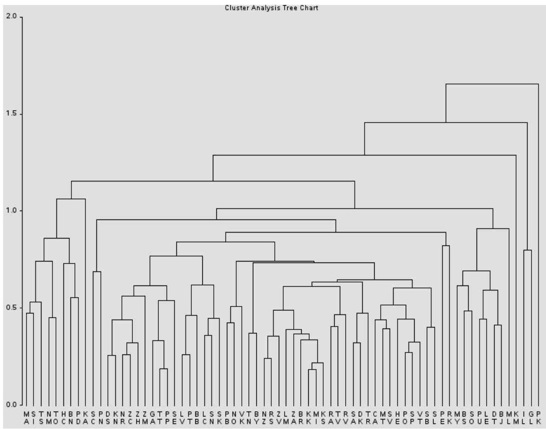
The partial data were the basis for the application of cluster analysis and the result present classification of 70 districts of the Slovak Republic into clusters based on the similarity of development of structure of unemployed in the analysed years. Based on the detailed results of cluster process, the optimal number of clusters was selected in the amount 8 and the process of cluster analysis is presented in the Figure 1, resp. 2.

Figure 1: Cluster process based on the changes in the structure of unemployed in the years 2004 and 2009



Source: Statistical Office of the SR, own processing, SAS output

Figure 2: Cluster process based on the changes in the structure of unemployed in the years 2009 and 2015



Source: Statistial Office of the SR, own processing, SAS output

The clusters of districts in Slovak republic which was created for the changes of the partial indicators between 2004 and 2009 are presented in Table 2. Obviously the most numerous is cluster 2, which is made up of 33 districts. Three clusters are formed with only one district.

Table 2: Allocation of districts in the SR to clusters based on the changes in the specific unemployment rates in the years 2004 and 2009

1	LC	PO	LV	SO	KS	RV	DS	TV	KA	LE	RA	RS	VK	BR	GL	ZC	PT	BY	BS	DT
2	PP	SK	KK	SN	NZ	MI	PE	SL	VT	SE	SV	NR	ZV	BN	SB	SP	BB	ZH	BJ	PN
	TO	SI	KN	LM	TT	HE	PD	TN	NM	ZM	PU	MA	ML							
3	PB	MT	SA	RK	DK	KM	TR	CA												
4	IL	ZA	GA																	
5	PK	MY	SC																	
6	HC																			
7	TS																			
8	NO																			

Source: Statistical Office of the SR, own processing, SAS output

The cluster 8 consists of the district Námestovo in which the share of unemployed men and women grow or fall together, in comparison with the years 2009 and 2015 this trend is vanishing and the district is already classified in the most numerous cluster 1. The second district, which consists of one-element cluster, is the neighbour district Tvrdošín from the geographical point of view. Similarly like in the district Námestovo, the share of unemployed men and women grow or fall together, but with the difference, that in the two first age groups share grow and in age group 35 - 49 years and in age group over 50 years share is declining. In the district Tvrdošín this trend occurs also in the second comparable period, so it is classified to the cluster 3 (Table 3) along with other seven districts from various geographical regions in the Slovak Republic. The opposite development is reported in the district Hlohovec what caused that it is the only one representative of the cluster 6. In the second analysed period there occurs a change in the district Hlohovec; the ratio of unemployed men in the age group 15 - 24 years and 25 - 39 years decrease and vice versa in age group 35 - 49 years and age group over 50 years ratio increase, so the district Hlohovec is classified in the cluster 3 (Table 3).The Government of the Slovak Republic tried to moderate the unfavourable development on the labour market by the adopting of three anti-crisis packages of measures. The first package of measures for overcoming of results of global financial crisis was enacted by the Government of the Slovak Republic on 6 November 2008 and contained 27 measures in the area of intensification of EU funds drawings, budget policy, tax policy, improvement of entrepreneurship environment, support of research and development. These were mainly measures "general and overtime" which should have been realized in the long-term period and regardless the economic cycle (Morvay, 2010). The second "package" of anti-crisis measures was enacted by the Government of the Slovak Republic on 2 February 2009 and was a proximate reaction to deteriorative situation at the labour market and contained the particular measures explicitly focused on the area of employment. Within the labour market the measures were adopted for the more effectiveness of active policy at the labour market by means of new supporting tools (e.g. contribution to support employment sustainability, contribution to support creation of new job opportunities, contribution to work trips and others) as well as on the support of foreign and domestic investors who received investment incentives to create and sustain working places. The third „package“ of measures was adopted by the Government of the Slovak Republic on 9 February 2009 and contained measures directed to support aggregated demand, improvement of entrepreneurship environment and stimulation of research and development. All new incorporated active measures at the labour market were design as temporary measures with a limited force of measures till 31 December 2010 (Hanzelová, 2010).

Table 3: Allocation of districts in the SR to clusters based on the changes in the specific unemployment rates in the years 2009 and 2015

1	KK MI KS NZ RS DS LC TN MT SV RA TV BB PE TT PP KN LV PT NR ZC PO SP SA DK GA BR ZV SN ZA SB SL PB NO CA VK SE ZM RK ZH VT BY LM RV TR HE SK
2	DT BJ PU LE SO BS MY ML
3	NM TO SI TS PD MA BN HC
4	SC PN
5	GL IL
6	KA
7	KM
8	PK

Source: Statistical Office of the SR, own processing, SAS output

In case of comparison of changes in partial indicators in the years 2009 and 2015, we chose for comparability the division of 70 districts of Slovak Republic into 8 clusters. The most numerous cluster 1 consists of 47 districts, the clusters 2 and 3 are equally numerous and the each of them present 8 districts (Table 3). The clusters 6, 7 and 8 are similar as in the prior analysis, consists of one-element cluster. The cluster 6 represent district Krupina, because the changes in the ratio of unemployed have the contrary development as recorded in the majority districts of the Slovak Republic (Table 1). In the analysed period in the district Kysucké Nové Mesto there were two marginal values of partial indicators (maximum decrease but as well as increase) which resulted in the creation of a separate cluster 7. The specific case is presented by the district Pezinok as the only representative of the cluster 8. The district Pezinok as the only one presents the decrease in values of all partial indicators except for the age group 35 - 49 years, in which recorded the highest increase of proportions of unemployed men and women was disclosed.

5. Conclusion

The Slovak Republic after its entry in the European Union (EU) has integrated into countries for which the different area is adjusted by not only the national arrangements but as well as the vast transnational arrangements (Košovská, Váryová, 2016). World economy has been trying to break down the national boundaries for several decades - it has got the global character (Košovská, Váryová, Bojňanský, Ferenczi Vaňová, Krajčírová, 2015). The Slovak Republic has a long-standing problem of unemployment and regularly is among the countries with the worst results in this macroeconomic indicator. Among EU Member States, however, maintained a good position to overcome impact of the economic crisis (Gregová, Dengov, 2015). The objects of our analyses were changes in the age structure of unemployed men and women in 70 districts of the Slovak Republic. In the period of general decrease of unemployment, i.e. the years 2004 - 2009, the increase in unemployment in the age category over 50 years was reported in the majority of compared districts. The districts with the decrease in this age group create the clusters 5, 6 and 7. In the year 2009 the impact of economic crisis fully became evident in the economy of the Slovak Republic that led to the increase in the unemployment. Subsequently in the following years the unemployment began to decrease. As regards the structure of unemployment this caused the decrease in the proportions of unemployed in lower age groups and the unemployment increase in higher age groups however these changes were not in all the districts. If we assess the territorial unemployment rate, we will find that the territorial principle still exist, and even on the basis of the comparison of the results over the monitored years, we can say that the differences between the Slovak districts are constantly deepens and has the effect of creating "own" clusters. Based on the before mentioned we can state similarly as Qineti, Matejková (2008) that the regional and development policy of the Government of the Slovak Republic should prefer less developed regions as regards the development support of their infrastructure and help to increase their attractiveness for the creation of new job opportunities. The indispensable part is also the increase in educational level of population in various areas. Modernization of educational system is a base for development of qualification of labour force of each organization on all its levels (Polakovič, Slováková, Hennyeyová, 2016).

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LOGIT AND PROBIT ANALYSIS OF EXPORT BEHAVIOUR AND ECO-INNOVATION ACTIVITY OF ENTERPRISES UNDER GLOBALIZATION: EVIDENCE FROM UKRAINE

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Abstract. The paper discusses the relationship between the company's export activity and its willingness to implement eco- innovative technologies under globalization. The authors investigate eco-innovative activities of exporters according to their size, and determine the relationship between eco-innovations and export of enterprises of different sizes (small, medium, large) in the case of Ukraine. Two hypotheses are tested: the first one suggests that exporters are more environmentally innovative; the second one argues that size is positively correlated with the environmental technologies implementation. The results of econometric analysis using logit and probit models demonstrate that both hypotheses may be accepted in most cases, and the size of the company and its export activities really do influence the spread of environment-friendly technologies. The larger firm size has the more significantly foreign trade (especially export performance) impacts on their eco-innovations. Instead, export performance of small businesses has a little effect on eco-innovations, moreover, the size showed a negative effect on the eco-innovations. It might be explained by the fact that small businesses generally do not have the financial resources for the eco-innovations and choose to enter foreign markets less commonly.

Keywords: export, eco-innovation, small, medium and large enterprises, logit and probit models

JEL Classification: F0, F180, C2, Q56, O3

1. Introduction

In the modern terms of globalization the eco-innovation aims to create both economic and environmental values, and both researchers and business study the effects of innovations. Horbach et al. (Horbach et al., 2011) point on three important features of eco-innovation: it is based on a subjective view of innovation (i.e. the innovation has to be new for the firm), it only considers implemented innovations (rather than activities targeted at reducing environmental impacts), and it relates environmental impacts to the state of the art. As it is noted by Rennings and Jaffe et al. (Rennings, 2000; Jaffe et al., 2005), the environmental innovation policy improve the benefit of the citizens of the country as well as for the rest of the world.

The group of German researchers indicates that the affinity to introduce eco-innovations depends on the certain degree on the sector affiliation and on the size of the firm. So, small and medium-sized enterprises show special features of the management of environmental innovation due to limited financial resources, their organisational structure, short term orientation, limited environmental awareness, lower ability to obtain highly radical innovation etc. (Aschhoff et al., 2013). Hall et al. (2009) examined the innovation activities and productivity of Italian SMEs using firm level data. They found that international competition fosters R&D intensity.

Moreover, firm size and R&D intensity, along with investment in equipment, enhances the likelihood of having both process and product innovation. Both these kinds of innovations have a positive impact on firm's productivity, and in case of process innovation the effects are especially significant. Among SMEs, larger and older firms seem to be less productive. Cuerva et al. (2014) recommended to reduce the financial constraints for SMEs in order to incentivize eco-innovation.

Based on prior studies and theories on eco-innovative development we assume that ecological innovation is currently a neglected area. Scientists argued that neither the theoretical nor the empirical literature provides a clean cut answer to the link between trade and environmental emissions (Forslid et al., 2015). Therefore, the purpose of the paper is to investigate the eco-innovative activity of exporters according to their size, and thus to determine the relationship between eco-innovation and export activity of different sized *enterprises* in Ukraine.

2. Data and methodology

2.1 Data

Data set for the study is based on *telephone* interviews with business owners and top-managers in 254 Ukrainian enterprises (88 large, 84 medium and 82 small ones) from 10th of September 2016 through 22nd of December 2017. The survey was concerned the participation of enterprises in foreign trade activity, and the present situation, opportunities and barriers in the implementation of technological and environmental innovations.

The most common factor determining the size of enterprises is the number of people employed. According to this factor the World Bank divides them into three groups: small – 1-19, medium – 20-99, and large – more than 100 employees (Ukraine..., 2013).

In our study we made the classification of enterprises based on the Ukrainian laws, which determined that small-sized enterprises employ less than 50 people, medium-sized - from 50 to 249 people, large-sized – 250 or more people (Economic...). The same classification method is used by the Ukrainian Institute for Economic Research and Policy Consulting (Ryzhenkov, 2015).

Geographical coverage of the study: all regions of Ukraine, except for the temporarily occupied territory of the Autonomous Republic of Crimea, Sevastopol and parts of the zone of anti-terrorist operation.

2.2 Methodology

A number of previous studies (Wignaraja, 2008; Klieštik et al., 2015; Kollár, 2014; Ahunjonov et al.,2013) applied different logistic regressions to estimate the innovativeness of exporters according to their size. We also chose the logit and probit models to determine the relationship between eco-innovation and export of enterprises of different sizes.

The dependent variable is a binary variable, taking a value of 1 if the firm is an exporter (exports to sales ratio>0) and zero if it is a non-exporter (exports to sales ratio=0).

The description of the independent variables is provided in Table 1.

Table 1: Description of independent variables

Variable	**Description**
EXP	Number of small, medium and large-sized enterprises engaged in export activities
SIZE	Size of enterprise (small, medium, large) according to the number of employees
AGE	Number of years of enteprise's export activity
RD	Share of enterprise's R&D expenditure
ECORD	Share of enterprise's environmental R&D expenditure
POLLUT	Level of environmental pollution by the enterprise

Source: authors' own elaboration

Our research question about the export behaviour and eco-innovation activity of Ukrainian enterprises under globalization is elaborated into two testable hypotheses:

- exporters are more eco-innovative than non-exporters;
- the size of enterprise is positively correlated with the environmental technologies implementation.

For other studied variables, the positive impact is expected in the case of age, R&D expenditure and environmental R&D research, in particular, the negative impact is expected in the case of emissions to the environment.

For comparison purposes, however, we also analyze results using probit model. Probit analysis is alternative of logit method. The main difference is that assume normal distribution of random variables (independent variables in model).

The difference lies in fact that logistic function has harder "fat tails". There are no significant differences in practise, only in the case that sample contains numerous observations with extreme values (Klieštik et al., 2015).

3. Results

In the study we divided companies into the groups with respect to their participation in export activities (see Table 2).

Table 2: Groups of enterprises by size with respect to their participation in export activities

	Large				**Medium**				**Small**			
	Exporters	**%**	**nonexporters**	**%**	**Exporters**	**%**	**non-**	**%**	**Exporters**	**%**	**non-**	**%**
Total including	66		22		20		64		12		70	
innovative	16	24.2	3	13.6	5	25.0	8	12.5	2	16.7	4	5.7
eco-innovative	8	12.1	4	18.2	3	15.0	2	3.1	1	8.3	1	1.4
neither innovative, nor eco-innovative	42	63.6	15	68.2	12	60.0	54	84.4	9	75.0	65	92.9

Source: authors'own elaboration

As Table 2 shows, large enterprises are the most innovative and active, and implement environmental innovations more often as well. The largest number of exporters is also among this group. This is largely due to the fact that, firstly, the large companies have better access to the internal capital, some of which they can allocate to innovations, including to eco-innovations, the more so, because their business is often environmentally polluting. Secondly, the large companies are better able to obtain loans. Thirdly, they have greater volume of products which they might bring to the external markets and remain competitive on the international level. According Galliano and Nadel (Galliano & Nadel, 2013), the structuring role of firms' internal characteristics, co-evolution with other forms of innovation, and the influence of firms' external environments on their eco-innovation adoption are the most important determinants of firms' eco-innovation and export behavior.

According to the results of logit analysis we found out that the effects of the studied variables on the deployment of environmental innovation are not always straightforward. In the case of small enterprises (Table 3), as our hypotheses predict, the export activities positively influence the implementation of environmental innovations.

Table 3: Results of the analysis for small enterprises

	Coefficients	**Standard error**	**t-statistics**	**P-value**
EXP	0,000665	0.0001355	0.490536491	0,000625447
SIZE	-0.03756	0.031292	-1,200186492	0,000233844
AGE	0.003168	0.003414	-0.928039667	0,356364098
RD	0.005029	0.008719	-0.57679515	0.000565805
ECORD	0,143712	0.017631	8,151088861	0.0000001
Pollution	-0.00715	0.022658	-0.315617645	7,53169E-05

Source: authors' own calculations

These results agree with a number of studies, which emphasize that the international competition encourages enterprises to achieve higher efficiency, including environmental. But the value of this indicator is small, which may be explained by the difficulties experienced by small firms when they try to enter external markets and their general orientation onto the domestic market.

By contrast the size of an enterprise in this group affects environmental innovation negatively. In the case of small businesses, it should be noted that smaller companies are often characterized by the more flexible structure and ability to adapt to changes.

The life span of a company on the market has a positive effect on environmental innovations, but this variable is not statistically significant. The impacts of all other variables align with our hypotheses.

Analysis results for the second group - medium enterprises - are presented in Table 4.

Table 4: Results of the analysis for medium-sized enterprises

	Coefficients	**Standard error**	**t-statistics**	**P-value**
EXP	0,215846	0,048771	-0.044426	0.000965
SIZE	0.003607	0.000416	0,867136	0,000389
AGE	-0.00542	0.004351	-1,24585	0,216598
RD	0.012569	0.010661	1,178938	0.002421
ECORD	0,114577	0,026788	4,277157	5,38E-05
Pollution	-0.03464	0,047768	-0.72523	4.71E-06

Source: authors' own calculations

As in the previous group, export activities have a positive effect on environmental innovations of the companies. At the same time the coefficient is much higher than in the case of small enterprises. It might be concluded that the access to foreign markets and the pressure of international competition are more important incentives for introducing environmental innovations for medium-sized enterprises than for small ones. In the case of medium enterprises, the size also has a positive effect on the implementation of environmental innovations. The coefficient is small but statistically significant. As in the previous group, the age coefficient was statistically insignificant. The impact of all other variables is in line with our hypotheses.

The analysis of large enterprises (see Table 5) also demonstrates the positive impact of exports for adoption of environmental innovations. It should be noted although that the corresponding coefficient for this group of enterprises is much higher than for the previous two groups. External markets have the most powerful impact on the environmental effectiveness of large enterprises.

Table 5: Results of the analysis for large enterprises

	Coefficients	**Standard error**	**t-statistics**	**P-value**
EXP	1,454758	0,077984	-1.86545	0.000657
SIZE	2,505808	0.001233	2,032824	0.004535
AGE	0.00313	0,010449	0,299533	0.7653
RD	0.018567	0.021691	-0.85596	3,95E-05
ECORD	0,158713	0,049865	3,182848	0.002069
Pollution	-0.11023	0.081991	-1 34437	0.051826

Source: authors' own calculations

The size of large enterprises is also a positive factor for the intensification of environmental innovations. At the same time the size coefficient in this group is much higher than in case of medium-sized enterprises. Firms with bigger sales volumes (including export sales) over which to spread the costs of environmental innovations will show better returns than firms with low sales. The large firms have also better developed complementary activities such as financial planning or marketing, which makes them more efficient innovators, and also have access to wider coverage networks, that is, they receive more information and other resources. Another great benefit of large firms is the learning and scale effects. If a large company spends more on environmental innovations in absolute terms, it may also obtain the effect of scale economy and the benefits of the learning curve - that is, they might become more and more effective over time. Due to investing in environmental innovations the firm acquires not only the innovation itself, but also the knowledge and ability to carry out scientific developments, that is, it improves its research processes. A large firm might accumulate better equipment and staff. Moreover, large firms gain experience in selection and management the innovative projects, and over time, they learn how to select all the best projects that fit better the capabilities of the companies and increase the likelihood of successful innovation. Large firms, unlike small ones, might also afford to take on big or risky innovation projects. As in previous groups of enterprises, the variable of age is not statistically significant, and the remaining variables have expected signs. For comparison reasons we also analyze results using probit regression for the binary exporter/non-exporter variable for below tested enterprises against the variables from Table 1. However, there were no significant differences in the results received from logit and probit analysis that confirmed the main conclusions of our investigation.

4. Discussion

The problem of identification and evaluation of factors affecting the eco-innovations of enterprises of different sizes is very important not only for business but also for universities, R&D organizations and the governments agencies. Although many studies are focused on the innovative and environmental issues (Golovko & Valentini, 2011; Nieto & Santamaria, 2010; Sternberg & Arndt,2001; Batrakova & Davies, 2012), but environmental innovations might be an important tool that will determine market development in the near future. Therefore, further study of factors and scientific evidences of eco-innovative strategies for large, small and medium enterprises is the area for further research and discussion. On the one hand, efforts should be focused on the analysis of eco-innovations at the firm level for the better understanding of microeconomic dynamics that lead to better environmental outcomes. On the other hand, the comparative study of the different countries experience is also of great interest inasmuch as it allows to understand macroeconomic dynamics based on aggregate environmental performance.

5. Conclusions

The results of the study permit to do some conclusions. Two hypotheses were tested in the paper: the first one suggests that exporters are more environmentally innovative; the second one argues that size is positively correlated with the environmental technologies implementation. The results of econometric analysis using logit and probit models demonstrate that both hypotheses may be accepted in most cases, and the size of the company and its export activities really do influence the spread of environment-friendly technologies. The larger firm size has the more significantly foreign trade (especially export performance) impacts on their eco-innovations. Instead, export performance of small businesses has a little effect on eco-innovations, moreover, the size showed a negative effect on the eco-innovations.

It might be explained by the fact that small businesses generally do not have the financial resources for the eco-innovations and choose to enter foreign markets less commonly.

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FINANCING OF SOCIAL EMPLOYMENT PROJECTS IN GLOBAL CONTEXT

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Abstract. The process of globalization, characterized by economic and political interconnection of current economies, broadens the scope for all economic entities to operate globally. The current world economy creates a globally closed and heterogeneously structured social and economic system. The economic benefit of globalization is also reflected in the fact that total labour productivity is growing faster when commodities are produced in countries, by production of which they have a comparative advantage, resulting in a faster growth of the life standard. The social dimension of globalization creates more attractive job opportunity and working conditions, affecting income and social welfare in the society. The primary need for a globalized labour market is an increase of labour force flexibility as well as creation of jobs that depend on appropriately interconnected markets where competition and consumers stimulate their entrepreneurial activities. There are several obstacles in the global market that need to be eliminated, such as unemployment, which is the accompanying phenomenon and the threat of the current global economies. It affects the economic performance and the quality of life in the country. A major problem in Slovakia is disproportion between the interconnection of labour market needs and the quality and structure of branches in education system, the low ability of the economy to support job creation, resulting in high unemployment of young generation. The main causes of the unemployment issue on the global labour market focus mainly on education and employment policy, which also include European social employment projects that are applied globally.

Keywords: globalization, labour force, economic entities, European social employment projects, education system, quality of life

JEL Classification: A13, E24

1. Introduction

The contribution deals with European social projects regarding various characteristics, size and objectives. The projects involve sustainable and quality employment, social inclusion, vocational training and technical assistance. (Laratta & Sachiko, 2016). The projects are focused on educational systems of educators and students, young people and older job seekers or potential entrepreneurs from a wide range of different sectors of society. (Filhon et al., 2016) Their goal is to create better employment perspectives for citizens and to help them succeed in the specific profession. (Greblikaite et al., 2015).

Nowadays in the period of globalisation they help to increase the development of human potential across Europe through flexible job offers with an emphasis on higher employment and social inclusion in particular country. (Nica & Molnar, 2016).

2. European Employment Services

The European Social Fund is the main tool for promoting the jobs and which helps people to get better jobs and ensuring more equal employment opportunities for all citizens within the EU. As part of its activities, the Fund invests into human capital within Europe, which represents primarily a risk group of the unemployed people. (Kliestik & Majerova 2015) The European Union distributes funds from the European Social Fund between the Member States and the regions which finance their operational programs.

Employment-related social projects are supported within these programs operated by various public and private organizations. (Kovacikova & Repkova 2016) Their priority is to strengthen the adaptability of the labour force in the labour market. (Stofkova et al., 2015, A) These programs support social projects, related to employment, operated by various public and private organizations. (Majernik et al., 2016) Priorities also focus on provision of training to less qualified job seekers with the aim to improve their job prospects, career opportunities and lifelong learning. (Pereira et al.,2016).

The Employment Offices of the Social Welfare and the Family of the Slovak Republic are significantly involved at the level of the employment services through the implementation of various projects European Social Fund as well as from the state budget (Eurich & Langer, 2015).

The mission of The European Social Fund is to fund local, regional and national employment projects across Europe - from small community charity projects that help people with disabilities to find the right job, to national projects, to promote vocational training throughout the population. (Stofkova et al., 2014) The Fund resources help to employ or improve skills and in order to be able to find a work in the future. This is important to reduce the unemployment rates and poverty levels, but also in the long term - as part of the strategy for transforming the European economy not only through job creation but also inclusive society. (Moravcikova & Krizanova, 2016) .

3. Financing and objectives for 2014-2020

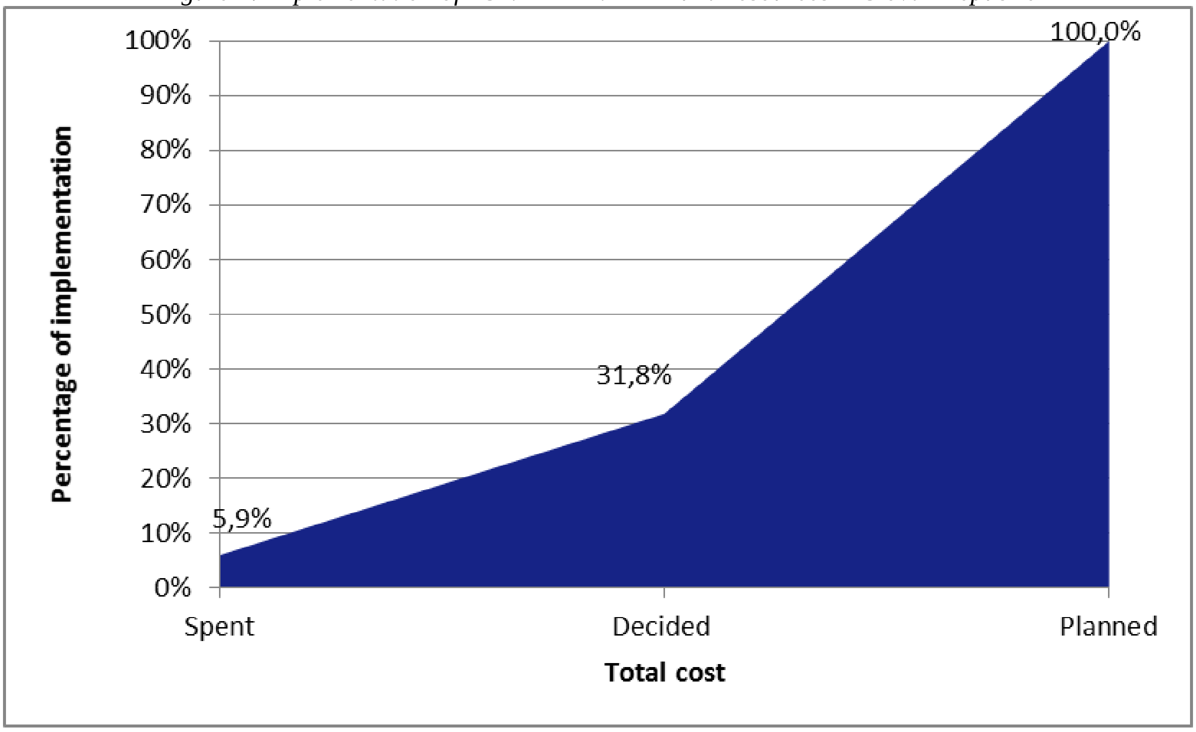
In the period 2014-2020, the ESF provide around € 80 billion with the aim to:

- provide training for people and assistance in their re-employment,
- promote social inclusion,
- improve the level of education and training,
- improve the quality of public services in the country.

The ESF budget is prepared and approved by the EU Member States, the European Parliament and the European Commission. The operational programs are prepared by governments for the next 7 years and approved by the European Commission. Funding is provided to a wide range of organizations - public authorities, private companies and civil society. People get practical help in finding a job or staying in a job. Nowadays it is an important driver of job creation, promoting better education, modern public administration and social inclusion, and is therefore a key instrument for ensuring more equal employment opportunities for all citizens. (Antalova, 2016)

The European Social Fund has helped millions of Europeans find a job, get some qualification or certificate or raise their skills. All this has been achieved thanks to many thousands of projects across Europe. In the period 2014-2020 millions of people will benefit from the fund, thanks to EU budget investments in an amount of 86.4 billion €. During this programming period, the ESF focuses on a number of priorities to ensure maximum impact, with a focus on youth employment and social inclusion.

Figure 1: Implementation of ESF/ ERDF / YEI Fund resources in Slovak Republic



Source: own processing according to (EC, 2017, A)

National and regional programmes report financial data to the Commission on their progress. Fund resources of ESF/ ERDF / YEI in Slovak Republic are following and are shown in Fig.1.

- Planned expenditures: total budget of the program includes 2 628 533 420 €.
- Decided: financial resources allocated to selected projects involve 835 466 876 €.
- Implemented expenditures reported by the selected projects comprise 156 282 166 €.

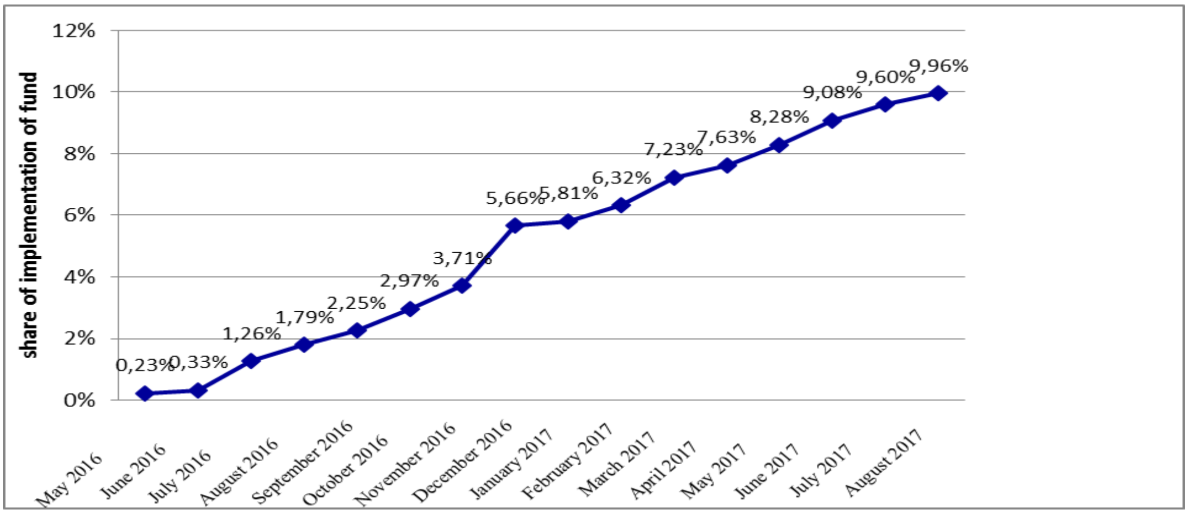
The online open data platform provides access to the results of the 2014-2020 European Structural and Cohesion Funds, shows the latest implemented amounts. The total budget of The Fund is 7.6 billion €.

The projects under the Youth Employment Initiative in SR show a very good decision level. Total planned budget of the programme includes 215 910 858 €. Decided financial resources allocated to selected projects involves 150 000 000 € (69.5%). Implemented expenditures reported by the selected projects comprise 7 347 006 €. (EC, 2017, A)

Nowadays 11 Operational programs are running in Slovak Republic. Operational programme „Human resources" belong to these programs. The operational programme (OP) "Human resources" include ESF (European social fund), ERDF (European regional development fund) and YEI (Youth employment initiative). Implemented finances of this OP in Slovak Republic until September 2017.

By august 2017 the implementation of finances from the operational programme „Human resources" was of about 10% of total planned amount. The period 2014 – 2020. Ministry of the Finances of SR has the function as the certificate authority, shown in Fig.2.

Figure 2: Overview of share of implemented finances of Programme „Human resources" total costs in period 2016-2017



Source: own processing data (Ministry of Finance, 2017)

The European Commission published an evaluation report of investments under the European Social Fund (ESF). By the end of 2014, at least 9.4 million European residents found a job with support from the Fund. About 8.7 million people gained a qualification or certificate. Increased skills levels were reported by 13.7 million participants.

According to the evaluation 2007-2014, the European Social Fund has provided essential support to implementing national and EU priorities for smart, sustainable and inclusive growth, including the Europe 2020 targets and country-specific recommendations. Participants in ESF-actions were spread between the inactive people (36%), the employed citizens (33%) and the unemployed people (30%). Key target groups included the low-skilled people (40%), young people (30%) and the disadvantaged group of citizens (at least 21%). ESF provided more than 70% of resources for active labour market policies in Bulgaria, Estonia, Greece, Latvia, Lithuania, Malta, Romania and Slovakia and more than 5% of expenditure on education and training in Portugal and Czech Republic.

The ESF has played an essential role in supporting the modernisation of public employment services and other institutions responsible for active labour market actions. In less developed regions the ESF has supported reforms in the education, judiciary and general public administration. (Antalova, 2016)

The Employment and Social Innovation Program (EaSI) is a European-level financial instrument managed directly by the European Commission. It is used to promote employment, social policy and labour mobility in the EU. Eligible bodies may apply for funding through calls for proposals. It is a European financial instrument to promote quality and sustainable jobs that guarantees adequate and acceptable social protection, combats social exclusion and poverty and helps to improve working conditions.

The European Globalization Adjustment Fund (EGF) helps employees who have been released as a result of changes in world trade structure to find a new job as quickly as possible. The European Globalization Adjustment Fund provides support people who have lost their jobs as a result of major structural changes in world trade due to globalization (i.e. if a large company cancels production or moves outside the EU or as a result of the global economic and financial crisis).

The maximum budget of the Fund for the period 2014-2020 is 150 million Euro. They can co-finance projects up to 60% of their costs to help find jobs or start up businesses for workers who have lost their jobs as a result of restructuring. Projects may be co-financed from the Fund, including the following measures: help in finding work, education, training and retraining, mentoring and training, business and business start-up. Fund resources may also be used as training, mobility / transfer or similar support measures. (Kral & Janoskova, 2015) Final beneficiaries of EGF projects may be individual redundancies as a result of restructuring. In the period 2014-2020, this concerns tradesmen, temporary staff and fixed-term workers.

By the end of 2017, young people who are unemployed and do not participate in education or training may also benefit from the EGF in regions with high youth unemployment, corresponding to the number of workers in regions benefiting from the Fund. (Stofkova et al., 2015, B) EGF funds cannot be used to keep the company running or to modernize or restructure it. The difference of EGF from EU structural and investment funds - EU structural and investment funds, in particular the European Social Fund, are based on a strategic, long-term perspective in estimating and managing the social impacts of industrial change through activities such as lifelong learning. (Loucanova et al., 2015) The EGF provides workers with one-off individual support that is limited in time.

4. European Job Mobility

The European Employment Services (EURES) have set up public employment agencies, as partners are also involved in trade unions and employers' organizations. Their purpose is to enable the free movement of workers within the European Economic Area (28 members of the European Union, Norway, Liechtenstein and Iceland) and Switzerland. The EURES network addresses job seekers who want to move to another country for work or study reasons and employers who are interested in recruiting workers from abroad. (EC, 2017, B). EURES also plays a very important role in cross-border regions, as they are areas where there is a high rate of cross-border commuting.

More than 1 000 000 people who live in an EU country and work in another country have to face different national practices and legal systems. They can meet the administrative, legal and tax obstacles associated with their mobility every day. EURES cross-border partnerships are a useful point of contact for regional and state administrations in the workplace and for the social partners. They are an important tool for monitoring cross-border work areas, which are a key element in the development of the European labour market. About 94 million young people aged 15-29 live in Europe. Many go to school or continue to study, others find work and build a career. A significant proportion of young people are unemployed and many gave up hopes of finding employment.

The European Social Fund finances thousands of projects and programs across Europe that help young people to acquire knowledge, experience and opportunities to be able to be included among workers. The Fund specifically focuses on helping those who do not currently have a job, do not learn or do not undertake vocational training. (Gubbins & Garavan, 2016).

Another focus of European social projects is to increase the digital literacy. Employers are increasingly looking for workers with experience in this sphere. Nowadays nearly 90 percent of all jobs require at least the basic level of digital skills. (Calenda et al., 2016). Digital literacy is understood as basic skill or ability to use a computer confidently, safely and effectively, including: the ability to use Office software such as word processors, email and presentation software, etc. (Department of eLearning, 2015).

The intention to implement IT skills testing in the Slovak Republic was established in 2009 as part of the European Commission's initiative. IT testing is being carried out by the IT Association of Slovakia with the support of the Ministry of Education, Representations of the European Commission in Slovakia and other partners. (Sutorova, 2017). Testing is regarding areas such as the Internet, security and computer systems, collaborative tools and social networks, office tools. In this year, the test was complemented by web and online marketing. (Daneshjo et al., 2016).

Many entrepreneurs and businesses therefore use European social projects to expand the capacities and flexibility of their most valuable resource for their workers, giving them, for example, training in the basics of management, or the legal and financial skills they need to set up a business. (Koettgen et al., 2016) In some projects, entrepreneurs use business advisors to accompany them during the first critical years. Other projects support the development of entrepreneurial networks for exchange of experience and offer of support.

5. Conclusion

Thanks to globalization, the process of change is part of our everyday life. Workers in EU countries have to be more adaptable and open to change in order to increase their employment possibilities. Employers with the support of European Social Projects also help to improve future skills requirements and offer workers the opportunities for their development in order to adapt to new technologies and markets.

Workers and businesses face new challenges. If workers and companies want to make these changes to their advantage, they need to be more flexible and learn how to live with change - know how to predict and process it. These projects also actively promote career management, notably by guiding people in recognizing their future career needs and planning their retention, which is often provided in lifelong learning programs. Not only individuals are responsible to learn to be adaptable.

Government, regional and local authorities, trade unions, employment services, and companies of all sizes are involved in the implementation of active employment support measures. It requires modernization of employment institutions, a shift away from responding to the end of organization and job loss, and moving towards more long-term planning and anticipation of change.

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DIFFERENCES IN MOTIVATION OF STUDENTS IN THE GLOBAL LABOR MARKET AS ENTREPRENEURS

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Abstract. Globalization has given rise to tremendous prospects for change, development, and a more prosperous world, effectively tackling global challenges and making the most of global opportunities increasingly. Numerous studies have shown that entrepreneurship plays an important role in contemporary global societies. As globalization proceeds apace, entrepreneurs and small businesses will play a more prominent role on the global business arena. Entrepreneurs have to think globally to survive locally also. Entrepreneurship today means staying abreast of worldwide trends. This paper aims to recognise the factors that motivate potential entrepreneurs in the commencement of one's own business activity and in starting up their own businesses in global market. The study was conducted by surveying 1078 people. We analysed potential entrepreneurs -students of non-economic study fields at technical universities in Slovakia. The author's questionnaire was administered to all participants. The influence of age and the degree of study on the motives of respondents was not proven. Respondents more often declared being influenced by internal motives when planning to set up their own business. The findings show that globalization has impacted towards the increasing demands of entrepreneurship education and entrepreneurial skills and thinking among graduates. Entrepreneurship education can raise awareness and open the students' minds towards entrepreneurship as a career choice. Entrepreneurship can encourage people in the economic, social, cultural change, integration of society and increase social mobility. Thus, the educational programs need to be well planned in order to develop many successful and competitive global market entrepreneurs.

Keywords: globalization, motivating factors, entrepreneurship, start up, students

JEL Classification: I0, I1, I2

1. Introduction

Na začiatku 21. storočia bol vývoj podnikateľských aktivít spojený s prenikaním podnikov na zahraničné trhy. Internacionalizácia ponúka nové príležitosti pre podnik. Podnikanie je čoraz viac uznávané ako dôležitá hnacia sila hospodárskeho rastu, produktivity, inovácie a zamestnanosti a je všeobecne akceptované ako kľúčový aspekt hospodárskej dynamiky. Mnohé štúdie ukázali prínos a dôležitosť podnikania. Čierny (2010) hovorí, že existujú jedinci, ktorí ťažia z globalizácie, tým že nadnárodne podnikajú. História ukazuje, že podnikať dokážu len pragmatickí ľudia, ktorí sú inovatívni, ktorí dokážu využiť príležitosti a sú ochotní riskovať (Hisrich, 1986). Podľa Uddina a Bosea (2013) motivácia je významným faktorom začatia a úspechom podnikania a vychádza z vnútorných a vonkajších stimulov.

Dôvody na to, aby sa jedinec stal podnikateľom, sa líšia od človeka k človeku, od jednej krajiny do druhej v závislosti od hospodárskeho, politického, sociálneho a kultúrneho prostredia, v ktorom sa podnikatelia realizujú (Hung et al., 2011). HasniChe Ismail at al. (2012) medzi faktormi podnikať na globálnom trhu objavili potrebu nezávislosti, potrebu výzvy a vplyvu, zlepšenie finančnej príležitosti, sebarealizáciu, túžbu byť vlastným šéfom, materiálne zabezpečenie rodiny, potenciál rozvíjať koníčky, osobný úspech ai. Iní autori (Frese at al., 2002) píšu, že sú to psychologické atribúty, ako je snaha o nezávislosť, adrenalínové aktivity a dobrodružná povaha, ale hovoria aj o túžbe po nezávislosti, slobode, pracovnej spokojnosti a financiách.

Zo zahraničného prieskumu v USA (Edelman et al., 2010) „prečo začínajúci podnikatelia chcú začať podnikať" vyústili zistenia, že dôvodmi sú nezávislosť/ samostatnosť, vnútorná odmena za šikovnosť, zabezpečenie rodiny. Na druhej strane začínajúci podnikatelia v Indii boli najviac motivovaní túžbou po autonómii a zvýšení príjmu (Benzing & Chu 2005). V Turecku zabezpečiť seba a svoju rodinu a zvýšiť svoje príjmy (Benzing et al., 2009). V Rumunsku najsilenejšími motivátormi boli potreby príjmov a osobné potreby (Benzing at al., 2005). V tomto empirickom článku čerpáme z množstva rôznych štúdií (napr. Davidsson & Honig, 2003; Reynolds et al., 2004; DeTienne, 2010, Kolvereid & Isaksen, 2007) pri zvažovaní premenných (analýzou primárnych determinantov, motívov a ich zodpovedajúcich účinkov), ktoré sa stávajú podnetom pre rozhodnutie začať podnikať na globálnom trhu. Príspevok dopĺňa teoreticko-výskumné práce tým, že kombinuje rôzne faktory, ktoré vytvárajú najpozitívnejšie postoje k samostatnej zárobkovej činnosti v Európe. Zatiaľ čo existujú rôzne faktory motivácie, ktoré sa pokúšajú vysvetliť dôvody vykonávať podnikateľské aktivity, málo akademikov aplikovali tieto teórie vo vysokoškolskom vzdelávaní (Canabal & O'Donnell, 2009, Xue at al., 2011). Katedra spoločenských vied Technickej univerzity v Košiciach sa stala silným stúpencom prípravy študentov na globálny trh práce, počnúc motiváciou využitia príležitosti podnikať až po získanie podnikateľských znalostí potrebných pre spustenie úspešnej kariéry.

2. Metodológia výskumu

Skvalitniť prípravu študentov pre podnikateľskú činnosť predpokladalo zostrojiť merací nástroj, ktorým by sme získali širokospektrálne údaje u študentov technických odborov – neekonómov. Výskum bol zameraný na mapovanie diferencií v motivácii študentov jednotlivých VŠ uplatniť sa na globálnom trhu práce ako podnikateľ. V dotazníku sa respondenti na škále 1. nesúhlasím, 2. skôr nesúhlasím, 3.rovnako súhlasím ako nesúhlasím, 4. skôr súhlasím, 5 súhlasím, vyjadrovali k hlavným faktorom rozhodujúcim pre budúce podnikanie. Motivačné faktory sme identifikovali na základe vytvorenia motívov podnikateľov podľa klastrovej analýzy.

Pre spracovanie výsledkov sme použili štatistické metódy, ktoré umožňujú vykonávať viacnásobné porovnávania hodnôt - analýzu rozptylu (ANOVA). Prieskum sme realizovali na univerzitách: Technická univerzita v Košiciach (TUKE), Slovenská technická univerzita v Bratislave (STU BA), Žilinská univerzita v Žiline (ŽU), TU vo Zvolene (TUZVO), Slovenská univerzita v Nitre (SPU). Výber respondentov bol zámerný. Reprezentatívnu vzorku tvorili študenti N=1078 v bakalárskom, magisterskom, alebo inžinierskom stupni. Vzhľadom na množstvo získaných údajov nie je možné v plnom rozsahu uviesť všetky relevantné údaje. Vyberáme len tie, ktoré korešpondujú s problematikou motivačných faktorov k samozamestnaniu na globálnom trhu. Napriek tomu, že interpretácie niektorých zistení sú funkčné len na základnej štatistickej úrovni (deskriptívna štatistika a jednorozmerná analýza rozptylu), všeobecný obraz o týchto, aj keď minimálnych rozdieloch prinieslo nové poznanie ohľadom komparácie kľúčových motivátorov študentov.

3. Interpretačná časť – výsledky výskumu

Celkový pohľad na faktory podnecujúce rozhodnutie odhodlať sa podnikať na globálnom trhu práce, uvedené v Tab. 1 a Tab. 2 naznačujú len minimálne rozdiely medzi hodnotením študentmi jednotlivých VŠ. Štatisticky významný je rozdiel v položke spoločensko-ekonomické potreby ako vytvoriť pracovné miesta, zlepšiť štruktúru hospodárstva, uspokojiť novovzniknuté potreby (F=3,384 a p=0,009). Študentov ŽU (M=3,67) a študentov STU BA (M=3,53) by tento faktor skôr podnietil k podnikaniu. Študenti ostatných VŠ – TUKE, SPU sú pri tomto faktore nerozhodní. Najdôležitejším faktorom pre študentov všetkých VŠ, je materiálne zabezpečiť rodinu. Druhým najdôležitejším faktorom je dosiahnutie úspechu, a tretím lepšie pracovné možnosti.

Table 1: Diferencie vo faktoroch podnecujúcich štart k podnikaniu na globálnom trhu práce I.

Čo by Vás podnietilo k rozhodnutiu odhodlať sa podnikať na globálnom trhu		N	priemer	SD	Std. Error	95% Confidence Interval for Mean – Lower Bound	95% Confidence Interval for Mean – Upper Bound	Minimum	Maximum
Využitie podnikateľskej príležitosti	TU KE	602	3,64	1,10	,0448	3,548	3,724	1,0	5,0
	SPU NR	187	3,67	1,13	,0830	3,505	3,832	1,0	5,0
	STU BA	253	3,64	1,14	,0717	3,503	3,786	1,0	5,0
	ŽU	15	4,00	0,85	,2182	3,532	4,468	2,0	5,0
	iné	21	3,86	1,20	,2608	3,313	4,401	2,0	5,0
	Total	1078	3,65	1,11	,0339	3,587	3,720	1,0	5,0
Lepšie pracovné možnosti	TU KE	602	3,96	0,98	,0399	3,878	4,035	1,0	5,0
	SPU NR	187	4,11	0,89	,0654	3,983	4,241	1,0	5,0
	STU BA	253	3,93	1,00	,0627	3,805	4,052	1,0	5,0
	ŽU	15	4,00	0,93	,2390	3,487	4,513	2,0	5,0
	iné	21	4,00	1,18	,2582	3,461	4,539	1,0	5,0
	Total	1078	3,98	0,97	,0296	3,920	4,037	1,0	5,0
Väčšia nezávislosť	TU KE	602	3,70	1,07	,0437	3,610	3,782	1,0	5,0
	SPU NR	187	3,94	1,00	,0734	3,791	4,081	1,0	5,0
	STU BA	253	3,83	1,07	,0673	3,694	3,959	1,0	5,0
	ŽU	15	4,00	1,31	,3381	3,275	4,725	1,0	5,0
	iné	21	3,67	1,15	,2520	3,141	4,192	1,0	5,0
	Total	1078	3,77	1,07	,0325	3,708	3,836	1,0	5,0
Materiálne zabezpečenie rodiny	TU KE	602	4,11	0,98	,0401	4,033	4,190	1,0	5,0
	SPU NR	187	4,17	0,93	,0684	4,036	4,306	1,0	5,0
	STU BA	253	4,18	1,00	,0626	4,059	4,305	1,0	5,0
	ŽU	15	4,13	0,92	,2364	3,626	4,640	2,0	5,0
	iné	21	4,19	0,98	,2140	3,744	4,637	2,0	5,0
	Total	1078	4,14	0,98	,0297	4,082	4,198	1,0	5,0
Finančné profitovanie	TU KE	602	3,93	0,96	,0393	3,856	4,011	1,0	5,0
	SPU NR	187	4,04	0,95	,0697	3,900	4,175	1,0	5,0
	STU BA	253	3,91	1,03	,0645	3,782	4,036	1,0	5,0
	ŽU	15	3,60	0,99	,2545	3,054	4,146	2,0	5,0

	iné	21	4,00	1,05	,2289	3,523	4,477	2,0	5,0
	Total	1078	3,94	0,98	,0298	3,884	4,001	1,0	5,0
Dosiahnutie úspechu	TU KE	602	4,00	1,04	,0424	3,918	4,085	1,0	5,0
	SPU NR	187	4,06	1,00	,0730	3,920	4,208	1,0	5,0
	STU BA	253	4,02	1,01	,0632	3,895	4,144	1,0	5,0
	ŽU	15	3,73	1,16	,3003	3,089	4,377	1,0	5,0
	iné	21	3,76	1,18	,2573	3,225	4,299	1,0	5,0
	Total	1078	4,01	1,03	,0313	3,947	4,070	1,0	5,0
Vysoké osobné ambície	TU KE	602	3,65	1,17	,0477	3,554	3,742	1,0	5,0
	SPU NR	187	3,75	1,06	,0778	3,600	3,908	1,0	5,0
	STU BA	253	3,67	1,17	,0733	3,524	3,812	1,0	5,0
	ŽU	15	3,67	1,18	,3034	3,016	4,317	1,0	5,0
	iné	21	3,33	1,15	,2520	2,808	3,859	1,0	5,0
	Total	1078	3,67	1,15	,0350	3,596	3,734	1,0	5,0
Rozširujúce podnikateľské aktivity s dopadom na rozvoj spoločnosti	TU KE	602	3,36	1,15	,0469	3,267	3,451	1,0	5,0
	SPU NR	187	3,48	1,10	,0804	3,323	3,640	1,0	5,0
	STU BA	253	3,52	1,18	,0744	3,371	3,664	1,0	5,0
	ŽU	15	3,40	0,83	,2138	2,941	3,859	2,0	5,0
	iné	21	3,00	1,26	,2760	2,424	3,576	1,0	5,0
	Total	1078	3,41	1,15	,0350	3,342	3,480	1,0	5,0
Spoločensko-ekonomické potreby - vytvoriť pracovné miesta, zlepšiť štruktúru hospodárstva, uspokojiť novovzniknuté potreby	TU KE	602	3,26	1,25	,0509	3,161	3,361	1,0	5,0
	SPU NR	187	3,45	1,17	,0855	3,281	3,618	1,0	5,0
	STU BA	253	3,53	1,18	,0740	3,388	3,679	1,0	5,0
	ŽU	15	3,67	0,98	,2520	3,126	4,207	2,0	5,0
	iné	21	2,95	1,16	,2533	2,424	3,481	1,0	5,0
	Total	1078	3,36	1,22	,0371	3,284	3,430	1,0	5,0

Source: own proceesed

Table 2: Diferencie vo faktoroch podnecujúcich štart k podnikaniu na globálnom trhu práce II.

Čo by Vás podnietilo k rozhodnutiu odhodlať sa podnikať na globálnom trhu		**Sum of Squares**	**df**	**Mean Square**	**F**	**Sig.**
Využitie podnikateľskej príležitosti	Between Groups	2,915	4,00	0,73	,587	,672
	Within Groups	1331,330	1073,00	1,24		
	Total	1334,245	1077,00			
Lepšie pracovné možnosti	Between Groups	4,271	4,00	1,07	1,127	,342
	Within Groups	1016,238	1073,00	0,95		
	Total	1020,509	1077,00			
Väčšia nezávislosť	Between Groups	10,248	4,00	2,56	2,261	,061
	Within Groups	1215,615	1073,00	1,13		
	Total	1225,863	1077,00			
Materiálne zabezpečenie rodiny	Between Groups	1,174	4,00	0,29	,307	,873

	Within Groups	1024,675	1073,00	0,95		
	Total	1025,849	1077,00			
Finančné profitovanie	Between Groups	3,845	4,00	0,96	1,003	,405
	Within Groups	1028,589	1073,00	0,96		
	Total	1032,434	1077,00			
Dosiahnutie úspechu	Between Groups	3,053	4,00	0,76	,721	,578
	Within Groups	1135,872	1073,00	1,06		
	Total	1138,925	1077,00			
Vysoké osobné ambície	Between Groups	3,971	4,00	0,99	,749	,559
	Within Groups	1422,137	1073,00	1,33		
	Total	1426,109	1077,00			
Rozširujúce podnikateľské aktivity s dopadom na rozvoj spoločnosti	Between Groups	8,998	4,00	2,25	1,707	,146
	Within Groups	1413,953	1073,00	1,32		
	Total	1422,951	1077,00			
Spoločensko-ekonomické potreby - vytvoriť pracovné miesta, zlepšiť štruktúru hospodárstva, uspokojiť novovzniknuté potreby	Between Groups	19,928	4,00	4,98	**3,384**	**,009**
	Within Groups	1579,572	1073,00	1,47		
	Total	1599,500	1077,00			

Source: own proceesed

4. Diskusia

Dospeli sme k záveru, že u študentov skúmaných vysokých škôl existujú určité diferencie v predstave pracovať, podnikať v zahraničí. Pokiaľ študenti inej VŠ skôr neuvažovali v zahraničí podnikať, skôr len pracovať, tak študenti ostatných VŠ uvažovali o možnosti nielen v zahraničí pracovať, ale aj žiť. Nerozhodní sú len pokiaľ ide o oblasť podnikania. To súvisí pravdepodobne s tým, že si nie sú istí, či majú potrebné vedomosti, zručnosti pre začatie podnikania v inej krajine, a či poznajú konkrétne podmienky a nároky na ľudský kapitál v inej krajine. Ak by študenti mali podnikať, tak študenti ŽU a inej VŠ skôr v rámci krajín V4, študenti TUKE a STU BA si svoje podnikateľské aktivity vedia skôr predstaviť v rámci krajín EÚ. Študenti ostatných VŠ sú pri výbere krajiny svojho podnikania nerozhodní. V našej štúdii sa snažíme identifikovať motívy, ktoré inšpirujú potenciálneho podnikateľa, tj osobu, ktorá plánuje v blízkej budúcnosti založiť vlastné podnikanie, Naše výsledky naznačujú, že potenciálny podnikateľ je ovplyvnený radom motívov v rozhodovacom procese a vnútorné motívy sa zdajú byť dôležitejšie (bez ohľadu na pohlavie alebo vek respondenta) ako externé. K rozhodnutiu podnikať by študentov všetkých skúmaných vysokých škôl podnietilo hlavne to, aby mohli materiálne zabezpečiť rodinu, dosiahnuť úspech a tiež lepšie pracovné možnosti. Rozhodujúcim kritériom pre podnikanie na globálnom trhu práce by bolo ovládanie jazyka krajiny u rovnako u študentov všetkých skúmaných VŠ, okrem inej VŠ. Tieto zistenia poskytujú prehľad klasifikácie motivačných faktorov, ktorá je podobná štyrom základným faktorom v rôznych štúdiách, ktoré boli prezentované vyššie. Prvým faktorom, ktorý používajú takmer všetky štúdie, je túžba po (1) financiách. Tento faktor zahŕňa aj motiváciu pre bezpečnosť a túžbu zarobiť viac peňazí. Medzi faktory, ktoré sú spojené s touto kategóriou, patrí aj poskytovanie pohodlného odchodu do dôchodku a vnímanie prínosu bohatstva. Ďalej je to snaha o (2) nezávislosť. Faktory, ktoré sú zahrnuté v motivácii k nezávislosti, sa usilujú o autonómiu, radosť zo samostatnej zárobkovej činnosti, byť lídrom, vlastným pánom a vyplýva to so nespokojnosťou so súčasnou prácou. Veľa faktorov uvedených v rôznych štúdiách súvisí so sociálnym prostredím podnikateľa (3) tzv. faktor sociálneho uznania, jeho súčasťou je potreba súťaže, zabezpečenia rodiny. Posledný faktor sú (4) potreby sebarealizácie. Tento motivačný faktor zahŕňa, sebauplatnenie, vedomosti a skúsenosti, potrebu osobného rozvoja a vzdelávania. Možno konštatovať, že modely v oblasti motivácie nie sú dostatočné na vysvetlenie motivačných faktorov pre podnikateľské aktivity. Príspevok ukazuje, že štúdie sú založené na rôznych klasifikáciách faktorov začať podnikať. Výsledky tejto práce podporujú argumentáciu spomínaných autorov, že individuálne potreby ľudí sú najväčšou hnacou silou ekonomických aktivít prostredníctvom podnikania.

5. Conclusion

Záverom konštatujeme, že podnikateľské vzdelávanie je účinné s ohľadom na vlastné výsledky výskumu. Výskumom zdieľame spoločný názor s autormi podobných výskumných štúdií (bližšie Lorenco & Jones, 2006; Mwasalwiba, 2010; Souitaris at al., 2007; Fatoki & Olabanki, 2014; Lourenco at al., 2013, Matlay, 2006 a iní) a to, že podnikateľské vzdelávanie podporuje študentov v kariérnom smerovaní a dáva im motiváciu a zručnosti potrebné k podnikateľským aktivitám, k zakladaniu firiem a ich pôsobeniu na globálnom trhu.

Podnikateľské aktivity môžu byť ideálnym nástrojom na podporu rastu ekonomiky a riešením na ekonomický problém, akým je nezamestnanosť (Sondari, 2014, s. 44-53). Vhodne zvolená vysokoškolská príprava umožní absolventom zorientovať sa na trhu práce podľa aktuálnej situácie a v praxi si vhodne vybrať formu uplatnenia sa v ekonomicko-spoločenských podmienkach. Či sa vybrať sa cestou nezávislosti a voľnosti alebo ísť cestou „istoty" v podobe zamestnania (Farrington et al., 2011). Pre zlepšenie prípravy na život v podmienkach VŠ štúdia je nevyhnutné vytvoriť na vysokých školách priaznivú klímu pre podnikateľské vzdelávanie založené na integrovanom prístupe, ktorého cieľom je nielen zmena myslenia, ale i zlepšovanie globálnych a podnikatelských kompetencií budúcich absolventov.

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ENTERPRISE RISK MANAGEMENT AS PART OF CORPORATE SOCIAL RESPONSIBILITY IN THE CONTEXT OF THE GLOBALISATION OF BUSINESS

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Abstract. The internationalisation and globalisation of doing business brings the companies not only more opportunities but also a whole range of new challenges and threats globally. Due to globalisation and informatisation of the society the importance of the socially responsible entrepreneurship also grows. The enterprises can transfer and develop their entrepreneurial activities anywhere in the world. This fact forces them thinking about the negative effects of each decision. The companies are forced to face the hard competition and except for this to solve the ethical, ecological and social issues during developing their strategies. This fact results in new requirements on the managers for them to be able to assess effectively all key risks in the company and in the framework of the socially responsible entrepreneurship as well. The current proactive approach to the risk management will enable the companies to identify and understand the risks linked with the socially responsible entrepreneurship better. They will be also able to recognise in time the negative impacts of the risks they have to cope with during developing their entrepreneurial activities. The essence of the article is to work out an analysis of the current state of the social responsibility linked with the risk management of the companies abroad and in Slovakia, to assess the shortages of implementing the company risk management in Slovakia and first of all to assess the current attitude of the managers to the risks. We will also design a procedure for implementing the risk management connected with the area of the socially responsible entrepreneurship for the Slovak conditions.

Keywords: risk management, enterprise, social responsibility, environment

JEL Classification: M14, M21, F64

1. Introduction

The importance of the responsible entrepreneurship is growing with the development of globalisation and informatisation of the society. The enterprises can move and develop their entrepreneurial activities anywhere in the world if they acquire better conditions (cheap labour, low taxes or developed infrastructure). The access to information and its utilisation forces the companies to realise their activities in such a way that their reputation will not be damaged (Havko et al., 2017). The society starts orienting on the quality of life and the overall influence of the entrepreneurship on the society.

Currently not only the socially responsible entrepreneurship but also the need and importance of the risk management in the company are coming to the foreground. Especially due to the fast changes in the global entrepreneurial environment, the consequences the global financial crisis as well as various legislative measures. The risk in the entrepreneurial environment is not perceived only from the point of view of the negative side, i.e. through threats but also through the positive one, i.e. opportunities. Therefore the contemporary conceptions of the risk management show the necessity of a broader view at the risk.

The goal of this article is to design a procedure of implementing the risk management in connection with the area of the socially responsible entrepreneurship in the conditions of Slovakia; from the assessment of the shortages of implementing the risk management of the companies and the evaluation of the current attitude of the managers to the risks in Slovakia.

2. Methods

Defined scientific objectives and basic scientific methods were used for creating this article and the observation and analysis during collecting the data about the qualitative and quantitative side of the investigated problem as well. The comparison and synthesis of the data during comparing and generalising the data were utilised too. Except for these methods results of other scientific procedures, e.g. research realised by other organisations and recommending methods of the risk management process – the analysis of the internal and external environment, assessment, risk management, etc. – were implemented.

3. Results – Current state of the risk management in the enterprises and the social responsibility of the companies in Slovakia and abroad

3.1 Risk management in the companies abroad and Slovakia

The company risk management is currently perceived as a continuous process which continually develops together with the enterprise facing new and unforeseeable risks (Hopkin, 2013). The risk management has passed certain development during its existence. It can be investigated either from the theoretical or methodological point of view, however, never separately from the development in practice implemented risk management conceptions. For the time being the risk management passes from its traditional understanding towards more comprehensive conceptions for the purposes of a broader utilisation of the risk management opportunities and improving the quality of the decision-making processes in the framework of the whole enterprise (Broll & Mukherjee, 2017). From the point of view of the long-term strategy of a company´s successful operation the implementations of the new approaches of the risk management become one of the **competitive advantages and tools for increasing the company value in the current world of uncertainty**. According to Brachert (2017) the new approach to the risk management is oriented on creating and managing the business. It is an integrated approach oriented on the negative and positive deviations from the planned state, an active and proactive, continual, value-based one aimed at managing the processes in the whole company. According to Broll, Mukherjee, (2017) currently it is not sufficient if we have the mission, policy and the risk strategy in the company. The enterprise has to possess a system of monitoring to find out if the objectives are fulfilled and which risks can threaten their fulfilment. This type of management can be called a **proactive one**. The global investigations about the state of the risk management implementation (ERMI, 2015) show that the companies attempt to implement effectively the integrated approach to the risk management although they have some problems with this process. The companies involve the top management to inspection processes of the risks. It is informed about the most serious risks. The risk strategies are linked with the strategic planning of the company. On the other hand, only half of the companies believe that the risk management system is an important competitive tool in the enterprise. They are missing any support for the early identification of the risks in the enterprise and do not provide enough trainings or consultancy in the risk management area. The companies worldwide face similar risks; however, the perception of the risks is different on individual continents. The majority of the enterprises think that the implementation of the risk management regarding the current risks has big shortages. Approximately one third of the companies in Europe, Asia, Australia, Africa and Middle East believe they have implemented the risk management in their enterprise correctly, compared with America – 24 %. Most companies have integrated the risk management in the strategic planning – in Europe 42 %, Asia and Australia 44 %, Africa and Middle East 47 %, however, in America it is only 26 % (ERMI, 2015). According to the research in Slovakia and also some authors dealing with the risk management area, e.g. (Kuliš, 2011), (Hudakova, 2010), (Kral & Kliestik, 2015) the approach to the risk management is (compared with the developed countries) less systematic and is implemented with certain reserves. The companies are missing the overall framework of the risk management which is not sufficiently linked and works without any connection with the company strategy. It faces problems in the area of the content definition, responsibility for the risks; the early identification as well as the orientation on identifying the source of the risks is also missing. The majority of the enterprises are aware of the risk in the company, but the importance of the entrepreneurial risk is perceived with different intensity and the solutions are often limited on informal assessments of the risks. In practice it is not obvious that the procedures and coping with risks are a normal part of the important managerial decisions. The risk management is limited only on the financial and investment risks of the company (Virglerova et al., 2016). According to Kruliš (2011) currently no purposeful and systematic identification of the company risk management processes is carried out and the risk rate is not assessed. The individual segments of the management are not evaluated and managed as a whole (system) and in mutual interconnections. The company management does not emphasise sufficiently the area of prevention, the correct approach to the risk management and in this way it creates an unsuitable corporate culture for the risk management (Vodak et al., 2014). The underestimating of the risks results in a limited orientation in using the methods and tools of the risk management. The possible reason is also the fact that the companies use the risk management too late, after they have problems and they solve the consequences and not the prevention. The Slovak managers are missing practical instructions how to implement the risk management system in the companies effectively. The enterprises do not recognise the risks and opportunities of the processes as well as the real and key risk indicators. The managers have an exaggerated confidence that all problems will be solved in time and without any bigger losses after they appear. In some companies the risk management is only part of emergencies and unexpected events (Kozubíková et al., 2015).

3.2 Corporate Social Responsibility in Slovakia and abroad

The corporate social responsibility (CSR) or responsible entrepreneurship approaches are doing business as a society-friendly activity. The main idea is to carry out the entrepreneurial activities in such a way that also the wide company environment (interested parties), e.g. the employees, customers, owners, shareholders, suppliers, competitors, bodies of the public administration, state and local community could have profit from them (Feng et al., 2017). These activities are mostly carried out beyond the framework of the corresponding legislation and support the positive social and working atmosphere. The social responsibility of the companies is based on the sustainable development whose basis is created by three basic pillars: the economic, social and environmental ones (ISO 26000, 2010). These pillars comply with the characteristics called 3P – the triple-bottom principle. The profit, people and planet. The economic pillar is based on building particular relations between the company and interested parties. The social pillar is based on creating and developing relations with the employees and the environmental one on the responsible approach to the environment. It is necessary to analyse the current situation of the enterprise not only from the point of view of all three pillars but also from the relation with the stakeholders and to create a comprehensive characteristic of the company´s current situation. In 2016 an internet questionnaire research Bayer Barometer (2016) with the goal to find out the attitude of Slovaks to innovations and scientific development was realised. The research also solved the issue of the socially responsible entrepreneurship in Slovakia. 501 people older than 18 years participated in the event. The research results (Bayer barometer, 2016) confirm that 73 % of the addressed Slovak citizens think that the socially responsible entrepreneurship can effectively complete the role of the state. According to the research the biggest benefit of the CSR is in the area of health-care - 38 % of the participants. 34 % Slovaks consider the benefit in the area of ecology in protecting the country, environment and recycling. Further assessed areas were the economy (29 %) and education (16 %). Other areas covered 23 % (Bayer barometer, 2016). Several foreign studies show (The Importance of Corporate Social Responsibility, 2017) that more than 50 % consumers are willing to buy in such companies whose strategy or a particular CSR programme is adjusted correctly. The socially responsible entrepreneurship helps not only acquire high-quality employees but also keep them in the company. This trend is an assumption of success of many multinationals which regularly publish their VSR reports on their web sites, e.g. Target, Toyota, Google, Nike, Disney, IKEA, etc.

4. Discussion

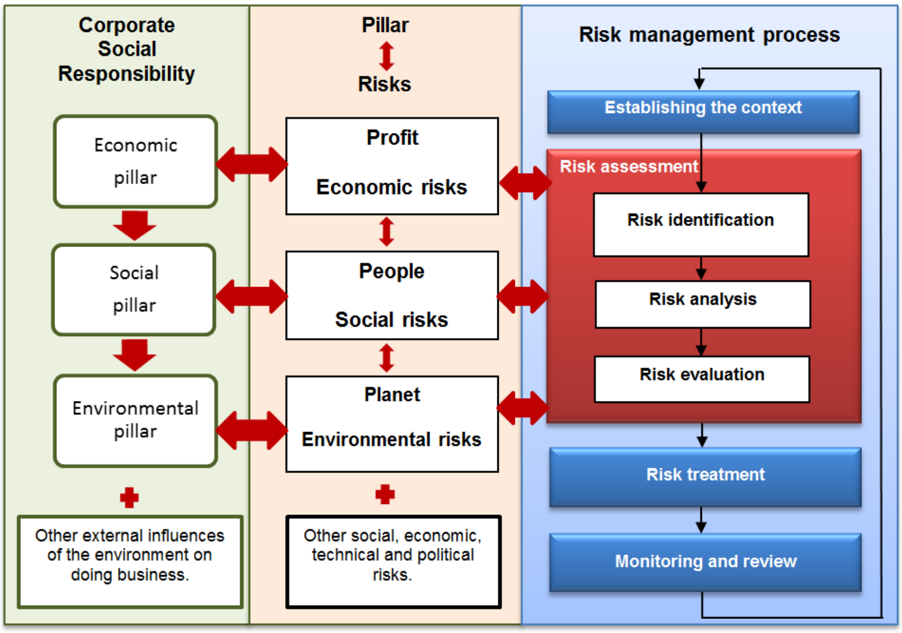
Currently the basic assumptions of the socially responsible responsibility of the companies are: the triple-bottom line, part of the corporate culture, voluntary character, collaboration with the stakeholders, system approach, proactive approach and development of the quality of life (Beschorner & Hajduk, 2017). The corporate social responsibility departments are becoming an integral part of the contemporary business organisations. This change is the result of an evolving business paradigm that integrates the economic performance, social accountability and environmental impact.

The investors, customers, shareholders, local community and other key stakeholders are calling for more responsible ways of doing business, following a triple bottom line approach. The socially responsible entrepreneurship emphasises the **proactive approach**. Its support for safe entrepreneurship as well as other advantages of this approach opens space for a better **risk management implementation** in the company which also currently prefers the proactive approach. The company should orient its activities towards the proactive approach, i.e. it should build a monitoring system to find out if the objectives are fulfilled and which risks can threaten its fulfilment (De Oliveira et al., 2017).

The strategies of the responsible entrepreneurship and risk management linked and optimised – e.g. the consumed time, costs or personal resources. The risk management process is based on a systematic implementation of policy, strategy, procedures of assessing and managing risks, communication with the concerned parties and monitoring the changes of the environment.

The steps of the risk management have a cyclic character and logical linkage and are adapted to the particular processes being assessed. Based on the three basic pillars of the socially responsible entrepreneurship (triple-bottom line) the designed procedure should be the implementation of the risk management oriented on assessing and managing the risks especially in the area of finance, HR and the environment quality. From the point of view of globalisation it is also necessary to evaluate and manage the risks in the social, technical, economic and political environment of the country where the enterprises realise their entrepreneurial activities, the figure 1.

Figure 1: Linkage of the risk management and socially responsible entrepreneurship



Source: elaborated by authors

The designed procedure of implementing the risk management linked with the socially responsible entrepreneurship is based on the risk management process according to the standard ISO 31000:2009 Risk Management. It consists of the following steps:

- In the first step – **creating the linkages** – it is necessary to emphasise those risks which affect the entrepreneurial subjects in the global entrepreneurial environment. These risks differ in dependence on the orientation of the entrepreneurial activities of the companies. However, the basic risk sources can be categorised according to three CSR pillars, the table 1.

Table 1: Important risks ranked according to three pillars of the socially responsible entrepreneurship

Risks in the framework of the economic pillar	**Risks in the framework of the environmental pillar**	**Risks in the framework of the social pillar**
Growth of prices of selected raw material and energy	Water pollution	Increasing unemployment
Business activities abroad	Air pollution	Insufficient social care
Insolvency and indebtedness	Producing communal and industrial waste	Low standard of living and quality of life
Changes of the interest rates and exchange rates	Seizing arable land	Disrupting the human rights
Inflation	Risk of damaging the human population	Migration
Monetary and budget policy	Natural disasters	Changes of social relations in individual countries
International relations of selected countries – threats of the external and internal pressures	Technological disasters	Increase of vulnerable groups of inhabitants

Source: elaborated by authors

- In the step identifying the risk it is necessary to identify not only the risks but also their sources. Based on these facts it is very important for the companies performing on the global markets to know the risks resulting from their entrance and performance on these markets. It is possible to utilise the current analyses used for the needs of the company management for identifying the risks or to complete them by analyses from the point of view of the needs of the risk management.
- In the step risk analysis it is necessary to process the analysis of the identified risks by a pair of criteria, i.e. the probability of the occurrence of the together with the consequence. The mutual Cartesian product of the criteria represents the resulting assessment (points), i.e. the level of the risk. The level of the risk states the priority of the risks, i.e. in which extent the risks can affect the objectives of the processes and the enterprise. It is possible to use the qualitative, semi-quantitative and quantitative methods as well as modelling and software tools for support of making decisions in dependence on the type of the risks being analysed for the needs of the risk analysis.
- In the step risk assessment it is necessary to state if the risk is acceptable for the company or measures for its reduction are to be implemented. Here it is very important to state the real boundaries of acceptability (tolerance). The assessment can be strongly affected by the subjective approach of the evaluator therefore the usage of a collective decision-making method is preferred. The risk acceptability should be based on the routine company or general principles, e.g. the principle ALARP (As Low As Reasonable Practicable) can be used.
- In the step dealing with risks or risk management it is necessary to state the selection of measures for reducing the risks to an acceptable level, their assessment , preparation of the plans (scenarios) for reducing the risks and their implementation. As a matter of fact the risks should not be always minimised in their essence but optimised. The reason is if a company wants to be successful and to create profit, it has to undergo a certain risk. The risks should be managed in such a way that it will be possible to achieve a value determined in advance.

- In the last step - inspection and monitoring of the risk – it is necessary to ensure the whole risk management system to be investigated but the communication of the consultancy and reporting has to be effective. The managers should ensure inspection and monitoring of the state of the risk identified, the designed measures for reducing the unacceptability of the risks, checking the effectiveness and efficiency of the risk management system and fulfilling its plan from the point of view of sustainable improvement. The inspection can be carried out internally or externally. The internal inspection carries out the checking activities and the external inspection is realised.

In the global competitive environment regarding CSR it is necessary to emphasise especially the identification of the needs and values of the stakeholders and their perception of the company for working out the communication method with other parties which, as a result, can increase the effectiveness of the risk management.

5. Conclusion

The globalisation in the framework of deterritorialising the economic activities currently affects especially the area of culture, legislation and responsibility. The companies are active on the foreign markets more and more frequently and are often confronted with new and diverse ethical requirements; the moral values which are commonplace on the domestic market are disputed as well as making decisions about correctness or incorrectness of the business procedures in a different legal framework. Just here the risk management is coming to the foreground where prevention and a thorough analysis of the entrepreneurial environment enables identifying the risks and preparing for the conditions and decisions which the global competitive environment is bringing. The method of implementing the risk management is individual for the companies in dependence on their orientation and objectives they have for its implementation both for fulfilling the legislative requirements or satisfying the needs of the stakeholders. The designed procedure of the risk management implementation linked with the socially responsible entrepreneurship can become an assumption for successful development of the company which takes into account the influence of important factors, e.g. voluntariness, the orientation on the economic, environmental and social area, improvement of quality of life, systematic long-term management, incorporation to the corporate culture of the organisation and wide-spectral approach to the stakeholders.

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POLICY AND CLUSTER SUPPORT IN V4 COUNTRIES IN GLOBAL WORLD

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Abstract. The development of clusters is increasingly important in addressing regional development issues in individual countries of Europe, and therefore it is necessary that proper support be given to it both by the government and the economic and political spectrum as well. An indispensable prerequisite for the successful operation of companies in any area is the building of different connections between companies, between companies and customers or suppliers. These links mean that companies create certain mutual groupings. These groupings are usually formed between companies with a similar sectoral orientation or within a geographic affinity, thus creating the so-called clusters. The affinity of companies brings different benefits to members of these clusters - for example, in the form of positive externalities. Effective clustering can have positive effects for national economies, notably in the form of increasing of company performance and competitiveness. In dynamic world of today, where globalization is pushing to the foreground, it is essential to address the issues of cooperation that will ensure the development of the country and increase its position on the world market. Success in global markets is determined the competitiveness of individual countries. Country competitiveness as a tool for building a position in relation to other countries of the international market is currently being created and maintained mainly through innovation and regional development. The cluster policy is one of the instruments of development policies in the individual countries of the world, including those of the European Union. Slovak Republic, as part of the Visegrad Four (V4), does not have a unified system to support the formation and development of clusters and national cluster policies. We consider the comparison of cluster policy and cluster support in the V4 countries to be an incentive to further improve of the functioning clusters.

Keywords: cluster, cluster policy, region, V4 countries, globalization

JEL Classification: P1, P13, P25

1. Introduction

Úspech na globálnom trhu je podmienený konkurencieschopnosťou jednotlivých krajín. Konkurencieschopnosť krajiny ako nástroj na budovanie pozície vo vzťahu k ostatným krajinám na globálnom trhu je v súčasnej dobe vytváraný a udržiavaný najmä prostredníctvom inovácií. V súčasnej fáze vývoja postindustriálnej spoločnosti a svetovej ekonomiky procesy globalizácie a špecializácie národných trhov výrazne zvyšujú konkurenciu medzi krajinami, regiónmi ako aj jednotlivými výrobcami v rámci krajiny tvrdia (Lee et al., 2009) Na to, aby podniky boli úspešné pri svojich inovačných aktivitách je potrebné, aby medzi sebou vytvárali určité spojenia. Tieto spojenia môžu prerásť do tzv. klastrov. V klastri ide o koncentráciu podnikov a rôznych inštitúcií s rovnakým alebo podobným sektorovým zameraním zvyčajne v geografickej blízkosti. (Štofková et al., 2015) Pôsobenie jednotlivých firiem a inštitúcií v klastri môže mať za následok efektívnejšie fungovanie, aby mohli subjekty vystupovali na trhu samostatne (Eraslan et al., 2016). V záujme štátov je mať čo najviac rozvinuté konkurenčné regióny či vyspelú vedu a výskum s využitím znalostného manažmentu. (Stofkova & Stofkova, 2010) Tieto pozitívne efekty môže verejný sektor napĺňať prostredníctvom cielenej podpory (politiky) v oblasti klastrov pripomínajú (Vivas-López et al., 2015). Aj klastrová politika je vnímaná odbornou verejnosťou rôznorode. "Klastrová politika je definovaná ako špecifická vládna snaha na podporu klastrov. Klastrová politika nevystupuje samostatne, ale je integrálnou všetkých politík, ktoré majú vplyv na pôsobenie klastrov na danom území uvádza (Breznitz, 2013). Klastrová politika musí byť predovšetkým prispôsobená zvláštnostiam regiónu, jeho podnikom a inštitúciám. Mala by stavať na doterajších silných stránkach regiónu, ako sú kompetencie a siete vzťahov, ktoré sa rozvinuli za dlhé roky, a predpokladané technológie budúcnosti, ako služby blízke výrobe, informačné technológie a biotechnológie. (Butek & Stofkova) Klastrová politika by teda mala stavať na stávajúcich silných stránkach miestnej kultúry a zavedených technológiách. (Yoon, 2017).

2. Klastrová politika a globalizácia

Z hľadiska globálnej klastrovej politiky hrá podľa (Skokana, 2004) významnú rolu **Inštitút konkurencieschopnosti** (**The Competitiveness Institute – TCI**). TCI je popredná svetová sieť určená odborníkom, politikom, výskumníkom a obchodným vedúcim pracovníkom, ktorá prispieva k zlepšeniu konkurencieschopnosti v regiónoch i klastroch. (Machan & Chester, 2016). Táto inštitúcia je otvorená všetkým členom zo všetkých krajín celého súkromného, verejného aj neziskového sektora a je financovaná z ročných členských príspevkov. Hlavným poslaním TCI je podľa (Šmída, 2011) zber a výmena informácií v oblasti rozvoja klastrov po celom svete, a tým podporovať konkurencieschopnosti založené na klastroch, podporiť metodológiu pre posilnenie konkurencieschopnosti klastrov a zvýšiť profesionálnu úroveň klastrových odborníkov. Autor (Liu, 2015) považuje za prelom v rámci globalizácie a znalostnej ekonomiky kreatívny priemysel, ktorí sa podľa nich stal základným celkom v ére novej globálnej ekonomiky. S týmto názorom sa nestotožňuje (Feng, 2014), ktorý tvrdí, že jedným z najdôležitejších článkov globálnej klastrovej politiky je práve priemyselný klaster. Každopádne národné a regionálne vládne organizácie v globálnom meradle považujú potenciál klastrov za hnací motor regionálneho rozvoja. (Daneshjo et al., 2016) Verejný sektor môže konkrétnymi aktivitami zlepšiť rozvoj klastrov, a tým posilniť miestne ekonomiky, tvoriť nové miesta a lákať tak nových investorov. Aj vďaka tomu sa v posledných rokoch zväčšuje počet klastrových iniciatív. Niektoré krajiny začleňujú klastrovú politiku do národných rozvojových programov, iné krajiny aplikujú priamo regionálne rozvojové modely uvádza (Liu, 2009). Podnikateľské klastre majú veľmi vyspelý politický program, len zriedkavo stotožnený s tradičnou politikou územia tak ako aj regionálnou, inovačnou a priemyselnou politikou. (Benedikter, 2016). Niekedy ide o jednoduchý tradičný politický zámer, ale vo väčšine krajín nový mikro-sústredený program, ktorý sa rýchlo stáva novým politickým vzorom – odporujúci starému politickému vzoru založenom na podpore a pomoci zvyšovania konkurencieschopnosti znižovaním nákladov dodávajú (Audretsch & Bonser, 2002). Proces globalizácie zvyšuje nadvládu nadnárodných korporácií, čo vedie k prísnejšej konkurencii na svetových trhoch. Podľa (Cornetta, 2014) teória Michaela Portera odzrkadľuje tento proces a definuje zoskupenie ako modernú formu medzinárodnej súťaže. Klastra môže byť preskúmaná na jednej strane ako typ geografickej organizácie moderného podnikania a na druhej strane je fenoménom, ktorého rozvoj zvyšuje konkurencieschopnosť krajiny na svetovom trhu. Úspešné globálne klastre ponúkajú podľa (Sabadka, 2011) zúčastneným spoločnostiam mnoho konkrétnych prínosov:

- **klaster poskytuje úspory z rozsahu a znižuje náklady,** – poskytuje podnikom príležitosť dosiahnuť kritické množstvo v kľúčových oblastiach, čo im prináša úspech, ktorý by nebol možný, keby pracovali izolovane a spoluprácou môžu firmy otvárať nové trhy a znižovať náklady,
- **klaster znižuje obmedzenia menších firiem a zvyšuje špecializáciu,** – môže združovať firmy z rôznych článkov hodnotového reťazca a umožňuje tak menším firmám, aby sa špecializovali a spolupracovali pri konkurencii proti väčším, vertikálne prepojeným firmám a spolupráca s väčšími spoločnosťami zasa poskytuje menším firmám mechanizmus prístupu k medzinárodným sieťam väčších spoločností v klastri,
- **klaster zvyšuje miestnu konkurenciu a rivalitu a tým globálnu konkurenčnú výhodu,** - pričom rivalita podporuje vo firmách inovácie, pomocou ktorých sa snažia zlepšiť svoju efektivitu a konkurencie schopnosť, aby sa udržali v zoskupení
- **klaster zvyšuje rýchlosť prenosu informácií a technológií,** - čo nastáva v dôsledku blízkosti firiem, silných väzieb medzi nimi a vysokej konkurenčnej podstaty klastra,
- **klaster zvyšuje moc a hlas menších firiem,** - keďže pomocou vytvárania siete sú menšie firmy schopné ovplyvňovať udalosti a lobovať u vlády za zlepšenie služieb a infraštruktúry,
- **klaster podnecuje vládu k investíciám do špecializovanej infraštruktúry,** – keďže vďaka jeho viditeľnosti ako aj vďaka nákladovej efektivite a vyššej návratnosti investícií sa tieto investície ľahšie zdôvodňujú, pričom špecializovaná infraštruktúra by mohla zahrňovať zriadenie školiacich stredísk, technologických inštitútov, vládou podporovaného výskumu a vývoja a či zabezpečenie nákladného zariadenia potrebného pre miestny priemysel,
- **klaster umožňuje efektívne prepojenie a partnerstvo,** - nakoľko jeho viditeľnosť a dôležitosť môže tiež podnietiť reakciu akademických inštitúcií vo vzťahu k vytváraniu partnerstva s miestnym priemyslom a pritom iniciatíva klastra môže poskytnúť podnikom, ktoré si obyčajne konkurujú, neutrálne fórum pre informovanie sa o spoločných problémoch a možnostiach bez obmedzenia ich schopnosti konkurovať.

3. Prípadová štúdia

Spoločným problémom mnohých krajín sveta je podľa autoriek (Potomovej & Letkovej, 2011) fakt, že mnoho malých podnikov váha pripojiť sa do siete alebo inej formy spoločného podnikania na báze spolupráce. Tieto podniky majú často averziu voči riziku a bránia sa prijať pomoc z vonku, s výnimkou konkrétnych potrieb. Obávajú sa príliš dôverovať svojim dodávateľom a tiež im chýba motivácia pre spoločnú spoluprácu vo výskume a vývoji. (Stofkova, 2015) To sa však netýka krajín V4, ktorá úspešne implementovala klastre do chodu národného hospodárstva všetkých štyroch krajín. (Vochozka, 2010). Základné údaje o komparácií krajín V4 sú v Tab.1. Jedným z dôvodov nekonzistentného úspechu existujúcich rámcov klastrovej politiky pri správe výkonnosti klastrov je skutočnosť, že klastre sú často na rôznych úrovniach a budú si vyžadovať rôzne stratégie na vytvorenie, posilnenie a udržanie ich konkurenčnej výhody (Aziz & Norhashim, 2008). Skúsenosti "štátov hospodárskej súťaže" v UK a USA podľa (Phelpsa, 2008) poukazujú skôr na potenciál čiastočnej internalizácie alebo "zachytenia" miestnych inštitúcií a výdavkov na kolektívnu spotrebu, než na externalizáciu spojenú s klastrovaním. (Rahman et al., 2017).

Table 1: Komparácia klastrov krajín V4

Ukazovateľ	**Slovenská republika**	**Česká republika**	**Poľská republika**	**Maďarská republika**
Počet obyvateľov (v mil.)	5,43	10,55	38,49	9,91
Rozloha územia (v km2)	49 035	78 886	312 679	93 036
HDP na obyvateľa (USD)	29 10	32 759	26 261	25 799
Právne formy	občianske združenia, záujmové združenia právnických osôb	občianske druženie, a.s., všeobecne prospešná spoločnosť, družstvo, záujmové združenie právnických osôb	konzorcium, združenie, s. r. o., nadácia, a.s., obchodná komora	
Počet klastrov	okolo 50 (aktívnych 20)	cca 80 (aktívnych 51)	cca 134	34 (akreditovaných)
Zameranie	turistické a technologické (v prevažnej miere)	celoodvetvovo (drevársky, automobilový...)		
Vládne agentúry zastrešujúce klastre	SIEA	CzechInvest	Poľská agentúra pre rozvoj podnikania, Ústav trhovej ekonomiky	Centrum ekonomického rozvoja Maďarska (MAG)
Organizácie zastupujúce klastre	Únia klastrov Slovenska	Národní klastrová asociace		
Financovanie	členské príspevky, medzinárodné projekty	fondy EÚ, operačné programy		
Zodpovedné ministerstvo	Ministerstvo hospodárstva SR	Ministerstvo průmyslu a obchodu	Ministerstvo regionálneho rozvoja, Ministerstvo hospodárstva	Ministerstvo ekonómie Maďarska
Strategický dokument	Inovačné politiky SR	Národní klastrová strategie	Smernica a prognóza Poľskej klastrovej politiky do roku 2020	Szechenyi plán 2020
Podpora klastrov	po r. 2005	po r. 2000	po r. 2005	r. 2000

Source: own proceesed according to Repák (2017)

Pri komparácií pohľadu na klastre v podmienkach Českej republiky a Slovenska treba brať do úvahy, že Česká republika má vyspelejšiu ekonomiku (HDP na obyvateľa 33 200 oproti 31 200 na Slovensku). Z hľadiska počtu obyvateľov má Česká republika viac takmer o 5 miliónov. Slovenská republika sa rozprestiera na území o takmer 1,6 násobne menšom ako Česká republika. Z hľadiska kritéria počet klastrov môžeme vidieť značný rozdiel medzi Českou republikou a Slovensku. V Česku bolo evidovaných približne 80 klastrov a klastrových iniciatív od začiatku existencie, avšak podľa štúdie Univerzita Tomáše Bati v Zlíne je ich aktívnych 51. V Slovenskej republiky bolo identifikovaných doteraz okolo 50 klastrových iniciatív, avšak niektoré nejavia aktívnu činnosť. Reálne môžeme hovoriť približne o 20 klastrových iniciatívach.

Vznik klastrov v Českej republike je založený skôr na systéme "zhora dole" (vďaka podpore z fondov EÚ), naopak na Slovensku vznikali klastre prirodzenou cestou (tzv. "zdola hore"). CzechInvest je vládna agentúra, ktorá vykonáva podporu klastrov a klastrových iniciatív v Českej republike, obdobnú činnosť vykonáva na Slovensku SIEA. Zatiaľ čo slovenské klastrové iniciatívy v prevažujúce miere využívajú 2 právne formy (záujmové združenia právnických osôb a občianske združenia), tak v Českej republike vďaka pružnejšej právnej úprave sa využívajú hlavne tieto právne formy - občianske združenia, družstvá, všeobecne prospešná spoločnosť, akciová spoločnosť alebo aj záujmové združenie právnických osôb.

Exaktné vymedzenie klastrovej politiky ako samostatnej politiky v legislatíve Poľskej republike dosiaľ nebolo vykonané. Poľská právna úprava zatiaľ nepozná pojem klaster. Klastrová politika sa radí v Poľsku do jednej z oblastí inovačnej politiky. Význam a dôležitosť pre poľskú ekonomiku v podobe klastrov bola zadefinovaná v širokej škále strategických vládnych dokumentov. Formovanie klastrovej politiky sa v Poľskej republike uskutočnilo v rámci troch fáz (2004-2006, 2007-2013, 2014-2020). Právne formy klastrov v Poľsku majú väčšiu variabilitu ako na Slovensku, kde prevládajú hlavne občianske združenia a záujmové združenia právnických osôb (viď Tabuľka 1). Taktiež môžeme vidieť rozlíšenie podpory klastrov z hľadiska vplyvu na ekonomiku Poľska (kľúčové národné, regionálne, lokálne) na Slovensku takéto rozdelenie neexistuje. Strategickým dokumentom, ktorý upravuje klastrovú politiku Poľska je Smernica a prognóza Poľskej klastrovej politiky do roku 2020, na Slovensku absentuje takýto druh dokumentu.

Rozvoj klastrovej politiky začal v Maďarsku oveľa skôr, datuje sa už do deväťdesiatych rokov, na národnej úrovni začala podpora po roku 2000. Tento rozdiel v podpore sa zatiaľ medzi oboma krajinami nepodarilo znížiť. Založenie prvého klastra prebehlo v roku 2000, na Slovensku v roku 2004. Akreditovaných klastrov v Maďarsku bolo do dnešnej doby 34. Avšak negatívnym javom v oboch krajinách je fakt, že absentuje národná klastrová stratégia, ktorá by upravovala celú problematiku klastrov. Zodpovedným ministerstvom v Maďarsku za oblasť klastrov je Ministerstvo ekonómie, pod ktoré patrí aj vládna agentúra Centrum ekonomického rozvoja Maďarska (MAG). Výrazným prínosom pre problematiku klastrov v Maďarsku je, že existuje 4 úrovňové rozdelenie klastrov podľa ich rozvoja, taktiež systém akreditácií klastrov možno považovať za pozitívny prvok v tejto oblasti. V súčasnosti evidujeme v Maďarsku 34 akreditovaných klastrov. 1. založený klaster v Maďarsku bol PANNON Automotive Cluster v roku 2000 z iniciatívy Ministerstva ekonómie Maďarska. Hlavnými účastníkmi boli 3 automobilky v Maďarsku (GM, Suzuki a Audi) a ďalšie malé a stredné podniky. Z hľadiska odvetvového zamerania prevládajú v Maďarsku výrobne orientované klastre, ďalej veľké zastúpenie majú klastre zaoberajúce sa výskumom a vývojom, IT technológiami alebo vyskytujúce sa v službách. Na Slovensku akreditácia klastrov ani rozdelenie či už z národného alebo regionálneho pohľadu alebo úrovne rozvoja klastrov chýba.

4. Conclusion

Status klastrovej politiky ako dôležitého elementu regionálnych a celonárodných ekonomických programov sa neustále zvyšuje. Zatiaľ čo rozvinuté európske štáty (hlavne západoeurópske) pochopili význam a dôležitosť klastrovej politiky už v období 90. rokov 20. storočia, štáty tzv. "východného bloku" (krajiny V4) si začali osvojovať agendu klastrov a klastrových politík až začiatkom nového milénia. Vnímanie klastrovej politiky sa v jednotlivých krajinách značne odlišuje.

Ekonomiky štátov Vyšehradskej štvorky počas svojej transformácie museli čeliť dramatickým štrukturálnym zmenám, ktoré sme v práci opisovali pri komparácií. Môžeme skonštatovať, že proces globalizácie, vedie k univerzalizácii svetovej ekonomiky a zároveň pôsobí ako proces diferenciácie, ktorý má za následok jej rozklad na menšie hospodárske celky. Súčasťou tohto pojmu je aj integrácia, ktorá je využívaná nie len na makroekonomickej úrovni, ale aj na mikroekonomickej úrovni. Tu je integrácia chápaná ako proces zbližovania funkčných jednotiek v organizácii. Zo systémového hľadiska moderného manažmentu ide o umenie nahradiť „negatívnu kooperáciu“ (boj, súperenie, konkurenciu) jej protipólom, t.j. „pozitívnou kooperáciou“ (spoluprácou, alianciou, klastrom).

Klastre podporujú rozvoj výskumu a v neposlednom rade podporujú aj rozvoj regiónu. Na druhej strane rozkladajú náklady na podporu inováciu a tvorbu novej spolupráce. Priťahujú nové investície do regiónu, čím pôsobia aj na investičnú politiku. Spolupôsobením v klastri sa tak podniky ako aj krajiny na globálnom trhu stávajú konkurencieschopnejšími.

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COUNTRY RISK ON GLOBAL STOCK MARKET

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Abstract: The stock market in each country has its own specific features compared to the global equity market. These differences reflect the different risks for investors who invest within one of the national stock market. Higher risk in the stock market is reflected in the summary of aggregate - increase price volatility, as well as the low liquidity of the market. Currently, we can find several research studies which examine the mutual and empirical relationship between country ratings and the components of stock market volatility. This relationship is examined in respect of individual countries, as well as in relation to global equity markets, as also from the perspective of both the short term and the long term. The purpose of this paper will be to examine the sensitivity of stock market volatility in select countries, in relation to their credit, economic or financial risks. These indicators and their relation to the stock market should be considered by every investor who decides to invest in the country. Country stability as an aspect of political risk is also significant, and currently plays an important role in the allocation of investible capital among various countries. In attempting quantification of the risk in stock markets, we have focused mainly on the political impact of Brexit to the UK stock market, where the stock market is a major player in the long run.

Keywords: country risk, volatility of stock market, risk spread, financial risk

JEL Classification: G11, G12, G15

1. Introduction

In financial theory, we come across the term of country risk as a category, which includes not only economical but also political and financial risk. The International Country Risk Guide (ICRG) is the resulting category of measuring the country risk. ICRG, based on the basis scoring, determines the level of risk on the country's stock market. The ICRG index has a subset of other indices: the Economic Risk Index (ER), the Political Risk Index (PR) and the Financial Risk Index (FR). The economic risk index measures macroeconomic indicators such as GDP per capita, economic growth (GDP growth in %, annual inflation rate, state budget deficit and debt ratio relative to GDP) or balance of payments, and the political risk index takes into account the stability of the government, internal and external conflicts, level of corruption, level of judiciary and law, level of international relations, external conflicts, etc. ICRG also measures financial risk through indicators such as foreign debt (% GDP), foreign debt in relation to exports, exchange rate and so on. It can be said that the country risk covers a complex of problems that are often analysed as partial quantities, quantified by different statistical methods and econometric models.

2. Literature review

The publications of foreign and domestic authors currently encounter with the fact that specifically examines the country risk separately for the bond market and the stock market. The country risk associated to the bond market is mainly focused on the credit risk or the insolvency of the country. -Kerstin Bernoth, Jürgen von Hagen and Ludger Schuknecht (2012) stated that this risk is measured and quantified as a risk premium. Much attention was given to this issue especially in connection with the insolvency of Greece. Dionysios Chionis, Ioannis Pragidis and Panagiotis Schizas (2014) examined the impact of macroeconomic indicators to the government bond yields and growth of risk margins in Greece.

At the present, we come across the working papers, which deals with the problems of the country risk associated to the stock market. In this area, Abdulaziz I. Almahmound (2014) offered an interesting point of view that examines the relationship between country risk rating and volatility of the stock market in Saudi Arabia.

Turan G.Bli and Nusret Cakici (2010) dealt with the problem of the world market risk of the stock market. Additionally, they used International Capital Pricing Model (ICAPM) for country-specific risk. The results of their research are also important in creating an optimal equity portfolio with regard to the country-specific risk.

The stock market of Latin American is also in the centre of attention. Ephraim Clark and Konstantinos Kassimatis (2004) monitored the behaviour of Latin America's largest stock markets (Argentina, Brazil, Chile, Colombia, Mexico and Venezuela) and quantified the level of country risk and risk margins.

In advance, Marc L.Ross (2016) responded to some of the expected economic consequences of Brexit, giving some advantages but also the disadvantages and the risks of this process.

Many authors payed attention to the emerging market risk premium, with particular emphasis on low-income economies. Naumoski Aleksandar, Arsov Saso, Gaber Stevan and Naumovska Vasika Gaber (2016) quantified the risk premium on the Macedonian stock market.

Autori Chang, Chen and Zolotoy (2017) investigated the relation between the stock market liquidity and the risk of a price crash.

Relatively considerable attention was given to this issue by the well-known economist Aswath Damodaran (2003), who regularly evaluated the level of risk of individual countries in both bond and equity markets. Attention was also given to his well-known book publications dealing with credit default swaps or risk margins on the stock markets, including stock valuation in individual regions.

The approach of the authors Miloš Bikár and Martin Hodula (2016) is also interesting. They tried to prove through the Bayesian vector regression model (BAVR) that the changes in the values of the stock indices DAX 30 and FTSE 100 significantly affect the changes of the macroeconomic environment.

The article by Czech authors Marika Křepelová and Jozef Jablonský (2013), who used Markov's model, proves that under the conditions of the Czech capital market, the volatility of the stock market is also conditioned by changes in the bond market.

Authors Lopez-Espinosa, Rubia, Valderrama and Moreno, A. (2016) provide a new measure of sovereign country risk exposure (SCRE) to global sovereign tail risk, which is based on information incorporated in 5-year sovereign CDS spreads.

In article created by Scholl (2017) we can find a new stochastic dynamic politico-economic model of sovereign debt, which analyze the interaction of sovereign default risk and political turnover.

Cepni (2017) identified the macroeconomic factors which influence the sensitivity of credit default swap premium to changes in the global risk factors across emerging markets.

The exact evaluation of sovereign disaster risk finance instruments avaible to governments for funding disaster loses, we can find in paper by Clarke, Mahul and Poulter (2017).

In working paper created by Fry, John and Brint (2017) we find developed financial model to investigate whether bubbles present in opinion polls and betting markets prior to the UK's vote on EU membership on 23 June 2016.

Some authors also look at the links between various stock market anomalies in association with the risk on the stock market. Peter Árendáš (2017) quantified these anomalies using the so-called Halloween Effect.

2.1 Methodology

Currently, the Brexit issue is significantly affecting the stock market mechanism in the UK. As part of our research, we looked at the historical growth of risk margins on the stock market as well as the risks of the country. We used the historical data, which were processed by A. Damodaran since the early 20th century. We compared the obtained data with the developed stock markets of the world such as the US and Germany. From the point of view of the political risk of Great Britain, the decisive period for us was 2015–2017. For our analysis and comparison, we worked with the data FTSE, DAX, and S&P500 on a monthly basis. We illustrated these connections in the form of a graph.

Additionally, we quantified the size of the risk premium on the UK stock market and the country risk for the investor investing in this market. For this purpose, we used data on a weekly basis. We used the following relationships to quantify these variables:

$$Relative\ Standard\ Deviation_{\ country\ X} = \frac{Standard\ Deviation_{\ country\ X}}{Standard\ Deviation_{\ country\ US}} \tag{1}$$

$$Equity\ Risk\ Premium_{\ X} = Risk\ Premium_{\ US} \times Relative\ Standard\ Deviation_{\ X} \tag{2}$$

$$\text{Country Risk Premium}_{\ X} = \text{Equity risk premium}_{\ X} - \text{Equity risk premium}_{\ US} \tag{3}$$

Firstly, we presented a historical overview of the volatility of the FTSE, DAX, and S&P 500 indices from 1900–2016 to assess the level of risk on the UK stock market and also, the standard deviation, which was used for calculating the risk premium of the stock market. The calculation of risk premium is linked to the US stock market, which is also the basis for the country risk calculation. We had also put into the analysis the German market, which currently represents the most efficient stock market within the European Union. When calculating the UK risk margin, we started from the period just after the referendum (July 2017). For a more objective assessment of the expected changes, we monitored the risk premium and country risk in the three countries for the 2015 pre-referendum period and subsequently after the 2016 decision. In the light of the ongoing legislative processes, we also used the data for the first half of 2017.

Based on these relationships and the assumption that Brexit as a political decision will also influence the economic area, we can set up a hypothesis: *Before the referendum, the volatility of the FTSE was lower, indicating that even the risk premium was lower. The Brexit decision increases the risk margin.*

Derogations will be quantified for the period 2015–2017. When processing individual database data, we relied on official sources of stock exchanges in the countries concerned.

2.2 Results

For analysing the stock market growth in UK and calculating the risk margins, we used historical data from 1900–2016. In the first part of the following table, we can see a risk premium as the difference between the return on shares and the short-term government securities of T-Bills. In the second part, we can see the risk premium as the difference between the shares and the long-term government securities of G-Bonds. The basis for comparison was the aforementioned countries of the US and Germany.

Table l: Historical Risk Premiums across Equity Market 1900-2016(in %)

	Stock minus Short term Goverments				***Stock minus Long term Goverments***			
Country	**Geometric Mean**	**Aritmetic Mean**	**Standard Error**	**Standard Deviation**	**Geometric Mean**	**Aritmetic Mean**	**Standard Error**	**Standard Deviation**
USA	*5,5%*	*7,4%*	*1,8%*	*19,6%*	*4,3%*	*6,4%*	*1,9%*	*20,8%*
UK	*4,4%*	*6,1%*	*1,8%*	*19,5%*	*3,6%*	*4,9%*	*1,6%*	*17,1%*
Germany	*6,1%*	*9,9%*	*2,9%*	*31,2%*	*5,0%*	*8,4%*	*2,6%*	*28,3%*

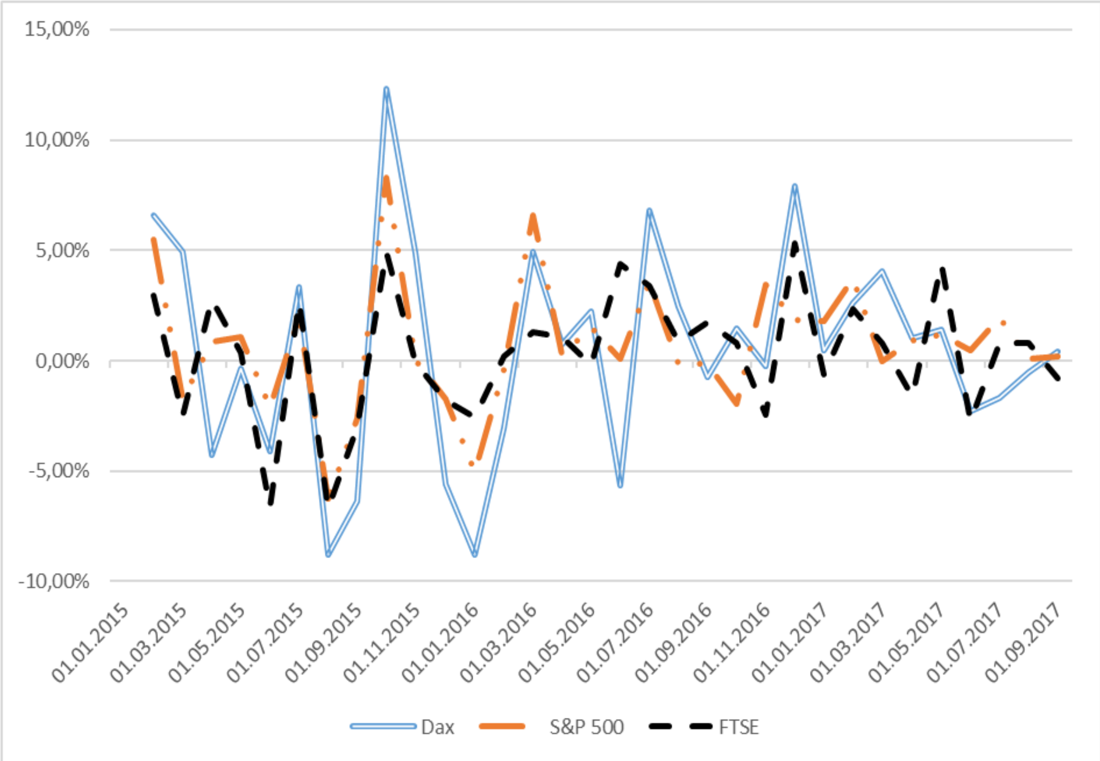
Source: Credit Suisse Global Investment Returns Sourcebook, 2016

On the next graph, we can see that the UK, compared to the US, has only minor volatility of risk premiums of stock market in the period from 1900–2016. It is also clear that risk premiums, compared to the government bonds, are even significantly lower than in the US.

Germany's stock market has a higher risk premium compared to the UK or the US market. However, it is necessary to recall that Germany's stock market does not have such a long history as other countries. In addition, after World War II, Germany had to build his economy and market from its foundations. In the 1990s, Germany performed an extensive restructuring of the economy, particularly in connection with its unification.

We analysed the volatility of stock market indices FTSE100, DAX30 and S&P500 in the years 2015–2017 (in the period of preparation for referendum about Brexit, where decisions and preparations to leave the EU was made). It can be hardly said that this political decision increased the volatility of stock index FTSE 100. Substantially higher volatility was seen not only on the DAX 30 but also on the S&P index.

Figure 2: Volatility of stock indices FTSE100, DAX 30 and S&P500 in years (2015-2017)



Source: own processing www.investing.com

The light increase of volatility of FTSE can be tracked exactly at the time of the referendum (June 2016), but these market fluctuations are comparable to other months. But the question is how the risk margin respectively indicator of country risk reacts to this situation.

$$Relative\ Standard\ Deviation_{\ country\ UK} = \frac{Standard\ Deviation_{\ country\ UK}}{Standard\ Deviation_{\ country\ US}} = \frac{22{,}8\%}{20{,}8\%} = 1{,}1\% \quad (4)$$

$$Equity\ Risk\ Premium_{\ UK} = Risk\ Premium_{\ US} \times Relative\ Standard\ Deviation_{\ UK} \quad (5)$$

$$= 5{,}69\ \% \times 1{,}1\ \% = 6{,}25\ \%$$

$$\text{Country Risk Premium}_{\ UK} = \text{Equity risk premium}_{\ UK} - \text{Equity risk premium}_{\ US} \quad (6)$$

$$= 6{,}25\ \% - 5{,}69\ \% = 0{,}56\ \%$$

These calculations are related to the period immediately after the referendum (July 2016). For a more objective assessment of the growth of risk premiums before and after the referendum, we give the following table, where we provide figures for 2015, 2016 and 2017 (only data for the first half of 2017 can be reported within this year).

Table 2: Equity and Country Risk Premium in 2015-2017

	2015		2016		2017	
Country	**Total Equity Risk Premium**	**Country Risk Premium**	**Total Equity Risk Premium**	**Country Risk Premium**	**Total Equity Risk Premium**	**Country Risk Premium**
UK	*6,44*	*0,69*	*6,82*	*0,57*	*5,97*	*0,28*
USA	*5,75*	*0,00*	*6,25*	*0,00*	*5,69*	*0,00*
Germany	*6,40*	*0,65*	*6,31*	*0,06*	*5,76*	*0,07*

Source: own processing.www.stern.nyu.edu/

At the end of 2015, the risk premium of the UK was 6.44% and of the US was 5.75%, which means that the country risk premium was 0.69% (Damodaran, A., 2016). Despite a major political decision, the UK country risk premium did not change significantly and was only 0.57% at the end of 2016. The first half of this year shows that there was a significant decline in the country risk premium in the UK to 0.28%. An even more pronounced decline occurred in Germany; the country risk premium stood at 0.65% in 2015 and dropped to 0.07% in the first half of 2017. In other words, in the US and Germany, there was a fall in the risk margin, which was obviously the result of favourable economic growth in the countries concerned.

3. Conclusion

The UK represents countries with a developed economy and a developed stock market that has a long history. At the same time, it also represents a highly developed financial centre of the world, which is also a major contributor to financial transactions within the European Union. From this point of view, we would expect the Brexit process to be reflected in the UK's economic area and the risk to increase in the stock market. From this point of view, we would expect that the Brexit process will be reflected in the UK's economic area and the risk will also increase on the stock market.

Our analysis and real-time calculations show us that the world of investments has not responded very much to political decisions in the UK. Further growth is taking place against the hypothesis formulated by us, in which we anticipated a negative intervention of the stock market, which would be reflected in the growth of the equity risk and thus, lead to an increase in the country risk premium. In other words, Brexit's determination did not lead to a fall in interest in investing in the stock market in the UK; however, we saw a decrease in risk premiums and also, in country risk of the UK. This effect can be associated to the positive growth of the UK economy as well as to the global growth of stock markets.

In conclusion, we can say that it is necessary to examine the issue of country risk as the complex of all the components of the risks on the stock market. The developed stock markets, which includes the UK, also have a high degree of confidence and built-in tools, which even with such major changes, do not lead to negative developments.

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THE CONCEPT OF AUTOMATIC DATA TRANSMISSION IN GLOBAL OPEN NETWORKS FOR THE DATA ACQUISITION SYSTEM FOR RAILWAY TRAFFIC CONTROL DEVICES

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Abstract. Civilization progress and globalization created need for development of wireless technology. This global technology should be available both for private and business users. Creation of separate system for global railway transport purposes entails huge investment in development, certification and implementation of this technology (Barazzetta et al., 2016), (Parichehreh et al., 2016). Therefore, in authors opinion, it is possible to use public open radio networks to communicate among railway transport users. Such approach can significantly reduce the cost without decreasing the safety. It is necessary to develop the transmission allowing for safe exchange of information (in accordance with railway standards) via already existing public infrastructure. Thus, this paper will presents the concept of global data transmission in open networks for diagnostic of railway traffic control devices using LTE technology. The proper diagnostic is the crucial issue which ensures the right operation of railway traffic control devices. In Poland, relay based traffic control devices are gradually replaced with computer based systems. Thus, the data transmission among modern railway traffic control devices using LTE technology is one of the main tasks of the research project commissioned by NCBiR PBS3/A6/29/2015 and realized at University of Technology and Humanities in Radom. The simulation results for different encryption methods have been presented. Based on research results the most effective encryption methods have been chosen.

Keywords: railway transport, communication, safety, LTE

JEL Classification: L92, L96, O39

1. Introduction

Civilization progress and globalization created need for development of wireless technology. This technology should be available both for private and business users. Manufacturers of communication equipment face to develop effective and safe wireless technology and introduce it into railway transport. The aim of the introduction of this technology is unification of standard using in railway transport. Application of Global System for Mobile Communications – Railway standard (GSM-R) in railway caused an integration of voice service and data transmission for railway traffic control systems. The main advantage of

GSM-R standard is its cooperation with Global System for Mobile Communications standard (GSM), what in turn allows providing voice service for passengers traveling by train. Although GSM-R ensures proper safety level and reliability for railway traffic control systems, it is not able to guarantee the same safety and reliability for the service provided for passengers (for example: Internet access, VOiP). In addition to that, in high speed train, after exceeding the speed above 250 km per hour, mobile station using by passenger covers the area being under control of base transceiver station (BTS) in very short period of time, what in turn lead to decay transmitting signal for frequency equal to 300 Hz.

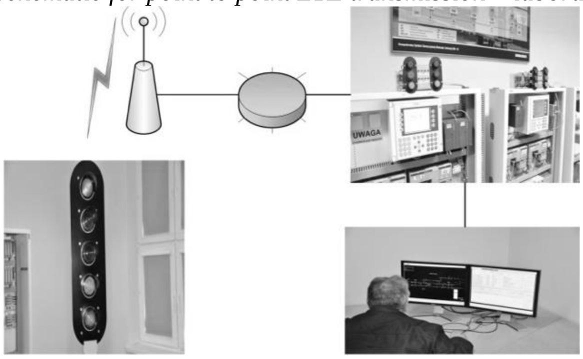
2. Data transmission in open networks in aspect of PN EN 50159:2010

Technology boom in railway traffic control systems has been observed in Poland for last few years. It was mainly trigged by EU funds donated to Poland which in turn was used to modernize railway infrastructure. Besides new railway stations and rolling stock, safe and reliable railway traffic control systems using modern communication and computer technologies also constitute significant contribution to modernization of railway infrastructure. Still in the 20th century, the railway authorities found these technologies as unsafe and were reluctant to introduce them. At present, railway traffic control systems being used in railway transport are fully computerized. These systems are either a "shell" on existing relay based control systems or autonomous microprocessors systems. All contemporary modern interlocks are based on computer technology. This technology was introduced to railway traffic control devices at the turn of the 20th century. However, the moment of introduction of modern radio based communication systems to railway transport coincides with the appearance of GSM technology. GSM technologies, due to unique requirements occurring in railway traffic control systems were adapted for railway transport purposes as a separate GSM-R standard. Unlike GSM, GSM-R is fitted with a broader band and allows for data transmission in two 5MHz channels. FM systems using in Poland on railway tracks, due to their specific modulation are not able to transmit data. However, some aspects of "data transmission" have been used in radio-stop system. GSM-R allows not only for transmission between the vehicle and the track but also between the track and track. Thus, it can be used in wireless control of railway infrastructure. Degradation in wire infrastructure connecting elements of railway traffic control systems forced railway authorities to seek a new medium - radio to control railway traffic control devices (Puttonen et al., 2010). The main problem with the implementation of this technology is the safety of data transmission. It should be noted that the radio based communication systems ensure the safe transmission, what is used in GSM_R standard. Creation of separate systems for railway transport purposes entails huge investment in design, development, certification and implementation of this technology. Thus, in author's opinion, it is possible to use public open radio networks to communicate in railway transport. Thanks to the use of already existing infrastructure, such approach significantly reduces the total cost (Shin & Lee, 2013). Development of data transmission satisfying PN EN 50159:2010 railway standard can significantly improve the diagnostic of railway trackside equipment. Due to limited access to transmitting data, they have to satisfy tough safety standards. The issue regarding the safety in railway traffic control systems is regulated by PN EN 50159:2010 standard (Baek, et al., 2014). Adaptation of open wireless communication for railway transport purposes should satisfy Safety Integrity Level (SIL) standard (PN-EN 50128:2002, 2007), (PN-EN 50129:2007, 2007), (PN-EN 50159:2010, 2010), (Rajamohan, et al., 2017). The next part of this paper will show threats caused by potential intruders and methods used to prevent the system from them. Of course, presented methods have to satisfy Safety Integrity Level (SIL) standard. The paper also gives criterions using in developing the open systems for railway traffic control systems. These criterions will be used in section three of this paper to analyze proposed communication system. Next, the solution allowing for data transmission from railway trackside devices to expert system server using LTE technology and encryption methods presented in PN EN 50159:2010 standard has also been shown.

3. Flow model of LTE radio network for railway transport needs

The system under analysis is comprised of traffic control devices located on the track (Alasali et al., 2014), (Baek et al., 2014), (Chrzan, 2013), (Dahlman et al., 2008) and the local railway traffic control hub which oversees the operation of these devices. Fig.1 presents the schematic of this system. This configuration can generate following risks: repetition of datagram, deletion of datagram, masquerade, datagram resequencing, corruption of datagram, datagram delay.

Figure 1: Schematic for point to point LTE transmission – laboratory set-up

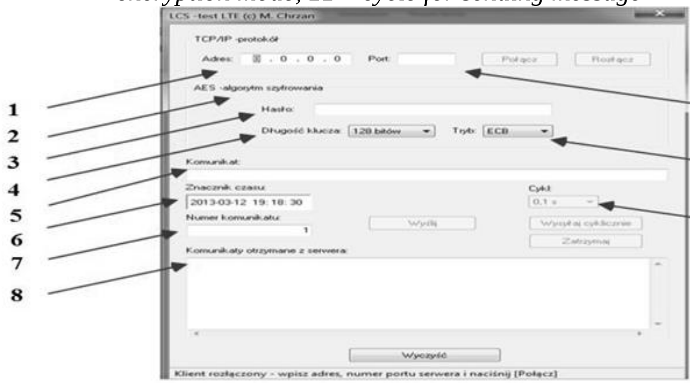


Source: self proceesed

Research conducted by authors allowed assessing delays in non-real time systems. According to authors, the system is regarded as real time system, when executes its task in the time much more shorter than execution time of processes running on this system. Calculation of mean value for network time delay has been carried out for non-real time operating system – Windows. This value is determined based on the program written by authors, which allows for B0 datagram transmission (according to PN EN 50159:2010 standard) within the area of the computer. It composes of two modules: server (simulating the operation of local railway traffic control hub) and client (simulating the operation of railway traffic control devices). The fig.2 and 3 present the server and client modules, respectively.

Datagram generated by server module is composed of: datagram number, time stamp, datagram contents, CRC suffix, encryption is based on AES standard (encryption key is equal to 128, 192 or 256 bits, ECB or CBC mode), the key is automatically generated based on password. Client module (fig.3) receives datagram, decrypts it, checks its integrity and sends acknowledgement to server module. Datagram generated by simulation program meets safety requirements for open and closed systems specified in PN EN 50159:2010 standard. The safety is strictly related to hardware and software used to transmit datagram (Chrzan, 2013). Fig.4 presents the test of delay of transmission for damage message for the length of datagram equal to 64bits.

Figure 2. Server module (1 – IP address for TCP/IP protocol, 2 – encryption mode, 3 –the type of encryption algorithm, 4 –the length of key in bits, 5- message contents 6 – time stamp, 7 – the number of subsequent message, 8 – acknowledgement in the form of copy of message received, 9 –port for the transmission, 10 – encryption mode, 11 – cycle for sending message



Source: self proceesed

Figure 3: Client module (1 –port for TCP/IP transmission, 2 – the choice of encryption algorithm, 3 – password for data encryption, 4 – the length in bits, 5 –data logging (data are logged to text file), 6 – log file contents, 7 – encryption mode, 8 –acknowledgement request

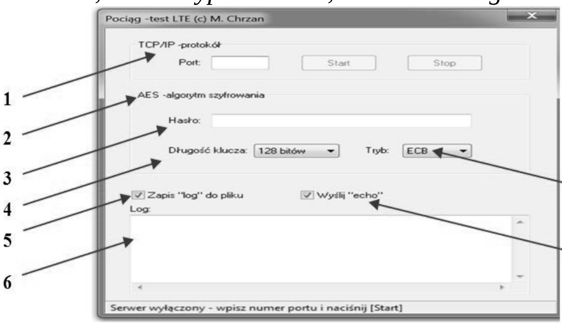


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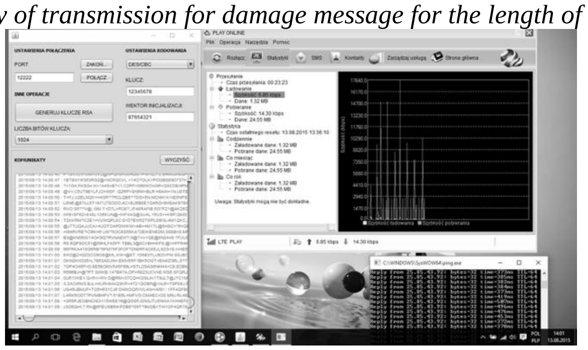
Figure 4: The test of delay of transmission for damage message for the length of datagram equal to 64bits



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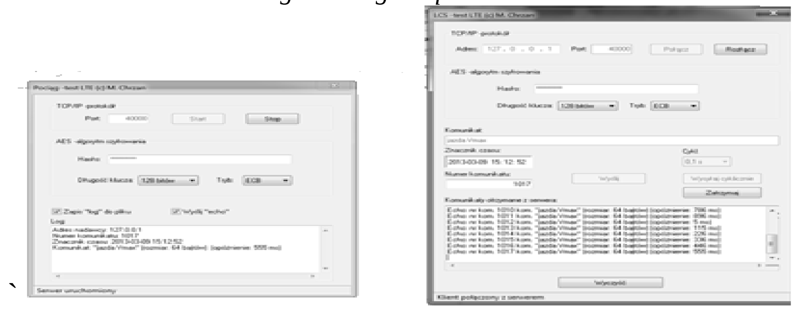
In order to satisfy safety requirements, the system developed for data transmission from the transmitter to the receiver should ensure: error detection, transition to safe state when break in transmission exceeds some assumed threshold.

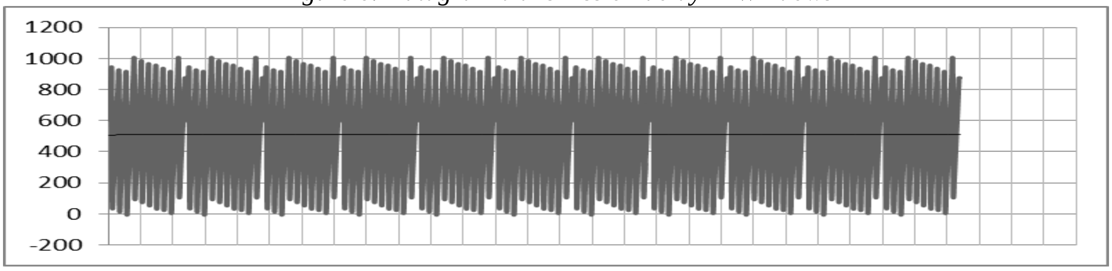
Fig 5 presents print-screens for server and client modules during measurement of datagram transmission delay for datagram length equals 64 bits. Fig. 6 shows that datagram transmission delay in Windows system varies in the range of (2ms; 1000ms). For further analysis, authors assumed that the mean value of delay introduced by the system is equal to 500ms.

Figure 5. Print-screen for server and client modules during measurement of datagram transmission delay for datagram length equals 64 bits



Source: self proceesed

Figure 6. Datagram transmission delay in Windows



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According to safety requirements, presented system should take into account following aspects:

- datagram numbering, it prevents the system from unintentional (intentional) deletion of datagram or datagram resequencing. Additionally, it allows for verification of order in which datagram arrives;
- Cyclic Redundancy Check (CRC) is used to verify plausibility and integrity of transmitting datagram. This method allows for single error detection based on the comparison of checksum appended to datagram with checksum which is calculated for datagram after receiving its contents (Nguyen et al., 2015). It should be noticed that CRC algorithm has been already embedded in Quality of Service (QoS) layer of LTE technology. In addition to that, Hybrid Automatic Repeat Request (HARQ) layer and Adaptive Modulation and Coding (AMC) layer are also responsible for correct transmission in difficult propagation conditions. Therefore, it seems to be reasonable to remove one CRC algorithm from LTE transmission. This removal allows for a decrease in datagram transmission delay and does not have the influence on safety of transmission specified in PN EN 50159-:2010 standard;
- Maximum period of time in which the receiver waits for system response. It decreases datagram transmission delays;
- Advanced Encryption Standard (AES) algorithm has been used to prevent datagram transmission from hacker attacks. In the author's opinion, this algorithm is sufficient for present and future systems.

Solutions occurring in closed systems specified in EN50128, PN-EN50129 and PN-EN 50159:2010 were adapted for open systems by authors. It results from the assumption that open systems should ensure at least the same Safety Integrity Level (SIL) as closed systems (Lewiński & Sumila, 2010), (Łukasik et al., 2017).

Overall system safety results from the safety of its elements. Because railway traffic control systems have a direct impact on the traffic safety, therefore they have to meet tough SIL-4 level for which, according to IEC 61508-1 norm, Tolerable Hazard Rate (THR) varies in the range of <10^{-9}; 10^{-8}).

Due to impossibility of integration of presented solution with actual railway traffic control systems at this stage of research, only safety of radio communication interface has been analyzed. Radio communication interface under analysis uses LTE public network, what corresponds to project assumptions. Because LTE is an open system, research was conducted for actual transmission parameters and unknown system load. In authors opinion, such approach allows for plausible assessment of usefulness of system in tasks concerning railway traffic control (Chou et al., 2016) , (Kim et al., 2015).

It results from the fact that indeterminist load of the network in fixed time interval allows us to determine actual delays and correctness of transmission. Such approach is necessary to assess the lowest possible value for parameters which should be guaranteed to ensure assumed Safety Integrity Level.

According to PN-EN 50159:2010 standard, proposed system belongs to SIL-3 layer. Specification for SIL-3 also enumerates transmission in GSM-R, GPRS and Wi-Fi (802.11) standards. LTE technology uses packet transmission and has built-in “responsibility” for transmission correction so that LTE can be regarded as single channel transmission for which THR varies in the rage of <10^{-9}; 10^{-8}). Therefore, in authors opinion, proposed system based on LTE technology satisfies SIL-4 standard requirements.

For serial transmission failure rate for dangerous damage can be defined as (1):

$$\lambda_{Nt} = \lambda_N * 2^{-32} \tag{1}$$

where:

- λ_N - failure rate for all damages occurring in radio transmission channel using CRC32 checksum algorithm.

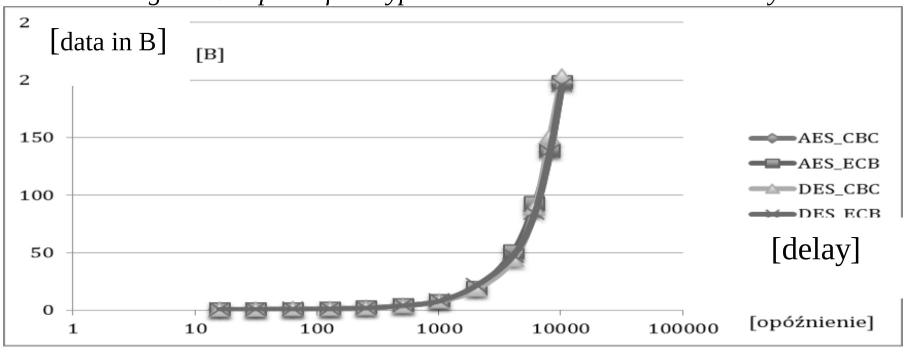
Based on the assumption that open transmission systems should at least satisfy requirements for closed transmission systems, we can calculate the overall failure rate for the system (2):

$$\lambda_{Nt} = \lambda_N * 2^{-32} = 10^{-4} * 2^{-32} = 2{,}33 * 10^{-14} \tag{2}$$

for $\lambda_N = 10^{-4}$

This calculation confirms that presented system meets requirements for SIL-4 standard, it is necessary condition for safe railway traffic control systems (Chrzan, 2013), (Dahlman et al., 2008). Of course, we must be aware that it is necessary to take into account safety level for all elements occurring in real system. In consequence of this failure rate raises, however it should not exceed the value of 10^{-8}. Based on results presented in fig.7, we can conclude that both the type of encryption method and the length of encrypting data have no influence on delays.

Figure 8. Impact of encryption method on transmission delay



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4. Conclusion

Introduction of open radio communication to railway traffic control devices can reduce the cost of railway communication infrastructure and increase the pace of introduction of new communication solutions to railway transport. Existing margin in public networks can surely be used in safe signal transmission for railway traffic control devices. In order to hide the transmission and ensure static IP, VPN technology must be applied. Basing on the literature and propagation conditions for GSM-R and LTE standards, we can say that LTE technology can be applied to transmit datagrams among railway traffic control devices. The use of the proper SIL level along with encryption methods presented in PN EN 50159:2010 allows for reliable transmission within a given time. The results show that LTE technology can be utilized in railway transport, what can make wireless railway traffic control systems cheaper.

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IMPROVING ANALYSIS OF IFRS-COMPLIANT REPORTS AMID GLOBALIZATION

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Abstract. As the modern world economy is becoming increasingly globalized, its development requires the utilization of well-trialled management instruments that are familiar to all market participants It is fair to say that today International Financial Reporting Standards (IFRS) are the most important globalization tool in the field of accounting and financial reporting. Preparing financial statements under IFRS make them more "transparent" and suitable for analysis by potential foreign lenders and investors who can provide the company with the capital it needs for further development. This adds to the already strong scientific and practical interest in improving the conceptual and methodological framework of analysis of financial statements prepared under IFRS. The improvements should increase the information value of the analysis results that gives a more accurate idea of the company's financial performance and financial standing, thus enabling interested users of analytical financial information (potential lenders and investors in the first place) to make management decisions. To solve the above problem, the authors systematize international and Russian practices and propose an original conceptual approach to analyzing financial statements prepared under IFRS that considerably improves the results of such analysis as regards the financial performance and financial position of companies. The approach proposes breaking down the analysis procedure into four consecutive stages: preparatory stage, interpretation, calculations and analysis, and forecasting.

Keywords: analysis, financial reporting, IFRS

JEL Classification: G30, M41, M49

1. Introduction

The rapid globalization of the world economy implies that market players use familiar and well-tried governance instruments. One of them is International Financial Reporting Standards (IFRS) (Kent & Stewart, 2008) that can be rightly categorized as the most important globalization tool in the field of accounting and financial reporting.

The introduction of internationally recognized financial reporting standards is due to integration processes in the economy, the development of capital markets, a stronger role of multinational companies, and growing costs of preparing financial statements (Dean, 2006). It is aimed at creating an international accounting system, and developing a unified set of financial reporting standards that are applicable to any company in any country (Crawford et al., 2014), (Guerreiro et al., 2015), (Haslam et al., 2016).

Preparing IFRS-compliant financial statements make them more "transparent" and suitable for analysis by potential foreign lenders and investors who can provide a company with the capital it needs for further development (Young & Guenther, 2003). The application of IFRS also speeds up the process of improving national accounting and makes it possible to adapt it to present-day economic requirements. It also sets the bar higher for accounting professionals and makes the job of the accountant more prestigious (Chen & Jiang, 2010), (Hussan & Sulaiman, 2016).

There is therefore a strong scholarly and practical interest in improving the conceptual and methodological framework of analysis of financial statements prepared under IFRS. As a result of such improvement IFRS-compliant reports should become more informative and provide a more accurate picture of a company's financial performance and financial position to enable interested users of analytical financial information – potential lenders and investors in the first place - to make management decisions.

The problem could be solved by supplementing the already established international approach to analysis of IFRS-compliant statements with established domestic (e.g. Russian) practices in the field of financial statement analysis that have been developed in the countries adopting the IFRS standards (e.g. Russia).

2. Previous research

The authors have systematized the views of the scholars whom they consider to be among the most outstanding authorities in the field of corporate IFRS statement analysis (Alexander et al., 2014), (Lantto & Sahlstrom, 2009), (Prather, 1997), (Richards & Van Staden, 2015). Below is a summary of the essence and sequence of the analysis that comprises two interrelated stages:

- Interpretation of financial statements.
- Computational analysis of financial statements.

Interpretation of financial statements helps get an understanding of the actual economic position of a company by making information in its financial statements truly valuable and useful for decision making. The goal is to reveal and analyze the key components of the accounting policy as a result of which published financial statements might contain data that window dress the real economic situation in the company. The outcome of the procedure is financial indicators that are free from the effects of the accounting policy.

Interpretation of corporate financial statements reveals the effects of such strong factors as industry-related operating specifics of the company, its business strategy and accounting policy, methods of and approaches to financial statement management, information disclosure quality and relations between the companies that are part of the corporate group.

Computational analysis of corporate financial statements can be divided into two steps: identification of potential factors that hamper the process of comparing financial statement data, calculations and evaluation of results.

Among the potential factors making financial statement data comparison are different fiscal year ends, different reporting dates, changes in the corporate structure, changes in accounting methods and valuations, changes in generally accepted accounting principles and diviations in information presentation.

Doing calculations on the basis of financial statement data and reviewing the analysis results involve the following procedures: trend; proportional analysis, segment analysis, ratio analysis (solvency, liquidity, financial sustainability, turnover, profitability, market performance), cash flow analysis.

Below is a brief review of achievements in the field of financial statement analysis by Russia's most prominent experts.

Kovalev and the son (Kovalev & Kovalev, 2014) describe financial statement analysis as a two-modular system that consists of quick analysis and in-depth analysis of financial statements.

The quick analysis of financial statements aims to provide a quick, clear and simple assessment of the financial soundness and development dynamics of a company. It involves verifying financial statements for formal compliance (file completeness, formatting, accuracy of calculations etc.), looking through audit reports and studying the company's accounting policy, identifying "troubled" balance sheet items and assessing their dynamics, verifying the key indicators, looking through the explanatory notes, producing an overall valuation of the company's property and financial situation and drawing inferences based on the analysis results.

In-depth analysis of financial statements aims to provide a more detailed description of the property and financial potential of a company, its performance over the reporting period and prospects of its development. The analysis details, supplements and expands on some of the procedures of quick analysis. Its key elements are:

- A preliminary review of the economic and financial position of a company (this step essentially a repetition of quick analysis) that includes an overview of the general trends in the company's financial and business performance and evaluation of the "troubled" items on the balance sheet.
- Assessment and analysis of the economic (property and financial) potential of the company including the preparation of an analytical balance sheet, its vertical and horizontal analysis, analysis of qualitative shifts in the property potential and evaluation of the company's liquidity, solvency and financial sustainability
- Evaluation and analysis of the company's financial and operational performance: business efficiency, profitability, its position on the stock market

Efimova and Melnik (Efimova & Melnik, 2013) single out two steps in financial statement analysis: quick analysis of accounting (financial) statements and their detailed analysis.

Quick analysis of accounting (financial statements) is about obtaining a clear and simple assessment of a company's property status and its development efficiency. It is performed in three stages: the preliminary stage (involves a visual and basic calculation check to establish compliance with formal benchmarks and in substance); a preliminary review of the accounting balance sheet (that does not go beyond reading the explanatory notes); an economic review and analysis of the statements (yields a composite evaluation of the company's business performance and its financial position).

A detailed analysis of accounting (financial) statements is aimed at providing a detailed description of a company's property and financial status, its performance the previous year (reporting period) and its development prospects. In general, the analysis algorithm is as follows:

- A preliminary review of a company's economic and financial position that yields a description of the general trends in the company's financial activity and business and identification of "troubled" balance sheet items.
- An assessment and analysis of the company's economic potential: its property status (preparation of an analytical net balance, its vertical and horizontal analysis, analysis of qualitative shifts in the property status) and its financial position (liquidity, financial sustainability).
- An assessment and analysis of the company's financial performance: sales, revenue structure, structure of expenses, profit, profit margin, financial sustainability, creditworthiness, and solvency.

Ilysheva and Krylov (Ilysheva & Krylov, 2015) look at financial statement analysis as a process that is executed in four interrelated stages including preliminary analysis, in-depth analysis, a summary of analysis results, and forecasting.

Preliminary analysis (or quick analysis) of financial statements makes it possible to produce a clear and simple (in terms of time and labour intensity of applied algorithms) assessment of the financial position and financial performance of a company. It consists of three steps:

- The preliminary stage involves a visual and basic calculation check to establish the compliance of the financial statements with formal benchmarks and in substance (completeness of the et of financial statements, accuracy and clarity of filled-in data; availability of all relevant company details; calculations and main reference ratios), and analytical coupling and regrouping of the items of the account balance to make it more suitable for analysis.
- A preliminary review of the financial statements that entails reading audit reports and explanatory notes; assessing qualitative changes to the company's financial position over the previous period and examining the impact of macroeconomic factors on indicators contained in the financial statement.
- Calculation and analysis of the critical analytical indicators describing the financial position of the company by using the data from its balance sheet and financial statements.

In-depth analysis of financial statements is aimed at producing a fairly detailed description of a company's financial performance and position over the past reporting period and of the possibility of changes to them in the near future and in the long run. It draws upon the data from all financial statements of the company and consists of the following steps: analysis of the accounting balance sheet, analysis of the profit and loss statement; analysis of the statement of changes in shareholders' equity; analysis of the cash flow statement; analysis of the explanatory notes to the accounting balance sheet and the P-and-L statement, and a comprehensive assessment of the company's financial position judging by its financial statements.

A summary of the results of financial statement analysis involves drawing a general conclusion based upon the interim conclusions as regards individual areas of financial performance analysis and the company's financial position and, if necessary, making up a list of recommendations aimed at improving them. Financial statement forecasting involves the use of appropriate financial forecasting methods while taking into consideration the recommendations from the previous step.

3. Results

Drawing upon international experience of the analysis of IFRS-compliant statements and supplementing it with coherent Russian practices that make it possible to improve the efficiency of financial statement analysis, the authors propose an original conceptual approach to conducting financial statement analysis in companies that have adopted International Financial Reporting Standards. The approach is outlined in Table 1.

Table 1: Content of analysis of IFRS-compliant reports by type and stage

Stage	Type of analysis	
	Preliminary analysis	**In-depth analysis**
1. Preparatory stage.	Visual and basic calculation check to establish the compliance of financial statements with reference standards and in substance (completeness of financial statements, accuracy and clarity of filled-in data; availability of all appropriate company details; correctness of calculations and main reference ratios). Elimination of the effects of inflation in statement indicators; analytical coupling and regrouping of statement indicators (if necessary) to make them more suitable for analysis.	
2. Interpetation.	Singling out the effects of industry-related operation specifics of the company, its business strategy and accounting policy, methods of and approaches to financial statement management, information disclosure quality and relations between the companies that are part of the same corporate group; changes to fiscal year ends; different reporting dates; changes to the company structure, changes to the accounting method and accounting valuations; the adoption of a different system of generally accepted accounting principles; and deviations in information presentation.	
3. Calculations and analysis.	Calculation and comparative evaluation of the key financial ratios characterizing the main aspects of a company's financial position. The data utilized are contained in the accounting balance sheet and P-and-L statement. Followed by a brief conclusion and general recommendations as to how to improve financial performance.	Detailed examination of all forms of financial statements in terms of all aspects of financial performance and financial statement analysis, using the methods of horizontal, vertical ratio and factor analysis, accompanied with relevant interim and general conclusions and specific recommendations aimed at improving financial performance and financial position of the company.
4. Forecasting.	Forecasting that utilizes appropriate financial forecasting methods of making accounting balance sheet and income statement projections on the basis of the recommendations yielded by the previous stage.	Forecasting that utilizes appropriate methods of making all forms of financial statement projects on the bases of the recommendations yielded by the previous stage.

Source: the table was developed by the authors

Table 1 shows that analysis of IFRS-compliant statements can be divided into two types: preliminary analysis and in-depth analysis, each of them consisting of several steps. The preparatory stage and interpretation are essentially identical in both types of analysis because they are mandatory for the precision of subsequent computational and analytical procedures.

The preparatory stage is purely technical, but is no less important for the stages that follow. The stage of interpretation that is handled by the authors in a broader sense than by the foreign scholars mentioned above (Alexander et al., 2014), (Lantto & Sahlstrom, 2009), (Prather, 1997), (Richards & Van Staden, 2015) is aimed at revealing and analysing the key components of the accounting policy as a result of which published financial statements might contain data that do not truly reflect the real economic position of the company, and at the subsequent elimination of the accounting policy effects from the statement indicators, as well as at identifying potential factors that make it difficult to compare financial statement data. It is not appropriate to incorporate the latter procedure in the calculation and analysis stage.

Calculations and analysis are performed as part of in-depth analysis and imply a more extensive, detailed and prolonged examination of financial statements as compared to the previous analysis stage. Within in-depth analysis, the stage of forecasting that is associated with making statement projections and is based on the outcomes of the previous stage is also more detailed, accurate and specific than that of preliminary analysis.

4. Conclusion

To draw a line under their take on the problem of improving IFRS-compliant statement analysis in today's conditions, the authors come to the following conclusions:

- a transition of IFRS makes it necessary to introduce appropriate changes to the content and sequence of financial statement analysis in domestic (Russian) companies;;
- when implementing the changes it is necessary to adopt foreign (international) experience in IFRS statement analysis as a framework that could be complemented with coherent national findings in the field that make it possible to improve the efficiency of financial statement analysis and the analysis of the financial position of domestic companies that made a transition to IFRS.;
- having systematized international and domestic (Russian experience), the authors propose an original conceptual approach to IFRS statement analysis that significantly increases its effectiveness in terms of the examination of the financial performance and financial position of a company. The approach conducting analysis in four interrelated stages: preliminary stage, the stage of interpretation, calculation and analysis, and forecasting.

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SUSTAINABILITY AND LOGISTICS CHALLENGES OF MODERN GLOBALIZATION, CASE FINLAND

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Abstract. The purpose of this paper is to discuss about the current situation and development of globalization at the sustainability and logistics points of view and then focus on the challenges presented on the Finnish economy and industry. Finland is relatively big country in Scandinavia with a total area of 338145 km^2 and one of the lowest density in Europe 18 inhabitants per dry land km^2. This causes logistic and also sustainability challenges, which Finnish companies have to deal with in order to be competitive in the global markets - how to compensate the extra cost caused by the 2000 km transportation to the main markets at the central Europe? During the last 60 years the Finnish economy and industry have been strongly dependent on foreign trade surplus. Since 2008 the quantity and value of the Finnish exports has experienced a dramatic change and the sustainability challenges will definitely change the markets further in the ever-globalizing world trade. In the future the Finnish exports industry will be required to face ever tightening productivity and cost efficiency challenges because of automatization, digitalization and low cost production. As the external productivity and costs pressure increases will the Finnish national economics be in turmoil because of chronically deficit national budget. The high living costs do not allow lower salaries without social support financed by government or municipalities. These lower salaries will cut automatically down the tax incomes and the vicious circle is appearing.

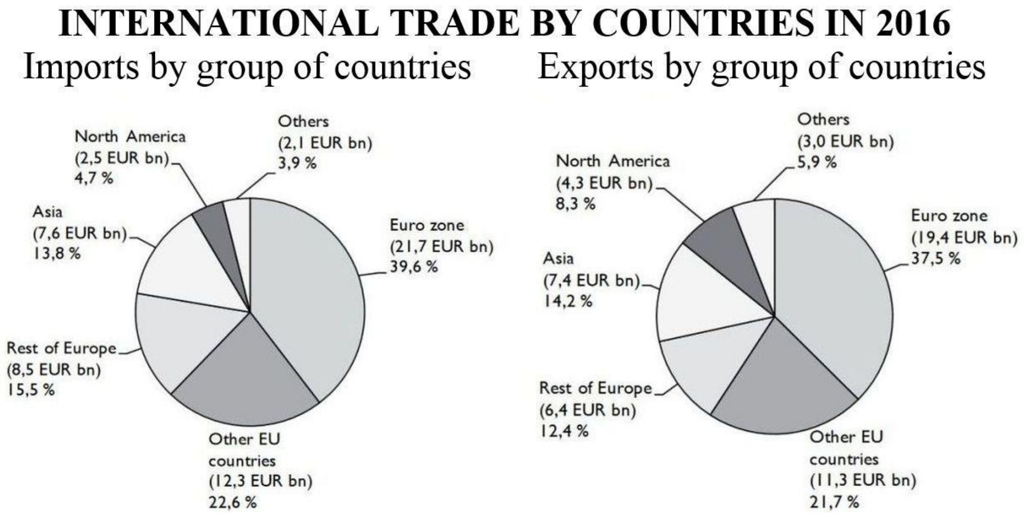
Keywords: transportation, sustainability, economics

JEL Classification: L91, Q01, R40

1. Introduction

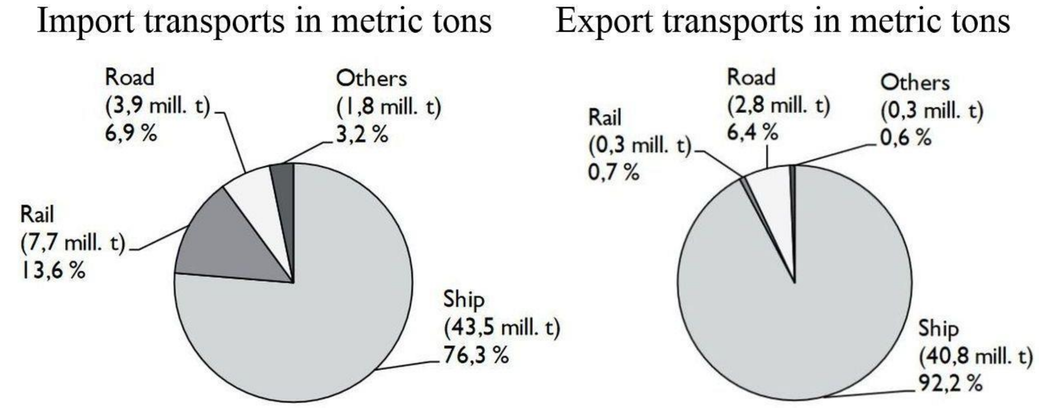
Viewed from the continent of Europe, Finland is logistically an island. Despite of the fact that most of Finnish imports and exports are from and to Europe (Fig. 1) a large majority of The Finnish import and export transports are done seaways by ship (Fig. 2). Vast majority of Finland’s foreign trade is carried on by ship, and the harbours are its principal traffic nodes. Finland has a direct railroad connection to Russia and railship connection to Sweden and Germany. Also direct truck transport connections exist to Russia and Sweden. (Mohammadi, 2017). Trucks are also transported by ferries to Sweden, Estonia, Poland and Germany. As the Finnish GDP was 2016 € 215,6 billion (Statistics Finland 2017) the value of Finnish imports is 25,4 % of the GDP and the value of Finnish exports is 24 % of the GDP, so the significance of global trade is without a doubt very important to the Finnish economy.

Figure 1: Structure of Finnish import and export 2016



Source: Finnish Customs (2017a), processed by the Author

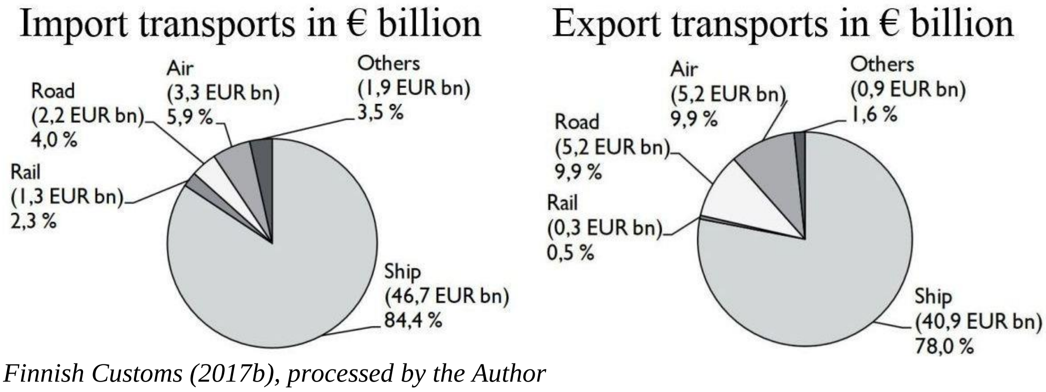
Figure 2: Transports of Finnish import and export 2016, volume



Source: Finnish Customs (2017b), processed by the Author

According to the latest customs statistics 76,3 % of Finnish import transports and 92,2 % of Finnish export transports are transported seaways by ship because of geographical, transport-economic and environmental reasons (Finnish Customs 2017a and 2017b).

Figure 3: Transports of Finnish import and export in 2016, value



Source: Finnish Customs (2017b), processed by the Author

The average value of Finnish imports was at 2016 about 0,97 € per kg and the average value of Finnish exports was at 2016 about 1,17 € per kg (Finnish Customs 2017a and 2017b). These figures show clearly that transportation costs are a significant factor for the Finnish globalization. Finland is almost 2 000 km away from the main European market area and of course import and export transportation costs outside EU are even more significant.

2. Import and export material flows of Finland

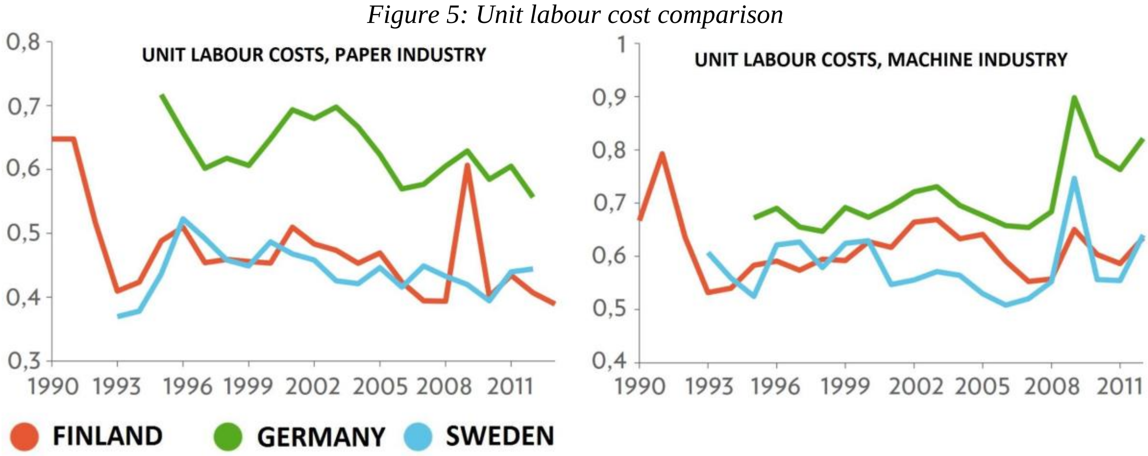
As Finland is located in Scandinavia it means that global transports mean de facto very long distances. The average distance to Russian destinations is about 1 000 km, to Central European destinations about 2 000 km, to North American destinations about 10 000 km and to South East Asian destinations about 8 000 km (by air) or 24 000 km (by sea). The logistic situation of Finland is illustrated at Figure 4.

Figure 4: The global location of Finland and distances to main market areas.

Source: adapted from Jones (2009), processed by the Author

The main logistic and sustainability challenges are the long distance transportation need and low average value of our imported and especially exported goods. (Rubio and Jimenez-Parra, 2017) In order to maintain competiveness at the main exports market area, the Central Europe, Finnish export industry has to compensate in average 2 000 km transportation. Historically the cheap electricity at Scandinavian countries has compensated the situation (especially with energy intensive industry), but recently this has changed. (Abbasi & Nilsson, 2016). The average market price of electricity for industry was at the first half of the year 2016 30,40 €/MWh in Finland and 25,00 €/MWh in Germany (Kuokkanen 2016). Also the unit labour costs of our paper industry have been lower than our Central European competitors' which has also compensated the situation.

Figure 5: Unit labour cost comparison



Source: adapted from Sauramo (2015), processed by the Author

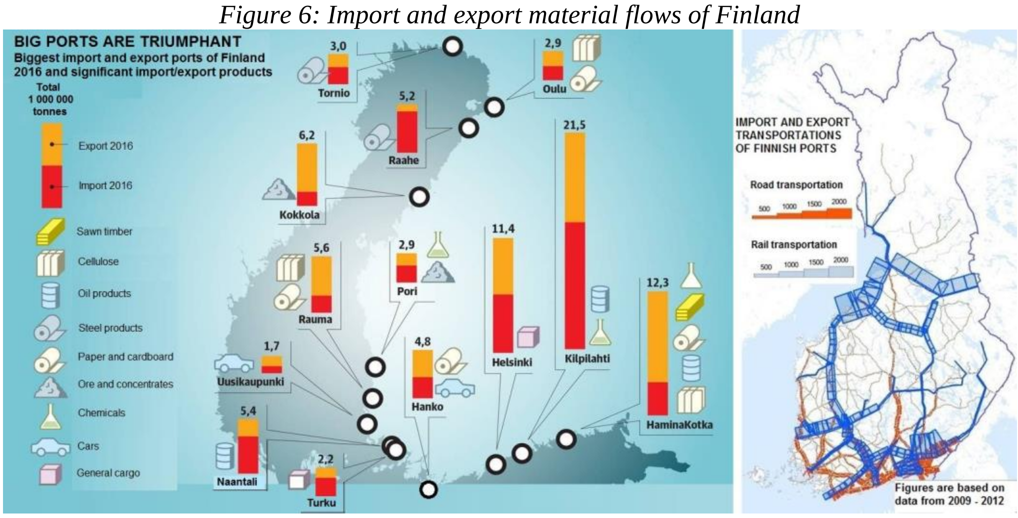
The figure 5 shows clearly, that especially the competitiveness of Finnish paper industry has been significantly better in Finland and our neighbouring competitor Sweden in important German markets. The labour costs gap between Finland and Germany is nicely compensating the earlier mentioned 2 000 km delivery handicap. In machine industry the labour costs difference has not been so significant, but it has been growing steadily for our benefit.

3. Logistic challenges

According to Corbett and Winebrake (2013) "*marine transportation is an integral, if sometimes less publicly visible, part of the global economy. The marine transportation system is a network of specialized vessels, the ports they visit, and transportation infrastructure from factories to terminals to distribution centers to markets. Maritime transportation is a necessary complement to and occasional substitute for other modes of freight transportation. For many commodities and trade routes, there is no direct substitute for waterborne commerce.*" As the average value per kg for both Finnish imports and exports is quite low (0,97 / 1,17 € per kg) freight cost is of course very critical factor.

As the marine transportation is the cheapest form of transportation in overseas import and export it is a natural choice for Finnish import and export. As described at paragraph 2, our geographical 2 000 km distribution "handicap" on important Central European export markets requires efficiency especially in logistics. All the distribution logistics costs exceeding the distribution costs of our competitors jeopardize our competitiveness.

Figure 6: Import and export material flows of Finland



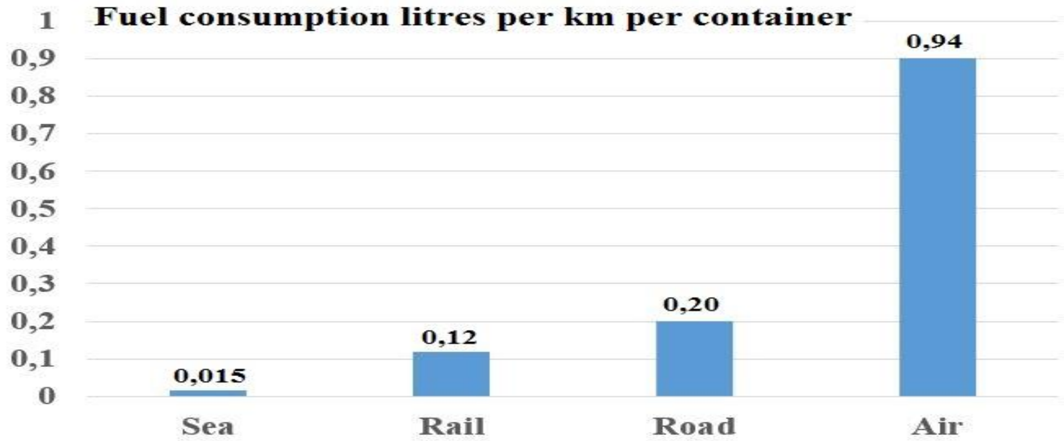
Source: adapted from Salanne (Undated) and Kankare (2017). processed by the Author

4. Sustainability challenges

According to IMO (2013) "*Maritime transport is the backbone of world trade and globalization. Twenty-four hours a day and all year round, ships carry cargoes to all corners of the globe. This role will continue to grow with the anticipated increase in world trade in the years to come as millions of people are expected to be lifted out of poverty through improved access to basic materials, goods and products. World trade and maritime transport are, therefore, fundamental to sustaining economic growth and spreading prosperity throughout the world, thereby fulfilling a critical social as well as an economic function.*"

As described earlier, the Finnish foreign trade is heavily dependent on sea transportation. Therefore the sustainability of sea transport is a significant factor of the sustainability challenge of Finnish globalization. The key question is how to organize the required import and export transports in a sustainable matter.

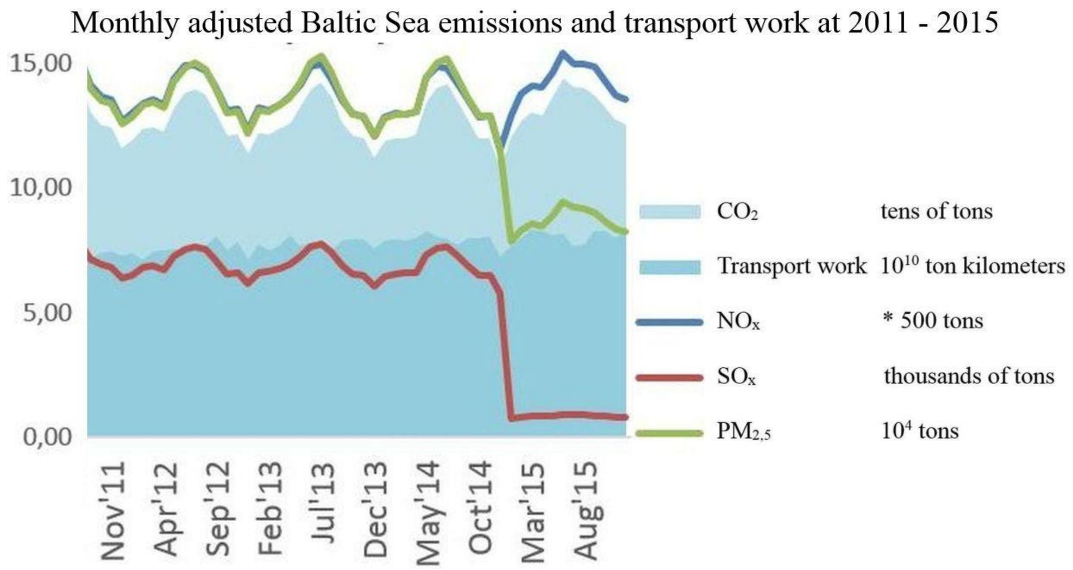
Figure 7: Transportation costs of different transportation forms



Source: adapted from Ballou (1998) and Torian (2012) and calculations made by the Author.

It is a well-known fact that sea transportation is the cheapest and the most fuel economic form of transportation per ton kilometer. Therefore the CO_2 emissions per ton kilometer are also the lowest. The problem lies with sulfur oxide (SO_x) emissions, which are of a total different category. As the cheapest available fuel for big diesel engines typically utilized in cargo ships is bunker fuel having very high sulfur content. 12th of September was the Rotterdam price of IFO380 bunker fuel (containing max. 3,5 % sulfur) 312 USD/metric ton and the price of ULSFO light fuel oil was 477 USD/metric ton (Ship & Bunker 2017a and 2017b). Environmentally better ULSFO fuel is more than 50 % more expensive that cheap and pollutant IFO380 fuel so it is no wonder, that shipping companies prefer IFO380 fuel – unless regulations stipulate otherwise.

Figure 8: Sea transport emissions at Baltic Sea area



Source: adapted from Johansson et.al. (2016). processed by the Author

Since 1st of January 2015 it has been forbidden to use fuel containing more than 0.1 % sulfur at the Baltic Sea area. Under this EU directive, carriers operating in the Baltic and North seas and English Channel can only use fuel with a mentioned maximum sulfur content of 0.1 percent (The Journal of Commerce 2015). The results have been dramatic – the PM2.5 (particles smaller than 2,5 µm) and SO_x emission values have decreased significantly. Therefore the Baltic Sea transport is currently relatively sustainable when compared to alternative forms of transportation to the Central Europe.

As for other sea areas, International Maritime Organization (IMO) aims to introduce a global 0.5 % sulfur limit in ship fuels by 2020, an emission control area (ECA) in the Mediterranian Sea might be introduced as part of the global sulfur cap (The Journal of Commerce 2015). Still the crucial decisions are not made and the emissions are practically uncontrolled in other sea areas than Baltic and North seas and English Channel, which makes the sea transportation relatively unsustainable because of the sulfur emissions.

It has been said that a big container ship emits more sulfur oxides than 50 million modern diesel cars and the reality is, that depending on the cruising speed of a big 14 000 TEU container ship, it's SO_x emissions are equal with the NO_x emissions of 20 to 60 million modern diesel cars (Aminoff 2017) – and this really means that the current fleet of diesel powered ships using IFO380 fuel are much bigger source of NO_x than all modern diesel cars together. Unsustainable indeed!

Is there any alternative? As illustrated in Figure 7 is the sea transportation the most fuel efficient and therefore most economical form of transportation. When the freight cost is a significant cost factor as it is in relatively low value overseas exports (on average 1,17 €/kg) of Finnish industry the logistics cost efficiency is of course crucial. So de facto ther is no feasible alternative for sea transportation for Finnish imports or exports.

5. Conclusion

How to manage the sustainability and logistic challenges of a country so dependent on import and export like Finland having so challenging geographical location? (Zijm,2016). The geography is something we cannot change, but the ways to manage sustainability and logistics are of course ours to decide. As Finland is highly dependent on global trade in both imports and exports are the sustainability and logistic efficiency things to take seriously (Wang, 2016). The global interest on sustainability has affected and will affect the maritime transport. Ever globalizing world has made countries and economies growingly dependent on international transportation and of course maritime transportation, because 90 % of all material flows are transported with it.

An efficient way to improve sustainability and logistics of global trade is to improve the fuel efficiency of vehicles and functionality of the global infrastructure. Essential improvement would be the adaptation of tighter SO_x and NO_x emission limits on ship engines, but so far the international agreement on the matter is not imminent. Of course each buyer of transportation services can select which service provider they prefer, but if the preferences are focused on freight cost only it is no surprise that shipping companies using the cheapest possible and pollutant fuel (like IFO380) get the orders.

If sustainability equals in global logistics lower competitiveness it will not attract companies competing with tight margins. The only way to improve sustainability in global logistics is to uniform the emission limits worldwide and this way to make sustainability an economically feasible way of business.

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JOINT VENTURES AS AN ECONOMIC CONSEQUENCE OF GLOBALISATION FROM THE PERSPECTIVE OF COMPETITION LAW

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Abstract. Joint ventures are dealt with under the merger rules only where they amount to a concentration. Article 3(4) of the European Merger Regulation provides that the creation of a “full-function” joint venture constitutes a concentration. The full-functionality criterion thus determines which joint ventures should be assessed under the European Merger Regulation and which fall to be appraised by Article 101 of the Treaty on the Functioning of the European Union. When will the Commission consider a joint venture to be a concentration and is the Commission’s decisional practice consistent? Applying the analytical and synthetic-inductive method, the author provides the answers to these questions. As the source base of its research, not only European legislation and foreign literature, but also the views of recognized experts, as well as a number of the European Commission decisions, as a body with a leading position in the mergers of companies, have been used. The result of such application leads to the author’s conclusion, under which the “full function” criteria are not applicable to all joint ventures equally. The application of “full-function” criteria rather depends on the method used for establishing the joint venture, i.e. illustrated new creation or acquisition of joint venture, which are further discussed in the paper.

Keywords: joint ventures, competition law, European Merger Regulation, European Commission

JEL Classification: K21, K33

1. Introduction

Joint ventures represent a very common method of collaboration and cooperation between undertakings. They encompass a broad range of commercial operations, ranging from fully-fledged merger-like operations to co-operation limited to particular functions such as production, distribution or research and development (White, 1985). Even though the European competition law doesn’t provide any *expressis verbis* definition, we can draw it from the previous Commission’s Notice on full functionality, where joint ventures are described as undertakings that constitute a separate and fully functional business entity that is “jointly controlled” by at least two parents (Tyson, 2007). These joint ventures are capable of constituting either a concentration or cooperation between competitors.

Since 1990 when the first merger regulation[9] came into force, more than 6000 concentrations have been notified, and more than half of those were joint ventures.[10] This number induces quite a big interest of undertakings to notify their concentration (when they are establishing a joint venture) to the European Commission instead of national authorities, and it evokes that undertakings prefer to be subject to the regime of the European Merger Regulation[11] instead of the regimes of Articles 101 or 102 of the Treaty on the Functioning of the European Union[12] (Cseres, 2013). Another fact speaking in favour of the EU Merger Regulation is that only 27 concentrations out of more than 6000 were declared incompatible with the internal market.

However, the usual reason for having the joint ventures to be reviewed by the Commission, and thus for having them to fall under the EU Merger Regulation, is the so-called One stop shop principle, which provides cost savings as the undertakings are subject to only one single proceeding at the union level (Govaere et al., 2011). Therefore, it is not needed to undertake several proceedings before national authorities, which are, in addition, time consuming and they can lead to inconsistencies. Moreover, the parties can offer commitments in case the notified concentration would be likely to be non-complying with the internal market; thus, the Commission should be able to declare it compatible with the internal market (Monti, 2016). At this point or rather towards the policy evolution regarding the jurisdictional divide between Brussels and the national authorities we need to further refer to Morgan (Morgan, 1997).

The background and the advantages of the merger regulation, as aforementioned, are important part for the overall conclusion of this paper. Even though the topic of this paper is focused on the assessment of the joint ventures under the EU Merger Regulation, one can say it is quite useless to understand the assessment as such, if we do not understand the reason behind that.

2. The assessment of joint ventures

As it has been drafted in the introduction, joint ventures are under certain circumstances being treated under the EU Merger regulation, which expressively stipulates Article 3(4) pursuant to which the creation of a joint venture based on a lasting basis and performing all the functions of an autonomous economic unit constitutes a concentration. From the previous conclusion, we can point out that joint ventures are not being regarded as a full-function entity, if they are not lasting. This means that they should fall outside the scope of the EU Merger regulation.

[9] Council Regulation (EEC) No 4064/89 of 21 December 1989 on the control of concentrations between undertakings (Merger regulation) [1989] OJ L 395/1

[10] For details, see the statistics provided by the European Commission. [Online]. Available:

http://ec.europa.eu/competition/mergers/statistics.pdf

[11] Council Regulation (EC) No 139/2004 of 20 January 2004 on the control of concentrations between undertakings (the EC Merger Regulation) [2004] OJ L 024 (hereinafter referred to as the "EU Merger Regulation")

[12] Consolidated version of the Treaty on the Functioning of the European Union [2012] OJ C 326/01 (hereinafter referred to as the "TFEU")

However, this is not exhaustive and according to Article 1 of the EU Merger Regulation, joint ventures as well as the other concentrations will be assessed under the EU Merger Regulation only in case they are concentrations with a Community (Union) dimension. Joint ventures, which are not full-function, and full-function joint ventures, which do not have a Community dimension, but which have a co-operative element, will be assessed under the procedural and substantive rules of Article 101 of the TFEU and/or national competition (including merger control) rules (Nourry & Harrison, 2017).

The key element – concentration – is defined in Article 3(1) of the EU Merger regulation, pursuant to which concentration exists where a change of control on a lasting basis results from the merger of two or more previously independent undertakings, or results from the acquisition, by one or more persons already controlling at least one undertaking, or by one or more undertakings, whether by purchase of securities or assets, by contract or by any other means, of direct or indirect control of the whole or parts of one or more other undertakings. To put it simply, concentration may arise in case of a merger, or as a result of a change of control of an existing undertaking (Cook & Kerse, 2009).

Control can be either sole, or joint.[13] The concept of joint control is crucial to determine the actual existence of joint venture and it means any possibility of exercising decisive influence over undertaking by two or more another undertakings. According to Article 3(2) of the EU Merger regulation, joint control may arise as a result of positive or negative measures. This means that decisive influence by two parent companies can either determine the strategic commercial behaviour of an undertaking as such, or it can result in a block of actions determining the strategic commercial behaviour (Walther & Baumgartner, 2007). If such situation does not exist and one parent company can effectively determine strategic commercial behaviour by itself, then there is no joint control and we cannot speak about joint ventures. However, it is not necessary for parent companies to have equal voting rights of the joint venture company to jointly determine strategic commercial behaviour. Under paragraphs 65-73 of the Consolidated Jurisdictional Notice, it will suffice when they will be able to mutually reach crucial decisions due to actual or *de facto* veto rights such as veto rights on investments, business plan, budget or appointment of senior management, which are related to the business policy of the joint venture. Therefore, we can conclude that joint control exists when the jointly controlling parents have equal voting rights, or when they have certain veto rights, or exceptionally when they are mutually dependant (Riggs & Giustini, 1991).

On the other hand, an acquisition of sole control would mean that there is a concentration in the form of a merger, whereas if there is no sole or joint control acquired, the transaction is unlikely to constitute a concentration. Following the Consolidated Jurisdictional Notice, it should be also stated that change of a regarded control constituting concentration should be lasting, as the EU Merger Regulation does not deal with operations resulting only in a temporary change of control. It is quite difficult to determine what time is needed for lasting control, although it is presumed from cases that eight years is quite satisfying.

Another important criterion is the Community (Union) dimension, which is determined by certain thresholds set out in the Article 1 of the EU Merger Regulation. Due to the certain

[13] Pursuant to Consolidated Jurisdictional Notice under Council Regulation 139/2004/EC on the control of concentrations between undertakings (Jurisdictional Notice) [2008] OJ C95/1 (hereinafter referred to as the "Consolidated Jurisdictional Notice"), paragraphs 54 and 62.

subject matter of this paper and limitation of the scope, we do not further discuss it and, thus, refer, to the works of Kaczorowska (Kaczorowska, 2011).

To sum it up, we can say there are generally three conditions that must be satisfied in order for a joint venture to be subject to the EU Merger regulation. First, it is the acquisition of the joint control, which actually determines the existence of joint venture. Second, it must be an actual full-function joint venture, which we will discuss further, as the topic of the assignment indicates considerable focus upon this one. Third, it is the Community (Union) dimension.

3. The full-function joint venture

Since May 1, 1998, when the distinction between "concentrative" (falling under merger control) and "co-operative" (falling under ex Article 81) joint ventures was abolished, all joint ventures constitute concentrations and are subject to the EU Merger Regulation in accordance with Article 3(4), provided they fulfil the requirement of "full-functionality"(Cook & Kerse, 2009). Thus, the full-function criteria set out in the already mentioned Article 3(4) of the EU Merger regulation are decisive for the applicability of the EU Merger regulation and they are mainly explained in the Consolidated Jurisdictional Notice.

In this context, the essential question is whether Article 3(4) (full-function joint ventures) limits the scope of Article 3(1)(b) (acquisition of control), so that acquisition of joint control comes within the scope of the EU Merger regulation only if it results in a full-function joint venture (Rudolf & Leupold, 2012). Following this, Article 3(4) is often interpreted as limiting the scope of Article 3(1)(b) and it has been said that the "prevailing view" is that the term "creation" in Article 3(4) should not be interpreted restrictively: it should at the very least include changes from sole to joint control (Rudolf & Leupold, 2012). In that case, it would be reasonable to assume that all joint ventures, regardless of the method of structuring the operation, should be subject to the full-function criteria in order to determine whether the operation is notifiable and the EU Merger regulation applicable (Brozolo & Gustafsson, 2003). As this is very particular question and we adhere to the limits of this article, for further explanation we refer to aforementioned Brozolo & Gustafsson (Brozolo & Gustafsson, 2003) or Rudolf & Leupold (Rudolf & Leupold, 2012).

In the light of the above, the creation of a joint venture, which does not perform on a lasting basis all the functions of an autonomous economic unit, does not fall under the Merger Regulation. The concept of full-functionality thus encompasses economic and operational independence of joint venture from parents. Yet, under paragraph 93 of the Consolidated Jurisdictional Notice, the parents must have joint control over the joint venture and so adopt strategic decisions, the joint venture does not necessarily need to be independent in strategic decisions (Odudu & Bailey, 2014).

Under the Consolidated Jurisdictional Notice, joint venture will be full-function, if it performs the usual functions of any undertaking operating on the same market like joint venture. In order for joint venture to be full function, it shall have - sufficient resources to operate independently on a market, activities that go beyond one specific function for the parents, no significant purchase or supply agreements between it and its parents which would undermine its independent character, sufficiently long duration to bring about changes in the structure of the undertakings concerned.

The requirement to have sufficient resources to operate independently on a market suggests that a joint venture should have day-to-day management, access to resources including finance, staff and assets either tangible or intangible in order to conduct on a lasting basis. The staff does not necessarily have to be employed by the joint ventures itself. It is enough to have it provided by third parties or interim employment agencies. Personnel can be even provided by parent companies, however, only for a start-up period or in case the joint venture deals with the parent companies just like with the third parties. In order to provide further arguments, we shall support our statements with the case law of the European Commission, which has jurisdiction to examine transactions falling within the scope of the EU Merger regulation.

The case *RSB/TENEX/Fuel Logistic (Case IV/M.904)* provides a good example of not satisfying the requirement of sufficient resources as the joint venture did not have the assets, management or personnel necessary to operate in the nuclear products market. Usually, it is very rare for the European Commission to oppose pure production joint ventures (Bellis, 2016). However, in this case, a party to the case was about to operate from the offices of one of its parents and there were no concrete plans for a development of own personnel or assets as e.g. premise, so it was not clear when it would happen.

Regarding activities that go beyond one specific function for the parents as a next relevant criterion, the joint venture should not just take over some specific functions from the parent companies and so lack the access to the market as well as it should not just conduct auxiliary activities such as research and development or production. However, there is an observation that a joint venture can make use of the distribution network of its parent companies without getting disqualified for full-functioning as long as parent companies will act only as agents of the joint venture. This is being illustrated in case *Cargill/Vandemoortele (Case IV/M.1227)*, where the joint venture was about to use the distribution network of its parent companies and the Commission stated that it did not prevent it from being full-function, because the parent companies were to act only as agents, while the joint ventures would be responsible for their own marketing and organization, i.e. they would sustain economic and operational independence.

Further requirement – not to have significant purchase or supply agreements between it and its parents, which would undermine its independent character - is also to be taken into account, while determining the full-function character of a joint venture. If there are any significant purchase or supply agreements between parent companies and joint venture, but only in a start-up period, those agreements should not affect the full-function character. Pursuant to the Consolidated Jurisdictional Notice, paragraph 97, the start-up period, however, should not exceed usually three years. If those purchase or supply agreements with parent companies do not exceed more than 50% of joint venture's turnover, then it is likely that the joint venture attains its full-function character, although it depends on individual cases. Yet, it is still possible for joint venture to attain full-function character even when only 20% of its sales go to third parties, but it must be shown that joint venture treats its parent companies as third parties, as provided in the Consolidated Jurisdictional Notice, paragraph 98.

Simply put, a joint venture shall not be generally considered as the full-function one, if they just support parent companies, they do not perform normal functions of a trading company, or they cannot operate on their own, or obtain significant supplies from third parties instead of just their parents. However, the European Commission does not require a new joint venture to be fully functional since the very beginning, but start-up joint ventures are provided a period of three years, during which the substantial support of the parent companies, is not contrary to the full-function criteria (Walther & Baumgartner, 2007). Nevertheless, there must be a legitimate expectation for a joint venture of becoming fully functional since its actual inception (Walther & Baumgartner, 2007). A full-function joint venture fulfilling all the aforementioned criteria must also have some permanence like any other concentration in order to create structural change in the market and fall within the scope of the EU Merger regulation (Cook & Kerse, 2009). Proceeding from the assumption from the Consolidated Jurisdictional Notice that a joint venture might meet the long-lasting criteria, when it is set up for an indefinite period, a joint venture set up for a short and finite period, might not. However, such a joint venture, which is set up for certain period, can still be considered as the full-function one, if the intended period is sufficiently long to cause a lasting change in the structure of the undertakings concerned, or if there is a possibility of renewing the certain period and so prolong it.

4. The Commission's decisions

In order to get the practical view over the applicability of the full-function criteria, we try to demonstrate some cases regarding joint ventures. The particular focus in these cases is, obviously, on the concentration assessment. We should also mention that as the Consolidated Jurisdictional Notice was adopted only in 2008, it seems advisable to put more focus on the recent cases. The Commission determines constitution of a concentration for the purpose of the EU Merger Regulation via full-function criteria. However, the Commission does not conduct an in-depth analysis of full-function criteria analysis in every case. In case *Robert Bosch/Samsung/JV (Case M.5227)* the Commission just briefly stated that a newly created joint venture would perform on a lasting basis all the functions of an autonomous economic entity, and only due to this fact without any further examination, the transaction would constituted a concentration within the meaning of Article 3(4) EU Merger regulation. Another case *Buitenfood/Ad van Geloven Holding/JV (Case M.6321)* provides a short analysis of the Commission's view as well. It states that, in view of the Commission's Consolidated Jurisdictional Notice, the acquisition has all characteristics of the creation of a joint venture within the meaning of Article 3(4) of the EU Merger regulation. In this case however, the merged entity was created by companies contributing assets previously owned individually and the Commission classified the proposed transaction as a holding company, which has all characteristics of the creation of a joint venture. Therefore, the joint venture had to fulfil the full-functionality criterion in order to constitute a concentration. Similar is case *Talanx International/Meiji Yasuda Life Insurance/Warta (Case M.6521)*, where the notified transaction consisted in the acquisition of joint control over Warta, the Polish insurer, by German and Japanese insurance companies. The Commission stated that as the German and Japanese undertakings would acquire joint control over Warta, the notified transaction represents a concentration within the meaning of Article 3(1)(b) of the EU Merger regulation. Simply due to the fact of acquiring joint control, the Commission did not examine the full-function criteria. However, in case *Carlyle/Advent/HT Troplast (Case M.3642)*, full-functionality was examined in depth, even though there was acquiring of joint control by Carlyle and Advent over the undertaking HT Troplast. Even though this case seems similar to the previous one, decision by the Commission was adopted in 2004, i.e. earlier than the previous case. The Commission concluded that HT Troplast will continue to operate on the markets and that it will perform on a lasting basis all the functions of an autonomous economic entity and that it has necessary resources and personnel to do so. Unlike in *Talanx International/Meiji Yasuda Life Insurance/Warta case*, the Commission examined the full-function criteria and just after this it concluded that the transaction constitutes a concentration within the scope of the EU Merger regulation. This discrepancy probably flows from the fact that the full-function criteria given in paragraph 91 of the Consolidated Jurisdictional Notice are not applicable to the acquisitions of pre-existing joint control under Article 3(1) of the EU Merger regulation. It distinguishes between the term creation and acquisition. The new acquisition of another undertaking by several jointly controlling undertakings therefore constitutes a concentration under the EU Merger regulation. In order to confirm this statement, we shall proceed to another case. In case *Barclays/Investcorp/N&W Global Vending (Case M.5338)*, decided shortly after the adoption of the Consolidation Jurisdictional Notice, the two companies acquired joint control over N&W Global Vending, which was a manufacturer of food and beverage vending machines. The Commission qualified proposed transaction as a concentration within the meaning of Article 3(1) of the EU Merger Regulation only due to the acquisition of joint control over a pre-existing undertaking. As the old and replaced Notice on the concept of full-function joint ventures[14] did not contain provision regarding non-applicability of full-function criteria to the acquisitions of joint control, there used to be more inconsistent decisions by the Commission regarding application of the full-function criteria to acquisitions of joint control. The aforementioned is has been proved in the last examined case *CVC/Permira/AA (Case M.3517)*, where the Commission examined the operation, concluded that it was an acquisition of joint control and simply stated that it constituted a concentration for the purpose of Article 3(1) of the EU Merger regulation. The actual full-functionality was not considered even though this case is from the same year as *Carlyle/Advent/HT Troplast*, where full-function criteria were examined.

5. Conclusion

As we can see from the cases and reflections above, the full-function criteria are not applicable to all joint ventures equally as we could assume after reading Article 3(4) of the Merger Regulation. The application of full-function criteria rather depends on the method used for establishing the joint venture, i.e. illustrated new creation or acquisition of joint venture. However, this has been cleared just after adoption of the Consolidated Jurisdictional Notice. Until this adoption, the old Notice on the concept of full-function joint ventures did not contain any provisions excluding applicability of full-function criteria to acquisitions of joint ventures; therefore the Commission was applying it irregularly. This led to rather inconsistent application of the full-function criteria to acquisitions of joint control. Nevertheless, with adoption of the Consolidated Jurisdictional Notice this seems no more to be a problem and the application of the full-function criteria seems consistent as illustrated in aforementioned cases.

[14] Notice on the concept of full-function joint ventures under Council Regulation 4064/89 on the control of concentrations between undertakings [1998] OJ C66/5; This notice was transposed to Consolidated Jurisdictional Notice, which replaced previous Notices on jurisdictional issues.

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GLOBALISATION AND THE INFORMATION SOCIETY IN POLAND AND SELECTED COUNTRIES

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Abstract. The contemporary world, and therefore our existence as well, undergo continuous globalisation, which exerts a powerful impact on all aspects of the economic, social and political life. Scientific and technological progress is believed to be one of the major causes of globalisation. Consequently, it is essential to analyse factors that contribute to the development of the information society. The paper discusses some selected issues concerning the information society within the context of globalisation. It is a comparative analysis of the information society in Poland and selected countries performed by means of models examining contagion effects. The study was conducted by means of a comparative analysis of selected country-pairs. They were constructed with a view to presenting variations in residual standard deviations. Cross-validation models enabled specifying the degree to which movements in random variables in one country are affected by movements in random variables in the other country. It also investigates the interconnectedness between the Internet usage and GDP of these countries in the period of time under study. The Internet usage and the GDP of the selected countries are looked at as transmission channels of contagion. The analysis is based on empirical data on the quarterly values of the variables under study in the years 2012-2016.

Keywords: globalization, information society, contagion effect, GDP, financial econometrics

JEL Classification: C01, C02, C51, C10

1. Introduction

Globalisation is a process of worldwide internationalisation, which leads to increasingly close links between countries and societies, including those situated at a vast distance from one another. One of the factors contributing to globalisation is progress, both scientific and technical, resulting from the ongoing development and modification of new information technologies. (Bielak&Ptaszek, 2016). These technologies stimulate economic growth, and thus improve the quality of our life. Access to the new technology products, and the subsequent emergence and development of the information society, have become major elements shaping society as they enable globalisation, which brings about various social changes, e.g. shifts in the ethnic composition of societies due to migration. People take advantage of the improved communication possibilities, but this also leads to greater social differentiation as a result of differences in access to the fruits of the information and communication revolution (Sanchez-Mortinez&Otero, 2009). Another problem is the way the ICT products are used. For many people they are simply part and parcel of their life; a lot of people, however, have become addicted to technological gadgets. All these processes change our tradition and culture. T. Miczka notices the emergence of the communication shifts, which occur as a result of the impact that the media exert on society.

Today, electronic systems dominate most areas of our life, we are dependent on computers, the data they process, and the information stored in them. We have become the network society, the interactive society and the world we live in has become the interactive world. The Internet and the multimedia are increasingly important, which results in our growing dependence on new technologies. K. Krzysztofek argues the Internet is becoming a social space, where some aspects of human activity can be transferred, and thus, through its digital activities, society converts into the *big data society.* Another concept that can be found in the literature is *mediatisation*, i.e. a process where communication refers to the media and employs the media, and consequently the media begins to play a primary role in shaping everyday life, society and culture. F. Krotz believes that mediatisation, like globalisation and individualisation, is a social process, or a metaprocess. People adopt various strange behaviour patterns, e.g. info-activism – it is a term referring to the situation where each of our everyday activities is affected by the media. Another example of the social evolution taking place today is *multitasking*, i.e. the simultaneous co-use of various media (Janiga-Ćmiel, 2017, B). Unfortunately, new technologies and the Internet have also dark sides, intensified by globalisation, such as cyberterrorism and hacker attacks. E-economy may pose a threat to the security of our money, or even to the national security (Globan-Klas&Sienkiewicz, 1999). The gap between the affluent, who have access to a computer and the Internet and the poor, deprived of new technologies, is widening and results in digital exclusion. Access to rapidly developing information and communication technologies exposed the information society to multiple dangers and led to the emergence of the multi-risk society (Janiga-Ćmiel, 2013), (Janiga-Ćmiel, 2016, B), (Janiga-Ćmiel, 2017, A). Summing up, globalisation affects the development of the information society - on the one hand it accelerates the process, but on the other, it presents an increasing threat and arouses general insecurity.

2. An analysis of the contagion – the information society

Economic and social phenomena undergo upheavals caused by various kinds of factors, some of which are systematic and some – random. Systematic factors can be modelled, and then they become explanatory variables. However, it is more difficult to examine the impact of random variables as this requires constructing specific models which combine solely random components. The study investigates how changes in Internet usage are generated. It involves a comparative analysis of pairs of selected countries and is conducted by means of contagion detection models, built in such a way as to present variations in residual standard deviations. The crises of the 1990s and of the 21st century were mainly financial ones, connected with the problems in the banking sector (Janiga-Ćmiel, 2016, A), (Rigobon, 2003), (Naoui et al., 2010). Crises were explored by scientists from many countries, including: M. K. Brunnermeier, P. O. Gourinchas, S. S. Skrzypek. (Forbes&Rigobon, 2002), (Frankel&Rose, 1996), (Celik, 2012), (Fry-McKibbin et al., 2013). Numerous studies concluded that during crises there was an increased correlation between stock markets, as well as bond markets and currency markets around the world. The subject literature acknowledges the existence of a contagion phenomenon, which is defined in various ways, for example as "a considerable growth in a correlation among various financial markets due to shocks", „the cross-country transmission of shocks", or „the general cross-country spillover effect" (Ghini&Saidi, 2017), (Xu&Jiang, 2011), (Guidolin&Pedio, 2017).The concept of the contagion effect is associated with the concept of a transmission channel. It can be defined as"a cross-country link between two or more national economies, through which there can happen mutual transmission of economic impulses, particularly various economic crises, no matter what kind of link it is or how it manifests itself, as long as it produces cross-country effects". (Alvarez&Barlevy, 2015), (Cai et al., 2009), (Caporale et al., 2005), (Fiszeder&Razik, 2003), (Longstaff, 2016). Cross-validation models are applied, to specify the degree to which movements in random variables in one country are affected by movements in random variables in the other country. Standard deviations are denoted by S1t, S2t and their variations can be shown as dependent on the variations in random variables of the Internet usage in the countries under study U1t, U2t. Since the expected values are different from zero, it is not possible to adopt the classical least-squares method to estimate them - the maximum likelihood method should be used instead. (Wälti, 2003) In addition to values U1t, U2t, the expected values of random variables U1t, U2t are introduced into the model, and consequently the standard deviation models take the following form:

$$S_{1t} = \alpha_{11}U_{1t} + \alpha_{12}E_1(U_{2t}) + V_{1t}$$

$$S_{2t} = \alpha_{21}U_{2t} + \alpha_{22}E_2(U_{1t}) + V_{2t} \tag{1}$$

Where U_{1t}, U_{2t} are random components of the Internet usage models in the countries under comparison, while V_{1t}, V_{2t} are the models' residuals. It is assumed that the expected values of variations in one of the countries are known in the other, i.e. we know $E_1(U_{2t})$ and $E_2(U_{1t})$. The calculation of the expected values is a prerequisite to the models' estimation, which allows for determining the times of contagion in the countries under study and the resultant contagion spillover onto the other countries (Wälti, 2003). It is assumed, however, that $E(V_{1t}) = 0$ and $E(V_{2t}) = 0$, which means the expected values of random components are zeroed, so they neutralise each other. For specific deviations S_1 and S_2, the following models (1) are used to build a bilateral interdependence model showing the standard deviation of a contagion-receiving country, in this case S_{2t}, the standard deviation of a contagion-transmitting country S_{1t}. The following linear model illustrates the relationship:

$$S_{2t} = \alpha + \beta S_{1t} + \varepsilon_t \tag{2}$$

The model enables capturing the moments of contagion, which can be identified by means of the correlation coefficient:

$$\rho = \beta \sqrt{\frac{\sigma_{S_{1t}}^2}{\beta^2 \sigma_{S_{1t}}^2 + \sigma_{\varepsilon_t}^2}} \tag{3}$$

The movement variance in the country-receiver can be expressed as:

$$\sigma_{S_{2t}}^2 = \beta^2 \sigma_{S_{1t}}^2 + \sigma_{\varepsilon}^2 \tag{4}$$

The extension of this variance is used to calculate the correlation coefficient of the variances in accordance with the presented model:

$$\varrho_{\sigma_{1t}\sigma_{2t}} = \frac{cov(\sigma_{1t}\sigma_{2t})}{\sigma_{1t}\sigma_{2t}} = \frac{cov(\sigma_{1t}\sigma_{2t})}{\sigma_{1t}^2} \cdot \frac{\sigma_{1t}}{\sigma_{2t}} = \beta\,\frac{\sigma_{1t}}{\sigma_{2t}} =$$

$$= \beta\sqrt{\frac{\sigma_{1t}^2}{\beta^2\sigma_{1t}^2+\sigma_{\varepsilon}^2}} \tag{5}$$

The correlation coefficient presented above is defined by the variance of movements in the Internet usage in the contagion- transmitting country, and the variance of the model representing the relationship between these variances. Now, let us examine what happens to the correlation coefficient when the variance changes $\sigma_{S_{1t}}^2$ (Wälti, 2003). With this end in view, we present a derivative of the correlation coefficient to the variance $\sigma_{S_{1t}}^2$. The derivative takes the form:

$$\frac{\partial\rho}{\partial\sigma_{S_{1t}}^2} = \frac{1}{2}\beta\,\frac{\sigma_{\varepsilon}^2}{\sigma_{S_{1t}}\sigma_{S_{2t}}^{\frac{3}{2}}} = \frac{\beta}{2}\,\sigma_{\varepsilon}^2\,\frac{1}{\sigma_{S_{1t}}\sigma_{S_{2t}}^3} > 0 \tag{6}$$

It can be observed that the correlation coefficient derivative with respect to $\sigma_{S_{1t}}^2$ is always positive, which means that an increase in the variance results in a higher correlation coefficient with the movement variance in the contagion-receiving country (Forbes&Rigobon, 2002),. Thus, the variances for the countries under study are mutually correlated (Wälti, 2003). Once the correlation of the variances is proved, it is time to investigate whether there are factors concurrently shaping both variances. The factors are denoted as ω_t and we obtain the following models:

$$\begin{cases} S_{1t} = \alpha_{11} + \alpha_{12}\omega_t + \varepsilon_{1t} \\ S_{2t} = \alpha_{21} + \alpha_{22}\omega_t + \varepsilon_{2t} \end{cases} \tag{7}$$

The value of the common component ω_t, corresponding to the lines' intersection point (there is an intersection point for the models presented above because in each case $\alpha_{12} \neq \alpha_{22}$), indicates the moment when the value of coefficient ϱ changes, i.e. the moment when contagion hits. *z* is used to denote a contagion spillover from the first country's economy onto the second country's economy. Now we can calculate the conditional variance conditioned on the presence of contagion, which in the case of the country-receiver is different from the model's residual variance, but the same for the country-transmitter: $\sigma_{\varepsilon_1/z}^2 = \sigma_{\varepsilon_1}^2$. (Wälti, 2003) This signifies that the occurrence of contagion does not affect the country-transmitter's variance, and: $\sigma_{\varepsilon_2/z}^2 \neq \sigma_{\varepsilon_2}^2$. However, there is a change in the variance of the country onto which the contagion spreads (Wälti, 2003). Similarly, for S_{1t} and S_{2t}, due to contagion:

$$\sigma_{S_{1t}/z}^2 = \sigma_{S_{1t}}^2,\ \sigma_{S_{2t}/z}^2 = (1+p)\sigma_{S_{2t}}^2 \tag{8}$$

Note that variance S_1 remains the same, while variance S_2 increases by decimal *p*, which also indicates its percentage rise (Rigobon, 2003). Determining an increment in *p* and examining its statistical significance make it possible to detect and measure contagion, i.e. the effect that the phenomenon's dynamics in one country exerts on its dynamics in the other country. If contagion does not occur, the value of *p* equals to zero.

3. Empirical example - the information society

The analysis is based on empirical data on the quarterly values of the variables under study in the years 2012-2016. The three countries examined in the study were selected by means of the Ward taxonomic method. The following variables were taken into account: Y_1 - the number of Internet users in Poland, Y_2 - the number of Internet users in Great Britain, Y_3 - the number of Internet users in Ukraine. The aim of the study was to analyse the correlation of movements in the number of Internet users in the pairs of selected countries. The comparative analysis was performed based on the model presented in this paper. A variance model of Internet usage was built taking into consideration the number of Internet users. The first pair to be compared was made up of Poland (S_1) and Great Britain (S_2):

$$\begin{cases} S_{1t} = 0.25U_{1t} + 0.33E(U_{2t}) + V_{1t} \\ S_{2t} = 0.09U_{2t} + 0.06E(U_{1t}) + V_{2t} \end{cases} \tag{9}$$

Where: $E(U_{1t}) = 0.05$, $E(U_{2t}) = 0.0003$. As we can see, the values of the models' parameters α_{ij} are positive:

$$\begin{cases} S_{1t} = 0.14 + 0.32S_{2t} + \varepsilon_{1t} \\ S_{2t} = 0.003 + 0.001S_{1t} + \varepsilon_{2t} \end{cases} \tag{10}$$

which means the movements in the Internet usage in Great Britain positively stimulate the movements in the Internet usage in Poland, and vice versa. The models represent the relationship between the movements in the Internet usage in Poland and Great Britain. As we can see, the model for the changes in the Internet usage in Great Britain due to the movements in Poland is statistically insignificant. This indicates that only the movements in Great Britain affect those taking place in Poland, but not vice versa. The correlation coefficient of the impact of S_2 on S_1, calculated with formula (3) stands at 0.553, whereas the correlation coefficient of the impact of S_1 on S_2 amounts to 0.012. The latter figure proves that the changes in the Internet usage in Poland do not have any impact on the changes in Great Britain.

$$\frac{\partial Q}{\partial \rho^2_{S_1}} = 0.112, \frac{\partial Q}{\partial \rho^2_{S_2}} = 0.326 \tag{11}$$

The calculated derivatives are positive and indicate a concurrent growth in variances in both countries, which means an increased interdependence between the movements and is a sign of the existence of contagion. Since the correlation of movements S_1 and S_2 is significant, it is necessary to determine common factor ω_t, concurrently shaping the variance in both countries. Relevant model equations are built for Poland and Great Britain;

$$\begin{cases} S_{1t} = 0.02 + 0.077\omega_t + \varepsilon_{1t} \\ S_{2t} = 0.015 + 0.002\omega_t + \varepsilon_{2t} \end{cases} \tag{12}$$

Where: $\sigma_{\varepsilon_1}^2 = 0.015$, $\sigma_{\varepsilon_2}^2 = 0.002$. ω_t stands at 0.04 and generates the standard deviation of 0.015 for the contagion factors in both countries. Next, we calculate conditional variances which take into account the effects that contagion exerts on the Internet usage in Poland:

$$\sigma_{\varepsilon_1/z}^2=0.028,\ \sigma_{\varepsilon_2/z}^2 = 0.002,\ \sigma_{\varepsilon_2/z}^2 = \sigma_{\varepsilon_2}^2 \quad (13)$$

In Great Britain the common factor variance does not change, while in Poland it does: $\sigma_{\varepsilon_1/z}^2 = 0.032$. When the post-contagion variances are compared, we can observe an increase: $\frac{\sigma_{\varepsilon_1/z}^2}{\sigma_{\varepsilon_1}^3} = 1.1429$, $1 + p = 1.1429$, $p = 14.29$. The increment in p indicates a rise of 14.29% in the variance of Internet usage in Poland resulting from the changes in the British Internet system. This is confirmed by the significance verification based on the random variable test: $z = \frac{1}{p}\sqrt{k\frac{n}{N}} = 1.55 < 1.96$ of normal distribution within the presented estimator. N is the size of the examined population, n is the size of the sample, k is a constant for the population affected by the other-population under comparison. p proves to be statistically significant, and so does the impact of the British Internet's dynamics on the Internet development in Poland (which is verified based on the significance level $\alpha = 0.05$). The same approach was adopted to analyse the dataset for Poland and Ukraine. In this case, parameter p stands at 10.12%; for such a value, the variable amounts to 1.94<1.96. This means the movements in the Internet usage in Poland and Ukraine are interconnected. The impact is unidirectional – the changes in Poland affect the movements in Ukraine, while the changes in Ukraine have no influence on the situation in Poland. For Poland and Ukraine, common factor wt generating contagion stands at 0.0003 - a lower value than for Poland and Great Britain. ω_t =0.0003 generates variance of 0.001, which is statistically insignificant.

4. An analysis of the contagion – the GDP

The study examined not only the trends in the Internet development in the selected countries, but also their GDP so as to detect the convergence between the GDP and the Internet usage. We use a trilateral model of the GDP variance in these countries. A general model takes the following form:

$$\begin{cases} S_{1t} = \alpha_{11}U_{1t} + \alpha_{12}E(U_{2t}) + \alpha_{13}E(U_{3t}) + V_{1t} \\ S_{2t} = \alpha_{21}U_{2t} + \alpha_{22}E(U_{1t}) + \alpha_{23}E(U_{3t}) + V_{2t} \\ S_{3t} = \alpha_{31}U_{3t} + \alpha_{32}E(U_{1t}) + \alpha_{23}E(U_{2t}) + V_{3t} \end{cases} \quad (14)$$

In order to construct this model we first build a model for variables $\{x_{1t}, x_{2t}, x_{3t}\}$ representing the movements in the GDP of the compared countries influenced by common factor ω_t. For particular countries the model defined by common factor ωt, and determined by means of factor analysis, takes the form:

$$\begin{cases} x_{1t} = \lambda_1 \omega_t + \delta_1 U_{1t} \\ x_{2t} = \lambda_2 \omega_t + \delta_2 U_{1t} \\ x_{3t} = \lambda_3 \omega_t + \delta_3 U_{1t} \end{cases} \tag{15}$$

Variable ω_t is a standardised variable of absolute value of (0;1). Parameters λ_1, λ_2, λ_3 provide information about the shock effect, while δ_1, δ_2, δ_3 - about the impact of the residual component on the GDP in the countries under study. In the model (14) parameters α_{ij} at random variables U_{it} inform about the impact of the residual component on the GDP variance. Parameters α_{i2} and α_{i3} associated with the expected values of residual components show the strength of contagion – the degree to which variable movements in - *i* countries for which the model is built are affected by the other two countries. The Wald test is applied to check the stability of the parameters, and for the significant parameters we determine the spillover effects of shocks – the linkages between the movements in the GDP variance in the country the equation refers to and those in the other countries. We can also examine the problem of crisis using other models and econometric tools (Hadaś-Dyduch, 2016, A), (Hadaś-Dyduch, 2016, B).

5. Empirical example - the GDP

Model (14) was estimated by means of the maximum likelihood method and the results are as follows:

$$\begin{cases} S_{1t} = 0.01U_{1t} + 0.15E(U_{2t}) + 0.001E(U_{2t}) + V_{1t} \\ S_{2t} = 0.01U_{1t} + 0.03E(U_{2t}) + 0.02E(U_{2t}) + V_{2t} \\ S_{3t} = 0.03U_{1t} + 0.14E(U_{2t}) + 0.01E(U_{2t}) + V_{3t} \end{cases} \tag{16}$$

In order to find out which country affects the others and which is affected, one has to examine the coefficients of the expected values. The value of 0.15 obtained in the model for Poland indicates that Great Britain impacts on Poland, while Ukraine does not (0.001). The value of 0.03 means that Poland does not exert an effect on Great Britain. Nor does Ukraine, for which the value amounts to 0.002. 0.14 signals that Poland affects the situation in Ukraine, whereas 0.01 shows that Great Britain does not. In order to examine the impact of the countries on the others, we can prove the existence of common factors ω_t. To this end, the following model is built:

$$\begin{cases} x_{1t} = 0.12\omega_t + 0.03U_{1t} \\ x_{2t} = 0.16\omega_t + 0.02U_{2t} \\ x_{3t} = 0.01\omega_t + 0.001U_{3t} \end{cases} \tag{17}$$

As we can see, common factor wt has a varying impact on the GDP of particular countries. The model shows that 12% of the factors shaping Poland's GDP are significant and can be transferred into Great Britain or Ukraine. For Great Britain, such factors account for as much as 16%, whereas for Ukraine – only 1%. This means that Ukraine does not affect the GDP of Poland or Great Britain. The residual component has a statistically insignificant coefficient, which indicates that the common factor was selected properly. The GDP variance is insignificantly influenced by the residual components of Great Britain's models, has a significant impact on the GDP in Poland, but does not affect the Ukrainian GDP. Poland and Ukraine exert no effect on Great Britain's GDP. Poland impacts on the GDP of Ukraine.

6. Conclusion

The paper examines the mutual impact that the three countries under study exert on one another with respect to the Internet usage and the GDP. The Ward taxonomic method was applied to identify three homogeneous groups of countries. The countries with the highest level of the Internet usage are represented by Great Britain, those with the medium level - by Poland, and the last group of countries, with the lowest level of the Internet usage – by Ukraine. The study shows that the movements in the Internet usage in Great Britain affect such movements in Poland, but not vice versa. As far as Poland and Ukraine are concerned, the impact is also unidirectional – only variations in the Internet usage in Poland have influence on those taking place in Ukraine. The same situation can be observed with respect to the GDP. The study indicates that the countries which belong to the group with a lower GDP do not have impact on the countries making up the groups with a higher GDP, and reveals the reverse influence. Globalisation allows the society of each country, to a greater or lesser degree, to expand computerisation and informatisation, while the consequent access to the innovative technologies and scientific knowledge brings about changes in the society itself.

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COMPARISON OF SELECTED INTERNATIONALLY RECOGNIZED MEASUREMENT SYSTEMS OF THE SOCIAL BRAND VALUE

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Abstract. Social brand value can be defined as brand value through social interaction and it is very closely related to marketing orientation to community in international environment. This concept can be defined also as the extent to which people share a brand of information about brand as part of their everyday social lives at works or at home. This contribution deals with basic characteristics of social brand value from the view of companies and customers, the structure of social brand value and specific differences between social brand value and classical brand value. A common feature of measurement systems of social brand value is the category „social media". Article focuses on selected measurement systems of social brand value that compares brands on different key dimensions of social media performance e. g. popularity, interaction, identification, information, affiliation, trust, network reach, receptiveness etc. and its specific indicators (PRINT Index™, Digital IQ, FB fans, total shares, FB IQ, Social Brand Score, SEI Score, Subscriber Growth, Questions answered, Overall SMR Score, Famecount, Social index - NPSI). After brief comparison of all internationally recognized models of the social brand value, there is analysis of global brands based on selected methods with application of the mathematical statistics apparatus.

Keywords: brand value, social brand value, social media, measurement system

JEL Classification: F60, F69, M31, M37, M39

1. Introduction

Social media technologies such as the Internet, social networking, and mobile broadband have fundamentally changed the way people connect with each other and with brands (Hsu & Lawrence, 2016). Social media encompass a wide range of websites such as social networking sites, blogs, microblogs etc. (Wan et al., 2017). Social media has created new rules and challenges for marketing strategy (Deighton, 2010 in Hsu & Lawrence, 2016).

Social media platform such as Facebook, Twitter, Google+ etc. have advanced to such an extent that they are a highly relevant topic in our everyday private and business lives. Hence, research on social media has become multidisciplinary. Antropologists, neurescientisc, sociologists and marketers are researching in the context of this phenomenon, analysing its consequences for society in general and business initiatives in particular. The beauty of this field of research is the fact that a large part of the worldwide population is somehow connected with, or at least informed about social media and its predominance in today´s reality (Zauner et al., 2012).

Social media gives consumers a voice, and allows them to interact and share their experiences with any person anywhere in the world (Kozinets et al., 2010 in Ismail, 2017). Understanding how social media marketing activities influence brand loyalty is important for strategic marketing (Ismail, 2017). The unique aspects of social media and its immense popularity have revolutionized marketing practices such as advertising and promotion (Hanna et al., 2011 in Laroche et al., 2012).

2. Literature review

The social Web is changing traditional marketing communications. Traditional brand communications that were previously controlled and administered by brand and marketing managers are gradually being shaped by consumers (Schivinski & Dabrowski, 2013).

Social media platforms have become popular tools among marketers (Quach & Thaichon, 2017). Social media being used as a marketing tool mainly for four purposes: market research and feedback generation; publicity, branding and reputation management; business networking; and customer service and customer relationship management (Thoring, 2011 in Ismail, 2017). The main reason is, that internet is the fastest growing medium which is also flexible, interactive and almost ubiquitous (Gajanova & Kramarova, 2016).

Social media marketing is a broad category of advertising spending, including advertising using social network, virtual worlds, user-generated product reviews, blogger endorsement, RSS feeds of content and social news sites, podcasts, games, and consumer generated advertising (Tuten, 2008 in Ismail, 2017). Social media marketing activities are subset of online marketing activities that complete traditional web-based promotion strategies, such as e-mail newsletters and online advertising campaigns (Berefoot & Szabo, 2010 in Ismail, 2017).

Online WOM (word-of-mouth) is defined as “any positive or negative statement made by potential, actual, or former customers about a product or a company, which is made available to a multitude of people and institutions via the Internet” (Henning-Thurau et al., 2004 in Hsu & Lawrence, 2016). Although companies cannot control the spread of WOM on the Web, they can use social media to get involved in conversations and influence and shape discussions in the desirable direction of a company’s mission (Hsu & Lawrence, 2016). Haenlain & Libai (2017) deal with the impact of WOM on the firm´s customer equity in their research.

Companies with strong brand equity may command loyalty and price premiums, but they also demand responsiveness and transparency to a greater degree. This issue raises the question as to whether a company’s brand equity works for or against it in a rich social media environment (Hsu & Lawrence, 2016).

Consumers are either brand conscious who view brands as symbols of status and prestige, or value conscious, who use social media to check and compare the prices of different brands, to get the best value for their money. Businesses are joining social media to target those two types of consumers and actively perform less costly integrated marketing activities (Ismail, 2017; Popescu, 2016). An overwhelming majority of marketers worldwide 97 percent are participating in social media marketing to market their business (Stelzner, 2014 in Ismail, 2017).

Although research on the influence of customers´ brand perceptions on perceived brand value is scarce, both conceptual and empirical evidence exists indicating a substantial, positive relationship (Zauner et al., 2012). Social media is redefining how businesses communicate with their customers and brings both challenges and opportunities to marketing practices. During the past decade, social media such as Facebook, Twitter have gained in popularity all over the world among both individuals and enterprises (Shi et al., 2016). Study realized by Colicev et al. (2016) specifically examines how social media actions are associated with brand value and thus directly addresses this highly topic issue. They focused on brand and user actions on social networks (Facebook, Twitter, YouTube):

- *Brand actions,* such as number of photos posted, numbers of status updates, number of videos posted, number of miscellaneous posted, number of tweets and
- *User actions,* such as number of liked on brands´ page, number of likes/brands´ posts, number of comments/brands´ posts, number of shares/brands´ posts, number of people talking about it (PTAT), number of followers, number of retweets, number of subscribers, number of video views etc.

Importance of social brand value is due the orientation of marketing. The next table presents the orientation of marketing from the beginning to today position.

Table 1: Orientation of marketing

Year	**Orientation of Marketing**
1950	Focus on production
1960	Focus on product
1970	Focus on selling
1980	Focus on customer
1990	Focus on service
2000	Focus on community

Source: own elaboration according to Fuller et al., 2009

There is a difference in perception of the term "social brand value" from the positon of users and companies is:

- *social brand value for users* – the perceived value, which results from exchange and interactions among brand users within a community,
- *social brand value for companies* – the share of a brand´s equity which results from social interactions among brand users and which is not directly under control of the company.

Fuller et al. (2009) defines five dimensions of social brand value: informational value, affiliation value, brand evangelism, convertinal value and identify value. Many surveys are based on brands activities on social networks, such as Facebook, Twitter etc. Tesearch of Sorensen et al. (2017) contains analyses of posts, likes, clicks shares, and retweets on Facebook, Twitter and YouTube. Research of Knapp et al. (20116) investigates the incremental effect of social media activities.

3. Results and discussion

Our research deals with the measurement systems of the social brand value. We identified 40 internationally recognized measurement systems. There is list of them with the years, during which were used.

Table 2: Measurement systems of the social brand value

Model	Years	Model	Years
Ad Age Social-Media Brand Ranking Top 10 (Ad Age)	2011, 2012	The 100 most mentioned brands on Twitter (Brand Republic News)	2009
Beauty Digital IQ Score (L2 ThinkTank)	2010-2015	The Most Liked Brands on LinkedIn (LinkedIn Corporation)	2012
Dutch Most Used Social Media Platforms (Newcom Research & Consultancy)	2014-2017	The NetProspex Social 50 (NetProspex)	2010, 2011
Engagement Scores for the World´s Top 100 Brands (Wetpaint and Altimeter)	2009	The SB Influencers Top 100 (Salterbaxter MSL Group)	2015
F.A.V.E.50 - Top 50 Retailers on Facebook (Expion)	2013	The Vitrue 100 (Vitrue)	2008-2010
Facebook Fan Page Top-20 (Tamar Research)	2008	The Vitrue 25 Top Social Restaurants	2009
Food Brand Ranked by Digital IQ Score (L2 ThinkTank)	2014	Top 10 Brand Movers on YouTube (Marketing Charts)	2012-2013
Home Care Brands Ranked by Digital IQ Score (L2 ThinkTank)	2013, 2015	Top 10 brands on Facebook (The Big Money)	2009
Media Value Ranking Global Brands (General Sentiment)	2009-2012, 2014	Top 10 brands with the most Hyves fans (Twistamsterdam)	2007, 2008
NetBase Luxury Brands (NetBase)	2016	Top 10 Social Brands (DVJ Insights)	2011, 2012, 2014
Olympic sponsors generate most social media buzz (Unruly Media)	2011	Top 10 Socially Devoted Global Brands (Socialbakers)	2012
Personal Care /China by Digital IQ Score (L2 ThinkTank)	2014	Top 10 Super Bowl XLV Media Value Ranking (General Sentiment)	2011
Presige 100 Facebook IQ (L2 ThinkTank)	2011-2012	Top 100 Brand LoveList (NetBase)	2015-2017
Sociagility Top 50 most social brands (Sociagility)	2010	Top 20 Brands on Facebook (The Next Web)	2011
Social Brands 100 Youth Ranking	2014	Top 20 Swiss Brands on Facebook (Unic)	2011
Social Brands 100 /The most Social FMCG Brands (Headstream)	2014	Top 25 Intent HQ Most Social Brands (Intent HQ)	2014
Social Brands Top 100 (Headstream)	2011-2013	Top 50 Brands in Social Media (SMR) (Yomego)	2011
Social Media Effectiveness Index (SEI 100) (Blue Ocean market Intelligence)	2012	Top 50 European Love List (NetBase)	2017
Social Media Monitor (Social Embassy)	2009-2014	Top 50 Facebook Brand Ranking (Markenlexikon)	2010-2012
Social Radar Top 50 Social Brands (Infegy)	2009	Top Social Network Stars (Famecount)	2010

Source: based on www.rankingthebrands.com

The first measurement system of social brand value was applied in 2007. During the analysis, we identified a big problem. The most of models (25 models) were used only once, 6 models were used only two times, five models were used three times, one model were used four and one model five times and only two models were used 6 times. No model was applied more than 6 times in a row.

27 of analysed models is global, 4 of them were designed for Netherlands, 4 for USA, 2 for UK, and 1 for China, European Union an Switzerland.

33 of analysed models contains brands from all industries. The rest of models contains only brands from one industry (beauty, retail, food, home care, personal care, FMCG, restaurants).

After introductory analysis of models, we focused only on global models contains brands from all industries and were applied more than once (seven models).

After depth analysis of these models, we identified 10 brands (Amazon, Apple, Coca-Cola, Disney, Google, LG, Microsoft, MTV, Nike and Starbucks) that achieved the best overall results. Measurement systems of these models are presented in the following table.

Table 3: Measurement systems of selected models

Model	**Characteristics**	**Unit of measurement**
Ad Age Social-Media Brand Ranking Top 10	- Examination of the sentiment of online conversation around the top 200 megabrands. - Tracking posts on 40 million online sources including blogs, Twitter, Facebook and other networks and analysing the sentiment of the brand references	ranking
Media Value Ranking Global Brands	- Measuring the earned media exposure of brands across the web. - Measuring the media exposure consist of three valuable inputs: volume of mentions, sentiment of mentions and exposure potential.	ranking
Social Brands Top 100	- Creation a ranking of 100 different brands based on their social activity. - Final Social Brand Score consists of the Social Engagement Score and the Expert Panel Scores.	social brand score
The Vitrue 100	- Daily analysing of over 2000 popular brands on the social web.	ranking
Top 10 Brand Movers on YouTube	- Publishing the Top 10 Brand Movers on YouTube by Subscriber Growth.	subscriber growth
Top 100 Brand LoveList	- Ranking according to consumers in social media.	ranking
Top 50 Facebook Brand Ranking	- Ranking shows the top 50 of brands with the most fans on facebook.	brand fans

Source: based on www.rankingthebrands.com

A lot of models are based on the number of fans, so we found out the number of followers of these brands (official pages of brands) on selected social networks (Facebook and Twitter).

Researches of many authors are based on comparison of several characteristics of these social networks, such as Chavez et al. (2017), Leung et al. (2015) or Howard et al. (2014). Table 4 contains results.

Table 4: Number of followers (Facebook, Twitter)

Brand	Facebook		Twitter	
	Number of followers (mil.)	**Ranking**	**Number of followers (mil.)**	**Ranking**
Amazon	27,10	6.	2,69	8.
Apple	10,51	9.	1,49	9.
Coca-Cola	106,23	1.	3,39	7.
Disney	49,90	2.	5,65	6.
Google	24,36	7.	19,20	1.
LG	3,96	10.	0,31	10.
Microsoft	11,75	8.	8,27	4.
MTV	46,89	3.	15,80	2.
Nike	28,98	5.	7,26	5.
Starbucks	35,63	4.	11,90	3.

Source: author

The degree of correlation of number of followers on Facebook and Twitter is calculated using modified non-parametric version involving ordinals – Spearman´s rank correlation coefficient. Spearman´s rank correlation coefficient provides quick idea of the intensity of dependence between two quantitative marks or the dependence between the rank characters. The Spearman's rank correlation coefficient is applied to determine a monotonic relationship between the ranked numbers of followers (the ranks of 1-10).

$$r_s = 1 - \frac{6\sum_{i=1}^{n}\left(R_i - Q_i\right)^2}{n\left(n^2 - 1\right)} \tag{1}$$

where

- r_s – Spearman's rank correlation coefficient
- R_i – rank-ordered value x_i
- Q_i – rank-ordered value y_i
- n – number of measurements

When interpreting the calculations of correlation coefficients, we draw on the following guidelines (Table 5):

Table 5: Degree of Correlation

Correlation Coefficient	Degree of Correlation
0.0 – 0.3	low
0.3 – 0.8	medium
0.8 – 1.0	high

Source: author

The Spearman´s Rank Correlation Coefficient is 0.33, which indicates medium correlation of values. It means that there exist only medium degree of conformity of the number of followers on Facebook and Twitter. The difference is due the different activity of account on Twitter and Facebook. Some brand are more active on Twitter and some on Facebook. For example, Chávez et al. (2017) investigated differences in account activity in their study. During their research (18 months), the most active account on Twitter was Coca-Cola while Pepsi was the most active page on Facebook.

4. Conclusion

Social media became an important part of life and popular tools among marketers. We can see interaction between companies and their customers on several social networks, such as Facebook, Twitter, Instagram etc. This interaction is very important, because creates social media value of brands. We found out, that there are several measurement systems of social brand value, but they are not use regularly. The most of models were used only once. No model was used more than 6 times in a row. This finding is striking, because, if we want to know development of social brand value, we need to use some model many times in a row. After introductory analysis of models, we focused only on global models contains brands from all industries and were applied more than once. After depth analysis of these models, we identified 10 brands that achieved the best overall results. After brief comparison of number of follower of the official web pages of these brands on Facebook and Twitter, the Spearman´s rank correlation coefficient was applied. The degree of correlation coefficient indicates medium correlation that means medium degree of conformity of the number of followers.

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THE IMPACT OF GLOBALISATION ON REGIONAL DEVELOPMENT

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Abstract. Problematics of regional development in a country is very important in the process of globalisation. It does not concern only economic indicators. Also related are the sociological and psychological impacts of regionalisation on the inhabitants. Until the inhabitants of a particular region start to feel the reflection of economic stability in the nearest surrounding regions, it is difficult to talk about the social stability of the state. The inhabitants want to feel their participation in positive globalisation trends in their own place of residence. Authorities of the European Union also understand that the importance of the region should be enhanced. There exist significant differences between regions in Europe – 75 % of investment is concentrated in Europe in the 14 % of the region in the Pentagon which lies between London, Hamburg, Munich, Milan, and Paris. On one hand the European Union is interested in growth, on the other side every growth can be a potential cause of further economic and social disparity between regions. European regional policy tries to implement practical solidarity among nations. In a number of areas which affect the country (region) in different ways and to varying degrees, it has become clear that citizens' participation in projects can greatly influence their success in the region. This concerns for example architecture, urbanism, but also the development of the region's economy. Interest in the development of the region is not entirely new. We cannot explain it just as a response to current globalization trends.

Keywords: globalization, region, regional development, regional policy, regional disparities

JEL Classification: R11, R13, A13, M38

1. Introduction

The performance of self-government is very important in the European Union. In this context, we are talking about a new value orientation (Hes, et al., 2015) of public administration with an accent on the citizen as a customer (Rybanský & Máliková, 2015). Such a trend is new for emerging countries, but in developed market economies, a mature democracy and a historically stable self-governmental breakdown, executive public marketing is obvious (Bednárik & Čapkovičová, 2016). In this context, from the point of view of globalization, we can accentuate that marketing communication is an interdisciplinary scientific discipline. It uses knowledge from sociology and psychology in addition to knowledge from economics, business and marketing (Majtán & Spišiaková, 2013). Representing the last two leading disciplines has an irreplaceable role in marketing at all because it directly or indirectly works with people (Romao & Neuts, 2017). The need for territorial marketing, which is directly based on positive persuasion, is marked particularly: "*marketing communication of towns and municipalities informs about the activities and products of the city, respectively the City Office and its tools will influence target groups so that urban activities, products, or any information about them are perceived as positive* (Majtán & Spišiaková, 2013)."

Communication with a positive and desired response requires appropriate preparation – *marketing planning* and so called *positioning*. It is the process by which the local authorities can establish themselves not only on the domestically market, but mainly European (Mally, 2018). Awareness of the region (city/municipality) is very important in the international projects. That's why the European Commission has made some recommendations to facilitate their preparation: investing in proposal preparation, identifying target group expectations, originality and novelty of the prepared proposal, thinking in the European context, project should support strategic goals of partners, identifying measurable goals and positive social impacts, use of the project from its start, understanding of the project partner's proposal, creating of the convincing proposal (Horváthová, 2010).

A similar emphasis on the on the accuracy and completeness of marketing planning for the city/municipality is also placed on projects funded by the European Union's Structural Funds (non-repayable contributions). The preparation of such project is a highly professional activity; so many municipalities (with the corresponding budget) employ relevant specialists for this activity (if it is necessary, the projects are being developed in a professional external environment) (Bezáková, 2016). Assistance in this direction is also provided by the Regional Advisory and Information Centres (RAIC) and the Business and Innovation Centres (BIC). These centres operate in Slovakia as a network of the The Slovak Business Agency (SBA).

The Integrated network of information and advisory centres belongs to the Central Coordinating Body, which is Deputy Prime Minister Office for Investment and Informatization of the Slovak Republic. This state authority acts as the coordinator of the European Regional Development Fund (ERDF), Operational Program National technical assistance programme 2014-2020. The European Business Network (EBN) covers business and innovation centres in the European Union.

Organizational culture in the context of self-governance is spoken by Professor Charles. B. Handy, who elaborated the typology of the corporate (organizational) culture of R. Harrison. He considers *organizational culture* in relation to self-government as a *set of fundamental values, assumptions, principles of acting, acting involuntarily and creating the organization's own view of its surroundings and of itself* (Slávik, 2014). The author distinguishes four basic types of organizational culture, but it can be assumed that in practice pure type will occur rarely, elements of each type may be mixed or combined:

- the culture of power,
- role culture,
- goal-oriented culture,
- a culture of personalities.

The culture of power - it comes from a single power source, typically a personality that controls the entire functioning of the institution through a relatively small number of loyal people. The sociologist Geert Hofstede in this context also speaks of a range of power that expresses the relationship of the members of the community to each other, to the authorities, to the centralization of power, and so on. It is a reflection of the vertical working relationship. It can be said that in the transforming countries, it is a typical culture of state institutions and self-governments governed by political nominees. The deepening of political culture and its associated democracy opens the space for the goal-oriented culture[15].

Role culture - stems from written and unpublished rules and procedures, which adherence is considered the highest value in the organization. It is a form of organizational culture that is typical for countries with a developed democratic system. The institutions for which it is typical usually have a hierarchical structure with multiple organizational levels and employ specific specialists for specific tasks. The cited author considers the role culture typical for the public sector, but he cautions against the possibility of its sliding into bureaucracy.

The power in this case lies in the intersection of responsibility. However, problems within the institution can create limited resources, which inevitably lead to internal competition for their acquisition (Bezáková, 2016). At times of trouble, it can be relatively easy changed into a culture of power.

Personality culture - according to the author of the theory, it has a simple structure, which is characteristic especially for the academic environment (Liang et al., 2017). At the highest level, there are specific personalities (experts) who share (use) common technical and financial resources. In an academic environment, it can be combined with a role culture sometimes, where personalities operate within a firm structure of rules, procedures, and rituals (Mulligan, 2017). There is no formal management and there is no single or primary goal. The connecting mean can be a common benefit. This culture is called a star culture where the stars are specific experts (Smidova et al., 2017).

As a result of globalization, organizational culture is rarely monolithic, it is often divided into a number of sub-cultures according to the particular environment and specific people. and also. This applies also in organs, institutions and self-government enterprises. Ultimately, it can embarrass management in self-government (Di Cataldo, 2017).

2. Own research

For the needs of the development of the Trnava region and the analysis of the various active policy instruments of the Trnava region, several marketing researches were carried out through the method of personal interviews, face-to-face interviews and brainstorming of several regional development experts, especially in the field of employment. The collection and processing of data took place between 2009-2010, 2014-2015 and 2015-2016.nIn this marketing research, the method of personal interview with informed people was used, i.e. with people dealing with issues that are the subject of research. Respondents' replies were recorded in pre-prepared questionnaires.

The questionnaire was submitted to a survey sample of 100 respondents in three phases. Questionnaire information was processed by computer. The sample selection was made using

[15] In this context, however, it is important to say that in the theoretical literature we also meet such cases when a typologically identical division differs from the definition of the types themselves. For example, with regard to the culture of power, R. Harrison states that it is an organizational culture in which there are very few rules and bureaucracy.

the available selection method, as the range was determined by the number of respondents in the appropriate management function. The results from the research were used to compare and formulate general conclusions for regional development in the Trnava region and to draw theoretical and practical ideas and recommendations. Marketing research was conducted in November 2009-February 2010. It is made up of the responses of 100 respondents, who in most cases work on jobs that have an impact on regional development. No questionnaire was discarded due to its incorrect completion. II. phase of marketing research was implemented in November 2014-February 2015. Most of the respondents were also involved in the first phase of our research. Third phase of the marketing research was implemented in January 2016. Most of the respondents participated in the first two phases of our research. No questionnaire was discarded due to its incorrect completion. For illustration, we provide several partial results:

Research results: 1. The name of the institution

First phase of research (2009 - 2010): 100 respondents were involved in this research. They were from the following institutions:

- Office of Labor, Social Affairs and Family in Trnava
- Civic authorities in Trnava
- District office in Trnava
- Higher territorial unit Trnava

Second phase of research (2014-2015): The research included 100 respondents from the following institutions:

- Office of Labor, Social Affairs and Family in Trnava
- Civic authorities in Trnava
- District office in Trnava
- Higher territorial unit Trnava

Third phase of research (2016): The survey included 100 respondents from the following institutions:

- Office of Labor, Social Affairs and Family in Trnava
- Civic authorities in Trnava
- District office in Trnava
- Higher territorial unit Trnava

In all three phases of the research, respondents from each of the decisive levels of regional self-government were selected for research. They are managers of higher and middle management who potentially should not be affected by political nomination, although this cannot be ruled out with certainty.

2. Field of action in the examined institutions

First phase of research (2009-2010): Specification of respondents' area of work: culture - 0%, civic and social development - 32%, education - 0%, science and research - 15%, healthcare - 0%, regional development - 37%, social area - 16%.

Second phase of research (2014-2015): Specification of respondents' area of work: culture - 1%, civic and social development - 37%, education - 2%, science, research - 15%, healthcare - 2%, regional development - 40%, social area - 3%.

Third phase of research (2016): Specification of respondents' area of work: culture - 9%, civic and social development - 16%, education - 3%, science, research - 6%, health - 3%, regional development - 38%, social area - 25%.

The shift within the categories of the job specification reflects to a certain extent of the changes in the internal organization of the represented institutions between the individual research stages that could be the result of the election. In addition, respondents participating in all three phases of research may have the effect of changing the job position (and thus the focus), even at the same level of management. Only in a few cases (together three) were respondents who participated only in second phase of research. Surprisingly, the transfer of empployees in the field of culture, and especially in the field of social work, where the increase can be considered particularly important, can be considered as surprising. The social activities of the relevant local authorities may have an impact, as well as the worsening demographic composition of the region. Also, a drop in science and research can be considered alarming, but the relocation of employees does not mean that there is no self-government interest in innovation processes in this area.

3. Does your work affect regional development?

First phase of research (2009-2010): 83% of respondents answered - yes, their work affects the regional development and 17% answered - no, my work has no impact on regional development.

Second phase of research (2014-2015): 87% of respondents answered that their work has direct impact on the development of the region and 13% of respondents did not affect regional development.

Third phase of research (2016): Also in the third phase of the research, 86% of respondents answered that their work has direct impact on the development of the region and 14% of respondents has no impact on regional development.

We can say that the second and third phase of research have produced the same results in this area. The high level of negative responses is perhaps the most striking outcome of research in all three stages. If the first assumption implies that sufficient availability of awareness of regional development employees is coping with the needs of the region, in this case it turns out that the high number of respondents does not know the context of their activity within the region (or their activity does not perceive as necessary for the regional development). This fact undoubtedly affects the validity of their other responses. This problem seems to indicate the lack of professional preparedness of some executives.

4. What do you think, is the biggest problem for your region?

First phase of research (2009-2010): There was an opportunity to express a subjective opinion in this issue. From the received answers, a list of similar problems within the region was created: high unemployment in the region - 28% of responses, a lack of vacancies - 37%

of responses, poor awareness about events in the region - 19% of responses, poor tourism - 16% of responses .

Second Phase of Research (2014-2015): Scale of matching responses in the 2nd phase: Providing online services to the customers - 34%, provision of social housing for young people - 28%, poor cultural and sporting activities in the region - 22%, quality and availability of gastronomy services - 16%.

Third Phase of Research (2016): Scale of consistent answers in the third phase of the research: underdeveloped funding for regional development - 38%, provision of social housing for young people - 31%, low level of culture and sport activity - 18%, transport problems (urban and suburban) - 13%.

The answers in first phase clearly reflect the current level of unemployment. With its decline within the region, the classification of current issues has also changed. This also applies to the third phase of research. However, as it was about creating a space for subjective opinion, responses could influence the civil and working attitude. It indicates the absence of unemployment in the 2nd and 3rd phase. Surprising - perhaps worrying fact is a sharp increase in the poor awareness item. The answer is clearly apparent from the previous two questions. Together, this signals the growing awareness of self-governance issues. This is the only partly due to the "postage period" effects i.e. the postponement of the elected officials, or the changes in the managerial positions that could have occurred during the exchange of elected representatives of the self-government. Such responses are also explained by the fact that part of the employees prefer to not answer some of the questions or it is reflected the personal attitude of respondents whether negative or positive in them.

5. Do you think that enough regional development activity is being carried out by local authorities in the region?

First phase of research (2009-2010): 53 % responded answered - yes, they agree that the regional self-government is sufficiently active in the field of regional development, 35 % of the respondents have the opposite view and answered - no, 12% of the respondents did not comment this issue.

Second phase of research (2014-2015): 32 % of the respondents expressed satisfaction with the work of institutions in terms of regional development, but 56 % were not satisfied. The direct impact of their work could not be estimated on the region's development by 12% of the respondents.

Third phase of research (2016): The satisfaction with the work of the institutions from the point of view of regional development was expressed by 30% of the respondents, but 48% were dissatisfied. The direct impact of their work on the development of the region could not be estimated by 22% of the respondents.

Answers to this question can be found in the context of the answers to question no. 4. If the respondent does not know the significance of his work for the region (Phase I - 17%, Phase II - 13% and Phase III even 22%), then he can hardly assess the activity of the institutions in this area. It turns out that this phenomenon will require more detailed research through sociology in the future. However, in our view, this corresponds to several deviations in previous responses, especially in responses that point to the professional status of respondents. While they may also take into account the "post-election effect" in this case, the summary of these responses indicates a problem in the professional preparation of competent self-government employees. The aim of the research was to verify the success of the marketing communication of self-governing bodies in the region. If would this research proceeds in a standard way, that is, it could be implemented one stage of research, then the conclusions of the research could be formulated relatively unambiguously. Repeating research with a five-year and two-year gap has already failed to produce clear results, because the correlation of all three stages has shown that there has been a lot of scattering in several responses to research questions, which has cast doubt on the validity of the answers in the first stage. However, the causes of this phenomenon cannot be determined uniquely at the present level of knowledge. To a certain extent, the fluctuation of responses to the fact that in the course of the research - at the time of its second and third stages - regional elections took place, not only a change in elected posts, but also a natural change in some managerial posts in Slovakia. This fact could also have impacted psychologically, as an indication of some responses could have been an increased degree of self-censorship (Nagyová et al., 2017). In any case, however, research has shown that self-government bodies have a lot of deficiencies in the marketing area. It is based on the fact that the business entities of the region as well as its population come into contact with a given level of available information at the level of management. This has direct impact on the creating their sense of belonging to the region.

3. Final recommendations

We formed final recommendation for this area. It is important to:

- look for ways to improve awareness and communication at all levels of governance,
- promote professional growth of self-government employees in marketing communications and innovation processes through regular specialized training,
- associate the resources for the material, technological and personnel building of the central information network of the self-government in the framework of the institutional communication of the self-government,
- create a centre of education, research, development and innovation in the area of marketing communication for self-government employees,
- develop a project of comprehensive research for institutional communication of self-government with the business environment in order to analyse in this respect the needs of both stakeholders.

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HUMAN RESOURCES IN HIGHER EDUCATION IN THE ERA OF GLOBALIZATION: PHILOSOPHY OF THE PROFESSION IN THE TEACHER'S PROFESSIONAL IDENTITY

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Abstract. The global processes in education contribute to closer interaction of teachers and the management of educational institutions; by joint efforts, they solve arising problems, adopt the positive international experience and plan the development of educational system in a more effective way. Despite the importance of new technologies in the global world, human resources play a great role in educational process. Research of the teacher's professional identity contributes to improving the quality of university management and, consequently, the learning process. The article is devoted to the international study of the professional identity of teachers of the three countries: Russia, Latvia, and Belarus. The author's technique based on the six component model of the professional identity (Philosophy of the Profession, Professional Knowledge, etc.) was used in the study, and the international survey was carried out in 2014-2016. On the whole, 248 respondents from Russia, Latvia and Belarus participated in the survey. In this article the basic component of professional identity – the Philosophy of the Profession – is examined. As a result, conclusions are drawn about the development of professional identity, taking into account global processes in contemporary education and the national specifics; the directions of improving of human resources management are identified in the national systems of higher education.

Keywords: globalization of education, human resources in education, professional identity, philosophy of the profession

JEL Classification: O00, O15, O17

1. Introduction

Modern higher education is primarily seen as a means of reproduction of human resources adapted to the global economic processes. An important factor is the quality of education, which ensures the highly qualified human resources renewal for the sustainable economic development (Saner, 2001; Yiu & Saner, 2016). The global emphasis on knowledge production and information flow is extremely important in the process of the internationalization of higher education. "The international mobility of students and staff has grown, new technologies connect scholarly communities around the world, and English has become the new lingua franca of the international community" (Kogan & Teichler, 2007).

However, the process of globalization of human resources in higher education faces many challenges. Underrepresentation of national minorities in higher education, residual phenomena of sexism are among them (Mcconnell, 1993). A link was found between the effectiveness of human capital and the amount of investment in education (Brown and Hunter, 2004; Nawe, 2006). The quality of higher education directly depends on the quality of HEI staff; therefore, human capacity issues in higher education are topical, especially in view of the ongoing educational reforming in many countries (Ivanova, 2008; Taylor, 2017). The global processes in education contribute to closer interaction of teachers and the management of educational institutions; by joint efforts, they solve arising problems, adopt the positive international experience and plan the development of educational system in a more effective way. Human resources play a decisive role in educational process. Psycho-pedagogical research of the teacher's professional identity (PI) contributes to improving the quality of university management and, consequently, the learning process. PI of teacher is a complex dynamic unity, which develops in the interaction of personal and public perceptions of what it means to be a teacher, subjective and social expectations from this profession (Goodson, 2014; Medveckis, 2016). According to G.A. Callalan (2003), nowadays clear development of identity is the key to a successful career. However, PI of HEI teacher has not been studied sufficiently (Ivanova, 2008; Clarke et al., 2015; Billot & King, 2017). The study of structurally significant personal and professional characteristics of HEI teacher was one of the goals of the Russian-Latvian research project on the professional identity of modern educators (2014-2016). Researchers proceeded from the hypothesis that structure of the PI of HEI teacher can be described through meaningful semantic components. Based on the available research on the problem (Beijaard et al., 2004; Emerson, 2010; Healey & Hays, 2012; Goodson, 2014; Akkerman & Meijer, 2011), the hypothetical model of the teacher's PI content was created consisting of six basic structural components: Philosophy of the Profession, Professional Knowledge, Professional Roles, Professional Attitude to Work, Cooperation with Colleagues, Professional Engagement Behaviors (Senchenkov & Shpona, 2016). To investigate this model, the survey of 244 university teachers from Latvia, Russia, and Belarus was carried out. In this study the basic component of HEI teacher's PI – the Philosophy of the Profession (PoP) – is examined. The article presents a comparative analysis of survey data of three national samples (Latvia, Russia, Belarus) for this component. As a result, conclusions are drawn about the development of teacher's PI, taking into account global processes in contemporary education and national specifics; the directions of improving of human resources management are identified in the national systems of higher education.

2. Methods

For the empirical research, the methodology "Professional Identity Scale in Counseling" (Woo, 2013) designed to study the PI of counselor psychologist was modified. Based on this technique, the 60 items questionnaire was developed (ten items per component). Each item is a statement, which is rated by teacher from the strong disagreement (1 point) to the complete agreement (6 points) (Senchenkov & Shpona, 2016). By Cronbach's alpha method, the indicator of reliability of the questionnaire is 0.84, which is sufficient to recognize the questionnaire as reliable. In all the components of PI, mean rates, statistical mode, dispersion, standard deviation, and coefficient of variation (CoV) are calculated for the three samples of respondents (CoV up to 33% is considered to be reliable).

Using the Mann-Whitney U test and the Pearson Chi-squared tests, statistically significant differences between the indicators are identified. Within each block of statements and between the blocks, coefficients of Spearman's Rank correlation are defined. The cases of moderately strong correlations are analyzed.

3. Results and analysis

On the whole, 244 HEI teachers from Riga (Latvia), Smolensk (Russia), Minsk and Gomel (Belarus) participated in the survey. The distribution of the teachers by gender, age, work experience, and presence/absence of scientific degree are shown in Table 1; the data reflect approximately the corresponding distribution of teaching staff in the participating universities.

Table 1: Characteristics of Latvia, Russia, and Belarus samples

Country	F/M (%)	Age				Work experience				Sc. degree
		Mean	Up to 35 (%)	36–55 (%)	56 and above (%)	Mean	Up to 5 (%)	6-15 (%)	16 and above (%)	Dr. or candid. / Mg. (%)
Latvia	76.3/23.7	52.8	8.5	49.2	42.4	20.0	7.6	28.0	64.4	57.6 /42.4
Russia	76.4/23.6	42.3	26.3	57.5	16.3	14.8	20.0	47.5	32.5	80 / 20
Belarus	73.9/26.1	45.8	23.9	50.0	26.1	15.6	8.7	52.2	39.1	50/50

Source: own elaboration

Women prevail among HEI teachers (more than 70% in every country). This is higher than general gender indicator (about 55%). In the modern world, the profession has become predominantly female. In the distribution of teachers by age, Riga sample stands out: the average age of Latvians is higher than that of Russians and Belarusians by 10 and 7 years, respectively. Mainly, this is due to minimal proportion (8.5%) of young teachers (up to 35 years) in the Latvian sample. In all three samples, about half of teachers are 36 to 55 years old; but in the Russian and Belarusian universities, two other age groups (up to 35 and above 56) comparable in number: continuity of generations in the profession is better maintained here.

The Latvian sample also differs by teachers' work experience: mean length of service is 20 years; 64.4% of Riga teachers work 16 years or more. In two other groups, the mean work experience is only 5 years less, whereas the average age differs more significantly. Thus in Russia and Belarus the new staff comes to the universities at a younger age. The data demonstrate an alarming situation in new staff recruiting in Riga higher schools. The best results in recruitment of young professionals are in Russia: 20% of Russian lecturers have worked in the university for 5 years or less (7.6% in Latvia, 8.7% in Belarus).

Similarly, the Russian sample compares favorably with academic degree: 80% of Smolensk HEI teachers have it, whereas in Belarus and Latvia only about a half. On the whole, the data show the better dynamics in the development of the HEI stuff in Russia: young people come in the profession, and they are actively engaged in scientific research. The component of teachers' PI "Philosophy of the Profession" concerns basic professional values and patterns, the belief in the necessity and importance of the work, the goals of professional work, professional ethics. The Spearman coefficients show that PoP' average indicator significantly affects the general PI (0.4 for Latvians, 0.51 for Russians, 0.67 for Belarusians). The general statistical indicators for PoP are shown in the Table 2.

Table 2: General statistical indicators for the PI component "Philosophy of the Profession"

Sample	Mean value	Dispersion	Standard deviation	CoV (%)	Mode
Latvia	5.19	0.97	0.99	19.02	6
Russia	5.12	0.99	1.00	19.46	6
Belarus	5.22	1.07	1.03	19.82	6

Source: own elaboration

According to the Mann-Whitney test, the differences between the three samples in PoP' general assessment are not statistically significant ($p <0.05$), which is in favor of the proposed model as reflecting essential constant characteristics of teachers' PI. Although in the last 25 years the three countries have independently implemented their educational policies, in the globalized world PI of HEI teachers have very much in common. At the same time, some peculiarities are found (Table 3 and Fig. 1).

Table 3: Modes and coefficients of variation for statements of the block "Philosophy of the Profession"

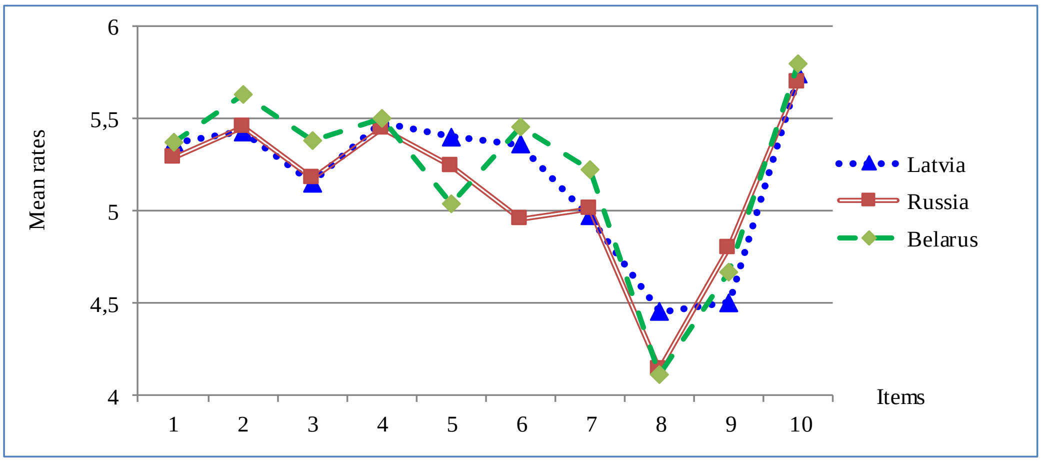
Statements proposed to respondents for evaluation		Mode / Coefficient of variation, %		
		Latvia	Russia	Belarus
1	Teacher should promote a holistic physical, mental and social development of student's personality	6/17.0	6/17.0	6/24.63
2	One of the teacher's professional values is student's intellectual growth in the learning process	6/14.34	6/15.40	6/12.05
3	Curriculum is a means for the development of student's personality	6/17.88	6/17.60	6/16.48
4	In the pedagogical process it is important to recognize students' personal achievements	6/13.3	6/13.3	6/15.69
5	Effective teaching process is based on equitable cooperation between teacher and students	6/16.80	6/15.26	6/24.00
6	Research work is an important component of the profession of university teacher	6/14.55	6/22.25	6/15.79
7	It is important for me to communicate with young people, help them, and give advice	6/22.06	5/20.20	6/18.48
8	If you look at things realistically, the teacher has few opportunities to influence students *(reverse code)*	5/20.27	5/23.31	5/32.14
9	Teacher profession gives opportunities for self-realization	5/28.28	5/21.58	6/27.82
10	I believe that in my profession it is important to follow certain ethical standards	6/8.95	6/12.2	6/10.66

Source: own elaboration

The block PoP received the most consistent and highest rates compared with other components of PI. In all samples, the average mode of the component is 6 ("completely agree"); CoV for the block as a whole and for each item in it does not exceed 33%. This means that the teachers believe in the high mission of their profession. The maximum approval is observed in the requirement of strong ethical standards (item 10) (Fig. 1). The teachers see the meaning of their work in harmonious development of the personality of student (item 1), but priority is nevertheless given to intellectual growth (item 2). Compared with Latvian and Russian teachers, Belarusians pay more attention to the personality of student (item 3), but at the same time they are most cautious in the issue of the equitable cooperation between teacher and student in the pedagogical process (item 5). Riga teachers are the most democratic here (mean rate is 5.4). All the teachers recognize the necessity of research work, however, the Latvian and Belarusian respondents, half of whom do not have a scientific degree, put more emphasis on this (item 6). At the same time, the teachers of

Smolensk universities, 80% of whom have degrees, do not consider this as an acute problem (mean rate is 5.0). Besides, they show less willingness to communicate with students outside the classroom (item 7 has mode 5 in Russia sample, 6 in Latvia and Belarus groups). Noticeably less optimism in all three samples is shown in questions about opportunities for self-realization in the profession (item 9) and the real impact on student (item 8). Doubt in the latter is especially noticeable in Russia and Belarus samples, where mean rate is 4.1. However, the answers of the Belarusians to this question have a rather high dispersion and CoV 32.14%, which is on the verge of reliability; this indicates to clearly expressed dependence of answers on individual. The optimists in this item provide high level of agreement with the 9th statement (opportunities for self-realization in the profession) in the Belarusian sample: mode 6 and mean score 4.7. The data obtained suggest that the positive impact on the student is realized by teachers as essential and connected with self-realization / awareness of mission. Thus a noticeable contradiction in the contemporary teachers' PI is revealed. The teachers recognize their mission in the development of student's personality and intellect, but at the same time they believe that the tools that they have are insufficient to carry out this task. The subject-object educational process has clearly exhausted itself at the present stage of the development of higher education; the teachers are aware of the need of a new type of communication and interaction with students, but the organization of the educational process does not provide (and teachers do not have) the adequate and effective technologies regarding the tasks being solved.

Figure 1: Mean rates of the statements of the component "Philosophy of the profession"



Source: own elaboration

By Spearman rank correlation coefficients, for each sample of respondents interdependencies between the items are analysed. The data indicate that Smolensk teachers primarily associate the development of student's personality with his intellectual growth; here they see their mission (correlation of items 2 and 3 is 0.51). They consider it necessary to recognize student's personal achievements for her/his harmonious development, but at the same time accentuate the complexity of the ethical aspect of the teacher's activity: the correlation of items 1 and 4 is 0.51, of items 4 and 10 is 0.60. The problem of assessing the student's work, in the context of group education, is recognized as ethically conflicting. For Riga teachers, equitable cooperation with student is the basic means of her/his personality developing (correlation of items 5 and 3 is 0.69). An important role in this collaboration is given to intellectual developing (correlation of items 1 and 2 is 0.52) and research (correlation of items 5 and 6 is 0.51). It is in this sense that the mission of teacher / counselor / assistant is important (correlation of items 6 and 7 is 0.54). Among the Belarusians, close links in the answers are traced between items 1, 2, 3, 4, 10. There are 3 correlations between each pair of items 1, 2, 4; and 4 correlations between items 3 and 10. It means that Belarus teachers see their mission in ethically correct development and recognition of student's personality. Against this background items 5, 7, and 8 stand out: there is no correlation between them and other items of the block. Thus in the Belarus teachers' answers, equitable cooperation in the pedagogical process, informal communication, and the variety of forms of interaction do not correlate with the declared aim to develop student's personality and are not included in the set of important teaching methods. It seems that this reduces student's prospects of the development, as well as teacher's possibilities. Probably, the general style of leadership in the country influences many aspects of public life, including educational practices. The intercomponent correlation analysis indicates to a weak connection between the PoP and other components of PI in the Smolensk sample and more significant interdependences in Riga (Table 4). In the data of Smolensk teachers, only item 10 correlates with items from the other PI components. It means that for the Smolensk teachers, the highly valued teaching mission remains rather declarative, with little connection with professional activities. Only its' ethical aspect relates to teachers' professional roles and the system of interpersonal relations.

Table 4: Intercomponent Correlations (IC) of PoP items (Latvian and Russian samples)

Philosophy of the Profession		Correlating statements in the other PI components	IC
Latvia	"Effective teaching process is based on equitable cooperation between teacher and students"	"I am convinced that my work at the university has a positive impact on society" (Professional Roles)	0,53
		"I realize the need to improve the performance of my professional role(-s)" (Professional Roles)	0,51
		"The teaching profession is unique and valuable for the development of society" (Professional Engagement Behaviors)	0,51
	"In the pedagogical process, it is important to recognize the student's personal achievements"	"I love my profession and would recommend it to young people" (Professional Attitude to Work)	0,62
		"The teaching profession is unique and valuable for the development of society" (Professional Engagement Behaviors)	0,53
	"Teacher profession gives opportunities for self-realization"	"The teaching profession is unique and valuable for the development of society" (Professional Engagement Behaviors)	0,50
Russia	"I believe that in my profession it is important to follow certain ethical standards"	"I have the necessary diplomas and certificates that give me the right to fulfill my professional role(-s)" (Professional Roles)	0,56
		"I feel comfortable when working with people" (Professional Attitude to Work)	0,54

Source: own elaboration

In the Latvia sample, PoP is more closely connected with the other PI components. The teachers from Riga are aware of their high mission in society, which they implement through collaboration with students, attention to their achievements, and self-realization in the profession. They show higher respect to the pedagogy of cooperation than their Russian colleagues. However, the closest connection of PoP with general PI is found in the Belarusian sample. There are 52 correlations with all the other 5 blocks. The components "Professional Roles" and "Professional Attitude to Work" have especially many correlations with PoP items: 16 and 12, respectively. The answer to the PoP statement "One of the teacher's professional values is student's intellectual growth in the learning process" influences the Belarus teachers' general PI the most: this item has 20 correlations with the other blocks. The endeavor of the Belarus teachers to intellectually develop students determines their professional life: the priority of professional roles, the quality of work, the level of satisfaction with the work, even relationship with colleagues and social activism. To compare, statements about the harmonious development of students and the development of personality in the learning process have 2 and 6 correlations in the PI model, respectively. The Belarusian lecturers understand the main mission of university teacher in a rather narrow way: it is students' intellectual development, transfer of knowledge, vocational training.

4. Conclusion

In the era of globalization, the representatives of countries with different political preferences, economic capacity and educational systems, have extremely common understanding of their mission of teaching as the development of the student's personality. At the same time, the data show some differences between the teachers. Latvian lecturers focus on equitable cooperation with student, respectfulness for personality, recognition of achievements. The Belarusians accentuate the intellectual development of students: the transfer of knowledge and professional training; less attention is paid to equitable cooperation with student. Though highly appreciating the basic values of the profession, Russian teachers connect them with the other PI areas: professional knowledge, professional attitude to work, professional engagement behaviors. The analysis of the data indicates some disturbing tendencies in pedagogy of higher education in these countries. Feminization of the profession is evident in all the samples; a threatening ageing of the staff is observed in Latvia; whereas some decrease of scientific activity is fixed in Belarus universities.

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THE SUPPORT OF SMALL AND MEDIUM-SIZED ENTERPRISES IN THE RESEARCH AND INNOVATION SECTOR IN THE ASPECT OF GLOBALIZATION

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Abstract. Globalization, as a process that brings a continuous increase in international connection, can be seen in all areas such as economics, politics, culture, the environment and so on. The aspect of globalization appears mainly in the possibility of the Slovak Republic to use resources from the European Union budget to support the innovation potential of small and medium-sized enterprises. Due to the impact of globalization, individual countries are becoming more and more connected and create associations and groups that take on the individual competences and responsibilities in the decision-making process about the redistribution of resources between its members and thus between the entrepreneurs themselves, citizens. The main disadvantage of SMEs is limited access to capital that greatly affects the use of their innovation potential, it is the role of the government to actively participate in creating such conditions for an entrepreneurial environment that will ensure a healthy competitive environment to strengthen innovation and research activities and to strengthen the competitiveness of small and medium-sized enterprises in the domestic and foreign markets. SMEs can quickly and efficiently respond to customer demands and consequently respond to changes resulting from market changes. The current economy in the period of globalization requires, in particular, to support the innovative potential of SMEs and thereby increase the share of established research and innovation results not only in enterprises but also in economic practice. The main objective of the article is to evaluate support for research and innovation and comparing the use of EU money within V4.

Keywords: support of SMEs in the aspect of globalization, SMEs, support of innovations of SMEs, financial resources, innovation potential, globalization

JEL Classification: F63, H20, O31

1. Introduction

Small and medium-sized enterprises forming the backbone of the national economy require constant attention from the state in terms of support for their business activities, as their limited access to financial resources compared to large enterprises is hampering SMEs to exploit innovation potential and to bring innovation and research results into economic practice (Oliver, 2016). There is a great deal of discussion and problem-solving at national level, but it still represents one of the key issues to make support activities as effective and efficient as possible in terms of redistribution of funds between small and medium-sized entrepreneurs. Every year, measures are taken to make it easier for small and medium-sized enterprises to raise capital needed to finance business start-ups, modernize and renew technological facilities, and innovate manufacturing processes and procedures to offer customers the products whose production ensures that the technology gap between the business and not only increases the living standards of the population but also positively influences the development of the national economy.

2. Globalization and support for small and medium-sized enterprises

Globalization represents a long-term historical process that has actively supported Europe over the past centuries by not only providing its scientific and technical knowledge to other parts of the world, but also its own ideas about society and the freedom of the individual. (Hontyova et al., 2006) We understand globalization as a complex process that has more dimensions: economic, social and political. In particular, globalization means the development of economic relations globally and is reflected in rapid growth in world trade, increasing direct investment flows, increasing the volume of international production, increasing the number of multinationals, increasing the integration of financial markets and the like. Due to the globalization and the gradual interconnection of individual countries, there is continuous integration in the field of support for small and medium-sized enterprises and the unification of the conditions required by the state and its supporting organizations for support. Slovakia, as a small part of the large European community, contributes to solving Europe's problems - politically and financially. This attitude is not a problem. The problem is that we forget that all of the previous major problems in Europe have started as the problems of individual countries in the European Union. (Banociova & Raisova, 2012) The competitiveness of enterprises, especially small and medium-sized enterprises, is also affected by innovation activity and the level of clustering. (Gajdova, 2013) Due to globalization, large spatial and economic clusters (OPEC, EU, NAFTA, CEFTA and others) have been created. The EU Single Market allows the free movement of goods, people, services and capital. Small and medium-sized enterprises (SMEs) in the EU operate mainly at a national level and only a few of SMEs takes part in a cross-border business. Irrespective of the scope and field of their operations, SMEs are affected by EU legislation in various areas, such as taxation, competition and commercial law. Small and medium-sized enterprises are an integral part of the business environment in all countries. (Jaros, 2016) In the globalization era, businesses are forced to push beyond the boundaries to sustain their competitive advantage and have the competency to succeed. (Ibrahim, 2015) As a driving force in every economy, it is necessary to support them mainly in the area of raising the funds needed for the realization of entrepreneurial activities as well as in the research and introduction of innovations into the economic practice. (Musa & Musova, 2016). Small and medium-sized enterprise sector is one of the main factors of competitiveness of regions and their economic growth rate. (Zuzek, 2015) An important actor in this area is the State which carries out these activities through the central state administration bodies and the organizational structure of institutions that provide contact with small and medium-sized entrepreneurs and equips administrative matters necessary for the request and obtaining state support. (Weede, 2016). Entrepreneurs normally state the following are the most common reasons for introducing innovations: expansion of the product range, improvement of product quality, increasing market share and improving competitiveness. Shortage of financial resources for such actions is the most frequently declared reason for not introducing innovations, on the other hand. Small and medium-sized enterprises primarily introduce changes that consist in improvement of existing products, introduction of a new product or of new marketing methods, including changes to product packaging, promotion or pricing. (Wolak-Tuzimek, 2016) Act no. 231/1999 State aid means any aid in any form that is provided to the entrepreneur or the provider directly or indirectly from the state budget, from his own budget or from the entrepreneur's own resources. We distinguish between two forms of state support:

- **the direct form** of State aid is in particular grant, the payment of interest or part of the interest on the loan provided to the entrepreneur, payment of part of the loan, implementation of a State guarantee or bank guarantee, irreversible financial assistance.
- **the indirect form** of State aid is State guarantee or bank guarantee, granting relief on penalties, fines, interest or other sanctions, selling property of a state or municipality at a price lower than the market price, providing consulting services free of charge or for partial reimbursement.

The most sought after and used are financial support instruments whose main objective is to overcome the lack of financial resources needed to ensure the smooth running of the transformation process, expanding production, services and, last but not least, increasing employment and creating new job opportunities. Non-financial support tools are not often searched because they are a secondary problem. As can be seen from the characteristics of SMEs and their limited access to financial resources, which are the primary problem, small and medium-sized enterprises, as well as institutions providing support to SMEs, are more concerned by providing the resources needed to secure business. Increased attention should also be paid to non-financial support, as entrepreneurship education, mentoring, mentoring and information services lead to an increased development of SMEs' potential. It should dominate the removal of business barriers and the reduction of the regulatory burden on businesses as the main components contributing to the development and healthy functioning of small and medium-sized enterprises, ensuring the development of the economy, raising living standards and economic growth. The European Union offers its member states a multitude of instruments to strengthen public policies to support SMEs, and, through sectorial aid and in the structural funds. (Mouloud & Belattaf, 2016) The accession of the Slovak Republic to the EU has brought the possibility of drawing funds other than the state budget also from the European Union and its funds - the European Regional Development Fund, the Structural Fund and the Cohesion Fund. The EU supports entrepreneurs through a wide range of programs through which they provide funding through local financial institutions. Funds are available for start-ups, entrepreneurs and businesses of all sizes and in each sector through loans, guarantees, equity investments, and more. The decision to grant financial support is received by a local financial institution, such as a bank, a guarantee company or a capital investor. Specific financing conditions - amount of funds, duration, interest rates and fees - are determined by the financial institutions themselves. The EU also provides grants targeted at specific policy objectives such as research or education. SME support is implemented through operational programs drawn up by ministries and implemented through institutions falling within the section of the Ministry, depending on the type and form of support.

3. Operational Programs in the Slovak Republic 2014-2020

By using EU funds, central government bodies are supporting small and medium-sized enterprises through calls announced under the operational programs. On 20 June 2014, the Slovak Republic and the European Commission concluded a Partnership Agreement, which represents a binding agreement between Slovakia and the European Commission on the use of the European Structural and Investment Funds for 2014-2020 and the fulfilment of specific objectives for its investment priorities. The operational programs specifying strategy and priority for investments of 15.3 billion EUR for the coming years. The Structural Funds and the Cohesion Fund represent an amount 13,7 billion EUR, European Agricultural Fund for Rural Development 1,55 billion EUR and European Maritime and Fisheries Fund 15,8 million EUR. The Central Coordination Authority, which is the Office of the Deputy Prime Minister of the Slovak Republic for Investment and Informatisation, is responsible for the preparation and execution of the Partnership Agreement. On 28 October 2014, the European Commission approved the Operational Program for Research and Innovation, which follows the Operational Program Research and Development and the Operational Program Competitiveness and Growth in the 2007-2013 programming period and represents EU funding for 2014-2020. The funds from the Operational Program are intended for technological development and increase the competitiveness of small and medium-sized enterprises especially in less developed regions, mainly by supporting Slovakia's participation in international cooperation projects and by increasing research activities. The Managing Authority for the Operational Program Research and Innovation is the Ministry of Education, Science, Research and Sport of the Slovak Republic and the mediating bodies are the Ministry of Economy of the Slovak Republic and the Research Agency. Operational Program Research and Innovation is a joint programming document of the Ministry of Education, Science, Research and Sport of the Slovak Republic and the Ministry of Economy of the Slovak Republic for providing support from the European Structural and Investment Funds in the programming period 2014-2020 in the field of creating a stable environment favourable to innovation for all relevant stakeholders and supporting the increase in efficiency and performance of the research and development system as a key pillar for increasing competitiveness, sustainable economic growth and employment.

Figure : Financial resources of the Operational Program Research and Innovation

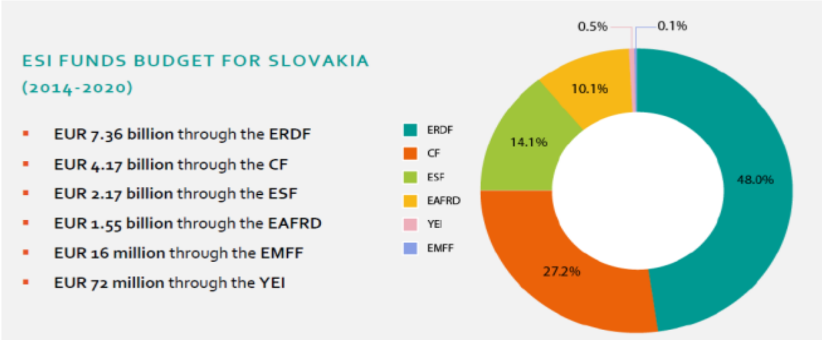
Operational Program Research and Innovation
Ministry of Education, Science, Research and Sport of the Slovak Republic

Amount: 3 707,21 million EUR
Union support: 2 266,76 million EUR
National funds: 1 440,43 million EUR

Source: own processing according to data from the Operacny program Vyskum a inovacie

The distribution of Operational Program Research and Innovation funding is based on the use of the EU funds it represents an amount 2 266,76 million EUR (61,15 %) of which more than three quarters of the funds are intended to strengthen research, technological development and innovation, and the remaining part is allocated to support the competitiveness of SMEs, and national funds represents an amount 1 440,43 million EUR (38,85 %). (MŠVVaŠ SR & MH SR, 2014)

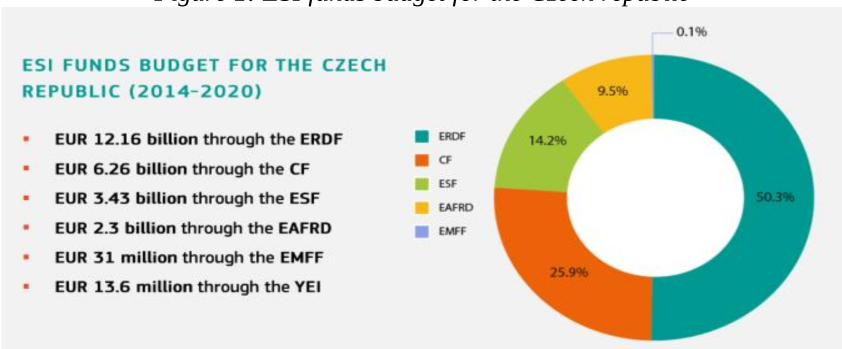
Figure 2: ESI funds budget for Slovakia



Source: own processing according data from European Structural and Investment Funds

Through nine national and regional programmes, Slovakia has been allocated EUR 15,3 billion from ESI Funds over the period 2014-2020. With a national contribution of EUR 4,7 billion, Slovakia has a total budget of EUR 20 billion to be invested in various areas, from creating jobs and growth to supporting sustainable transport as well as protecting the environment and investing in research and innovation.

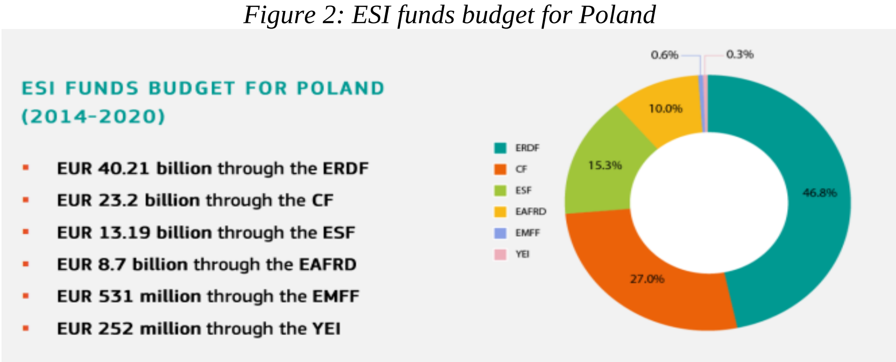
Figure 1: ESI funds budget for the Czech republic



Source: own processing according data from European Structural and Investment Funds

Through 11 programmes, the Czech Republic has been allocated EUR 24,2 billion from ESI funds over the period 2014-2020. With a national contribution of EUR 7,88 billion, the Czech republic has a total budget of EUR 32,08 billion to be invested in various areas, from creating jobs and growth to investing in research and innovation, protecting the environment, supporting sustainable transport, promoting employment and labour mobility, and enhancing social inclusion.

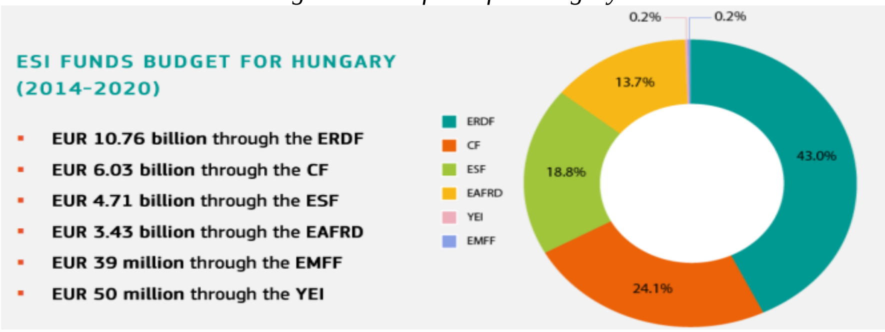
Figure 2: ESI funds budget for Poland



Source: own processing according to data from the Operacny program Vyskum a inovacie

Through 24 national and regional programmes, Poland has been allocated EUR 86 billion from ESI funds over the period 2014-2020. With a national contribution of EUR 18,8 billion, Poland has a total budget of EUR 104,8 billion to be invested in various areas, from infrastructure networks (transport and energy, SME competitiveness to boost research and innovation, investments in the low-carbon economy as well as environmental protection to increasing social inclusion and labour market participation.

Figure 5: ESI funds for Hungary



Source: own processing according data from European Structural and Investment Funds

Through nine national and regional programmes, Hungary has been allocated EUR 25 billion from ESI funds over the period 2014-2020. With a national contribution of EUR 4,63 billion, Hungary has a total budget of EUR 29,63 billion to be invested in various areas, from infrastructure networks in transport and energy, SME competitiveness, employment measures, to environmental protection measures, to low-carbon economy, research and innovation as well as investments in social inclusion and education. The effective provision of public services by the public sector, and especially local governments, determines the well-being of society and quality of life in the social, economic and environmental aspects. (Czaplak, 2016)

4. Conclusion

The European Structural Funds are an important resource used by Slovakia together with state budget funds to support small and medium-sized enterprises or as a major source of public investment. (Rahman et al., 2017). Considerable financial resources have been directed to the improvement of regional and local business environment for SMEs (improving access to capital for SMEs in the process of formation and growth, improving the business infrastructure and services to support SMEs, enhancing regional and local capacities for research and development and innovation, extension of capacities for enterprise collaboration, innovation, etc.). (Vojtovic, 2016) As a systemic issue, the SMEs' financing problem has to be solved with efforts from all sides in our society. (Zhang et al., 2012) There is a basic strategy for the 2014-2020 programming period, the Partnership Agreement, which is expected to simplify the processes and systems for drawing on EU funds. Initiative by the European Commission, which has defined proposals such as reducing the administrative burden for beneficiaries by applying simplified costs or digitizing projects to ensure electronic data exchange, exerts pressure to increase the level of implementation of funding targets while simplifying and reducing conditions create a high administrative burden, leading to the creation of surplus costs when preparing an application for a non-repayable financial contribution and the project itself. (Kramarova et al., 2014). Also policies conducted in some EU member states are not perfectly defined and transparent in defining standard of the conditions and the ways of financing supporting system on state level. (Binda et al., 2013) Simpler and more flexible budgetary rules for the use of EU funds play a key role in strengthening the capacity of the EU budget to adapt to changing circumstances and respond to unexpected events, while maintaining a high level of financial control. The Commission's proposal for the simplification of the budgetary rules aims to revise, in the context of one act, the general Financial Regulation relating to multi-annual programs. The inclusion of sectorial changes in the legislative proposal will ensure a unified approach and an effective approval process. It is important to do analysis of the sector’s situation and identifie the stimulating and limiting factors of its prosperity. (Adamowicz & Machla, 2016) An important part of supporting small and medium-sized enterprises is the systematic improvement of the business environment. The new legislation, it has to quantify impacts on the business environment, and in the case of negative effects automatically postpone the effectiveness of the law from approval in parliament so that business owners have time to prepare for change. Promote free movement of goods and services, energy, capital and labour in the EU. Company bringing innovative and new ideas that will stand out from the current business environment to the nature of the product, thus quickly be able to establish the international environment. (Gregova & Dengov, 2016)

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CIRCULAR ECONOMY AND CRADLE TO CRADLE PRINCIPLES IN GLOBAL ERA

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Abstract. Circular economy is an economic model that represents a new alternative to a traditional linear economy built on the principle of "producing - consuming - destroying. Thanks to the circulation of materials in the economy, resources in the production process can be kept as long as they can and get the maximum value during use. The circular economy and its basic principles are based on the idea that all product and material flows can be re-integrated into their cycle after their use, where they will again become sources for new products and services. Producing with less impact on the environment and assessing the impact of products throughout the life cycle of the product design phase is only the first step. Good product ecological design, innovation, and the return of materials back to production can bring great financial savings and long-term growth. The Cradle to Cradle principle also motivates companies not to produce only less harmful products, but also to improve the environment around us. In the current global era, there are a large number of positive examples of companies, whether in Slovakia or abroad, which are trying to recover, recycle and reuse existing materials or get waste back into production. In the paper we will discuss the theoretical background to the issue of the circulating economy, the cradle to cradle principle, and in practical examples we will show how these principles can work effectively in practice and provide international companies with a competitive advantage and growth potential.

Keywords: circular economy, cradle to cradle principles, corporate social responsibility, globalization

JEL Classification: M21, M31

1. Introduction

Cirkulárna ekonomika alebo obehové hospodárstvo je pojem, ktorý sa v súčasnosti v krajinách EÚ skloňuje veľmi často. (Lieder et al, 2017). V Európe, ale aj celosvetovo je cirkulárna ekonomika vnímaná ako nový trend, ktorý treba rozvíjať v plnej miere. Cirkulárna ekonomika a jej základné princípy sú založené na myšlienke, aby všetky produktové a materiálové toky mohli byť opäť zapojené do svojho cyklu po ich použití, kde sa stanú opäť zdrojmi pre nové produkty a služby. To znamená, že odpad ako taký už nebude existovať (Zaušková, Grib, 2016). V príspevku sa budeme zaoberať teoretickými východiskami k problematike cirkulárnej ekonomiky, objasníme si jej základný princípy a na praktických príkladoch ukážeme, ako tieto princípy môžu efektívne fungovať v praxi a prinášať firmám konkurenčnú výhodu.

2. Teoretické východiská k problematike cirkulárnej ekonomiky

V súčasnosti je naša ekonomika postavená na tzv. **lineárnom modeli: „vyťaž-vyrob-zahoď“.** To znamená, že prvotné suroviny, ktoré náročným spôsobom získavame z prírody a na ich obnovu budeme potrebovať desiatky až stovky rokov, po použití jednoducho zahodíme na jednu kopu, kde sa budú rozkladať ďalších niekoľko stoviek až tisíc rokov (Maleš, 2017).

Protikladom súčasného tradičného modelu lineárnej ekonomiky je nový ekonomický model, tzv. cirkulárna ekonomika, nazývaná aj obehové či zelené hospodárstvo (Pedersen & Conti, 2017). Podstatou súčasného lineárneho modelu, ktorý je založený na spomínanom systéme „zober-vyrob-zahoď“, je predovšetkým vysoká spotreba neobnoviteľných surovín, ktorá z dlhodobého hľadiska nemôže fungovať (D'Amato, 2017).

Keď k tomu pridáme iné negatívne faktory ako využívanie lacnej pracovnej sily z rozvojových krajín, populačnú explóziu, narastajúci konzum a devastujúci vplyv človeka na životné prostredie, súčasný lineárny systém môžeme oprávnene považovať za neudržateľný z ekonomického, ekologického, ale aj sociálneho hľadiska (Zaušková et. al. 2015).

Naopak, cirkulárny model má zaistiť konkurencieschopnosť krajín, ich stabilný ekonomický rast a zdravé životné prostredie. Výnos v obehovej ekonomike je založený na efektívnom využívaní prírodných zdrojov dosiahnutom účinným zhodnocovaním použitých materiálov, produktov a komponentov. Ich neustále vracanie do technického a biologického cyklu predstavuje uzavretie materiálových tokov (Zamfir et al., 2017).

Takto sa radikálne minimalizuje odpad a náklady na materiálové vstupy a energiu potrebné pre výrobu nových výrobkov. Zaušková (2013) zaraďuje medzi hlavné znaky cirkulárnej ekonomiky nasledovné aktivity: využívanie obnoviteľných zdrojov energie, ekoinovácie a prenájom, zdieľanie či podporu lokálneho obchodu.

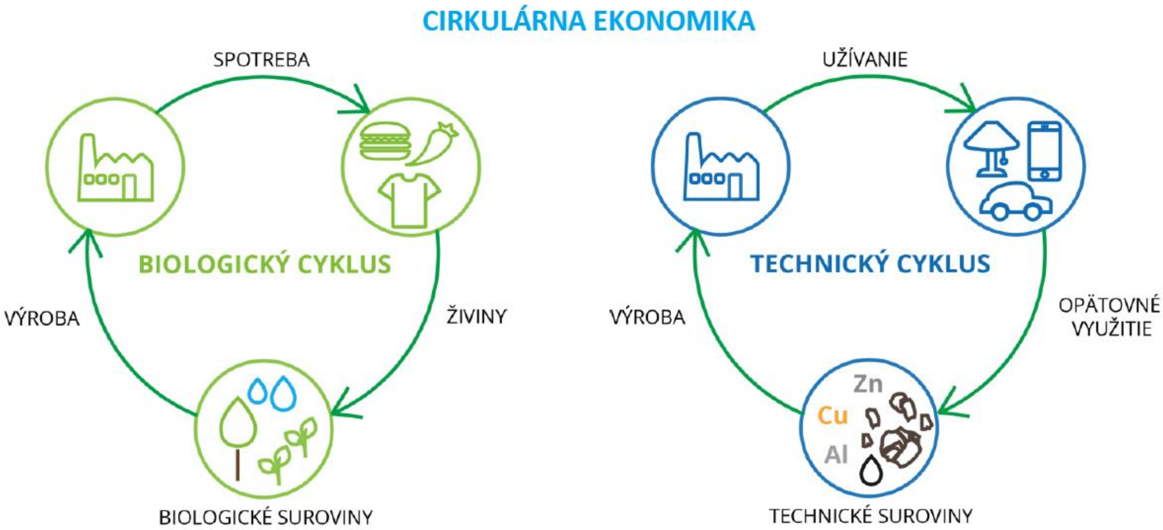
Zmena systému z lineárneho modelu na cirkulárny model si vyžaduje spoluprácu všetkých oblastí spoločnosti, od spotrebiteľov, dizajnérov a materiálových expertov, cez vývojárov, firmy, investorov, až po tretí sektor, akademikov a politikov.

Pokiaľ však štáty na celom svete nebudú zavádzať pravidlo „znečisťovateľ platí“ a ekonomicky zvýhodňovať ekologické podnikanie (napríklad zdanením produkcie oxidu uhličitého), prechod firiem a ich zákazníkov na zelený mód bude stále iba vecou osobného presvedčenia (Cséfalvayová et al., 2017).

Figure.1: Model tradičnej lineárnej ekonomiky

Source: own elaboration according to Cséfalvayová (2017)

Figure.2: Model cirkulárnej ekonomiky



Source: own elaboration according to Cséfalvayová (2017)

3. Princípy cirkulárnej ekonomiky a príklady dobrej praxe

Existuje niekoľko princípov, na ktorých je postavená cirkulárna ekonomika. Ide najmä o:

- odpad ako zdroj (surovina).
- Zero waste princíp.
- Ekologický dizajn. (Iacovidou et al., 2017).

V tejto kapitole si priblížime podstatu jednotlivých princípov obehovej ekonomiky a na príkladoch dobrej praxe si ukážeme, ako možno tieto princípy implementovať úspešne do praxe.

3.1 Odpad ako zdroj

Jedným z veľkých ekologických problémov súčasnosti je nekontrolovateľná tvorba odpadu (často aj toxického) a s tým spojený nelegálny vývoz a neefektívne nakladanie. Zodpovednosť za likvidáciu nechcených výrobkov nemajú ani producenti, ani spotrebitelia, a preto je ich konečnou stanicou skládka, spaľovňa alebo voľná príroda, kde je ich ďalšie účinné zhodnotenie nemožné. Pôda, prírodné materiály či zdroje energie sú vzácne a obmedzené a svet je tak zaplavený tonami prírodne nerozložiteľného odpadu, ktorý znečisťuje okolité životné prostredie (Saavedra et al, 2018). Takýmto prístupom sa oberáme nielen o druhotné suroviny, ale aj o primárne, ktorých ťažba by sa znížila (Maleš, 2017).

Hlavným princípom celého modelu cirkulárnej ekonomiky je zefektívniť využívanie všetkých výrobkov a predĺžiť ich životný cyklus. V cirkulárnej ekonomike sa odpad využíva ako potenciálny zdroj. Aj odpad, ktorý bežne končí na skládkach alebo v kanalizácii, tak možno premeniť na hodnotný vstupný zdroj. (Kirchherr et al., 2017). Hlavným cieľom každého biznisu by malo byť pozrieť sa až za hranice odpadu a nájsť efektívne riešenie ako uzavrieť slučku obehovej ekonomiky, aby vznikol uzatvorený cyklus tzv. closed loop. (Business Leaders Forum, 2016).

3.1.1 Slovnaft – zber a recyklácia použitého kuchynského oleja

Použitý kuchynský olej z domácností nemal na Slovensku dlhé roky praktické využitie. Zvyčajne smeroval z panvice rovno vo výlevky. Zanášal kanalizáciu a na olejové vrstvy sa lepili zvyšky potravín, ktorých zápach lákal hlodavce. V neposlednom rade olej znečisťuje vodu. S riešením tohto problému prišla spoločnosť Slovnaft, ktorá zbiera a recykluje práve použitý kuchynský olej. Spracovaním tohto často prepáleného rastlinného tuku totiž možno vyrobiť bio-palivovú zložku do motorovej nafty, ktorá má oproti bežným fosílnym palivám úsporu 50 až 80 % skleníkových plynov. Z jedného litra použitého kuchynského oleja sa vyrobí až 0,9 litra bio-palivovej zložky (Miklenčičová, 2016).

Figure 3: Zberné nádoby na použitý kuchynský olej umiestnené na čerpacích staniciach Slovnaft

Source: https://tlacovespravy.wordpress.com

3.1.2 Kaufland – zapojenie sa do iniciatívy Healthy Seas

Spoločnosť Kaufland (Bratislava, maloobchodný reťazec) sa dobrovoľne zaviazala k ochrane morí a svetových zásob rýb, a to zapojením sa do iniciatívy Healthy Seas (Zdravé moria). Kaufland ako prvý európsky maloobchodný reťazec predáva ponožky vyrobené v inovatívnom procese recyklácie z rybárskych sietí, ktoré skončili ako odpad v moriach a vďaka iniciatíve Healthy Seas boli vytiahnuté z dna morí. Tie prispievajú k znečisteniu morí a oceánov a predstavujú smrteľné nebezpečenstvo pre morské živočíchy ako sú ryby, delfíny, korytnačky či morské vtáky.

3.2 Zero waste princíp

Princíp Zero Waste (nulový odpad) zameriava svoju pozornosť na celoživotný cyklus výrobkov. Nepodporuje teda iba recykláciu, ale taktiež nahradenie neobnoviteľných materiálov obnoviteľnými alternatívami. Tento prístup motivuje k tomu, aby si priemyselní výrobcovia uvedomili hodnotu odpadu a hľadali preň nové spôsoby využitia.

Podľa definície Zero Waste International Alliance z roku 2014 je nulový odpad *„pragmatický a vizionársky cieľ, ktorý má viesť ľudí k napodobňovaniu udržateľných prírodných cyklov, kedy sa odhodené veci stávajú zdrojom na ďalšie využitie. Implementácia Zero Waste pomáha zabrániť znečisťovaniu krajiny, ovzdušia či vody, ktoré môže ohrozovať ľudí, zvieraá či zdravie planéty.“*

Na implementáciu Zero Waste princípu v každodennom živote je potrebné osvojiť si 5 základných pravidiel v nasledujúcom poradí:

- Refuse: Odmietnuť čo nepotrebujeme.
- Reduce: Zredukovať čo skutočne potrebujeme.
- Reuse: Znovu použiť a opraviť.
- Recycle: Zrecyklovať čoho sa nemôžeme zrieknuť, zredukovať to či znovu použiť.
- Rot: Skompostovať zvyšok.

3.2.1 Podujatie „Dobrý trh“ v Bratislave

Príkladom úspešnej implementácie Zero Waste princípu môže byť podujatie Dobrý trh. Ide o mestský trh v Bratislave, ktorý trikrát do roka organizuje OZ Punkt buď na Panenskej ulici alebo na Jakubovom námestí. V roku 2017 sa organizátori po prvýkrát zamerali na to, aby toto podujatie bolo „zero waste“, teda bez odpadu. Na to, aby sa niekto mohol zúčastniť Dobrého trhu ako predajca, musel splniť niekoľko podmienok v súlade s filozofiou zero waste:

- Zákaz balenia tovaru do igelitových alebo mikroténových saklíkov, alternatívou mohli byť buď papierové saklíky alebo bez obalu.
- Používanie kompostovateľného riadu a príborov pri predaji jedla.
- Používanie zálohovateľných plastových pohárov.
- Kompostovanie zvyškov jedla a potravinového odpadu priamo na trhu.

3.2.2 U Dobrožrúta

U Dobrožrúta je prvá zero waste pekáreň s obchodom a dizajnovými ekologickými produktami v Bratislave, kde sa potraviny dajú nakúpiť bez obalu. Okrem predaja bez obalu, majitelia využívajú v súlade so zero waste princípmi v pekárni elektrický kompostér, ktorý všetok biologický odpad rozloží za 24 hodín. Väčšinu tovaru objednávajú bez obalov v látkových alebo v papierových vreciach, ktoré posielajú dodávateľom naspäť. Samotná výrobňa je takmer celá zariadená z druhej ruky.

Figure 4: U Dobrožrúta - prvá zero waste pekáreň s obchodom v Bratislave

Source: FB page „U Dobrožrúta“

3.3 Ekologický dizajn

Inteligentná voľba materiálov, ekologický dizajn a vhodné výrobné postupy výrazne redukujú negatívne vplyvy na životné prostredie, predchádzajú tvorbe odpadu a zároveň šetria prírodné zdroje. Produkty sú vnímané a navrhované ako dočasné úložiská surovín, materiálové banky. **Jednoduchá demontáž** napríklad produktov, ktorá umožňuje zároveň ich rýchle spracovanie, je v prípade obehovej ekonomiky kľúčová. Prioritou v cirkulárnom systéme je **dizajn produktov s dlhou životnosťou,** respektíve optimalizácia životnosti produktov.

Cséfalvayová et al. (2017) zaraďujú medzi základné dizajnérske prístupy pre obehové hospodárstvo tieto:

- **Dizajn pre dlhú životnosť sa vyznačuje nadčasovým** dizajnom i zárukou opakovaného používania bez straty výkonu, odolnosti a spoľahlivosti. Príkladom dobrej praxe môže byť slovenská firma Novesta, ktorá vyrába kvalitné ručne vyrábané tenisky.
- **Dizajn pre opätovné použitie:**
  - ***produktov:*** použitie výrobných materiálov, ktoré je možné opraviť a zrenovovať, možnosť jednoduchého a intuitívneho rozloženia, čistenia a výmeny/opravy komponentov.
  - ***komponentov:*** modulárny dizajn, dobrá dostupnosť a štandardizovanie náhradných dielov.
  - ***materiálov:*** použitie čo najmenej druhov materiálov (preferencia recyklovateľných materiálov), žiadne pevné spoje a malé komponenty.

3.2.1 Fairphone – holandskí výrobcovia modulárneho smartfónu

Príkladom dobrej praxe dizajnu pre opätovné použitie produktov je holandská spoločnosť Fairphone, ktorá vyrába etické a ľahko opraviteľné smartfóny z eticky obstaraných a recyklovaných nerastných surovín a materiálov. Okrem materiálov bolo pri výrobe Fairphonu myslené na celý jeho životný cyklus tak, aby bol jeho dopad na planétu a ľudí minimálny. Výroba nového smartfónu sa zaobíde bez minerálov získaných z konfliktných krajín, je plne recyklovateľný a pracovníci, ktorí ho vyrábajú, nie sú ukracovaní na svojich právach. Za každý predaný Fairphone investujú 3 eurá do recyklačných projektov v krajinách, kde sa zatiaľ odpad netriedi.

3.2.2 Herman Miller a Maersk

K príkladom dobrej praxe možno zaradiť aj spoločnosť Herman Miller. Ide o jednu z prvých spoločností, ktorá začala dizajnovať produkty metódou „Materials Passport“. Spoločnosť vyrába stoličky, ktoré je možné rozobrať na jednotlivé materiály do 15 minút, tie sa dajú následne zrecyklovať a využiť na podobný účel. Taktiež lodná spoločnosť Maersk vyrába týmto spôsobom svoje prepravné lode (Jurišová, 2016).

4. Conclusion

V príspevku sme sa zaoberali tzv. cirkulárnou ekonomikou, ktorá je protikladom tradičného lineárneho modelu. Objasnili sme základné princípy obehovej ekonomiky a na príkladoch dobrej praxe sme demonštrovali implementáciu týchto princípov v malých, ale i väčších spoločnostiach. Príklady dobrej praxe ukazujú, že obehové hospodárstvo má obrovský ekonomický a ekologický potenciál, čo by znamenalo udržateľný zisk, vznik pracovných miest a lepšiu kvalitu životného prostredia. V ceste mu však zatiaľ stojí viacero prekážok. Medzi hlavné z nich patrí všeobecne nízke povedomie o koncepte cirkulárnej ekonomiky či náročnosť komunikovať jej komplexnú podstatu a globálny význam. Ďalšie zásadné úskalia sú ľudská ľahostajnosť a neochota zmeniť doterajšie návyky**.**

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SMART PORT MODEL USING THE GLOBAL SATELLITE SYSTEM GALILEO

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Abstract. Intelligent Transport Systems (ITS), also referred as Transport Telematics, is a list of processes that integrate global information and telecommunication technologies with transport engineering. The objective is to ensure traffic and transport management systems in accordance with expanding infrastructure. The main benefits of deploying ITS and their services are increasing of the safety, efficiency and reliability of international transport. The paper highlights the application of global navigation system Galileo to ITS in the model port. It presents individual services that are directly dependent on the use of satellite signals in order to accurately determine the position in real time. The security of freight, container but also the transport of people depends on the precise navigation of all means of transport in the port. To ensure the continuity of port operations, it is essential to coordinate all the elements involved in the process. The most effective way is to combine signals that ensure a more accurate positioning of the vessel. By deploying ITS in a port, it is possible to synchronize all operations related to freight transport. Intelligent Transport Systems are the solution for the activation of handling devices on the arrival / departure of the ship to the coast or semitrailers (railway wagons) on the track. It also ensures the elimination of stopovers in the port.

Keywords: Galileo, Intelligent Transport System, port, transport, infrastructure

JEL Classification: R40, R41, R42

1. Introduction

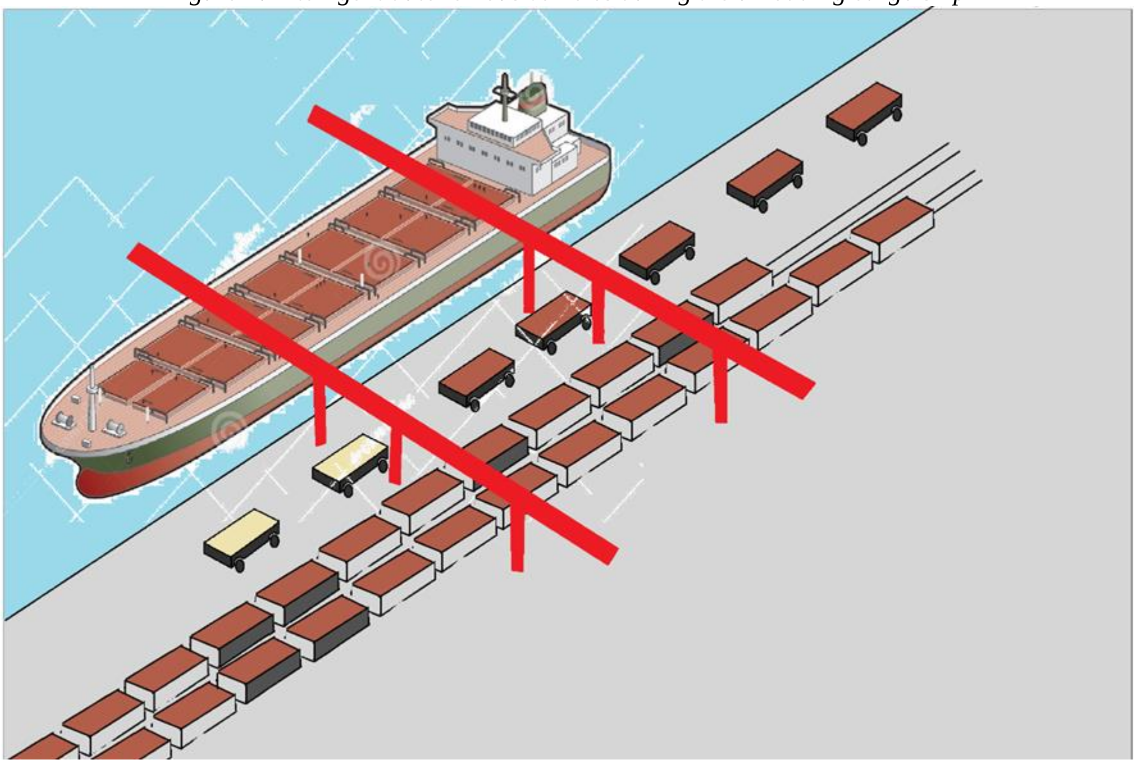
Intelligent Transport Systems can be considered as a means of faster assessment and response to risk situations, particularly in the use of intelligent autonomous (IAV) vehicles in the terminal. The IAV in contrast with automated vehicles does not require a rail or sensor guidance system built into the infrastructure. (Mondragon et. al, 2012)

The vehicle is a separate unit, allowing the vehicle more movement and more possibilities of handling operations in the port area. The Traffic Management Center is responsible for organizing IAV operations to increase security in the terminal. Control synchronization allows IAVs to work together as a series of consecutive vehicles. (McGinley, 2014)

Vehicles have a capacity of 1 TEU or 1 FEU. All four wheels have their own drive and are capable of 360° movement, allowing them to move in any direction in a confined space. The basic equipment of each IAV is the motion sensor, the Galileo receiver and the control unit. The motion sensor is essential to ensure timely identification of the movement of another nearby vehicles/device. Vehicles thus become aware of their presence.

Additionally, the Galileo includes a real-time positioning receiver that allows the vehicle to be moved unattended throughout the terminal. The control unit receives information from the traffic control center. An operator from the traffic control center can control the transfer of the necessary number of vehicles that are independent of each other and do not have a precisely defined route. (Januszewski, 2009)

Figure 1: Intelligent autonomous vehicles during the unloading cargo ship



Source: author based on the https://www.dreamstime.com/

Based on freight data from the carrier, the operator can plan the necessary amount of transshipment equipment, vehicles (or wagons). Galileo allows to control the entire process of handling cargo. One of the additional benefits of ITS in ports is the possibility of accurately recording the means of transport entering the port. (Bahnes et al, 2016)

2. The process of handling ITS in a port

The process of ITS operation in the port starts with the vehicles arrival to the port and ending when the cargo is delivered to the warehouse or other location in the port area. The entire process begins at the moment when the port operator receives information about the ship's cargo. Depending on the amount of cargo, it determines how many IAVs are needed to transport the cargo to the warehouse. Vehicles will receive their identification numbers in their control units to verify the vehicle in the control zone. (Larsen & Matz, 208)

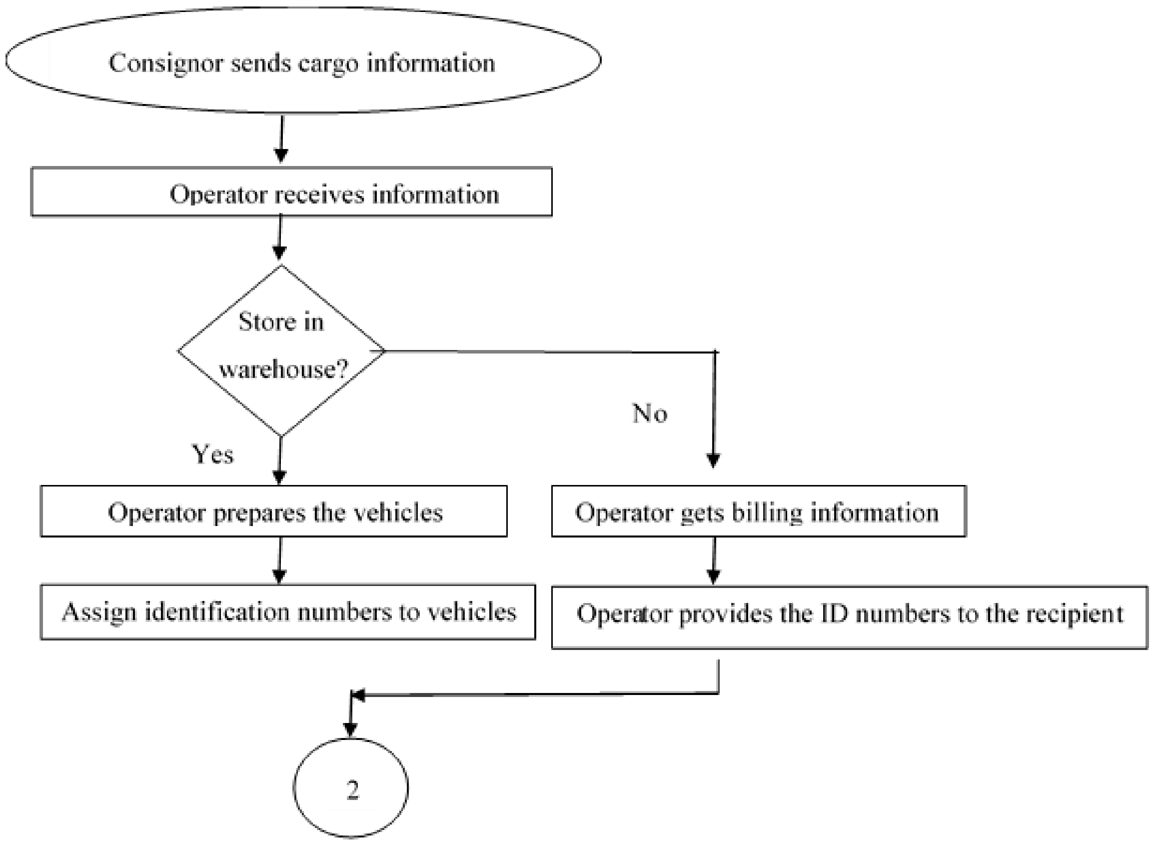
The loaded vehicle then carries the cargo on the specified route to the planned warehouse where the cargo is unloaded. Subsequently the operator receives the information about the unoccupied vehicle. Unoccupied vehicles will receive new identification number. The process is repeated until the ship's cargo is completely unloaded. (Stopka & Kampf, 2016)

The process is repeated until the ship's cargo is completely unloaded. In this way, it is possible to more effectively prevent IAV discontinuation. If the recipient is authorized to land the vehicle for unloading, the operator will send him the ship's arrival details and the identification number for his semi-trailers. If the identification number does not match, the gateway would not let the vehicle to the portal crane.

The operator is required to identify the cause of the disagreement and remove it as soon as possible. This process could not be done efficiently and safely without the use of Galileo services. (Skrucany & Gnap, 2014)

The ITS process in the port consists of two phases. The activities are shown in Figure 2 and Figure 3. (Sitanyiova et al, 2015) The first phase involves the communication activities between the consignor and the operator in the port and ends when the ship is approaching the port. (Cisko & Kliestik, 2006)

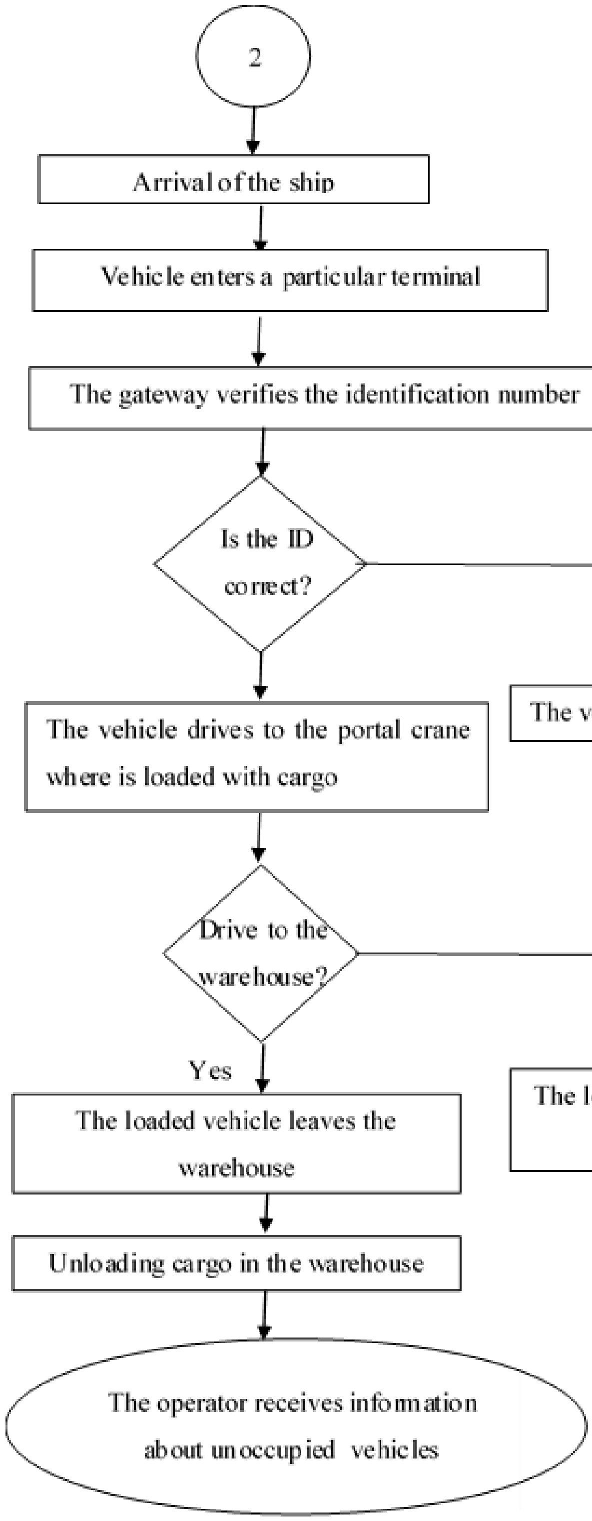
Figure 2: ITS operation chain – phase 1



Source: author

The second phase includes IAV traffic at port, cargo loading and unloading, vehicle marking, and empty IAV circuits.

Figure 3: ITS operation chain – phase 2



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A similar principle of transshipment using ITS operates in one of the four ports in Humber in the northeastern part of England. (Corucci et al, 2012) Manipulation tracking studies show that the implementation of ITS increases process automation and reduces the number of errors caused by human factors (e.g. loading into the wrong ship or shipping the cargo to another warehouse). During the study, the port used DSRC technology in vehicles. This is a specialized, short-range communication with GPS positioning. In presented model port have been applied IAV with Galileo, which is more accurate and reliable. (Binova & Jurkovic, 2016)

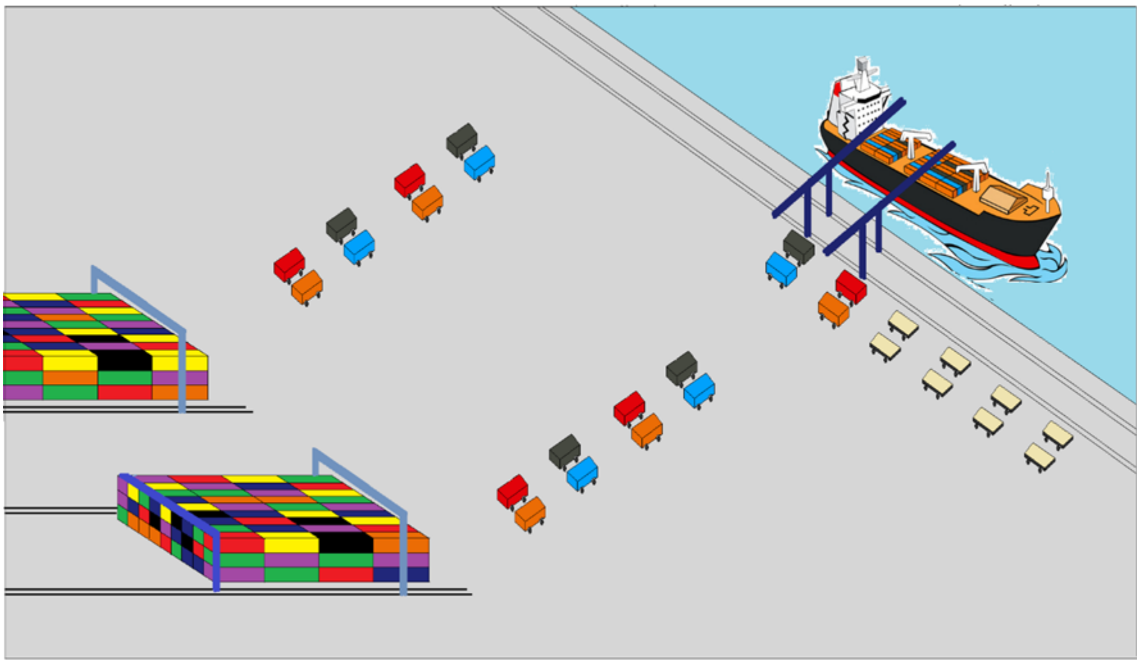
3. Smart Port Architecture Model

Galileo applications allow customers to track the current location of their containers throughout the distribution chain. The system helps identify the location of cargo or containers equipped with Galileo receivers not only in ports but also in maritime, road or rail transport. Galileo services enable real-time monitoring of cargo. (Innac et al, 2016) The system monitors containers based on receivers and sensors placed directly on the container or on the vehicle. The operator can therefore take the necessary action if the container deviates from the specified route. Customers and logistics companies can efficiently analyze data to help them choose the best carrier. The application of the system is also demanded by insurance companies. (Morante et al, 2016)

The cargo tracking application in smart port also allows:

- monitoring the handling of the container in the port,
- tracking the container during transport,
- send a warning in case of theft or damage.

Figure 4: Container transhipment in the port



Source: author based on the http://all-free-download.com/

Figure 4 shows a transhipment operation in a model port. (Shea, 2017) It consists of unloading containers using a semi-automated gantry portal crane with two trolleys, which store two containers on intelligent autonomous vehicles. IAVs are managed by the operator. Each vehicle has assigned a specific container according to the loading plan and after loading vehicle is heading to the designated storing block. The transshipment within the landfill is carried out via an automatic portal crane on the rails. All blocks are equipped with one large gantry crane and one small crane. The smart port should be also equipped for direct transshipment. (Januszewski, 2009)

Smart port consists of the following basic components:

- Terminal for loading of bulk and dry cargo with railway tracks and access to nearby warehouses,
- Container terminal,
- Railway terminal with wide-gauge portal crane,
- Management center and administrative buildings,
- Sono-buoy.

Sono-buoys transmit sound waves that spread with water. At the moment when sound wave strikes the object, it bounces back. Sono-buoy receives the reflected waves and records the time that has passed since the original sound wave was sent off. Sono-buoys are regularly located in the port's water area. Their main purpose is to identify approaching vessels and other objects in the water. Received data is sent via Galileo signals to the control center. The control center then displays information on the radar monitor. (Chaloupka & Boyd, 2017) Buoys can capture the movement not only of the vessels but also of larger floods or objects that can endanger the traffic in the ports area.

4. Conclusion

In the Smart Model Port, tracking and control devices are used in vehicles and cranes designed to handle cargo, but also to monitor the exact location of objects throughout the port area. The deployment of ITS helps to automate port activity and facilitates the reconciliation of all freight and container transport operations. As the main part of the ITS is the Galileo receiver that allows to precisely determine the location of the devices and allows to control the safe movement of the vehicles / objects. (Camerota & Ruffo, 2016) The Smart Model Port has intelligent, autonomous vehicles that do not need special infrastructure (with sensors) to conduct motion. Vehicles are moved based on instructions from the Control Centre which they receive through the Galileo satellite system. On this principle, all handling equipment in the model port works.

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IDEA OF SUSTAINABLE DEVELOPMENT UNDER CONDITIONS OF GLOBALIZATION IN THE LOGISTICS MANAGEMENT OF CONTEMPORARY ENTERPRISES

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Abstract. The idea of sustainable development is to maintain balance between the three fundamental elements: economy, environment and society. This idea is essential for understanding of the reasonable business activity as one of the most important components of the policy of development of contemporary enterprises under conditions of globalization. The interest of enterprises in the problems of sustainable development is viewed as a manifestation of social and ecological responsibility. As any human activity, logistics, on the one hand, generates specific economic benefits while on the other, it represents the source of certain negative phenomena which have an effect on the natural environment. Sustainable logistics concerns initiatives and activities which take into consideration business goals, the necessity of rational management of natural resources and the needs and social determinants of global economy. The aim of this paper is to analyse the area of logistics management as a tool that characterizes important potential opportunities for balancing development of contemporary enterprises under conditions of globalization. The aim of the study was achieved based on the interpretations of the problem in the literature study. In particular, the investigations concerned the area of the concept of sustainable development under conditions of globalization, enterprises towards the development in the global economy, idea of sustainable logistics and its importance for the achievement of the assumptions of sustainable development.

Keywords: sustainable development, sustainable logistics, globalization, management

JEL Classification: L91, Q56, R41

1. Introduction

Sustainable development is aimed at ensuring adequate high economic, ecological and socio-cultural standards for all present generations and the generations to come within the natural Earth capabilities, using the principle of intragenerational and intergenerational equity. Some common elements can be distinguished among numerous interpretations of the idea of sustainable development under conditions of globalization, including socioeconomic development that integrates human activities aimed to help future generations and lead to the most equal opportunities and meeting human needs in clean natural environment (Mesjasz-

Lech, 2012). Sustainable development is a long-term process that requires balancing the three dimensions to a similar level.

Accommodation of the triad of the objectives of sustainable development integrated into a common objective, also for contemporary enterprises, represents the basis for the concept discussed in this study. One of the methods to solve the biggest global problems today is to implement sustainable logistics to management of business entities (Nogalski & Ronkowski, 2007). The aim of this paper is to analyse the area of logistics as a tool that characterizes important potential opportunities for balancing development of contemporary enterprises under conditions of globalization. The aim of the study was achieved based on the interpretations of the problem in the literature study.

2. The concept of sustainable development under conditions of globalization

Sustainable development means the development which is socially demanded, economically justified and ecologically acceptable. Apart from smart development and the development which is conducive to social inclusion, it represents one of the three basic priorities of the Europe 2020 Strategy.

The definition of sustainable development has been interpreted in many ways, meaning e.g. (Welford, 2016):

- balanced development,
- permanent development,
- ecological development,
- self-sustaining development.

The definitions present in the literature approach the sustainable development as a strategy, system of actions (Holden et al., 2016), and even a "model of worthy continuance" with respect to the conditions of globalization but it should be noted that the multifaceted nature of this concept makes it impossible to present a uniform definition. The plethora of definitions of sustainable development and the fact of emerging new approaches were noted by Elkington (1994). This researcher also argued that the definition of sustainable development is not limited by the rigid definitional framework. On the contrary, it is open and constantly evolving as are global conditions. Contemporary understanding of the idea of sustainable development is focused on harmonization of microeconomic objectives of business entities and organizations from the business environment and households with macroeconomic and megaeconomic business and social objectives (Oelze et al., 2016).

The concept of sustainable development specifies the determinants of enterprise activities and their development based on the synergy of social, economic and ecological aspects. It is viewed as an assumption for continual economic and social progress harmonized with maintaining the values of the natural environment and respect for natural resources (Sun, 2016). The concept emphasizes the correlation within the socioeconomic development between the ecological, economic, social and spatial orders and emphasizes the necessity of maintaining the resources for the generations to come under global conditions.

3. Enterprises towards sustainable development in the global economy

Nowadays, enterprise management is facing numerous challenges, connected with both present and the past (Romanowska, 2001). One of such challenges for contemporary business entities is to follow the concepts of sustainable development of enterprises under global conditions.

The idea of sustainable development requires integrated and coordinated actions of public authority, society and enterprises (Burych, 2015). The key role from the standpoint of the effect of sustainable development is played by microeconomic entities i.e. enterprises (Newenham-Kahindi, 2015, Halme & Korpela, 2014, Calipinar & Ulas, 2013). Sustainable development of the enterprise means the concept which sets the objectives for the enterprise development through ensuring the opportunities for choosing between the environment and its protection and the freedom of economic activity. According to the definition by the World Business Council for Sustainable Development (WBCSD, 2017), sustainable development of the enterprise means adopting the strategy that combines meeting current needs of the enterprise and its stakeholders with protecting, maintaining and reinforcing the entity and the sources of natural resources which should also serve the generations to come. WBCSD also emphasized that it is impossible for a single enterprise isolated from a group of business entities or a business community to reach sustainable development. One entity cannot be sustainable. Sustainability should concern the whole economy, with its function depending on the specific nature of actions and relations between various entities which are participants of the global economy.

Among the most important areas of activity of the enterprises that function based on the principles of the concept of sustainable development in global economy are the actions towards the economic, environmental and social development. (De Brucker et al., 2013) The pillars of sustainable enterprise according to the concept by Machado and Davim (2016) are:

- financial results,
- responsibility for people,
- care for the environment.

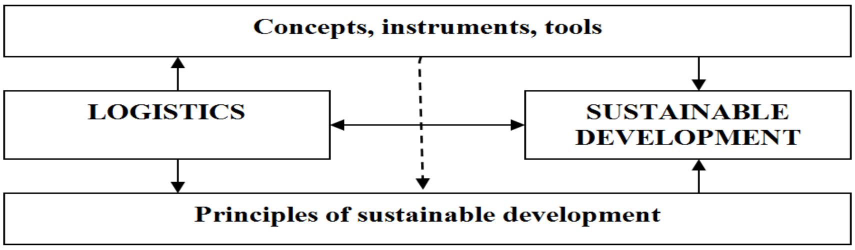
These areas are closely correlated and, consequently, the effects of all the decisions made in the enterprise should be considered for all these three aspects.

One of the most important challenges with respect to the concept of sustainable development is the requirement of a new and substantially more innovative approach, both in the case of the way of thinking and the method to make decisions in the enterprise. According to Dyma (2015), in order for the enterprises to become important co-authors and carriers of sustainable development, they have to implement numerous changes of strategic character, concerning e.g. the development of the value-based leadership, creation of relations with stakeholders which are adequate for the initiatives and building a more extended scope of competencies matching the scale of global economy. The problem of operationalization of the concept of sustainable development at the level of the enterprise results mainly from the global character of this concept and variations present between the goals of the enterprise and general social goals.

4. The idea of sustainable logistics

Logistics, which actually involves both the actions taken by individual enterprises and those between the enterprises, is viewed as an area which substantially contributes to changes in the systems of enterprise management (McKinnon, 2012). This study presents the logistics as an area that supports the achievement of the assumptions of the concept of sustainable development (Figure 1).

Figure 1: Logistics as an area conducive to sustainable development



Source: own elaboration

Through effective management of resources and adequate impact on the human environment, the solutions used in logistics (Rushton et al., 2014, Waters, 2010) are conducive to the development of social and economic order.

Logistics is understood as a domain of knowledge about rational, complex, economic and material-energy-informational ensuring of the function of systems, with certain level of resources, limitations and disturbances, in specific conditions and time (Price & Harrison, 2013). Through its concepts, instruments and tools, logistics is used to implement the basic principles on which the concept of sustainable development is based. These principles include in particular (Skowrońska, 2007):

- principle to use, in the first place, the space, matter and energy which are recycled;
- the principle of using the non-renewable matter and energy only if it cannot be replaced by the renewable forms or resources;
- the principle of the most economical and efficient use of time, space, matter and energy;
- the principle which assumes the discharge of the processed matter and energy to the environment only if it cannot be re-used.

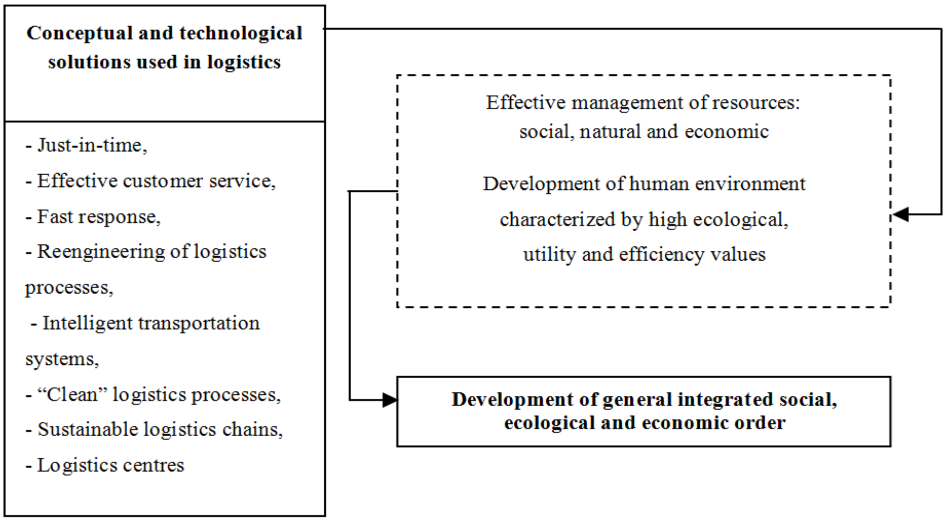
The diagram of the effect of logistics on sustainable development is presented in Fig. 2.

From the standpoint of sustainable development of enterprises, the most important components of sustainable logistics include the following solutions of the conceptual and technological character:

- just-in-time,
- efficient customer service,
- fast response,
- reengineering of logistics processes,
- intelligent transportation systems,

- "clean" logistics processes,
- sustainable supply chains,
- logistics centres.

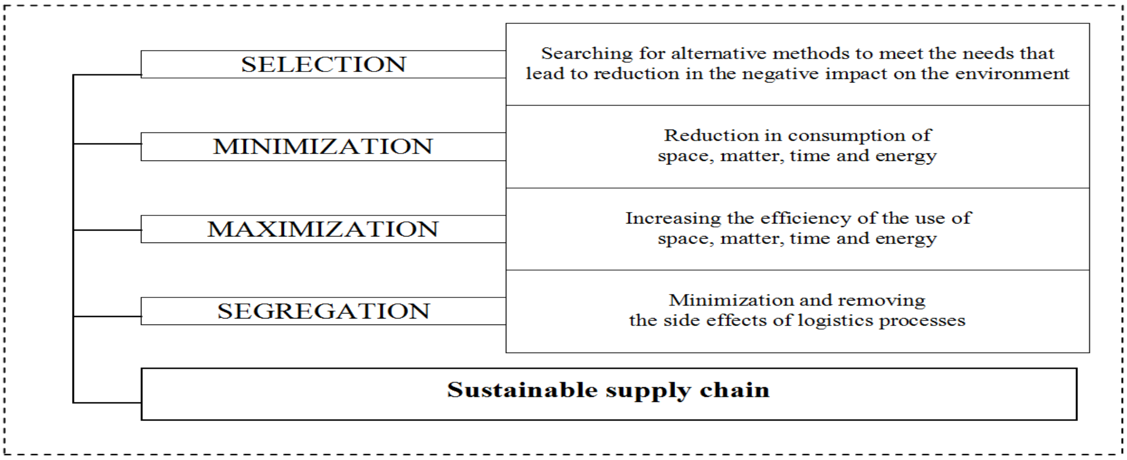
Figure 2: Effect of logistics on sustainable development



Source: author's own elaboration based on (Skowrońska, 2007)

Logistics can have an effect on increased competitiveness and accelerated and facilitated making the development sustainable. The process of making the enterprises development sustainable using the most important principles for building logistics processes was presented in Figure 3.

Figure 3: Principles for performing logistics processes in sustainable supply chains



Source: author's own elaboration based on (Skowrońska, 2007)

5. Importance of sustainable logistics for the achievement of assumptions of sustainable development

The problems of sustainable development have been analysed all over the world, at all levels, from different standpoints and with respect to the increasingly high number of areas of life and human activity. According to Laszlo and Zhexembayeva (2011), in the knowledge-based economy, the necessity for running business activity according to the concept of sustainable development under conditions of globalization seems to be obvious. Significance of the concept of sustainable logistics to the achievement of the assumptions of sustainable development is confirmed by the following reasons (Skowrońska, 2007):

- The concepts, technologies and methods used in logistics are conducive to the achievement of the goals for the development through the beneficial effect on the process of the development of the systems of balance with respect to the mechanisms of nature functioning;
- The supply chains that function based on the logistics ecological imperative make it easier to achieve the assumptions of sustainable development;
- With dematerialization of logistics processes in business entities that use the services of logistics centres and smart structuring of these processes, logistics centres contribute to the fulfilment of the principles of the so-called performance code.

The presented assumptions show the substantial complexity of the problems of sustainable development in logistics and emphasize the significance of logistics processes in maintaining the environment and natural resources for the generations to come (Zhang, 2014).

Interestingly, the survey conducted by the UN and Accenture among the managers of the biggest world companies demonstrated that the crisis highlighted the position and importance of sustainable development while suggesting that the insufficient attention had been paid to rational management of resources and long-term development, which was at least irresponsible (Bargieł, 2011). Therefore, it is necessary to start the discussion to make society aware, including the representatives of the business, of the huge importance of following the idea of sustainable development.

6. Conclusion

In order to be successful and survive in the demanding and very competitive contemporary market, the enterprise has to take actions which, through application of the integrated approach to management of business, ecological and social areas, should allow for gradual implementation of the concept of sustainable development. The idea of sustainable development is to maintain balance between the three fundamental elements: economy, environment and society. This idea represents the key to understanding of the fundamentals of reasonable business. This is one of the most components of the policy of development of contemporary enterprises under conditions of globalization. The interest of enterprises in the problems of sustainable development is viewed as a manifestation of social and ecological responsibility.

As any human activity, logistics, on the one hand, generates specific economic benefits while on the other, it represents the source of certain negative phenomena which have an effect on the natural environment. Sustainable logistics concerns initiatives and activities which take into consideration business goals, the necessity of rational management of natural resources and the needs and social determinants. Therefore, it seems obvious that a variety of actions, processes, tools and concepts of logistics enterprise management should be used for limitation of a negative impact on the environment.

Previous explorations lead to the conclusion that sustainable development should be gradually integrated into all aspects of business activities in the enterprise, with particular focus on the area of logistics management as an area with substantial opportunities for development.

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GLOBALIZATION AND ITS IMPACTS ON FOOD ENTERPRISES PERFORMANCE IN SLOVAKIA

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Abstract. By influence of globalization, the atmosphere of the environment in which food enterprises operate in Slovakia, is being changed. The continuous confrontation with environmental changes, as well as with changes in customer behavior and preferences, are reflected in new trends and attitudes of business entities operating in the food industry. Innovations, new approaches and trends in management and economy play a key role in fulfilment of corporate goals. Both the positive and negative impacts of globalization are reasons of changes we can observe in Slovak food enterprises. The aim of this paper is to analyze the impacts of globalization on food enterprises in Slovakia and to identify recent perspectives and trends which are the consequences of acceptation of changes in the environment, in which the analyzed food enterprises are located. The conclusions of the paper summarize the new perspectives and perspectives of entrepreneurial entities operating in the food industry, which are the results of modern management trends and which ensure the enhancement of the performance and competitiveness of the entrepreneurial subjects. The main contribution of this paper is an up-to-date reflection on the development and orientation of food enterprises, the identification of opportunities and threats resulting from the effects of globalization, performance analysis of selected enterprises and industry in the period 2010-2016 and the formulation of recommendations for the analyzed sector in terms of securing and increasing competitiveness and rate of success of food enterprises in Slovakia.

Keywords: globalization, food enterprises, performance, competitiveness

JEL Classification: F62, F64, L26

1. Introduction

Globalization is a phenomenon which affects the corporate decision making process, modify its strategies in the options of the financing of investments and innovations. Expert and scientific discussions open up the real challenges, benefits and challenges of globalization. In recent years, new insights and directions have appeared, even in the direction of de-globalization. Globalization is a phenomenon of nowadays associated with the development of information and communication technologies, information society and it also influences decisions of managers (Kučera & Látečková, 2015).

Nowadays, in our open economics conditions, enterprises operating in the food industry are addressing the opportunities offered by the global environment. In this context, it is necessary to analyse the opportunities and threats which enterprises must assess and readjust into their management.

The food industry has historically unsubstitutable position in the industrial sectors of the economy in Slovakia. The main tasks of the food industry include ensuring nutrition, and processing of agricultural production. Focus on furthering food industry varies according to the specific consumer requirements. Especially recently, there is an orientation to special foods, organic foods and other high-quality products supporting rational diet (Kajanová, 2015).

In Slovakia, the most of food products is being imported. The only exceptions are milk, mineral water and alcoholic beverages. While in 2011, domestic food products in Slovak stores reached 50 percent, this year (2017) their share in 360 monitored stores reached a new minimum of 37,2 percent. While in other countries domestic food production is an important topic, the food industry is not paying respectful attention in Slovakia.

Effective management of food enterprises is a key factor for successful, stable and competitive enterprise. The result is increase of sales, optimal costs, high profitability, relatively low debt, rising profitability, profit as the result of management. One of the key problems is financing of food enterprises. External and internal financial resources impact the operation of all businesses (Šúbertová, 2015). The next important factor is competitiveness of the company. According to the numerous studies the competition is a source of efficiency and it generates benefit for consumer (Zemanovičová, 2010). The questions of competitiveness of regions of Slovakia are solved in publication of Paškrtová and Saxunová (Paškrtová & Saxunová, 2016).

2. Objectives of the paper

The aim of this paper is to present the results of research activities focused on mapping out the current situation of the food industry in Slovakia, identification of opportunities arising from the existence of the global business environment and create an overview of the positive and negative impacts of globalization on the performance of food companies.

The partial objectives are:

- to analyze the inputs presenting the evolution and current status of food industry,
- to present the basic characteristics, which declares a state of the food industry in Slovakia,
- to identify the positive and negative impacts of globalization on food enterprises,
- to make an overview of recommendations allowing the improvement of the Slovak food enterprise.

3. Methods

In the course of research the following scientific methods were used: analysis, synthesis, deduction, comparison, monitoring, and inquiry. In accordance with the principles of scientific work the structure of the paper is following: introduction, methods, results, discussion, conclusion, and reference.

Based on the basic characteristics and information of the Statistical Office of the Slovak Republic, we outlined the current state of the food industry in Slovakia. By using standard scientific methods, we have identified and selected the positive and negative impacts of globalization on the sector surveyed. Suggested recommendations and measures are formulated on the basis of the facts, available information, domestic and foreign sources.

4. Results and discussion

The main results of the contribution include: a brief presentation of the current state of the food industry in the Slovak Republic, identification of opportunities and threats of the global environment influencing the management and decision making of food enterprises. At the same time, the contribution provides recommendations for improvement of the performance and competitiveness of food enterprises in Slovakia.

4.1 The current state of food industry in Slovakia

In total Slovakia is among the countries with the lowest share of food industry in industrial employment. It is associated with relatively lower volume of food production, not only in comparison with countries that can be classified as agrarian, but also the industrialized states such as Belgium, Holland, Germany etc. (Blaas, 2013).

In the following part, we want to point out the basic characteristics of the food industry. The first characteristic is employment in the food industry. The average number of persons employed by categories and special groups of industrial activity classifications (SK NACE Rev. 2) in persons for the period 2010-2016 is shown in Table 1.

Table 1: Development of employee number in food industry [person]

Year	2010	2011	2012	2013	2014	2015	2016
employee number	36 865	38 399	37 837	36 075	34 768	35 680	37 268

Source: Statistical Office of Slovak Republic, database SLOVSTAT, 2017

The food industry is stagnating in Slovakia, overall the food industry is declining in employment from 2010 to 2014 and is growing very slowly in 2015 and 2016. Employment in the sector is dependent on the total unemployment rate in the country. Unemployment and unemployment rates are discussed in Kočišová and Stoličná's contribution (Kočišová & Stoličná, 2017). The second characteristic is the development of sales in the food industry in the period 2010 - 2016. Sales characterize the performance of food enterprises during the monitored period. Sales are a significant variable for the calculation of the economic result, which is another significant indicator of the performance of enterprise. The evolution of sales in the food industry is compared with total industry sales (Table 2).

Table 2: Development of sales (food industry, total industry) in the period 2010 - 2016 [€]

Year	2010	2011	2012	2013	2014	2015	2016
Sales in food industry	3 757 702,8	4 276 256,3	4 597 757,2	4 533 443,4	4 278 269,7	4 213 503,6	4 225 354,2
Total sales in industry	67 484 076,8	76 583 604,5	82 250 954,5	82 247 465,3	82 236 224,4	87 090 666,1	88 329 945,8
FI / TI [%]	5,57	5,58	5,59	5,51	5,20	4,84	4,78

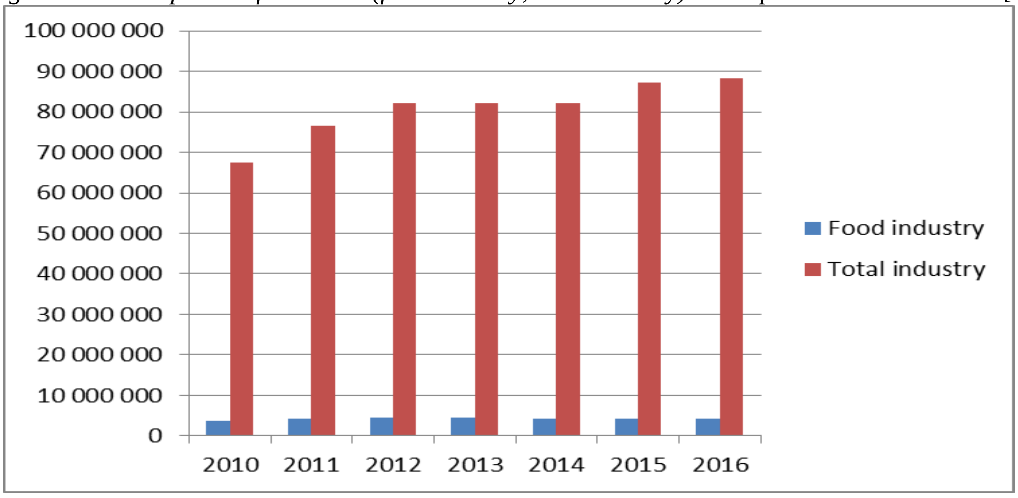
Source: Statistical Office of Slovak Republic, database SLOVSTAT, 2017

Sales growth in the food industry has ascending trend until 2012, then sales have fallen slightly. Industry regained growth in 2016. If we compare the development of the food industry's sales and total industry revenues, the development was very similar to 2014, only differs in fact that total industry's sales have started to grow in 2015.

Comparing the percentage of food industry sales and total industry sales, we observed a reduction in the share of sales of the food industry to total industry sales since 2012, which is in line with our conclusions of the stagnation and decline in the food industry performance in Slovakia.

A comparison of sale trends is for better illustration shown in Figure 1.

Figure 1: Development of revenues (food industry, total industry) in the period 2010 - 2016 in [€]



Source: own elaboration according to Statistical Office of Slovak Republic, database SLOVSTAT, 2017

A slight decline in food industry revenues is not yet a key factor, but enterprises have to adapt their decisions to new situations and measures. Therefore, it is necessary to carefully analyse the market opportunities which have grown significantly under the influence of globalization.

4.2 Opportunities and threats of global environment

By entering of Slovakia and the Czech Republic to EU, local markets opened completely for EU entities, this fact significantly changed the character of the business and competitive environment in the second half of the last decade (Kajan, 2016). The business environment is one of the basic assumptions of long-term competitiveness and growth of the market economy (Majerčák et al., 2015). Its expansion provides new opportunities and challenges.

Enhancing competitiveness of Slovak food products opens the way to expansion of products on the global markets. Simultaneously with the incoming opportunities, enterprises, however, have to deal with the threats arising from the extended markets for these products.

In the analysis of opportunities for the food industry, we have identified:

- possibilities for increasing efficiency,
- the potential of higher revenues,
- better utilization of production capacity,
- the possibility of shared costs on research and development,
- expansion of product portfolio,

- development of regional brands,
- increasing employment opportunities in the food industry,
- reduction of regional disparities,
- innovation in the direction of organic food, special gluten-free foods, foods for celiac disease,
- wider range of staff training,
- increase of economic growth,
- export to countries outside the EU,
- maintain the required quality of food products,
- Comprehensive Economic and Trade Agreement (CETA) between Canada and the European Union.

Recently, food quality and safety issues have been attracting increasing attention both in academia and industry, mainly because of consumers' concerns related to this topic (Pinna et al., 2017).

Identified opportunities can be qualified as positive as a result of globalization. However, the use of options depends principally on the financial situation of food enterprises, on the possibilities for innovation, on the ability to invest, on achievement of competitiveness.

One of the way how to increase the effectiveness of the companies is using of business process management. Business process management (BPM) as a systematic managerial approach enables organization's workflow to be more effective, more efficient and more capable to adapt to an ever-changing environment (Gažová et al., 2016).

Recent developments and trends related to food safety will impact the food sector is discussed by King, Cole and Farber (King et al., 2017).

In the analysis of threats to the food industry, we have identified:

- problems of price competitiveness due to lower subsidies and support in comparison with other countries,
- reducing the number of food companies,
- difficulties in obtaining sufficient foreign capital for investment and development,
- the necessity of investment in modern technologies,
- problems of staffing of food businesses
- lack of interest in the food industry, low motivation,
- exodus of qualified personnel to other sectors, particularly to the service sector,
- increased import of foreign food products (often at dumped prices)
- higher customer orientation on the most affordable products (to the detriment of quality and provenance),
- import of dangerous products.

Identified threats can be described as negative, creating risks and negative impacts for food enterprises in Slovakia. Among the negative effects of globalization, which influenced the performance of enterprises in Slovakia can be classified: changes in national laws, environmental problems (Plchová, 2012), raw material problems, energetic issues, safety problems. Many problems require long term solutions. Therefore, they need to be rationally reviewed and focused on those which bring positive results for food businesses in a shorter period of time.

Solutions related to financial support, creating the similar conditions, or hindering the import of lower-quality and problem food products are less demanding than foreign investment topics, ensure the necessary education, where businesses will experience impact on the long run.

The problem of dangerous food has been resonating since August this year, when the "fipronil case" resonates not only within the media of Slovakia but across the whole European Union. On one hand, we are positively assessing the alert system for dangerous food, on the other hand, we are negatively evaluating the timeframe and the spread of dangerous food across many European Union countries.

Process control has become increasingly important for the food industry since the last decades due to its capability of increasing yield, minimizing production cost, and improving food quality (Kondakci & Zhou, 2017).

The main task of the industry is to support Slovak export of food products and reduce the import to Slovakia. In assessing the development of the food industry, it is necessary to present the effects of importing food products. On the one hand, consumers have a wider choice of products in different price ranges, the choice of the supplier, on the other hand, cheap foreign products dampens demand for Slovak products, reduced interested in domestic products decreases employment in the food industry.

Key challenges for the future:

- to ensure food self-sufficiency of Slovakia,
- to grant the same conditions to both domestic and foreign entities,
- to create customer preferences to traditional Slovak food products,
- to develop modern products for a healthy lifestyle,
- to maintain the efficiency and effectiveness of food enterprises in Slovakia,
- to limit the import of food products, by increased competition from local enterprises,
- to promote the production and sale of Slovak foodstuffs,
- to promote employment in agriculture and food industry.

5. Conclusion

The situation of the food sector in Slovakia can be compared with size-similar countries. The extremely efficient Irish food sector produces 8 times more nominal gross production; 5 times more effective is Danish food sector. The Czech Republic has more than three times the production of food products. Lithuanian food production is bigger by one fifth than Slovak and in the food industry it generates 50% higher added value. The results show that the EU food industry´s competitiveness is weak (Wijnands et al., 2008).

The situation in the food industry needs actions which will result in increased food self-sufficiency and safety, increasing employment, adapting the education system to the needs of the labour market. The labour market has been for a long time a big challenge within the effort to achieve an economic prosperity and growth (Milošovičová & Stachová, 2016).

The general conclusions include: requirements for improvement of the business environment, more favourable tax conditions, a transparent environment, simplified and less time consuming use of euro funds. Specific measures more closely related to the food industry concern the economic support of food businesses, approximation of agricultural subventions to Western European countries levels, address the shortage of qualified labour, the need to change the education system, provide financial support for farmers and food producers, and support investments in technological equipment that will allow Slovak businesses to increase competitiveness.

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CLUSTER ANALYSIS OF COUNTRY COMPETITIVENESS IN THE GLOBAL TOURISM MARKET

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Abstract. The purpose of research is to identify the clusters of countries in the global tourism market with the use of cluster analysis and the database of the World Economic Forum. The paper is aimed at identifying the clusters of 140 countries with a certain level of competitiveness in the international market of tourist services taking into account the types of tourism that provide the greatest competitive advantages for a particular country. The evaluation of the country competitiveness in the global market of tourist services is based on the determinants of competitive advantages of M. Porter, which allowed the authors to consider relation between the competitiveness of a tourism industry and the related, supporting industries. Clusters are created using the Ward method of cluster analysis and uniting the countries with the similar indicators of competitiveness. Ten clusters of countries on the level of the international competitiveness are created using the Statistical Package for the Social Sciences software. A brief description of clusters is given and the changes in the countries' competitive positions within the period 2013-2015 are analysed. The countries are ranked according to their competitive strengths and weaknesses in tourism sector, the nearest competitors and the leading competitor in the higher cluster are defined. Assessment of the position of a certain country ranked in the world tourism industry allows determining the directions of competitiveness enhancement by means of eliminating competitive weaknesses and developing tourism on the basis of unique benefits.

Keywords: global tourism market, country competitiveness, competitive determinants in tourist services, cluster analysis

JEL Classification: F140, C380, L83

1. Introduction

The international tourist services market is one of the fast growing sectors of the world economy in terms of economic globalization. International trade in tourist services provides the countries with the direct income such as currency receipts and the indirect income due to the tourism multiplier effect which stimulates the related and supporting industries and economy diversification.

Many international researchers focused on an increasing role of the international tourism among other types of the trade services in the world economy as a whole and in individual economies, such as Lin et al. (2017) for China, Garsous et al. (2017) for Brazil, Fauzel et al. (2017) for small island economies, Stoffelen & Vanneste (2017) for Europe. Tourism-led economic growth hypothesis postulates that a unidirectional causality runs from tourism development to economic growth, i. e. a positive long-run relation between the tourism expansion and economic growth (Paramati et al., 2017). Mass migration of people across continents can be explained by a society transition to a new stage of development. Osipenko (2014) defines one of the most significant tendencies of the international tourism development as a factor of fast strengthening competition on the tourist supply market because of a growing number of countries with ambitious plans aimed at tourists attraction. Macleod (2004) states that tourism is a part of globalization process, because international tourist flow causes overflow of capital, goods and information from one country to another, and impacts on the trade, transport and communications systems. Sharpley and Telfer (2002) suggest that tourism is logically built in the main paradigms of social development in the industrialized countries after World War II due to specificity of goods produced in a particular industry and active involvement in a production process of other industries. Tourism is the first or second source of exports earnings for almost half of the world's 48 less developed countries. In some developing countries tourism accounts for over 25% of GDP (Hrubkova & Loster, 2015).

The definition given by the World Trade Organization allows to determine enterprises which belong to the sphere of tourism: the tourist services and other services related to the travel organization include the services provided by hotels and restaurants, travel agencies and tour operators, excursion organizations, and also other services. Major visitor attractions stand out as the strongest pull-factors of a tourist destination and are considered as key destination resources for development and competitiveness improvement (Ram et al., 2016).

Empirical studies of tourism competitiveness (Dwyer, 2000) have emphasized the critical role the following factors: the development of travel technologies, exchange rates, government regulation, and the impact of transnational corporations. Craigwell (2007) argues that the number of tourist arrivals in the country depends on three factors: technological advantage, the advantage in the tourist industry organization and the cost advantage. Lee et al. (1996) noted that the susceptibility of tourists is extremely high relative to the cost of travel to certain destinations. Barros and Machado (2010) show that the length of certain tourists stay in a destination is influenced by an economic affluence including socio-economic variables, nationalities, quality and destination attributes.

The Theory of International Competitiveness, proposed by Michael Porter at the turn of 20th century, includes several groups of indicators, some of which may be applicable to the tourism industry: factor conditions, demand conditions, related and supporting industries, firm‘s strategy, structure and rivalry. Porter didn't consider the government as the main determinant noting its negative influence on competitiveness. However, considering the tourism sector the role of government cannot be ignored, since its regulatory function can br found in almost all stages of the tourism product formation. Tourism is also affected by natural disasters, epidemics, etc.

2. Methods

We have developed the methodology, allowing to determine country competitiveness level in the international market of tourist services on the basis of allocation of clusters of the countries depending on tourist infrastructure and tourist potential (Kapustina et al., 2014). This methodology is based on the methods of factor and cluster analysis using the software package of SPSS (Statistical Package for the Social Sciences) and consists of the following stages.

1. *Forming a system of indicators of the country competitiveness in the international tourist services market.* We established criteria of indicators: a representativeness of selection (international market), peculiarities of the international market of tourist services, convertibility of data to use it in the SPSS program. According to criteria the classification of determinants of M. Porter is used which allowed the authors to consider the relation between competitiveness of a tourist industry and the related, supporting industries. The system of indicators consists of six factors: factor conditions; demand conditions; related and supporting industries; firms strategy, structure and rivalry; government; accidental events. Each factor includes a range of indicators according to Porter (2016).

Indicators are divided into competitive strengths and weaknesses on the basis of the following principle: the strengths of the first 10 countries in the World Economic Forum ranking are indicators from 1 to 10; the strengths for the positions from 11 till 50 are indicators of higher class; the indicator higher than 51 is considered as advantageous. The data obtained are entered into the SPSS program.

$$\begin{gathered} X_i(R) = 1, \text{ if } 1 \le R \le 10,\ X_i(R) \in S_{ca}, S_{ca} = \{1,2,...,10\}; \\ 11 \le R \le 50, (X_i(R) < R) \in S_{ca}, S_{ca} = \{1,2,...,50\}; \\ 51 \le R \le n, X_i \in S_{ca}, S_{ca} = \{1,2,...,50\}; \end{gathered} \quad (1)$$

$$\begin{gathered} X_j(R) = 0, \text{ if } 1 \le R \le 10,\ X_j(R) \in S_{cw}, S_{cw} = \{11,12...,73\}; \\ 11 \le R \le 50, (X_j(R) > R) \in S_{cw}, S_{cw} = \{51,52,...,73\}; \\ 51 \le R \le n, X_j(R) \in S_{cw}, S_{cw} = \{51,52,...,73\}, \end{gathered} \quad (2)$$

where X_i – competitive strength of a country; X_j – competitive weakness of a country; R – ranking of a country; n – number of countries in a ranking (depends on a year of ranking); S_{ca} – a set of indicators – competitive strengths; S_{cw} – a set of indicators – competitive weaknesses.

2. *Determination of ranking and forming of clusters of the countries in relation with the levels of the international competitiveness*. By means of the cluster analysis we extract clusters of the countries depending on similarity of competitive indicators so that one cluster is formed sharing similar features in the international market of tourist services. To compute the smallest distance between clusters of the countries we calculate Euclidean distance, for the longer distances we calculate the squared Euclidean on the basis of competitiveness indicators.

$$p(X,Y) = \sqrt{\sum_{i=1}^{m} (X_i - Y_i)^2}, \quad (3)$$

where X_i and Y_i – indicators of tourism competitiveness of different countries.

The square of Euclidean distance is calculated to give of a bigger weight to the most remoted countries.

$$d(X,Y)=\sum_{i=1}^{m}(X_i-Y_i)^2. \tag{4}$$

Clusters are created with the use of Ward Method uniting the countries with similar indicators of competitiveness.

$$W=\sum_{i=1}^{n}(x_i - \bar{x})^2, \tag{5}$$

where x_i – indicator of competitiveness of i country, $\bar{x}$ – the average value of the competitiveness indicator.

3. *Determination of tourism types for which development the country has the greatest competitive stengths.* For complex assessment of competitiveness we determine the tourism type specific to the country. The indicators are selected on the basis of availability of factors for development of a certain type of tourism in the country (congress, business tourism, exhibition, business trips, incentive tours, and get-to-know tours, sales and promotion, cultural mission, educational, beach, shopping, sports, informative, event, visit of relatives and friends, nostalgic, recreational, pilgrim, transit). It is estimated in a certain type of tourism whether the indicator is competitive strength or weakness of the country. Then matrix of competitive strengths in a certain type of tourism is prepared. By means of matrix we allocate the tourism types specific to the country.

$$T_{sp}=\frac{\sum X_i(R)}{\sum t}\times 100\%, X_i(R)\in S_{ca} \tag{6}$$

where T_{sp} – share of indicators - competitive strengths in the overall number of indicators by type of tourism; X_i – indicator of international competitiveness of a country; R – ranking of a country; S_{ca} – a set of indicators – competitive strengths within a certain type of tourism; t – a number of indicators necessary for the development of a certain type of tourism, among the overall number of indicators.

4. *Assessment of competition intensity in the tourism industry of the country*. For the comparison with the nearest competitors it is proposed to use a competitiveness polygon on the basis of five competitive forces of Porter in relation to the international tourist services market.

3. Results and discussion

Variables for clustering are chosen as competitiveness indicators of 140 countries ranked by the World Economic Forum in 2013 and 2015. According to the analysis of an increase in distance coefficient between clusters we created 10 clusters of the countries in relation to their international competitiveness level in the tourist services market, as shown in Table 1.

Table 1: Findings of the cluster analysis of the country competitiveness in the international tourist services market

2013	2015
Competitiveness of the 1st level	
1. Switzerland 2. Germany 3. Austria 4. Great Britain 5. France 6. Netherlands 7. Belgium 8. USA 9. Canada 10. Australia 11. Sweden 12. New Zealand 13. Iceland 14. Finland 15. Ireland 16. Denmark 17. Norway	1. Switzerland 2. Germany 3. Austria 4. Great Britain 5. France 6. Netherlands 7. Belgium 8. USA 9. Canada 10. Australia 11. Sweden 12. New Zealand 13. Iceland 14. Finland 15. Ireland 16. Denmark 17. Norway *18. Japan* 19. Republic of Korea 20. Singapore*
Competitiveness of the 2nd level	
1. Spain 2. Japan 3. Portugal 4. Republic of Korea . Italy 6. Czech Republic 7. Greece 8. Croatia 9. Slovenia 10. Hungary 11. Poland 12. Latvia 13. Lithuania 14. Israel 15. Slovakia	1. Spain 2. Portugal 3. Italy 4. Czech Republic 5. Greece 6. Croatia 7. Slovenia 8. Hungary 9. Poland 10. Latvia 11. Lithuania 12. Israel 13. Slovakia *14. Luxembourg*
Competitiveness of the 3rd level	
1. Singapore 2. Hong Kong 3. UAE 4. Taiwan 5. Malaysia 6. Qatar 7. Puerto Rico 8. Bahrain 9. Oman 10. Saudi Arabia	1. Hong Kong 2. UAE 3. Taiwan 4. Qatar 5. Puerto Rico 6. Bahrain 7. Oman 8. Saudi Arabia
Competitiveness of the 4th level	
1. Luxembourg 2. Malta 3. Barbados 4. Cyprus 5. Estonia 6. Seychelles 7. Montenegro 8. Costa Rica 9. Mauritius 10. Uruguay 11. Brunei	1. Malta 2. Barbados 3. Cyprus 4. Estonia 5. Seychelles 6. Costa Rica 7. Mauritius 8. Uruguay 9. Brunei *10. China 11. Indonesia*
Competitiveness of the 5th level	
1. Panama 2. Thailand 3. Mexico 4. Turkey 5. Chile 6. Jordan 7. Republic of South Africa 8. Morocco 9. Sri Lanka	1. Panama 2. Thailand 3. Mexico 4. Turkey 5. Chile 6. Jordan 7. Republic of South Africa 8. Morocco 9. Sri Lanka *10. Malaysia 11. Russia 12. Montenegro 13. Puerto Rico*
Competitiveness of the 6th level	
1. China 2. India 3. Indonesia 4. Vietnam 5. Philippines 6. Egypt 7. Iran 8. Tajikistan 9. Pakistan 10. Bangladesh	1. India 2. Vietnam 3. Philippines 4. Egypt 5. Iran 6. Tajikistan 7. Pakistan 8. Bangladesh
Competitiveness of the 7th level	
1. Bulgaria 2. Russia 3. Georgia 4. Romania 5. Lebanon 6. Macedonia 7. Ukraine 8. Albania 9. Azerbaijan 10. Armenia 11. Trinidad and Tobago 12. Kazakhstan 13. Serbia 14. Bosnia and Herzegovina 15. Mongolia 16. Kuwait 17. Moldova 18. Kyrgyzstan 19. Venezuela 20. Algeria	1. Bulgaria 2. Georgia 3. Romania 4. Lebanon 5. Macedonia 6. Albania 7. Azerbaijan 8. Armenia 9. Trinidad and Tobago 10. Kazakhstan 11. Serbia 12. Bosnia and Herzegovina 13. Mongolia 14. Kuwait 15. Moldova 16. Kyrgyzstan 17. Venezuela 18. Algeria
Competitiveness of the 8th level	
1. Brazil 2. Argentina 3. Jamaica 4. Peru 5. Ecuador 6. Colombia 7. Dominican Republic 8. Honduras 9. Guatemala 10. El Salvador	1. Brazil 2. Argentina 3. Jamaica 4. Peru 5. Ecuador 6. Colombia 7. Dominican Republic 8. Honduras 9. Guatemala 10. El Salvador *11. Ukraine*
Competitiveness of the 9th level	
1. Cape Verde 2. Namibia 3. Gambia 4. Botswana 5. Surinam 6. Guiana 7. Rwanda 8. Zambia 9. Swaziland 10. Lesotho	1. Cape Verde 2. Namibia 3. Gambia 4. Botswana 5. Surinam 6. Guiana 7. Rwanda 8. Zambia 9. Swaziland 10. Lesotho
Competitiveness of the 10th level	
1. Nicaragua 2. Kenya 3. Cambodia 4. Senegal 5. Tanzania 6. Bolivia 7. Nepal 8. Paraguay 9. Uganda 10. Ghana 11. Zimbabwe 12. Ethiopia	1. Nicaragua 2. Kenya 3. Cambodia 4. Senegal 5. Tanzania 6. Bolivia 7. Nepal 8. Paraguay 9. Uganda 10. Ghana 11. Zimbabwe 12. Ethiopia

End of the Table 1

2013	2015
Competitiveness of the 10th level	
13. Cameroon 14. Malawi 15. Mozambique 16. Côte d'Ivoire 17. Nigeria 18. Burkina Faso 19. Mali 20. Benin 21. Madagascar 22. Yemen 23. Mauritania 24. Guinea 25. Sierra Leone 26. Burundi 27. Fumes 28. Haiti	13. Cameroon 14. Malawi 15. Mozambique 16. Côte d'Ivoire 17. Nigeria 18. Burkina Faso 19. Mali 20. Benin 21. Madagascar 22. Yemen 23. Mauritania 24. Guinea 25. Sierra Leone 26. Burundi 27. Fumes 28. Haiti
*Countries in italics are moved between clusters for the period 2013-2015	

Source: authors' calculations based on data of the World Economic Forum

The first cluster is characterized by various types of tourism resources. Natural and cultural resources allow to create a diversified tourist product. The cluster includes a variety of high quality material resource. Government policy promotes creating the environment for attracting foreign tourist due to favourable social, economic and political climate. However, some regulations throw an endless number of obstacles to tourism development.

The second cluster allocates different types of high-quality material resources of tourism which act as a clear advantage. Natural and cultural resources allow to create a diversified tourist product such as beach restaurants (Spain, Greece, Croatia, etc.), and other types of tourism with an active cultural and historical component. Besides, active development of the creative industry and availability of congress and exhibition halls creates a business tourist product. Government policy prioritizes tourism industry and is focused on attracting foreign tourists.

The countries of the third cluster are charaterized by the diverse types of material resources and the developed air transport infrastructure. The cluster is presented by the countries which don't have long-standing traditions in tourism for historical reasons. Migration policy restricts the entry and stay of foreign tourists but provides the highest level of safety which appears to be a competitive advantage of the cluster. Prices are a weak point of the tourist industry of countries in question.

Countries of the fourth cluster that are rich in cultural and natural resources set an explicit priority of developing beach rest (Cyprus, Barbados, Seychelles, Mauritius), or the business tourism (Malta, Luxembourg, Estonia, China), due to high customer focus and interest of local population in foreign tourists. Government policy is targeted at creating a favorable image of the countries and developing tourist sector.

The countries of the fifth cluster have developed material resources, but the transport infrastructure requires improvement.

The sixth cluster combines the countries which have natural and cultural resources as the main competitive advantage. These countries offer high quality accommodation at moderate prices. Transport infrastructure needs development and upgrade, standards of hygiene aren't observed in a proper way, it is necessary to improve staff training and to raise degree of safety for foreign tourists.

The seventh cluster includes the counties for which the tourist industry isn't the main source of income and isn't prioritized enough. This cluster loses higher cluster tourists, because of infrastructure problem, insufficient services and inappropriate pricing. The material resources need investments and further development, transport infrastructure and accommodation remain underdeveloped. Staff training, medical care, and safety level are considered to be a competitive weakness.

The eighth cluster includes the countries of Latin America and the Caribbean Region. The countries are characterized by less developed material resources of tourism and lower level of safety. At the same time, a lot of natural resources are combined with objects of historical and cultural heritage that contribute to a diversified tourists product creation. However, the tourist sector isn't supported by related industries properly which infrastructure condition, medical care.

The ninth cluster combines the countries of the African continent which make essential efforts for development of tourist sector. The countries consider tourism as a major priority, however investments aren't enough for active tourism development. At the same time there is a need for improvement of health care services, infrastructure, staff trainings and safety of foreign tourists.

The tenth cluster includes the countries with a various cultural, historical and natural potential for attraction of tourists, but effective use of this potential is limited by many factors. Competitive weaknesses are material resources of tourism, safety, staff training.

4. Conclusion

The Authors' approach allows to identify clusters of the countries with a particular level of competitiveness in the international tourist services market taking into account tourism types, to reveal determinants of competitive strengths of some countries, to establish a comparative level of competition intensity of clustered countries. Finally, assessment of the position of a country in the world ranking in relation to the development of the tourist industry allows to determine the directions of competitiveness growth by means of eliminating competitive weaknesses and developing tourism on the basis of unique benefits.

Thus, the findings of research revealed 10 different clusters of countries. Each cluster includes the nearest competitors in the international tourist services market having similar conditions for tourism development, such as factor conditions, demand conditions, related and supporting industries, firms strategy, structure and rivalry. Countries of the first cluster are united on the basis the highest level of their tourist industry quality, rich cultural and natural resources, strong government support and effective partnership with related and supporting industries. All the factors mentioned above are complemented by a high economic development level. Clustered countries have some problems with one or many of the factors mentioned above, so there is a correlation between the level and the tourism-related problem. A more detailed study is necessary for conducting the analysis of specific indicators within each factor and a particular country.

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RUSSIAN URBAN AREAS GLOBALIZATION PATH (CASE OF ST. PETERSBURG CREATIVE INDUSTRIES)

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Abstract: Many Russian urban areas (cities and towns) are involved into globalization process at least to some extent. Being goods, services or capital exporters/importers this settlements are by all means parties of the globalization process. Majority of Russian urban areas, as well as national economy as whole, are following the obvious path. That means they are mainly dealing with the fuels and other natural resources export and machinery and other manufactured goods and services import. St. Petersburg is the second biggest city in Russia (4th in Europe) with total population over 5.2 million inhabitants and is extremely important industrial, commercial, scientific, cultural national center. At the same time St. Petersburg has some economic and social problems (underdeveloped infrastructure, old technology based industrial enterprises number, low population life expectancy, etc.). In order to solve different problems the city Government has designed the socio-economic development strategy up to 2030 (Strategy). The Strategy goal - to ensure citizens stable life quality and increase St. Petersburg global competitiveness based on the national development priorities implementation, sustainable economic growth and use of innovation and technology activities. Present socio-economic development features highlight the cultural resources and creativity as one of the modern, post-industrial economy basis. Creative approach gives an opportunity to find new and unique solutions in a rapidly changing world. Therefore, creative industries (CI) development provides a significant competitive advantage to the St. Petersburg economy. The city has a large, but still not sufficiently realized CI potential.

Keywords: creative industries, creative spaces, globalization, St. Petersburg socio-economic development strategy

JEL Classification: F00, R00

1. Introduction

According to latest data currently there are more than 1100 urban areas (cities and towns) in Russian Federation. Share of urban population is 74% out of total. (Russia in Figures, 2017) St. Petersburg is the 2nd biggest city in Russia with the above mentioned advantages and problems. During the Soviet era (1917-91) the city’s as well as Russian economy in general have been on central planning principles. (Ishkov & Magera, 2015). Due to the governmental monopoly enterprise’s managers have no interest towards export development. In post- Soviet 1990-s Russian managers started to learn how to deal with market economy conditions. Most of companies have been trying just to survive, but some were lucky enough to become very profitable (mainly export-oriented companies of fuel, metallurgy sectors, banks, largest food and consumer goods importers). Many enterprises were trying to attract FDIs, import intellectual property rights. So, direct involvement of the city’s as well as other Russian economy into globalization process become more visual, but at the same time it was far behind potential level. Creative industries are playing very minor role in Russian economy. Despite relatively high level of cultural sector development in the former USSR, big number of museums, libraries, theaters, etc during post-Soviet time the sector suffered substantial decline. National economic growth is based mainly on oil, other fuels and commodities export and governmental spending. (Accenti, 2016). Above that big number of high skilled labor instead of being employed in cultural sector, computer programming and other CI migrated to the US, EU, Canada, Israel, etc. Situation with creative economy in St. Petersburg is much better compare to Russian average, but many European, American and Asian cities of the same size or even smaller are very much ahead. (Kievsky & Khorkina, 2013).

2. Paper objective and literature review

The paper objective is to evaluate current level the city of St. Petersburg CI involvement into globalization and discover Russian urban areas creative economy development problems and prospects. Topics dealing with creative industries and creativity in general are among the popular ones in the Western literature. Some authors (Mumford & Gustafson, 1988) reviewed the development of innovative occupational achievement, discussed how minor and major creative achievements require different knowledge structures, skills, and abilities. Importance of creative economy for some particular city research started in the UK (Landry, 2000). For some other authors (Galloway & Dunlop, 2007) it was important to distinguish the difference between the terms “cultural industries” and “creative industries”, which “are often used interchangeably”. Already in 2007 it has been indicated that: “The cultural industries have moved closer to the centre of the economic action in many countries and across much of the world.” (Hesmondhalgh, 2007). Four models of creative industries have been also indicated (Potts & Cunningham, 2008). Interlinks between “creative” and “cultural” issues have been indicated in the majority of researches. “Creative industries are defined as a combination of cultural content production/creativity and distribution of the result. The thing that makes creative industries different from other industries is creativity” (Towse, 2011). There is also a review of creativity and innovation. The authors discuss several seminal theories of creativity and innovation and then apply a comprehensive levels-of-analysis framework to review extant research into individual, team, organizational, and multilevel innovation (Anderson, et al., 2014).

CI development is one of the important topic of research made by the UNCTAD. This UN Agency is publishing reports on creative economy and creative industries global development annually. (Ivanova & Afonina, 2016). Research related to the development of creative industries and other structural changes in the investment and human capital in the Russian Federation, as a rule, do not view this development as an alternative to the traditional focus on exports of oil and other fuels. (Yazhlev, 2014). Also most of the research in the field are not dealing with innovations should complement financial investments in creative industries and other sectors of national economy innovations and financial investments complementarity in CI and other sectors of Russian national economy. See UNCTAD (2015), Karhunen (2009).

3. Methodology

The paper methodology is based on combination of methods. Beside the statistics analysis the methods of qualitative analysis are used, including expert assessment method, etc., as well as cluster analysis. The questionnaire and in-depth interviews are used to investigate the major problems and prospects of creative industries development in the city of St. Petersburg and its regional economy globalization path.

4. Results

As the research results the authors were trying to find out the level of different "creativity" issues understanding among Russian businessmen and other people living in the city of St. Petersburg. To determine the population's attitude towards settling down in their area creative economy, creative industries and globalization, Admiralty district of St. Petersburg was chosen. Admiralty district together with three others (Centralny, Petrogradsky and Vasileostrovsky) are forming St. Petersburg Historical Centre (downtown). They are all located nearby, bordered to each other and have the largest number of cultural and historical sights.

Table 1: St. Petersburg and It's Downtown Districts Population, Number of Theaters and Museums

District/City	**Population (mln)**	**Number of Theaters**	**Number of Museums**
Admiralty	0,163	21	39
Centralny	0,221	50	74
Petrogradsky	0,137	14	38
Vasileostrovsky	0,209	10	34
City Total	5,226	120	305

Source: the population of the administrative districts of St. Petersburg (2017)

Table 1 shows clearly that Admiralty district has one of the largest numbers of theaters and museums in St. Petersburg in absolute and per capita terms. The district has 0.13 theater and 0.24 museum per 1000 inhabitants, that is much higher compare to the City's average (has 0.0002 theater and 0.058 museum per 1000 inhabitants). This is also the area of the highest concentration of creative economy in its territory: Art Rizzordi Foundation, Red Triangle, Weavers, Floors - a list compiled of the most famous places of creative spaces. Piloting the questionnaire "The attitude of residents of St. Petersburg to the creative industries, space and globalization, etc" was conducted among residents of the Admiralty district by subdistrict: Admiralty sub-district, Haymarket District, Kolomna, Semyonov, Izmailovo. All together we had 48 respondents. Comments and observations were taken into account, tools profiles changed in line with the results of aerobatics. Initially, the questionnaire was not placed the question of whether the respondent is familiar with the terms "creative industry, space and globalization, etc". Because first piloting the questionnaire was conducted internally, and respondents were selected at random, then the problem is lack of knowledge was found in the first few seconds during the announcement of the theme and purpose of the study. Obviously, people who know nothing about the creative industries, space and management could not continue to respond to the questionnaire. As a result, in two days pilotage work in the "field" three questionnaires have been collected. After piloting this work, it was decided to carry out on the Internet with the help of the Internet survey. Comments on the questionnaire have been offered to write in the comments or send them in person. Definitions of creative industries, space and globalization were brought outside the questionnaire to the respondent were able to read it, as well as to create a certain mood of the respondent. Thus, before the start of the survey it is necessary to know whether the respondent had heard anything about the creative industries, space and management, or to put this issue at the beginning of the questionnaire itself.

If a person has been familiar with the creative industries, space and globalization, the next step was to find out ways to get information. The vast majority responded that the main source of information about the creative industries (74.4%) and spaces (74.4%) is the Internet (social networks, news feeds, announcements). The same was in the case of creativity way towards globalization is also known through Internet. 87.2% of respondents were familiar with the term “globalization” also via Internet. Response options "newspapers, radio and television" and "outdoor advertising" got zero. Perhaps in the final version of the questionnaire is to exclude these options. Option that receives the highest number of responses, probably needs more specific segmentation: if information is collected from the "social networking", and if the answer is yes, then what ("VKontakte”, ”Facebook”; “news feeds", "announcements"; "life-journals").

In the question "How do you rate how well you know about goods, services, and held in the creative spaces of events" results show the average level of awareness of the work of creative spaces. Because 74% of respondents know about creative spaces via the Internet, you need to ask clarifying questions about the kind of information received (for example, what's the news, basically, read the respondents in the social networks of creative spaces). Also here there is a lack of completeness of the proposed list of possible answers (only two points). It is necessary to break the list down into more specific options giving examples: what products are sold, what services are offered and what activities are carried out.

The vast majority of respondents (93%) had the experience of visiting a creative space "Loft Project Floors." Results are consistent with the hypothesis of the study. The question of whether the respondents know about the experience of visiting the creative spaces of his inner circle shows the value zero option "no." Respondents do not speak confidently about the experience of visiting the creative spaces of others. Expressed uncertainty about 5 people (including those who themselves have never visited creative spaces). Only half of the respondents are aware of the other places of recreation, ranging in the Admiralty district, other than those listed creative spaces. Rather low percentage may be related to inadequate sample volume, as well as the fact that people go to rest in the other areas of the city (eg, Central) to visit all sorts of cultural sites. Wording of the question has also caused some difficulties, because The term "recreational" perceived by the respondents vague and interpreted in different ways, and the term needs to be clarified.

The income level of people who visit the creative spaces, respondents estimated the average. However, the question of personal income was based on self-use criterion. Asked about the average income of creative spaces visitors they suggest themselves. Need for more detailed work on this issue, and to include the qualifying criteria, "level of education", "level of income", etc. Russia's middle class has always been a controversial category that requires special consideration in each case study. The question of how much money the respondent spends on certain creative leisure activities, shows the lowest value of money for each item in the list. Among the list of leisure can be objectively identified only one most expensive form of entertainment, "theater, cinema" - in which respondents are willing to spend 2-3 thousand Rubles a month (30, 23%). Other types of leisure activities have a minimum value of "less than 1,000 rubles". It is obvious that this issue is quite controversial, and the conclusions of the abundance of the respondents may be biased. The questionnaire was an attempt to assess whether respondents feel difficulties with access to the creative industry enterprises, the so-called barriers to entry. An attempt was made to assess the respondents' attitudes towards themselves as part of the target audience of creative space along three dimensions: income level; on the specifics of cultural consumption; as belonging to a particular social group.

However, these issues are not contributing to the disclosure of a software issue and profiles need to be developed. Question of the relationship of the respondent to the ongoing activities in the creative industries (spaces) did not cause trouble, and demonstrates adequate target group results: for exhibitions, expositions 62% of respondents have a positive attitude to the ongoing activities are positive 58% of the respondents. No negative attitude expressed virtually none of the respondents, however, this is due to a shift in the sample, when almost all of the respondents had experience of visiting creative spaces. Majority of respondents (63%) had no idea about creativity path towards globalization, but all who know consider that widely use of creativity in economy and company management will help to improve each company performance and faster Russian economy growth and give more chances for better international economic performance. Among the 48 respondents, only 9% have never visited a creative industries spots and spaces, and 23% have no idea about creative industries. The questionnaire was filled mostly people with higher education (80%), young, aged 18 to 35 years old (85%). However, since piloting the questionnaire was not of a substantive and methodological in nature, such a shift is acceptable. See Kapustkin V., Kapustkina E. (2014). In general, the questionnaire did not cause fatigue among respondents filling took place quickly and without stress. Often, however, the respondents were asked questions about the meaning of a term. The concept of "creative space" caused the most difficulty, so you need to replace it with a known term. It may be useful to include in the questionnaire more questions filters.

Table 2: Respondents Shares Familiar with Creative Industries, Spaces and Globalization and Importance of Internet as Information Source

	Share of Respondents Familiar with	**Importance of Internet as information source for whose who familiar with**
Creativity as Globalization Path	37%	100%
Creativity as Globalization Path Helpfulness for Russian Economy	37%	100%
Creative Industries	77%	91%
Creative Space (CS)	91%	74%
CS Visits	91%	74%

Source: calculated by the authors on the base of questionnaire

So far, we have to consider that creative industries and spaces development role in St. Petersburg economy is not high enough now. Level of creativity as globalization path is substantially lower compare to both creative industries and spaces. But at the same time it is clear for all who familiar with the issue that it should be very useful by Russian companies and make their business more efficient and successful. The understanding of creativity factor potential for the city economy is noticed by the Government of St. Petersburg. Currently creative industries are producing only 7% of St. Petersburg GRP. See Стратегия (2014). At the same time in some cities like Los Angeles, London, Berlin this share is between 10 and 25%. In order to solve different problems the city Government has designed the socio-economic development strategy up to the year 2030 (Strategy). Due to the Strategy by 2030, St. Petersburg should be a city open to new ideas and initiatives culture, the arts, science and social thought, an important center of the interaction between creative individuals and organizations in Russia and other countries, the birthplace and implementation of new creative projects and activities. The foundation for this will be available as a scientific and cultural potential of the city, and the authorities' efforts to create such economic and ideological climate that will be most favorable for the open and free creativity. The above mentioned strategic areas implementation support to creative industries will ensure by 2030 the following tangible positive results. The creative industries contribution to the formation of GRP St. Petersburg will increase to 12%. Value for professionals involved in the creative industries, in relation to the total civilian labor force in St. Petersburg will be 16%. See Стратегия (2014).

5. Discussion

For sure the paper authors are realizing the fact that research they made is limited by the information source. First of all it should mentioned that while choosing the city of St. Petersburg as the research case we have to see distinguish features of the city. Compare the majority of other Russian cities and towns St. Petersburg has higher level of creative industries development. Now St. Petersburg is the only big city which whole downtown (over 40,000 buildings) has been included into UNESCO World Heritage list. The city's potential in all terms of creativity is much bigger compare to typical Russian city. Another limitation of the research is dealing with the questionnaire. As it has been mentioned above the number of respondents is equal to 48. Of course the number of respondents could be different. For the future researches the authors will try to deal with bigger number.

6. Conclusion

The terms "Creative Industries" and "Creative Economy" are very rare in use in Russia in both theoretical and practical terms so far. The research made by authors proves the sentence in general. At the same time the research results show that Russian people consider importance of creative industries and space and to less extant creativity as the globalization path. The questionnaire respondents are able to see potential role in city's development. The similar understanding is expressed by city of St. Petersburg Government which considers the high level of importance of creative economy for the local economy. It is clearly shown at the Socio-economic development strategy of St. Petersburg up to 2030. The Strategy realization should involve much higher creative industries and spaces development level.

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INDIRECT LAW REGULATION OF THE ECONOMY AS IMPLEMENTING THE GLOBAL TRENDS IN RUSSIA

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Abstract. The problem of Russian economy is the absence of its effective law regulation. The analysis of possibility to use indirect forms of state influence on economic relations is conducted in this study. The main objective of the study was to identify promising directions of improving the economy regulations. The authors specifically developed criteria to evaluate the performance of direct and indirect forms of legal influence on economic relations. The results have been obtained on the basis of comparative data analysis. The assessment revealed that in recent years the legislation trend of the Russian Federation is to strengthen the direct forms of state control. Thus, according to the authors, these law methods lead to negative results in the economy. It should be noted, that ways of indirect legal regulations of the economy are developing in Russia too. It is an activity of licensing, registering, etc. They feature indirect legal regulation with the lower administrative coercion and they focus on the creation of conditions that legalize the activity of legal entities in the economic space. In order to develop these forms of impact in the Russian law, we should take into account all positive international experience. During the study, the authors concluded that currently the most effective forms of legal impact on the economy are indirect ones. We proposed ways of potentially possible mechanisms for improving legislation with the aim to replace direct rigid forms of state control by indirect ones.

Keywords: direct impact, indirect impact, economy, Russia

JEL Classification: K23, K34, K42

1. Introduction

The modern scientific literature is represented by many articles devoted to various forms of state influence on economic processes. The most frequently studied are various organizational and legal aspects of taxation, fiscal policy, which, according to Mariia Aleksandrova (Boiko), are one of the most common and effective methods of state regulation of the economy (Aleksandrova (Boiko), 2013). Currently, the functioning of the free market raises the question of the role of the state in the economy, in particular, the legality and boundaries of State intervention in economic relations (Suchoza, 2013).

However, the number of works devoted to the analysis of the correlation and effectiveness of direct and indirect forms of legal influence on economic processes is extremely small (Drobiszova & Machova, 2015), which became the reason for the authors to address the issue under consideration in the example of Russia.

2. Indirect law regulation of the economy

The law and economics are in symbiotic relationship. The Russian Federation inherited from the Soviet past the ideology of managing the economy by issuing direct regulatory directives. The collapse of the USSR determined the introduction of market-based economic management mechanisms, the country actively borrowed the experience of foreign law and took the path of introducing more flexible legal regulation. Russia together with the BRIC countries began to approach global legal standards (Baistrocchi, 2013).

However, in recent years there has been a reverse trend of strengthening direct forms of state influence on the economic sector in the legislation of the Russian Federation.

The Direct forms of state influence on the economic sector are expressed in numerous prohibitions on the commission of actions (inactions) for economic agents and punishments for their violation. One of the main features of this process is the establishment of an excessive degree of repressiveness of the legal responsibility for the subjects of entrepreneurial activity by the Russian legislation (Lapina et al., 2016, A).

This is expressed in colossal administrative fines, ruining small and medium-sized businesses; stated by law for the courts and state bodies to suspend the activities of the business entity up to 90 days, which, in fact, makes it impossible to continue the operation of the enterprise, etc (Lapina et al., 2016, B).

Rigid regulatory requirements did not contribute the establishment of business atmosphere in the Russian economy, they became serious obstacles to the development of the economic freedoms. It was required to introduce the alternative direct forms of legal regulation of the economy. The essence of the indirect forms of legal influence on the economy is not in the presence of direct prohibitions and repression, but in establishing mandatory regulations and restrictions for business entities, the implementation of which creates opportunities for the implementation of entrepreneurial initiative and participation in the economic activities. These, for example, include the establishment of quantitative indicators to the value of the authorized capital, licensing and registration. It is noted that liberalization of legislation facilitates the simplification of control and supervision procedures over business entities. As the regulatory requirements become more understandable and accessible, information transparency in the society improves (Klimenko & Minchenko, 2016). The development of these forms in the Russian legal system became possible due to the reception of the modern experience of European states on the mediated legal effect on the economy by the Russian legal system. However, the effectiveness of the introduction of these forms is still debatable (Voenkova, 2016).

3. Methods

To obtain reliable results in their study, the authors used the materials of official sources containing current and developing normative acts, reporting materials and statistical data. In addition, we analyzed the data presented by independent financial portals and media resources of the Russia's financial sector, the Russian segment of the Internet. To determine the degree of effectiveness of the implemented state-legal impact on economic relations, the criteria for assessing the direct and indirect forms of government impact were specifically developed by us. The results of the study were obtained based on the method of comparative data analysis in two segments of the Russian economy - the banking sector and in housing construction.

4. Results and discussion

As noted by E. Akopova and N. Przhedetskaya, in addition to performing the management function, the state performs several important roles in the economy. This sphere requires the use of organizational, administrative and technological innovations» (Akopova & Przhedetskaya 2016).

The administrative innovations include such indirect forms of regulation of the economy as licensing and registration. We can mention banking system of Russia as a positive example of this development (Bondarchuk & Melik, 2016). The evolution of the legal regulations governing the legal status of credit institutions in the Russian Federation in the post-Soviet period illustrates the continuous development of a system of licensing requirements for credit institutions with the aim of increasing their liquidity and responsibility to depositors. Among the latest innovations of the Federal Law No. 395-1 of 02.12.1990 "On Banks and Banking Activities" (the amendments came into force on June 27, 2017) the division of licenses issued by the Central Bank of the Russian Federation were divided into two categories - basic and universal.

The strict licensing requirements in terms of the amount of authorized capital are set for applicants. So, in accordance with article 11 of the Federal Law "On Banks and Banking Activities", the minimum amount of the authorized capital for a newly registered bank with a universal license is 1 billion rubles, for a newly registered bank with a base license - 300 million rubles. In addition, the banks that have a basic license cannot perform a number of banking operations.

For example, place the attracted funds of individuals and legal entities into deposits on their own behalf and at their own expense; to attract deposits and place precious metals; issue bank guarantees. The bank with a basic license is not entitled to carry out banking operations with foreign legal entities, with foreign organizations that are not legal entities under foreign law, as well as with individuals whose personal law is the law of a foreign state. The banks' non-fulfillment of the established license requirements entails the withdrawal of a license from a credit institution for conducting banking operations in accordance with Article 20 of the Federal Law "On Banks and Banking Activities".

For example, the grounds for revocation of a license from a credit institution are the violations of the values of all standards of sufficiency (below two percent); credit institution' funds decrease below the minimum value of the authorized capital, established on the date of state registration. The tightening of licensing requirements led to the change in the proportion of banks whose licenses were withdrawn in relation to banks whose licenses were liquidated by decision of the founders.

The summary data is given in Tab. 1.

Table 1: The ratio of banks that were liquidated and whose licenses were withdrawn

Year	**2012**	**2013**	**2014**	**2015**	**2016**
Dissolved banks	8	12	9	10	15
Banks with licence revoked	21	31	85	94	96

Source: Banki.ru — the largest independent financial portal of Russian Internet, one of the most cited media resources of Russia's financial industry, one of the most cited financial media in social media

It is noteworthy that in the first years of the formation of banking legislation in post-Soviet Russia there was a directly opposite picture (Tab. 2.) - the number of liquidated banks was significant.

Table 2: The ratio of banks that were liquidated and whose licenses were withdrawn

Year	**1991**	**1992**	**1993**
Dissolved banks	16	92	121
Banks with licence revoked	2	7	21

Source: Banki.ru

A positive outcome of the change in the illustrated relationship is an increase in the level of banks' liability to customers; the prevention of violations at an early stage of their commission; increasing the competitiveness of the banking system. The data given in our study shows an increase of such efficiency criteria as the increased level of response to violations that banks allow from the regulator of the banking system - the Bank of Russia; the liquidation of "ghost" banks, which were created for conducting dubious operations related to the illegal transfer of funds abroad and the laundering of criminal proceeds. In addition, the toughening of licensing requirements to the size of the authorized capital has significantly increased the level of depositors' property guarantees from banks.

It should be noted that indirect economic impact mechanisms which were developed and implemented in the banking system of the Russian Federation are being actively introduced in other segments of the Russian economy to prevent negative consequences. Let's illustrate this in one of the most problematic sectors of the Russian economy - the construction of multi-apartment buildings at the expense of attracted funds of the equity holders. The corruption and other abuses penetrate the construction industry in countries around the world. This reduces the efficiency of the economy, which is expressed in unnecessary, erroneous or initially defective construction projects (Nordinetal, 2011). In order to develop the construction industry effectively, it is needed to identify critical factors in construction correctly and try to develop legal regulation of the industry, taking into account the minimization of risks.

According to the Rating agency of the construction complex (RASK) in 2016, out of 5,479 developers which are active in the territory of our country, 149 bankruptcy procedures were launched. These companies did not fulfill their obligations to equity holders. According to the agency, only in 2016 the number of developers who declared themselves bankrupt increased by almost 3% of the total number of companies operating under Federal Law No. 214-FZ of 30.12.2004 "On Participation in Shared Construction of Apartment Buildings and Other Objects real estate and on making changes in some legislative acts of the Russian Federation ". There are 4,500,000 square meters of not put into operation housing on the balance sheet of bankrupts. That is about 5% of the total construction in the year in the Russian Federation.

For example, new provisions of Federal Law No. 304-FZ of 03.07.2016 came into force on July 29, 2017. There were introduced new requirements to the amount of the authorized capital. In accordance with the new amendments, the charter (share) capital, statutory fund of the developer legal entity (hereinafter - the charter capital of the developer) must be fully paid for and must be no less than the established minimum size, depending on the maximum area of the objects of the developer shared construction. Proceeding from the provisions of paragraphs b. item 3 of article 1 of the Federal Law No. 304, the approach to the minimum value of the authorized capital began to have a differentiated approach depending on the maximum area of shared construction projects (Tab. 3).

Table 3: The ratio of the maximum area of built-up apartment buildings

Max total area of building (sq. M.)	1500	2500	10000	25000	50000	100000	250000	500000	<500000
Min authorised share capital (million rubles)	2,5	4	10	40	80	150	400	800	1500

Source: Banki.ru.

Developer Construction companies who have not paid in full the amount of the authorized capital, are deprived of the opportunity to raise funds of co-investors-citizens in the construction of apartment buildings. This makes it possible to exclude risky construction companies with low capitalization from participants, who are not in a position to guarantee fulfillment of their obligations to equity holders (Ruchkina, 2015).

In our opinion, the establishment of the right of minimum quantitative indicators to the charter capital of a legal entity is an indirect impact on the economy and a positive factor ensuring an increased level of security of counterparties' investments, which is an indicator of a more effective legal impact.

It should also be noted that FZ No. 304 introduces an important instrument for protecting the interests of investors in the construction of residential premises - the register of developers. Management of which is entrusted to the authorized executive body. All construction companies that have to comply with the requirements of this law according to the quantitative indicators of their authorized capital, must be registered in it. Accordingly, the developer company which is not corresponding to the specified requirements cannot be written down in the register and carry out entrepreneurial activity in the sphere of construction of apartment buildings. The introduction of positive legal experience formed in the banking sector in the sphere of housing construction should bring a positive result, as new flexible rules can fundamentally change the mentality of players in problem sectors of the economy. The authors share the concept of Prof. Kaushik Basu that the law is able to change the behavior and beliefs of people relative acts of others (Basu, K. 2011).

The information contained in the united register of developers is open, public and is mandatory to be placed on the official website of the authorized federal executive body in the "Internet".

The experience of the European Union shows that the introduction of financial information in the registers is an investment that simplifies business and provides the public with the access to the information on the Internet. The register serves as a tool for macroeconomic analysis and forecasting, as well as for detecting tax evasion (Kosiciarova & Vincurova, 2015). The state registration through the introduction of legally relevant information in the registers, along with licensing is one of the forms of indirect legal impact on economic processes in Russia, as it is not only a form of data recording, but also a condition of a potential counterparty to participate in the economic activity. The sequencing of the information and "the timeliness of information flow in the public sector is a serious problem affecting the stability and evaluation of municipal markets" (Edmonds et al., 2017).

We should agree with the position of Lapina M., Merkushova O., Ostroushko A., Ruchkina G., on the formation of the institution of providing public services to the people and organizations. And the inalienable element of it is the register" (Lapina et al., 2017). The keeping of registers by the authorized executive bodies is actively developing in Russia. Generally, these information systems are in public access, which makes it possible to effectively receive information to all interested entities.

The lack of access to the registration systems has a negative impact on the economy. This can be seen from the example of the Republic of Uzbekistan, where the course for the creation of a national registration system was taken in 1997. But even now this system is still works mainly using traditional records on paper carriers in most regions of Uzbekistan (Samborsky & Popiv, 2015). This causes certain problems in the economy of this country because of the lack of information openness of legal, organizational and personnel nature. This indirectly confirms an unprecedented influx of labor migrants from this state to Russia. The authors fully share the view that the openness of government data (registers) can positively influence the country's global competitiveness (Lee, JN et al., 2016).

Modern Russian legislation knows such an institution as a register of unscrupulous suppliers (contractors, performers). The rules of maintaining the register were approved by the Government of the Russian Federation (the Government's decree No. 1062 of November 25, 2013). The maintenance of this register, including the inclusion (exclusion) of information on unscrupulous suppliers (contractors, contractors) in the register is carried out by the Federal Antimonopoly Service of the Russian Federation. This register includes information on the procurement participants who evaded contracts and also on suppliers (contractors, executors) with whom contracts are terminated in the event of unilateral refusal of the customer from the performance of the contract due to the significant violation of the terms of the contracts by them.

The availability of information on unscrupulous suppliers creates the prerequisites for selecting the optimal counterparty, conscientiously fulfilling its obligations under contracts in the procurement of goods, works, services to ensure state and municipal needs. This increases the number of concluded effective transactions, reduces the risk of contract breakdown through the fault of suppliers, creates additional incentives for the effective fulfillment of their obligations.

5. Conclusion

In the course of the study, the authors came to the conclusion that indirect forms of state-legal impact on the economy are currently the most effective. Based on the analysis of the global trends of indirect effects impact on the economy, ways of developing mechanisms for improving Russian legislation were proposed with the aim of gradual replacement of the direct rigid forms of state control by the indirect ones. The exemplifys confirm the authors' concept regulating of public administrative activities, which are aimed at creating and maintaining conditions for competition and ensuring the achievement of the common good (Ruffert, 2013). Thus, the analysis of the forms of indirect regulation of the economic activity showed the necessity of introducing licensing and registration as the forms of indirect regulation of economic activity on the basis of successful experience in certain spheres of the economy. Applied to Russia, this has been illustrated by the example of the banking sector, where such indirect forms as licensing and registration have been actively used for a long period of time. Also in housing construction, where the increased number of bankruptcies forced the state in 2017 to establish stringent quantitative criteria for the minimum amount of the developer’s share capital and to enter the register of developers. At the same time, it is necessary to take into account not only positive, but also negative aspects of the application of the registration institute in European countries. The official registries should be integrated, otherwise there will be the data redundancy, which will negatively affect the end users with the information recorded in the registries (Mader et al., 2017). As for licensing, Young Lee, Roger H. Gordonb rightly noted that the corruption that take place in many countries and that is expressed in "the need to pay endless bribes to government officials for obtaining the necessary licenses. That hinders the activities of small businesses" (Lee & Gordonb, 2005). The solution of this problem is especially important in Russia and indirect regulation here is supplemented by strict measures taken by the state. The high level of corruption in modern Russia should be taken into account and the process of issuing licenses by competent authorities should be monitored. The authors fully support the view that when addressing this issue it is necessary to turn to world practical experience, which, we hope, will strengthen the institution of the rule of law in Russia (Muravyeva, 2015).

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THE INTENSITY OF FOREIGN TRADE BETWEEN SLOVAKIA AND RUSSIA IN THE CURRENT PERIOD

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Abstract. The current development foreign trade relations between Slovakia and Russia is dependent not only on the extent, timing and success of the transformation processes taking place in both economies. It is also dependent on the extent of the direct and indirect globalization impacts transmitted by the world economy. This paper is focused on the recent and current development of foreign trade relations between Slovakia and Russia. It closely analyses their mutual foreign trade with goods and evaluates its perspectives by the use of the Trade Intensity Index. The development and regulation of the trade relations are supported by the Intergovernmental Commission for Economic and Scientific-Technical Cooperation. The paper also points to new perspective possibilities of deepening of mutual trade relations in the current period. The conclusions of the paper show, that despite the recent decline of the foreign trade between Slovakia and Russia caused by the sanction war between the EU and Russia as well as by falling prices of raw energy materials, there is still a potential for future growth of mutual foreign trade. This conclusion is supported by the results of the Trade Intensity Index calculation. The most promising areas of cooperation include energy, engineering, transport and agriculture.

Keywords: cooperation, foreign trade, perspectives, Russia, Slovakia, Trade Intensity Index

JEL Classification: F21, F14

1. Introduction

The long-term foreign trade relations between Slovakia and Russia have been fundamentally changed at the turn of the 90's after the collapse of the common market of the member countries of the Council for Mutual Economic Assistance (CMEA) and the later entry of the Slovak Republic into the international integration structures, especially into the EU. This new development trajectory has progressively become evident in the extensive restructuring of its territorial and commodity priorities in mutual trade relations. However, despite the gradual reallocation of political and economic power in the world economy, which has fundamentally been influenced by the process of shaping of the multipolar structure of the world economy, Russia continues to play a prominent position in it. (Baláž et al., 2015)

The development of foreign trade of the Slovak Republic as well as the structure of the Slovak economy's involvement in international business is influenced by many historical, economic and political factors. Its current positions are reflected by long-term comparative advantages, respectively, disadvantages that have arisen from previous development. Recently, these have been diversified due to the expansion of foreign direct investments in the country. (Brincikova & Darmo, 2014)

The current development of the Slovak-Russian international relations is dependent not only on the extent, timing and success of the transformation processes taking place in both economies, but also on the extent of the direct and indirect globalization impacts transmitted from the world economy. (Kuric, 2014). Recently, among the most significant impacts have been the effects of the global financial and economic crisis that affected almost all sectors of the economies, a conflict taking place in Ukraine and related sanction measures between the Russian Federation and the EU (together with the US and another Western countries) and the long-term decline in world prices of energy raw materials in international markets. (Baumgartner & Zubaľová, 2015)

The increasing importance of the economic factor in the development of mutual co-operation ensures a gradual improvement of the political climate, which greatly helps to find compromises in dealing with current issues of mutual relations. The presented analysis of the development and intensity of foreign trade between Slovakia and Russia creates a certain space for improving and broadening of the mutual trade-economic cooperation possibilities. (Drynochkin, 2016)

2. Methodology

The aim of this paper is to examine the development of foreign trade relations between Slovakia and Russia and on the basis of the Trade Intensity Index, to establish further possibilities for deepening of their trade relations in the current period.

To achieve this aim, a number of theoretical methods have been used in the form of general methods (abstraction, analysis, synthesis, deduction, and induction). At the same time, empirical methods have been used, especially the method of comparison for comparison of countries, regions and achieved results. Special methods have been used to make foreign trade data more transparent, especially the methods of exact or graphic display.

The Trade Intensity Index (TII) is used to assess whether the trade volumes between two countries are larger or smaller than it would be expected on the basis of their world trade position. It is defined as the share of one country's exports going to a partner divided by the share of world exports going to the partner. (World Bank, 2017)

It is calculated as:

$$\mathrm{TIIij} = \frac{(\mathrm{xij}/\mathrm{Xit})}{(\mathrm{xwj}/\mathrm{Xwt})} \tag{1}$$

where:

x_{ij} represents the value of export from country *i* to country *j*;

X_{it} represents the value of total exports of country *i* to world;

x_{wj} represents the value of total world exports to country *j*;

X_{wt} represents total value of the world exports.

TII values range from 0 to +∞. If the index value is 1, it means that the exporting country *i* exports to country *j* exact ratio of exports, which is a matter for country B considering its share in world import. If the index value is higher than 1, the business flows between examined countries are on a higher level, as it would be expected in view of the world economy. This means, that country *i* exports to country *j* in a ratio of more goods than to the rest of the world. It is thus an intense trade relationship. If the value is less than 1, then the intensity of trade is at a level lower, than it would be expected.

For the purpose of this research, the source of the data was the Statistical Office of the Slovak republic and Eurostat, which provided data for the analysis of foreign trade between Slovakia and Russia. The foreign trade commodity structure was classified according to the Harmonized System nomenclature. The data required for the calculation of TII were used from the Eurostat database.

3. Foreign trade relations between Slovakia and Russia

The current foreign trade and economic relations between Slovakia and Russia are realized at government and local level through regular meetings of intergovernmental and mixed commissions. The basis for mutual economic relations is the *Agreement between the Government of the Slovak Republic and the Government of the Russian Federation on Economic and Scientific-Technical Cooperation* from 1993, which established a contractual basis for the further development of mutual relations. After the accession of Slovakia to the EU, a new *Agreement between the Government of the Slovak Republic and the Government of RF on economic, scientific, technical and cultural cooperation* was signed in Bratislava on February 25, 2005. Under this Agreement, the Parties came to an agreement to promote the development, consolidation and diversification of mutually beneficial economic, scientific and technical cooperation in all sectors and sectors of the economy in accordance with their national laws and on the principles of equality. The competent authorities of contracting parties shall provide assistance to economic operators of the state of the other Contracting Party in securing activities in the territory of their state in accordance with their national law. By this agreement, the parties have established an Intergovernmental Commission for Economic and Scientific Cooperation between the Slovak Republic and the Russian Federation. Its main tasks include: (SLOV-LEX, 2017)

- Regular assessment of the condition and results of economic and scientific and technical cooperation;
- Preparation of proposals for the further development of economic and scientific-technical cooperation;
- Specification of the barriers limiting the development of mutual economic and scientific-technical cooperation and proposing of appropriate measures aimed at their removal;
- Consideration of the disputed issues related to the application or interpretation of this Agreement.

The last session of the 17th Intergovernmental Commission was held on 6 May 2015 at the Office of the Government of the Slovak Republic, which stated that, despite the unfavourable international political situation, the mutual Slovak-Russian relations will develop dynamically, on the principle of mutual benefit. Also, the international political situation has a significant negative impact on our trade and economic relations.

3.1 Development of mutual foreign trade with goods

Russia has always belonged to the strategically most important and largest trading partners of Slovakia. Since the formation of independent Slovak republic, our bilateral relations have undergone various developmental tendencies. At the end of the 1990s, mutual foreign trade fell and in 1999 Russia's share in the Slovak foreign trade accounted for only 6.8%. The significant decline in mutual trade was influenced by the widespread financial crisis that hit Russia in 1998. A detailed overview of the recent development of foreign trade between Slovakia and Russia is presented in Table 1.

Table 1: Development of foreign trade between Slovakia and Russia in years 2009 – 2015 (EUR, mln.)

	2010	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**
Export of Slovakia	1 932,3	2 070,7	2 620,1	2 547,2	2 076,9	1 461,0	1 272,0
Import of Slovakia	4 678,5	6 183,4	5 867,9	6 147,7	4 913,3	3 486,1	2 410,0
Turnover	6 610,8	8 254,4	8 488,0	8 694,9	6 990,2	4 947,1	3 682,0
Balance	-2 746,2	-4 113,0	-3 247,7	-3 600,5	-2 836,4	-2 025,0	-1 137,0

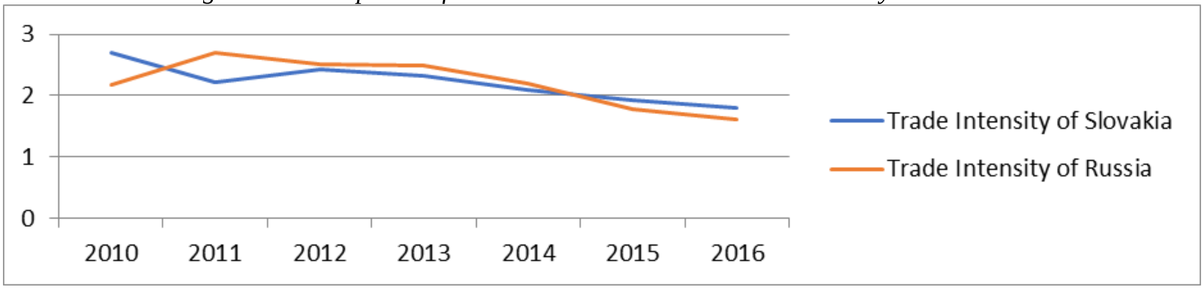
Source: processed by the authors according the data of Statistical Office of SR and Ministry of Economy of Slovak republic

The current development of the Slovak-Russian economic relations is marked by a sanction war between the EU and RF, which has been negatively reflected in the bilateral foreign trade between the SR and RF. (Kashulin & Kuznetsov, 2016) In 2014, Slovak foreign trade with Russia fell by 18.5%, with exports declining by 20.1% and imports by 19.6% compared to 2013. In 2015, foreign trade in foreign trade was again reduced by almost EUR 2.04 bln., which represents a 29.7% drop. Slovak exports to Russia decreased by 30% and imports by 29%. The decline in mutual trade was caused not only by the EU-RF sanction policy but also by significant drop in prices of energy commodities on world markets. These aspects have resulted into a significant drop in the Russian rubble, which has largely been offset by the insolvency of a large part of Russian companies operating in foreign trade. (Faltsman, 2017) In terms of business relations, a significant reduction of activity in both export and import activities can be observed since 2014. In 2016, compared to the previous year 2015, imports fell by 35% and exports by 7%. (Fasungova, & Radvansky, 2014) The uneven share between the structure of Slovak exports and imports with Russia was influenced by the high dependence of our country on imports of Russian energy raw materials. According the SITC, goods of commodity group 7 dominate the Slovak export to Russia in the long term. In 2016, road vehicles accounted for almost 40 % of Slovak export and with the value worth EUR 583 mln. became the most important item of Slovak export. The structure of Slovak import from Russia is quite different, as it's dominated mainly by crude materials. More than a half (56.8 %) of Slovak import consisted of Petroleum, petroleum products and related materials. The total value of this import was worth EUR 1.5 billion. A brief overview of Slovak import structure shows that energy raw materials account for more than 80 % of Slovak import from Russia, which points to a high dependence of Slovakia on Russia. (Balaz & Zabojnik, 2009)

3.2 Intensity of mutual foreign trade

In order to assess the volume of mutual trade between Slovakia and Russia, we used the calculation of the Trade Intensity Index (TII). TII assesses whether the value of the trade between assessed countries is bigger or smaller than could be expected on the basis of their position in international trade. A detailed overview of mutual trade intensity between Slovakia and Russia between 2010 and 2016 is illustrated in Figure 1.

Figure1: Development of the TII between Slovakia and Russia in years 2010 - 2016



Source: processed by the authors according Eurostat data

Figure 1 shows the development of the Trade Intensity Index (TII) in years 2010 - 2016. In the case of Slovak export to Russia as well as Russian export to Slovakia, the values of the TII were higher than 1, which points to high intensity of mutual foreign trade relations.

Value of trade intensity of Slovakia, respectively value of intensity of Slovak exports to Russia in 2016, reached 1. 92 points. Since the value is greater than one, this trade relationship can be described as intense. In the assessed time period, the highest trade intensity of Slovakia in relation to Russia was in 2010 (2. 7). The long-term development of TII in this case is decreasing. View at the development of TII of Russia in relation to Slovakia is quite similar. In 2016, the value of trade intensity of Russia, respectively value of intensity of Russian exports to Slovakia, was 1. 61. Based on this value, trade between Russia and Slovakia can be also described as intense. However, the development trend of this indicator is decreasing in the long-term.

3.3 Perspective areas of mutual foreign trade cooperation

The most perspective areas of mutual cooperation include: energetics, engineering, transport and agriculture. As we mentioned before, the Intergovernmental Commission for Economic and Scientific Cooperation plays a key role in regulation of mutual relations. The last meeting took place in May 2015 and discussed a list of current issues concerning economic cooperation. It has set energetics (including atomic), oil and gas, investment, transport, nanotechnology, innovation and military-technical spheres, agriculture and industry, and cooperation in the banking and financial sectors as priority areas of cooperation. (Veľvyslanectvo RF v SR, 2016)

The cooperation in the sphere of the energy-fuel complex is the basis of the Slovak-Russian economic relations. Deliveries of Russian oil, natural gas and nuclear fuel meet up to 90 percent of Slovakia's needs. Natural gas deliveries for the Slovak Republic as well as transit through the territory of the Slovak Republic to Western Europe are carried out on the basis of long-term contracts. Slovakia managed to sign a key agreement with Russia on the supply of oil to Slovakia and transit of oil through its territory at the end of 2014. The agreement has to ensure a stable and reliable oil supply in the period from 1 January 2015 to 31 December 2029. Based on this contract, Russia will supply Slovakia with six million tonnes of oil annually. The same volume is also intended for transit to Western Europe. (HNonline.sk, 2014)

Among the best-known examples of cooperation between Slovak and Russian companies is cooperation between the Russian company Technopromexport, a.s. and the Slovak companies SES Tlmače and Istroenergo Group. This cooperation is focused on seeking of joint participation in projects concerning the construction of new and modernization of existing energy objects in Russia and Slovakia as well as in third-party markets. (MZVaEZ SR, 2015). In the field of nuclear power, long-term contracts for stable supplies of nuclear fuel for nuclear power plants Mochovce and Jaslovské Bohunice are being successfully implemented. The Russian company Atomstroyxport participates in the completion of reactors 3 and 4 of the Mochovce nuclear power plant. (Kalotay & Eleto, 2016) Mutual cooperation is also intensive in the field of industry. Matador Automotive RUS, a subsidiary of Slovak company is based in Nizhny Novgorod. The company focuses on the production of welded parts for the Russian automotive industry. (Hinz & Morris, 2016) Significant is also the cooperation between the Russian railways and the Slovak company I. Tran. The textile company produces uniforms for armies, police, firemen and rescue workers. Its largest buyer is the Russian Railways, with whom it plans to set up a joint venture. (MZVaEZ SR, 2014). Russia proposes to Slovak companies with an interest in mutually beneficial cooperation to consider the possibility of becoming a resident of industrial parks located in the territory of the Russian Federation. New forms of cooperation accrue in the transport sector. Several mutually beneficial projects and other related programs are implemented. The project for the construction of a broad-gauge railway, which should lead the route Košice-Bratislava-Vienna, continues. The project also includes the construction of a logistics centre on the Danube. (SITA, 2015). Agriculture also plays a significant role in the field of mutual cooperation. Residents of the Astrakhan region are discussing a project of the centre of cattle genetics that should be created in this region. At the same time, a cooperation agreement is being prepared between the agricultural universities in Nitra and the Astrakhan region. Slovak entrepreneurs plan to open many economic and livestock farms in the Astrakhan region, on the contrary, entrepreneurs from this area will establish companies in the fish industry of Slovakia. According to Slovakia, this area has more development potential than most European countries. (Kittova & Steinhauser, 2016)

4. Conclusion

Based on the results of development and intensity of foreign trade between Slovakia and Russia in the current period, we have come to the following conclusions:

The current Slovak-Russian business relations have recorded a negative development during the period under review. Especially in the period 2014-2016, the turnover of foreign trade fell significantly. The decrease in Slovak imports from Russia in 2016, which represented 23.2%, was much more significant than the decrease in Slovak exports to Russia (4.4%) compared to year 2015. Such significant decrease in mutual trade was not caused by the fall in physical volumes of imports. It was caused by falling raw energy materials prices which also contributed to weakening of the Russian rubble on world financial markets. To a large extent, the weakening of the domestic currency has led to the insolvency of Russian companies and the decrease in the purchasing power of foreign products in Russia. The decline in Slovak exports to Russia can be attributed to the introduction of EU sanctions against Russia. On the other hand, this negative development contributed to a decline in the passive balance of trade balance with Russia in the years 2015-2016. Based on the results of Trade Intensity Index, it can be concluded that foreign trade between Slovakia and Russia is intensive, as the values of TIIRF-SR and TIISR-RF were higher than one in the monitored period. Based on the results of trade intensity indices, it can be seen that the intensity of Slovakia's foreign trade with Russia is higher than that of Russia's trade with Slovakia. Slovakia perceives Russia as an important partner in energy supply as well as a country with the potential to place its automotive, mechanical, electrical and electronics products, supplies of capital goods for the construction of power plants and power plants as well as equipment for food industry (Pásztorová, 2016). In the upcoming years, there will be an increasing demand for technologies related to environmental protection and water management in Russia. This concerns so-called green technologies used in all areas of the economy, thus creating opportunities for Slovak companies active in the field of water protection and water management.

Acknowledgment

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ECONOMIC EVALUATION OF IMPLEMENTATION OF THE QUALITY MANAGEMENT SYSTEM IN THE TRANSPORT ORGANIZATION IN CONDITIONS OF GLOBALIZATION

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Abstract. This article discusses economic issues of quality and its role in innovation development for transport organization in conditions of globalization. The authors analyzed the problem of introduction of QMS in the industry, noted the difficulty of quantifying the cost of quality in the provision of transport services. Also they considered elements of the quality economics in transport organization, evaluation of the effectiveness of the proposed implementation of the QMS. The authors state that for successful innovation development of the transport industry a number of challenges needs to address, one of which is raising the level of quality of transport services and transport security up to global indicators. The problem of improving the quality of products in conditions of globalization is very relevant because the success of a business depends on the competitiveness of goods or services. The high competitiveness of services is only a necessary condition for the successful implementation of them in the market in a given amount, taking into account the implementation of the quality management system (QMS) and client-centeredness. The company with great attention to product quality and management can achieve heights in its segment. Innovative principles introduction and effective operation of the quality management system (QMS) offer organizations new opportunities as well as stimulate to create entirely new technologies in management quality. Currently managers put as main objective not only profit but also ensuring the quality of products or services required by the consumer, on the basis that no quality depends on profit but profit depends on quality. Also this dependence should be commensurate with the cost of quality.

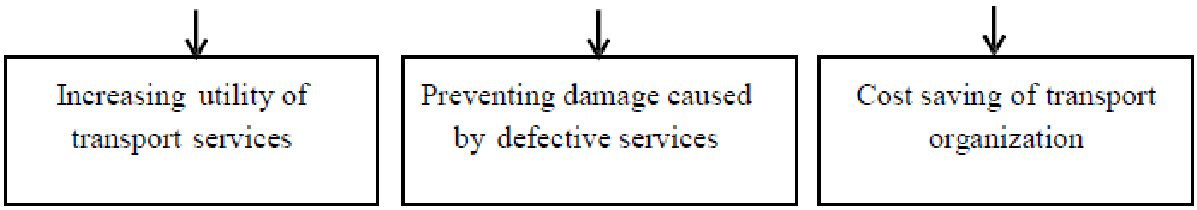
Keywords: quality economics, innovative development, quality management system (QMS)

JEL Classification: L150, F610, R410

1. Introduction

Today, many organizations in Russia including those in the rail industry are introduced to various types of standards: industrial, Russian and international quality standards. In particular, a new version of standard ISO 9001:2015 was released which focuses on improving business environment of organizations, This should increase the attractiveness of the QMS for those companies that seek to improve products or services, expand the market and develop business. Considering the quality management in the holding company «RZD», it is worth noting that the quality in the time of global change and reform has become one of the main principles of the company, which guide all who are involved in this process. At the moment the company implements programs that aim at the constant improvement of the quality and commitment of all employees in the solution of specific problems, introducing new standards, the opinion of consumers, workers, who offer their ideas on how to improve and change the quality control process. The company constantly works on the improvement of the quality management policy. Great attention is paid to environmental protection, recycling, reducing sunk costs. Today in times of crisis and financial instability the economic aspects of quality in the transport organizations became quite important. Such aspects include the efficiency of implementation of the corporate quality management system quality and costs optimization. Corporative integrated quality management system (CI QMS) of the holding company "RZD" can be considered effective when the company consistently manufactures products or provides services of sufficient quality to the consumer at the right price for all subjects. In transport-logistic holding this concerns both freight and passenger transport. Introduction of CI QMS would increase their competitiveness, ensure the sustainable development of transport organization (Kazanskaya, 2015). The difficulty of quantifying the quality of transportation is caused by insubstantial nature of the transport services. Innovative approach is required that takes into account the specifics of the sector. In this case a comprehensive analysis is important because some qualitative indicators do not contain full information about the transportation (Sokolov, 2014). If we consider the introduction of QMS in the transport services from the standpoint of economic efficiency (fig. 1), it is quite obvious that remaking products is always more difficult and more expensive than making them at the first place. And if it is a service than incremental costs emerge such as penalties. Secondly, a product or a service which does not meet the requirements of the market, in particular of consumers, is more expensive because of difficulties and additional costs for the sale of goods or services. Thirdly, the company, which introduces high-quality goods or services meeting all demands of a consumer, has higher net income and, as a rule, its market share is increasing.

Figure 1: Types of economic effect caused by improving the quality of transport services



Source: developed by authors

Cost optimization for quality through the introduction of QMS helps to manage internal processes of transport organization, to identify potential risks of costs increasing for their prevention and progressive elimination. It is worth noting that the problems of cost optimization for quality and determining the cost-effectiveness of implementing QMS are one of the latest trends in quality economics. There exist several interpretations of this term. V.V. Okrepilov sees quality economics as a part of the economic science that studies the relationship of qualitative characteristics of objects or phenomena with economic indicators (Okrepilov, 2011). T.I. Leonova says that quality economics as a science explores the optimization of quality, including the challenge of achieving the best possible quality at the lowest possible cost, issues of efficiency and effectiveness of the quality management and other aspects (Leonova et al., 2015). Scientists argue about interpretation of this term. Some state that because few would ignore the quality of services or products, it is not necessary to consider quality economics as a separate science. Others argue that it is impossible to numerically measure the quality, and even more so to reach its absolute value, so executives themselves can set the level of acceptable quality. We believe that such extremely opposite opinions create problems with understanding of the economic aspects of quality and there is no doubt that this century could be called "the age of quality". Also some explorers discuss various aspects of quality economics in recent and rather old papers (Bekkers, 2015; Gaudry et al., 2016; Li and Hanpo, 2009; Bester, 1990; Bluvband and Segev, 1994; Clark, 1999). At the same time in organizations, including transport, you must solve a number of problems, the most significant of which are cost management on quality and evaluation of the effectiveness of the QMS. By now a lot of papers on various aspects and applications of QMS have been published (Dominik and Gajewska, 2016; Kim and Kwon, 2015; Sousa et al., 2015; Stamenkov and Dika, 2015; Turcu, 2017; Vasiliauskas et al. 2014; Yin, 2016). In this research we concentrate on elements of quality economics on transport and integral indicators of introduction of QMS in transport organization

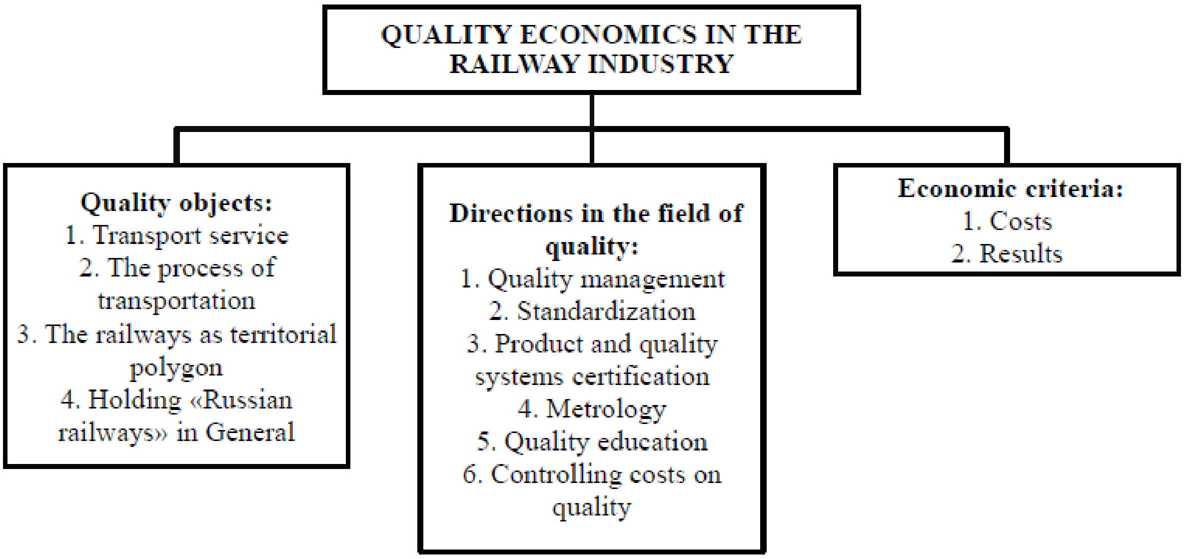
2. Elements of quality economics on transport

The main purpose of transport is producing high-quality transport services, so that quality issues in transport sector is of particular importance. High social importance of rail transport for branches of the country's economy and population determines the need for its innovative development focused on the continuous improvement of quality (Rowland et al, 2016). Assessment of the level of achievement of the required quality and cost-effective results on transport can be performed with quality economics which can have the following elements (fig. 2): the objects of quality control of the company «RZD», directions of activity in the field of quality and economic criteria (indicators). Quality objects in the rail industry can be organized by such classification characteristics as:

- level of control: business unit, business block, holding, railways as territorial polygon, subjects of Russian Federation, State;
- types of businesses: freight, provision of railway infrastructure for transportation, passenger transportation in far follow and suburban transport, services of passenger stations etc. (table 1);
- components of the industry: manufacturing, maintenance, repair of locomotives and carriages, the construction and operation of infrastructure, etc.

Then the quality of services provided in the holding company «RZD» can be seen as in a separate business unit/business block by type of business or industry components. Directions in the field of quality are discussed in detail in many papers (Okrepilov, 2012; Gorbashko, 2012; Leonova, 2013). Quality management in the holding company «RZD» is necessary not only to avoid losing prospective markets but also to use its reserves and power for expanding its influence on the potentially promising markets. These goals are achievable only if to consider them in terms of the principle of system approach, of developed methodology of interaction as well as taking into account the quality management as an integrating platform.

Figure 2: Elements of the quality economics system in holding company «RZD»



Source: developed by authors

Such areas as standardization, metrology and certification are the main tools to ensure the quality of products, works and services for all organizations in the rail industry. This triad has a great influence on the development and optimization of business. In the process of interaction of suppliers and consumers standards become the main instrument for reducing costs on business operations and evaluating market opportunities, enhance the quality and competitiveness of products, play a significant role in removing market barriers. Quality economics is a relatively young science. To enhance its role in the innovative development of the rail industry it is necessary to train professionals at all levels.

Table 1: Current business of holding company «RZD»

Core*	Strategic suppliers**	Profitable businesses***
1. Freight and provision of railway infrastructure for transportation 2. Passenger transportation in far follow 3. Suburban passenger transport 4. Services of passenger stations	1. Repair and maintenance of rolling stock 2. Railway engineering and production of components and assemblies 3. Research and development, intellectual property management, consulting services 4. Telecommunication and its services 5. Design of railway infrastructure 6. Production of construction materials 7. Power transmission and connection to networks 8. Heat and water supply and sewerage 9. Health and recreation services 10. Catering 11. Retail	1. Intermodal activities 2. Logistic activities 3. Construction of railway infrastructure 4. Commercial banking 5. Managing profitable real estate

*business types which are subject to special requirements; **the kinds of businesses that provide Core activities; ***the kinds of businesses that have synergies with the Core and must meet only the financial requirements
Source: self elaboration according to Yakunin, (2011)

In many countries, there is a growing trend for specialists in the field of quality. And if in a number of Russian educational institutions of different levels preparation of professionals in the field of quality management, standardization, certification and maintenance of unity of measurements is conducted, then why not to consider and discuss the possibility of introducing in educational institutions the specialization or direction "quality economics"!?! Such direction as cost controlling is an efficient tool of achieving the objectives of the innovation of the railway industry in the field of quality (Palkina, 2015). One of the indicators of such controlling may be improving the quality of innovation management, which can be characterized by the aggregate indicators such as number of innovative proposals and projects received from employees and expected their profitability potential; number of projects moving from one phase of the development process and to market innovative products and services to the next; the duration of the innovation process or its individual stages. Costs and benefits are key categories of economic theory. They are also economic criteria when evaluating the costs and benefits associated with quality. All other economic indicators are somehow connected with these concepts. The authors believe that this element of quality economics requires more detailed consideration as will be explained below.

3. Integral indicators of introduction of QMS in the transport organization

Costs and benefits are key categories of economic theory. They are also economic criteria when evaluating the costs and benefits associated with quality. All other economic indicators are somehow connected with these concepts. The authors believe that this element of quality economics requires more detailed consideration as will be explained below. Classical approaches to the classification of quality costs are well known. In accordance with the classification of A. Feigenbaum quality assurance costs estimated by the method PAD (prevention, assessment, defects) are: (i) expenses for research, prevention and reduction of the risk of inconsistency of services or production (P); (ii) costs for detecting inconsistencies in the delivery of services or production, with a view to removing them before handing over the goods to the consumer or to the completion of the services rendered (A); (iii) costs associated with the removal of internal and external defects (D). Internal defects are costs due to the inconsistencies found within your organization at any stage of the life cycle of the service or production. External defects are costs due to irregularities detected after delivery to the consumer. By J. Dzhuran cost groups «P» and «D» are combined into one group ID. His classification of quality costs is as follows: (i) the costs of bringing the process to meet all the goals and implied user queries (ID); (ii) costs associated with violations of the existing process of rendering of services or production (IID). Thus, the total cost of quality assurance as measured using the method PAD includes:

$$C = P + A + D \tag{1}$$

Costs of transportation can be defined as follows:

$$P = Eif + Eadd * L \tag{2}$$

where

- Eif additional costs for initial-final operation, rub./wagon;
- Eadd specific additional costs for transport operations, rub./wagon-km;
- L distance of transportation.

The costs of the group «A» include costs for wages of workers of all categories, employed quality control and maintenance of all types of equipment required to conduct quality control. Expenses of the group «D» include the amount of the damages of all kinds, for example for delayed goods, damage to or loss of cargo, violation of environmental regulations, penalties, etc. When analyzing the quality costs one must take into account that all costs for fixing defects will be external because the provision of services coincides with the process of consuming it. All costs need to be complemented by an assessment of the achieved economic results, the absolute values which are not informative. In order to assess the effectiveness of the implementation of the QMS it is more logical to relate the costs of quality with some characteristics of the production activity of the organization, such as the volume of output, labor input, costs. To date there is no common methodology for the assessment of efficiency of introduction of QMS, so each organization can decide what method to use. Application of the technique of an estimation of investment projects with traditional indicators (NPV, profitability index, internal rate of return) is not acceptable because it is impossible to compare the impact of the implementation of QMS in the discounted financial performance of the organization. Improving the competitiveness of any organizations depends on many factors and the impact of QMS is only indirect. When assessing the implementation of the QMS it is more logical to assess the level of planned results that is to evaluate the impact. Among positive results you can name accountability and transparency of production, organizational and financial processes, improving their interactions, identifying and addressing inconsistencies in processes, improvement of competencies, improved staff motivation, reduced defects of product and services, credit and insurance facilitation, reducing production costs and a number of other qualitative changes, which can be rated only using the method of expert estimations (Koltunov and Devyatkin, 2015). When transitioning organizations to implement ISO 9001:2015 one needs to conduct a comprehensive analysis of the implementation of QMS: financial indicators (table 2) and efficiency.

Table 2: Financial indicators in the implementation of QMS in transport organization

Improved processes	Components of economic effect	Generalized economic effect
1. Improving the quality and competitiveness of transport services		
Improvement of interaction of transport processes and ensuring processes	Increasing the value of services and works. Increase in the share of the transport services market (to attract additional clients)	Increase in revenue and profitability
2. Reducing non-productive actions and raising the level of executive discipline		
Improvement of organization interaction with customers	The reduction of waste. Labor productivity growth. Saving material and labor resources	Cost reduction
3. Reducing time and improving quality of administrative decision-making		
Regulation of action of staff. Improvement of management and production processes	Improving prevention of defects. Reduction of time for removal of inconsistencies	Reducing losses and lower operating costs
4. Increase in transparency of company and its investment attractiveness		
Regulation of management processes. Improving the system of leadership training	Expansion of activities in international transport markets. Attraction of external financing sources	The increase in revenue. Increasing profitability

Source: developed by authors

4. Conclusion

According to the results of the study it is possible to draw the following conclusions:

- one of the tools to provide innovative development of the railway industry is quality economics;
- implementation of QMS in holding company «RZD» should be based on the requirements of the new standard ISO 9001:2015;
- quality cost accounting should take into account the elements of the quality economics in the railway industry proposed by the authors;
- economic and quality departments of the industry can create cost accounting system based on the analysis of quality implementation of QMS by financial indicators and performance.

In conclusion we would like to note that the quality economics helps to take a fresh look at many manufacturing processes with quality role position and its impact on the innovative development of the rail industry.

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HUMAN CAPITAL IN THE CONTEXT OF GLOBALIZATION: THEORY AND RESEARCH METHODOLOGY

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Abstract. From scientific standpoint the article analyzes theoretical and methodological issues of study of Human Capital in the context of globalization, its place and role in economic theory are determined, the author's definitions of the categories "Human Capital" and "Human Potential" are given, the author suggests the model of transformation of Human Potential into Human Capital and of circulation of Human Capital. The purpose of the study is in the scientific substantiation of Human Capital, as well as identifying the major trends in the qualitative transformation of Human Capital in the context of globalization. The transformational model developed and proposed explains at theoretical level that investment aimed at developing a specific unit of human resource, while individual being involved in the labor process, contributes to the transition of potential into capital, turning a simple benefit into capital one. Visibly demonstrating mutual conversion of money into knowledge, then the knowledge into money, the transformation model allows us to evaluate the monetary value of accumulated human assets, commensurate costs of the ability in the future to generate income. The undoubted advantage of the author's model is also represented by the visualized step-by-step mechanism of circulation of Human Capital and its reproduction in conditions of globalization.

Keywords: human capital, human potential, transformation, circulation of human capital, globalization of economies

JEL Classification: O47, C23, J24

1. Introduction

In conditions of globalization, structural transformations of the world economic system, Human Capital is one of the topical categories. The appeal to man as the main productive force and the result of the social process of production is conditioned by internal needs of economic science. In this connection, the process of intellectualization of economy and social life is among the most important regularities. Knowledge and competences become critical factors of production, due to which the importance of high quality of the labor factor is enormously increased. The article describes the results of the research, was focused on economic interpretation of the categories of "Human Capital" (HC) and "Human Potential" (HP), identification in their content of generalizing and distinguishing properties, allowing us to propose, methodologically substantiate the author's model of formation, transformation and turnover of HC in economic system. The author has attempted to introduce a new model into scientific turnover in the form of a set of operational categories and their interrelations, which can be directly used in teaching the courses on economic disciplines, as well as in further empirical research. The model is based on metamorphoses of capital introduced by K. Marx and their circulation, which served as the author's working tool for constructing a new research model. The main emphasis in the analysis is on the working force component, which requires increased attention to itself in the light of actualization of new challenges of the time. In this case, the category itself is replaced in the model by HC, associated with increasing role of mental labor, when the productive forces of man from the commodity form are transformed into the form of HC[16]. The value of Marxist methodology for the analysis of HC is determined by expediency of rethinking K. Marx's views on reproduction of working force and projecting them to study of HC, about possible transformation, radical renewal and further application of the labor theory of value.

2. Methodology

The concepts of leading researchers of alternative scientific schools and directions in the field of conception of HC and innovative development are the basis of this research. The diversity of HC predetermined the need for use of various scientific methods, including that of expert estimates. When analyzing the motion of functional characteristics of HP and HC in the reproduction process, the approach was used close to the concept of "mutual conversion" of different forms of social ties developed in the context of interdisciplinary researches at the interface between Economics and Sociology.

3. Human capital – definitions and approaches

As an independent category, HC enters the scientific turnover in the second half of the twentieth century thanks to Nobel Prize winners in economics 1979 and 1992 Th. Schultz and G. Becker. Among the theorists who made a significant contribution to development of the theory, it is necessary to single out such as J. Minzer, L. Thurow, M. Fischer, G. Kendrick, A. Kucharčíková, R. Kapeliushnikov, R. Nureev, S. Dyatlov, O. Drozdov et al. The achievements of HC theoreticians are indisputable. The primary role of man in social production is recognized; interrelation of qualitative transformation of HC at the expense of science and education is empirically proved; it is argued that capital investments in development of productive capacities provide long-term economic effect; it is justified that transition to the new level of economic growth is impossible without HC accumulated etc. Recently, attention to HC is due to apparent profitability of funds invested in its formation, qualitative development. Effective use of HC becomes one of the most important conditions for achieving economic growth and competitiveness. However, with regard to the mechanism for its formation and effective use, there are many undeveloped issues, without solution of which it is impossible to further develop the theory of HC. First of all, it is necessary to overcome the ambiguity of conceptual apparatus. Today there is no unified scientific definition of HC as an economic category, which makes it possible to interpret it unequivocally. The analysis of different approaches to the study of the content of HC allows

[16] It is known that K. Marx never considered a man as capital, investigated him strictly in commodity form. In modern conditions, such position is considered not entirely correct, as it ceases to explain and adequately reflect the coming socioeconomic transformations.

classifying interpretations into the following types: predicative interpretations (talking about HC, but not explaining the actual essence of the category), resource interpretations (which talk more about resources (potential opportunities), and not about capital as activated resources), eclectic interpretations as a mixture of disparate positions of the studied object (individual, corporate, national HC). In addition, the ratio of HC to a number of related categories is not defined. The terminological confusion of HC is related not only to its multidimensionality, but also to insufficient research. The problem is that there is no single definition of human capital or a single view of the scientific understanding of its nature, status and role (Kucharčíková, 2011). The latter provokes a superficial description of the category, prevents the description of profound transformations in modern production relations. Analysis of the category of HC obliges us to use its definition in sufficiently strict formulation. This is connected with the fact that the studied category by structure and content determines in itself all the signs of capital value, therefore it is rightfully identified with the fundamental category of "capital". As it is known, capital is based on the single substance - value, which is self-increasing in time. In the process of its circulation, capital must remain in the state of permanent movement, which is basically cyclical, and the main goal of such a movement must consist in self-increase of initially advanced value. Classical economists (W. Petty, A. Smith, D. Riccardo, K. Marx) characterized value as a measure of socially necessary labor costs incarnated in commodity. Political economy itself is obliged to become as a science by turning to labor: as the cause and source of wealth (A. Smith, 1776); as determinant of the measure of value (D. Riccardo, 1817) and surplus value (K. Marx, 1887). If capital is value, and value (according to the law of value) is equivalent to socially necessary labor costs, then capital and labor basically show signs of interconnectedness (one determines the other and this is their commensurability). The construction of HC is also fundamentally determined by living labor. Just as the capital, HC can self-grow, turn around, be depreciated in time. Moreover, in order to assess the real creative role of labor, to understand the innovative essence, it is necessary to consider it not as creator of value (abstract labor according to K. Marx), but as a source of consumer value, its value (specified labor according to K. Marx). With value approach to labor, the productive force that creates it does not come to light. This is achieved by simultaneous analysis of value and consumer bases of evaluation of labor. In the course of the study it was found that HC simultaneously finds in itself the source of value in use and value in exchange ($HC^{\text{Value in use}}_{\text{Value in exchange}}$). Between the two indices of HC, complementarity is manifested: increase in value in use (superscript) as measure of the value of employee[17] helps to increase the value of the rate of return (bottom index) as valuation of the results of its ability to work. Indeed, the more skilled an employee is, the more complex and effective his work is compared to less skilled working force. Skilled labor, with other conditions being equal, allows you to attach the larger amount of value to the product in unit of time due to the greater expenditure of socially necessary labor costs in the field of training. The increase in labor productivity, reduction of production costs, improvement of quality, ability to offer a new one are achieved. The above confirms that amount of value in use has original sign to be the source of generation of new value and competitiveness, and in conditions of globalization this value acts as a predetermining factor. The historical and economic analysis of the existing interpretations, the comparison of HC with capital, allows us to specify the content of the category by *the author's definition,* which, unlike the previous ones, explains *HC with the*

[17] In the paper, the value of employee is understood as accumulated in the process of education, advanced training knowledge, competences and experience required by employer and involved in the work.

presence of productive capacities developed in man as a factor in raising the rate of return in the future. The author's position of the category HC largely follows from the developed research model, which allows us scientifically to substantiate the reliability of the interpretation, to trace the general logic of its movement and transformation.

4. Human capital and human potential: commonality and differences

Analysis of scientific literature has shown that the most serious violations of terminology are allowed in the categories of HC and HP. This is the obstacle in providing the methodological discipline of scientific thought, which can be explained by inadequate attention of some modern researchers to fundamental economic categories.

The conceptual essence of analyzed phenomena allows us to state that there is the certain structure in their interrelations that cannot be ignored, both from theoretical and methodological point of view. The study allowed us to come to the conclusion that HC and HP have the single substance - acquired and inseparable from their carrier of abilities in the form of knowledge, skills and experience. The only difference is that the potential capabilities in the carrier are much greater than those realized in labor. Therefore, HP is conceptually wider than HC. It is rather human development opportunity, which is not always realized in practice. Consequently, not all investments invested in development of intrapersonal abilities will be able to pay off in the future.

The foregoing allows us to sum up the intermediate conclusion. HC should be considered as strategic component of human resources, as it represents the potential for development and adaptation to market changes. In terms *of HP, abilities are not analyzed in value terms, because they are not able to reflect the return on investment in development of person's ability to work.*

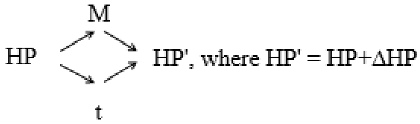
5. Mechanism of accumulation of HC

In the course of the study, it is concluded that in the system of social reproduction, HP as economic category is the basis for subsequent implementation of HC. Having made a hiring transaction on the labor market and joined the staff of organization, some abilities of employee are transformed from HP phase into HC in the form of knowledge, competence and experience activated in the work.

The main thing in defining HC is the concept of capital as a self-increasing value. From these positions, a person is viewed as a specific object, which, as a result of investment in him is the economic object with the certain value. At this stage, the person is not capital and seems to be only the certain potential. The person becomes capital when he acts as a subject of economic activity, i.e. when the investments invested in development of productive abilities begin to yield income.

The results of our research demonstrate that while a person is not employed, the time and money spent invested in him will go only to development of his intrapersonal abilities, general culture and no more. In this case, HC can take place either as small one (with single accumulation act) or extended (with multiple accumulation acts) turnovers. Schematically this can be shown as follows (Fig. 1, 2).

Figure 1: Small turnover



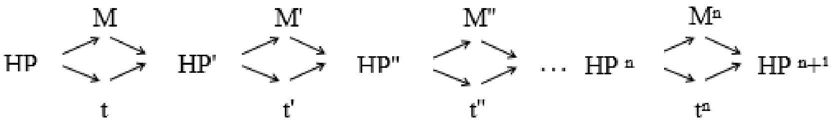
Source: elaborated by author

where

- HP Human potential
- M Money expenditures
- t Time expenditures
- HP' Extended turnover of reproduction of HP

Source: elaborated by author

Figure 2: Extended turnover



Source: elaborated by author

It is important to note that the process of accumulation of HP, both in small and expanded turnover, is limited by the boundaries of sphere of circulation, in which, according to the labor theory of value, there are no opportunities for self-expansion of value. In this regard, money investments will be fully consumed for internal development of the carrier himself, which, from the point of view of effectiveness of investments, is more appropriately regarded as economically inefficient expenditures. In education, the cost of training is formed. However, this cost is not realized immediately after completion of training, when a skilled worker joins the work process. It exists in latent form in the worker and does not receive public recognition at this stage, i.e. does not manifest itself as cost.

Taking into consideration the fact that HC, like any other capital, is not able to be created in the sphere of circulation, it is necessary to recognize that beyond its borders there is also no possibility for its qualitative formation. The important conclusion follows from this: *obligatory condition for formation of HC as factor of production is the sphere of circulation, and its subsequent increment is possible only in the sphere of production.* As it can be seen from the analysis carried out, HP even infinitely being accumulated in time, cannot be transformed into HC phase without practical application of accumulated abilities, when knowledge and competencies realized in the labor begin to pay off and bring in revenue.

6. Conceptual model of formation, transformation and turnover of human capital in economic system

The process of formation of HC can be reflected in the scheme (Fig. 3).

Figure 3: Mechanism of formation of HC

$$HP \cdots L \cdots HC$$

Source: elaborated by author

where

- HP Human potential
- L Labor
- HC Human capital

Elision marks (⋯) in the scheme means the interruption of turnover process.

In the movement act (HP ⋯ L ⋯ HC) the process of transformation of potentialities embodied in a person into productive abilities is observed. Only here the cost of training is gradually realized, manifested in labor. We note that in labor the worker transfers the cost of preparation to the created product in parts[18]. If in the phase of HP, the carrier first advances a certain cost for acquisition of knowledge and competencies (at the time of education), then in the phase of HC (during employment), the cost spent is commensurate with result. Consequently, the single substance of these transformations is value, starting with the conversion of monetary form into intangible assets in the form of knowledge and competencies, and then, conversely, converting intangible assets into monetary form, which in principle does not contradict the law of equivalence of value. With this, it is necessary to measure the costs directed to the ability to create income in the future. The next stage is HC's own turnover. In the process of movement, HC makes infinite number of small and expanded turns, progressive movement of which, not contradicting the general logic of capital flow, ends with certain return of HC form to its starting position (Fig.4).

Figure 4: Turnover of HC

$$HC \cdots L \cdots HC', \text{ where } HC = HC+\Delta HC$$

Source: elaborated by author

In the scheme HC' - is HC, increased by some delta. The full cycle of turnover of the HC in the process of reproduction can be easily decomposed into three stages: 1) HC, 2) ⋯ L ⋯, 3) HC'. The first and third stages refer to the sphere of circulation, the intermediate stage - to the sphere of consumption. The expanded form of turnover of HC will take the following form (Fig. 5).

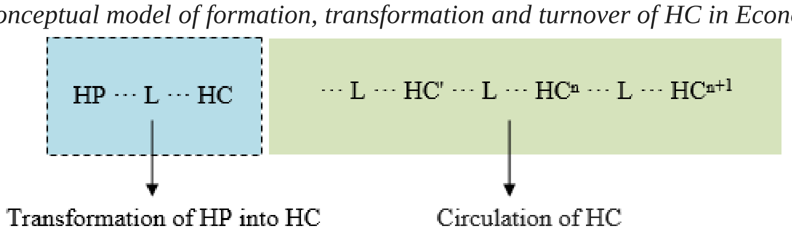
Figure 5: Circulation of HC

$$HC \cdots L \cdots HC' \cdots L \cdots HC^{n} \cdots L \cdots HC^{n+1}$$

Source: elaborated by author

The general model of formation, transformation and circulation of HC can be obtained by integrating the above-mentioned composite elements into a single construction (Fig. 6).

Figure 6: Conceptual model of formation, transformation and turnover of HC in Economic System



Source: elaborated by author

[18] This issue requires special analysis of practical material and in this paper is given only in the formulation.

where

- HP Human potential
- L Labor
- HC Human capital

So, the developed conceptual model allows us to visually reflect the mechanism of formation, transformation and circulation of HC in Economic System. We are convinced that the process of transformation of HP into HC is possible only with involvement of a person in the labor process (in the sphere of production), where realization, accumulation of capital, and increasing its profitability are possible. At the same time, implementation of HC is impossible in the absence of human resources with high human potential in them.

7. Conclusion

In the course of the research, a number of important tasks were identified and successively solved. On the basis of the developed model, comparative analysis of the structure, content of categories of HP, HC, the authors' interpretations have been proposed, clearly delineated to eliminate terminological uncertainty in interpretation. The author's model proves the need to abandon the non-subject economic science and transition to human dimension of economy and society. The said actualizes considering a man as a producer and consumer in the center of social and economic system, and his cumulative positive effect should be calculated on the basis of use-value and exchange-value evaluation of labor.

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GLOBAL CHALLENGE OF SANCTIONS: INNOVATIVE DEVELOPMENT OF RUSSIAN REGIONS

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Abstract. Development prospects of territories depend on their ability to guarantee sustainability under the influence of global challenges. Since 2014 Russian economy has been under the influence of sanctions. Although there are different views on the successfulness of this tool, this global challenge is obviously a serious test for Russian innovative enterprises. Russian innovation sector is developing poorly; the economy largely relies on the import of new technologies and hi-tech equipment. The aim of this research is to evaluate regions' innovative development under the influence of sanctions. For this purpose authors developed an equation of regional innovative development where four main factors were defined by means of decomposition; their influence was widely discussed and is scientifically proven: the effect of human assets, productivity effect of the sector generating knowledge, costs effect, productivity effect of the sector producing innovative products. Factor analysis performed in 51 regions shown that at least half of the regions reduced innovative activity. Leading regions were seriously affected. However, productivity effect of the sector generating knowledge shows that some regions have laid the groundworks allowing them to ensure sustainability of regional innovation system under conditions of global challenges. Following the analysis, authors came to conclusion that temps of innovation activity slump are not as significant as it was expected.Further innovative development requires significant state and private investments in human assets, system of knowledge generation. Otherwise, the effect of sanctions will grow.

Keywords: globalization, innovations, economic sanctions, technologies, regions, Russia

JEL Classification: F6, O30, O31, P25

1. Introduction

Over the past few decades particular emphasis has been put in academic literature on innovative development of the regions in the face of global challenges as the innovations themselves are becoming the source of economic development (Schumpeter, 1934) and start having a global nature (Chaminade & Fuentes, 2012). However, sanctions may also be compared to the global challenge for countries against which they have been imposed (Zhao, 2010; Mohaddes & Pesaran, 2016; Corwinatall., 2017).

As for Russia, global nature of sanctions is particularly evident in the fact that 23 countries from 3 continents have joined in them. Three main types can be identified among the restrictive measures implemented by the USA, the European Union, Canada and Ukraine in the period from 2014 to 2017: assets freeze, financial prohibitions and trade restrictions. Economic sanctions have limited the possibility to purchase new technologies and equipment that can be used both for civil and military purposes as well as in Russian oil sector. Share of machines and equipment purchases - the principal item in Russian import – was equal to 48,3% in 2013. In 2015 enterprises purchased 4,6% less machines, equipment and vehicles in comparison to 2013. The share of innovatively active enterprises is now at low level of 9-12%.

Many experts in Russia believe that the period of sanctions is the best time for new opportunities and mobilization of internal resources because there are similar examples abroad, i.e. in China (Zhao, 2010). That is why it is important to know what particular influence the sanctions have on conditions and results of innovation activity in regions in order to have strong information basis for justification of regional policy instruments.

The aim of this research is to find out what impact has been made by the global challenge of sanctions, imposed in 2014, on the results of innovation activity in the regions. In order to do that, the following tasks have been set: to provide theoretical basis and identify factors that have a decisive effect on innovative development of regions, to develop analytical model and provide an evidence base for stated conclusions on the grounds of relevant statistic data.

Innovative development of regions could be influenced by internal and external factors (Drayse, 2011). On the one hand, innovative activity in regions is under the influence of internal factors such as level of human capital (Capello & Lenzi, 2015; Brenner & Broekel, 2009), level of activity in inventive work and creation of technologies (Romer, 1990; Chesbrough, 2017), investment activity (Grossman & Helpman, 1994), business activity of innovators (Wong et al., 2005; Shane, 2009; Malerba, 2010) and institutional environment (Capello & Lenzi, 2015). On the other hand, in the context of global involvement of participants of the innovation process in international economic activity, external factors, such as economic sanctions, play the vital role.

Novelty of this research is in presentation of new data on the sanctions influence on innovative development of the Russian regions based on a factor model. The issue brought up in this academic paper has to be examined since there are data on the cost of sanctions for many target countries (Hufbauer at all., 2009), but such data for Russia are insufficient and limited mainly to general influence on the economy of the country (e.g., Glaziev, 2014) and do not deal in details with innovative activity in the context of regions.

2. Materials and methods

The proposed method is based on the concept that the main factors of innovative development are human factor and investments, as well as on the concept that innovative activity is carried out in two sectors – knowledge and technologies generation sector and sector of producing innovative products for final consumption. (Fig.1)

Figure 1: Model of equation of innovative development

$$\underbrace{\frac{\text{Volume of innovative products, works, services}}{\text{Population size}}}_{\substack{\text{Volume of innovative products per capita} \\ (Innov)}} = \underbrace{\frac{\text{Number of employees involved in research activity}}{\text{Popolation size}}}_{\substack{\text{Effect of human capital} \\ (E_{HC})}} \times \underbrace{\frac{\text{Number of created advanced technologies}}{\text{Number of employees involved in research activity}}}_{\substack{\text{Effect of knowledge generation sector efficiency} \\ (E_K)}} \times \underbrace{\frac{\text{Internal costs on research activity}}{\text{Number of created advanced technologies}}}_{\substack{\text{Effect of costs} \\ (E_C)}} \times \underbrace{\frac{\text{Volume of innovative products}}{\text{Internal costs on research activity}}}_{\substack{\text{Effect of innovative products producing sector efficiency} \\ (E_P)}}$$

Source: author

Then, the equation of innovative development of the region (i) within the time period t can be described by formula (1):

$$Innov_{it} = E_{HC_{it}} \cdot E_{K_{it}} \cdot E_{C_{it}} \cdot E_{P_{it}} \ , \tag{1}$$

Decomposition of factors is carried out by chain substitution method by means of absolute differences.

Component 1 "Influence of human factor" (or, effect of "human capital") shows to what extent the scientific activity and development are popular among the population. Change in the volume of innovative products per capita due to the influence of human factor is estimated by formula (2):

$$\Delta Innov_{HC_i} = \Delta E_{HC_i} \cdot E_{K_i} \cdot E_{C_i} \cdot E_{P_i}, \tag{2}$$

where ΔE_{HC_i} – change in the effect of human capital in the region i for the analyzed period.

Component 2 "Effect of knowledge generation sector efficiency" shows the payoffs from the use of human capital in the sector of knowledge generation and is expressed by the number of technologies per 1000 people involved in research and development. Change in the volume of innovative products per capita due to the influence of the effect of knowledge generation sector is described by formula (3):

$$\Delta Innov_{K_i} = E_{HC_i} \cdot \Delta E_{K_i} \cdot E_{C_i} \cdot E_{P_i}, \tag{3}$$

where ΔE_{K_i} – change in the effect of knowledge generation sector efficiency in region i for the period under review.

The higher index ΔE_{K_i} is, the more efficient the area of producing new knowledge in the region is.

Component 3 «Effect of costs» shows the share of costs on R&D per every unit of technology and describes the level of technological cost by enterprises and organizations regardless of the sources of finance. The influence of this factor is calculated by formula (4):

$$\Delta Innov_{C_i} = E_{HC_i} \cdot E_{K_i} \cdot \Delta E_{C_i} \cdot E_{P_i}, \tag{4}$$

where ΔE_{C_i} – change in effect of costs in region i for the period under review.

Low value of index ΔE_{C_i} indicates high level of payoffs from funds invested in scientific researches and development.

Component 4 «Effect of efficiency of innovative products producing sector" shows the level of efficiency of enterprises and organizations. The influence of this sector is determined by formula (5):

$$\Delta Innov_{P_i} = E_{HC_i} \cdot E_{K_i} \cdot E_{C_i} \cdot \Delta E_{P_i}, \quad (5)$$

where ΔE_{P_i} – change in the effect of innovative products producing sector efficiency in region i for the period under review.

The higher index ΔE_{P_i} is, the more efficient the sector of producing innovative products is.

Overall change in the value of volume of innovative products per capita in the region, caused by the influence of particular factors, is calculated by formula (6):

$$\Delta Innov_i = \Delta E_{HC_i} + \Delta E_{K_i} + \Delta E_{C_i} + \Delta E_{P_i} \quad (6)$$

The model, the equation of innovative development and the method of processing obtained results presented above made possible to carry out analysis of innovative development of the regions before (2013) and after (2015) the introduction of sanctions and to draw conclusions presented in the relevant section of this article.

3. Data and results

The research was done for 51 regions of Russia that carried out innovative activity in 2013-2015 and is based on official statistic data provided by Federal State Statistics Service of Russia. The volume of innovative products was calculated in base-period prices (2013) in order to neutralize the influence of rapidly growing inflation in the period under review. According to Rosstat data, consumer price index for 2014 and 2015 was equal to 111,4% and 112,9% respectively.

Factor analysis of the change in the level of per capita volume of production of innovative products in the regions of the Russian Federation has shown that over the years under sanctions the volume of innovative products per capita has reduced (table 1).

Table 1: Overall change in the volume of innovative products per capita and effects influencing it, for all analyzed Russian regions, thousand rub.

Indicators	2013	2015*	ΔInnov2013-2015**
Volume of innovative products per capita including:	24,48	16,6	-7,88
Effect of human capital	5,07	5,05	-0,11
Effect of knowledge generation sector efficiency	0,0020	0,0019	-0,91
Effect of costs	524,7	654,27	5,79
Effect of innovative products producing sector efficiency	4,68	2,66	-12,65

Source: calculated by the authors
*Note: *Calculated in 2013 prices ** Calculated by the method of chain substitution*

Economic sanctions contributed to the decrease in per capita volumes of innovative products production generally in all regions under review. Despite the increase in the amount of state and private costs on R&D, payoffs from these costs have decreased both in knowledge generation sector (the number of created advanced technologies per one person involved in

R&D reduced) and in the sector of producing innovative products. The detailed analysis of change in innovative activity of Russian regions under the conditions of sanctions made possible to show objectively the influence of presented effects on the overall level of innovative development of Russian economy (table 2).

Table 2: Indicators of differentials in innovative development of Russian regions, 2013-2015

	ΔInnov2013-2015, thousand rub.	**Including:**			
		ΔE_{HC_i}	ΔE_{K_i}	ΔE_{C_i}	ΔE_{P_i}
Regions-leaders	58,47 (Vologda Region)	40,36 (Lipetsk Region)	120,38 (Republic of Tatarstan)	36,15 (Lipetsk Region)	57,82 (Vologda Region)
Regions-outsiders	-103,13 (Arkhangelsk Region)	-17,81 (Samara Region)	-40,19 (Lipetsk Region)	-109,96 (Republic of Tatarstan)	-125,11 (Arkhangelsk Region)
Average	-2,3 (Vladimir Region)	1,06 (~Sverdlovsk Region)	5,01 (~Penza Region)	-1,87 (Komi Republic)	`-6,51 (~Moscow Region)
Mediana	-0,17	0,15	-0,15	0,97	-2,84
Standard deviation	18,39	6,48	22,83	23,44	21,88

Source: calculated by the authors

Interestingly, the Russian regions that have traditionally been innovative leaders with advanced innovative systems have reduced the number of people involved in R&D (the Samara region), costs on R&D (the Republic of Tatarstan) and production of innovative products (the Arkhangelsk Region) more than others. The more resistant to sanctions appeared to be those regions where: (1) innovative system has been rapidly growing over the last years due to new large-scale projects, the structure of innovation sector of economy was in line with the general national trends of state support of import substitution and growth of demand in agriculture due to the import ban for products from the countries of the European Union (the Vologda region and the Lipetsk region); (2) grounds for creation of technologies were established (the Republic of Tatarstan).

In all regions the effect of human capital has changed insignificantly after introduction of sanctions, which means that imposing of sanctions has had almost no effect on the share of staff involved in R&D. Most regions has this effect at the level lower than average in Russia.

The effect of knowledge generation sector efficiency increased in more than half of analyzed regions, but it shows high variability. Restrictions on external purchases led to the increase in the regions’ activity in the field of development of their own technologies.

Effect of costs, as well as the effect of knowledge generation sector efficiency, is highly variable among the regions. The value of “outsider” (the Republic of Tatarstan) is 100 times lower that the average in the regions. The majority of the regions under review have increased costs on R&D under the conditions of sanctions, which, in general, have not led to the increase in the level of innovative activity. It should be stated that in order to provide objective interpretation, it is necessary to consider the influence of the effect of costs in close connection with the effect of efficiency of innovative products producing sector and efficiency of knowledge generation sector.

The effect of efficiency of innovative products producing sector, calculated in 2013 prices cleared from inflation, characterizes by the decrease of values and high volatility in most regions under review. This fact suggests that the current costs on R&D are ineffective. This suggestion is supported by the negative correlation between the effect of efficiency of knowledge generation sector *(E_K)* and effect of costs *(E_C)*. This dependence was as followed: R_{2013} = -0,49 R_{2015} = -0,19.

4. Discussion and conclusion

Use of official statistic data for 2013-2015 and decomposition of factors of the equation of innovative development of the regions, which has been developed by the authors and presented for the first time ever in this work, enabled to obtain new data on the influence of global challenge of sanctions on the state of innovative activity in the regions of Russia.

Following the results of our research, we found out that the regions that have not traditionally been the innovative leaders in Russia managed to preserve stability and improve results of their innovative activity. At the same time, those regions that are producing the highest volume of innovative products per capita appeared to be included in the group of instable. The reason, as we think, lies in the size of innovative systems and the structure of those regions' economies. A good margin of stability was shown by the regions with small-scale innovative systems where the favorable market conditions were established. However, this issue is debatable and requires in-depth study.

The suggested equation of innovative development has shown its creditworthiness as a good analytical instrument because it allows quantifying the contribution of the main factors of innovative development – human capital and costs on innovations. Advanced knowledge generation sector has a beneficial effect on stability of regional innovative subsystems, which proves the hypothesis on top-priority of the human capital for the development of innovative activity (Brenner & Broekel, 2009).

The results of calculations have shown that the regional innovative systems have not yet been formed to the extent that provides the necessary level of stability of innovative systems in the regions. The effect of human capital shows the lowest level of volatility, which proves its relative stability under the conditions of external effects. Under the conditions of sanctions Russian regions have been able to support the stability of innovative systems by increasing costs on R&D, but not their efficiency. It has to be considered in future that the increase of costs on R&D in the regions of Russia with weak human capital will not lead to proportional increase in the efficiency of innovative activity (Zemtsov at al., 2016).

Calculations have shown that in the face of external global challenge, the higher level of volatility is shown by the sector of innovative products production, mainly because it is closely connected to consumer demand and international trade – those areas that are highly likely to be affected by the influence of sanctions (Hufbaueratal, 2008). Such conclusions are in agreement with previously obtained estimates on the significance of international links between the suppliers and consumers for innovative development of the regions (Sennett at al., 2002). The danger for Russian innovative sector is that economic sanctions in the long-term period may lead to the formation of the closed-loop economy which is bound to fail in the global world.

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STRATEGIC CHOICES IN BUSINESS MODELS IN THE CONDITIONS OF GLOBALIZATION: EVIDENCE FROM A LITHUANIAN ICOMING TOURISM COMPANIES

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Abstract. In company's business model exist certain strategic choices, which depend more or less on the business system peculiarities in which these companies operate, and on the business strategy and its' elements which are being created by the company itself. Identification of the strategic choices in global context and the highlighting them in company's business model helps to identify and recognize them. In what ways the strategic choices in companies' business model are important? How to identify the existing strategic choices in companies' business model and which strategic choices are typical in the global incoming tourism? To analyze the strategic choices in companies' business model belonging to global incoming tourism. systematic analysis of scientific literature, partly structured interview. Strategic choice is selection of the best strategic option that helps achieve organization's objectives. Relevant strategic options are evaluated their suitability, acceptability and feasibility. In the research 9 groups of strategic choices together with 11 choices in them were distinguished in global incoming tourism.

Keywords: business model, strategic choices, incoming tourism

JEL Classification: L83, M10, Z32

1. Introduction

In the constantly changing environment of the tourism business, companies are forced to look for certain cooperation contact points so that they would be able to survive in the intensifying battle of competition: implement innovations, reduce costs, increase profitability, etc., in other words, to adjust their business model. In order to achieve the aforesaid objectives, companies adjust their business models: adapt, combine or rethink them in essence (Buhalis and Foerste, 2015). A business model is a business implementation logic that companies employ to achieve the set goals and generate the income (Osterwalder and Pigneur, 2010). Casasdesus-Masanell and Ricart (2010) suggest that the concept of a business model cannot be reduced to an arbitrary list of components. They argue that companies initially make strategic choices on some business model parameters and then succinctly adjust the existing business model through less significant, tactical choices. While a vast amount of literature makes cross-sectional descriptions of business model components, the long-term effect from strategic choices on performance is not sufficiently understood. *The research questions of this* *paper are:* What strategic choices are most often discerned in the industry of the incoming tourism?; Why is it important to identify the strategic choices that dominate in the business models of the incoming tourism companies? What is the link between expression of the business models of companies, strategic choices and the elements of business models? *The purpose of this paper is* - to identify strategical choices in incoming tourism companies business models and explain how these strategical choices are able to help for better its (business models) cooperation. *Methods of research*. Research paper was prepared based on the systemic analysis of the scientific literature, with the semi-structured interview. Therefore the results of the performed research were obtained by employing the approach of the qualitative research. *Research limitations.* This work was developed in one tourism industry (incoming tourism) and small business companies took part in the research. Author presents only a single case study in a specific context. Therefore, author does not want to generalize his findings.

2. Literature review

In the recent years *the definition of business model (BM)* in the global works of the management science, is usually explained as: cooperation of suppliers, clients and partners; certain business logic; creation of an offer of a new value; measure for the development of the entrepreneurship, when creating the innovations, etc. (Chesbrough, 2007; Zott, Amit ir Massa, 2011). In order to discuss business model concept development phases and the context of the variety of points of view to the business models more in depth, the author of the article used detailed chronological analysis of the business model concept development performed by Wirtz et al. (2016). Based on the analysis of works of the aforementioned scientists, the groups of the business model concept development directions are discerned, based on them the concept of business model is analysed and developed: Technology-oriented, Organisation Theory-oriented, Strategy-oriented (Teece, 2010). Scientists Wirtz et al. (2016), identify business model conceptualisation phases in the following groups of directions: Early Phase; Formation Phase of First Overall Concepts; Differentiation Phase. Further studies of the scientific literature of the business model conceptualisation phase allows to state that current business models are oriented at four levels: product, business activity, company and industry (Perkmann and Spicer, 2010). Therefore author of this article defines business model as: a measure that helps to create a new value by uniting important elements inside and outside the company; a tool to identify and analyse the strategic choices of the company; and as a "frame" or a platform to analyse company relations, activities and their capabilities. Business model concept and its peculiarities are revealed in detail during the analysis of the business model structure and the elements that comprise it. *Structure of a business model* is an integral part of the business model concept, this part in the scientific discussion and empiric works is usually presented as a certain set of elements (Osterwalder and Pigneur, 2010) that allows to express business logic and the specifics of company activity, as well as to set their mutual relations in system of business. Aforementioned scientists identify 4 blocks of business model structural elements and elements that comprise them: product (value offers); consumer (consumer segment, distribution/presentation channels, relations with consumers); infrastructure and its management (essential partnerships, capacities: main resources, abilities, essential activities – value configuration); financial aspects (cost structure, income flows). *Business model typology* is discerned with respect to the objectives, levels, and stages of the business model orientation, as well as the specifics of the industry to which the business model belongs.

According to Kindström (2013) usually the scientific literature presents business models that are generic, less often specific, intended for the analysis of the different fields (business systems). Regardless of the industry the following types of business models are identified: Commercial Business Model, Social Business Model, Isolated Business Model, Interactive Business Model. The listed business model types are classified according to the orientation specifics of their value offer (a value offer, oriented at the economic value and a value offer oriented at the social value). Kindström (2013) states that there are companies that orient their business models towards goods or services, depending on which is more dominating, but there is possible a middle type of business model orientation as well - Commodity Plus Business Model. Further analysis of the scientific literature of the business model typology showed that scientists identify the business model types based on their orientation towards the phase of the consumer type: (B2B), B2C) and Emerging Business Models (Age, 2011). Other group of scientists (Wirtz et al., 2016) notes that business models can also be classified according to the business system level that they belong to: industry, company, business activity unit or a product. According Batocchio et al., (2016), although strategy and business models differ, there are also similarities: the way business models are developed bears resemblance to the way strategies are developed. Both strategy and business models contain some committed choices made by management, and business models are reflections of the realized strategy (Casadesus-Masanell and Ricart, 2010). Strategic choices determine the boundaries and shape of a business model (like setting the rules of a game). In management way of thinking, strategic choice is selection of the best strategic option that helps achieve organization's objectives. Relevant strategic options are evaluated their suitability, acceptability and feasibility. The evaluated strategic options are ranked in order of their potential to achieve objective. Such options should allow businesses to maintain or create sustainable strategic advantage. The strategic choices are made from among the ranked alternative. Strategic choices can also be viewed as a trade - off between competitive advantage and competitive scope, and between generalists and specialists. In today’s dynamic environment, strategic choices cross traditional boundaries and extend beyond short-term merchandising and operational decisions. Examination of these choices has resulted in many worthwhile strategy analyses of which only a few are discussed below (Leleur, 2012): as a trade-off between price and product assortment; as two components of competitive advantage, one led by productivity improvement, and one led by marketing decisions; as identified related or domestic choices and new or international choices; as area of strategic competition. The interrelated nature of strategic choices lends itself to new combinations and configurations, but sometimes conflicting and overlapping nature of strategic choices complicates decision making in business activities. Incoming tourism is defined as a value creation system that includes totality of relations and links between the subjects of tourism sector, these subjects unite into the cooperation formations of respective form, and create distinctive tourism products in different geographic regions. In order to conduct more thorough structural analysis of the incoming tourism and reveal the exiting strategic choices, the author used business model structure suggested by Osterwalder and Pigneur (2010). It is worth to note that strategic choices are deemed to be the most appropriate solutions (alternatives) to achieve the strategic objectives that also define certain "limits" of a business model and affect the interaction of their elements in the incoming tourism. Strategic choices are related to alternatives of choices in all structural elements of the business model (Casadesus-Masanelland and Ricart, 2010). Based on the authors Bethapudi (2013), Buhalis and Foerste (2015), Cooper et al. (2008), Granados et al. (2012), Laffargue (2009), Ping (2010), Zhang (2009) *strategic choices in the* *incoming tourism: Structural element of a business model - Essential partnerships* (Essential partnerships are formed for two reasons: available advantages and strengthening of the position in the market or the elimination of faults and failures. Aforesaid reasons are deemed the main strategic choices in partnerships.); *Essential resources and skills* (The most often the strategic choice between physical and human, intellectual resources appear.*); Essential activities* (During cooperation, tourism companies usually are faced with a strategic choice between marketing, sales network management and product development, as well as the assurance of its quality.); *Product/value offer* (During the creation of the value offer in the incoming tourism, strategic choices usually are between the price, accessibility, cost-effectiveness, and mass scale of the value offer and the customised, exceptional, and unique value offer.); *Consumer segment* (The most often occurring strategic choice between mass consumer and increase of sales volume, and the individual consumer, oriented towards the exceptional value of the product, when creating and providing the product of the incoming tourism.); *Distribution of a tourism product* (The strategic choices between indirect and direct sales channels, the IT channels and the direct personal channels become evident.); *Relations with clients* (Relations can be from personal to automated and formed because of various motives: attraction of new clients, keeping of old ones, increase of sales, etc. Strategic selection between non-repeating transactions and repeating transactions becomes evident.); *Costs* (Tourism business companies that work with the incoming tourism usually employ two cost orientation strategies: maximum cost minimisation or cost investment into the maintenance of product quality, and these strategies are considered as strategic choices.); *Income flow* (A strategic choice between the emphasis on the income from the direct activity and the emphasis on the income generation from side or auxiliary activities become evident.) Therefore, by employing the structural decomposition of the business model, eleven strategic choices that exist in the incoming tourism, will be identified.

3. Research methodology: phenomenological study of a case with partially structured survey

While seeking the set objective, the most expedient thing to do was to follow the strategy of the phenomenological case study (Yin, 2009). In this case it is intended to research strategic choices that exist in the business models of a single travel organizer and its four partners in Klaipėda city in Lithuania. Strategic choices that exist in the business models of travel organisers and his partners, are deemed intrinsic, interpretative, single case study with a unit of analysis, in a single and the same context, purposefully selected from the general set of the business models of the incoming tourism business units. Internal research single case study with several units of analysis was selected because it allows us to take on a holistic view and understand the business model and strategic choices in-depth (Lueg et al., 2016). First the research tasks that helped to fulfill the main objective to the research by phases, were identified – to identify strategical choices in incoming tourism companies business models and explain how these strategical choices are able to help for better its (business models) cooperation. Research tasks: to analyse the business models of the incoming tourism companies by identifying their type and orientation; to determine how strategic choices manifest in the researched business models of the incoming tourism companies and how those strategic choices affect the cooperation of companies. It was decided to employ the method of targeted sample creation – mixed targeted selection, because in the given case, several research sample identification methods were used: selection of critical cases and criterial selection. Therefore top managers of the travel organizer and its four partners (hotel, restaurant and carrier) and the guide of the highest category participated in the research. By using the partially structured expert interview, business models (orientation, type and structure) of travel organiser and its partners were analysed, as well as the strategic choices that exist in them were identified. The tool of partially structured expert interview was prepared according to business model structure, discerned by Osterwalder and Pigneur (2010) and its logic sequence, and the obtained research results are uploaded to the business model imaging tool – "business model canvas". This image is not presented in the article, because it is considered only as an auxiliary instrument for the cognition of the object and the context. Research instrument was comprised of 4 question blocks: 1) block – main information about the company and the respondent, as well as their conformity with the set requirements; 2) block – context questions that help identify the activity sector of the company, and changes of the business model during the last five years; 3) block – identification of business model structural elements; 4) strategic choice measurement matrix that helps to identify the strategic choices that exist in the business models, by employing the technique of the semantic differential with 7 point scale (of opposite characteristics). Grading point sequence from 3 to 1 means the increasing intensity of the strategic choices of the left pole, while the sequence from 3 to 7 means the increasing intensity of the strategic choices of the left pole in the matrix. In order to ensure and justify the *validity of the research*, the researcher himself participated in the research; mechanical data registration and storage measures were used; as well as fact adjustment. *The reliability of the performed research* is based on the instrument that relies on the research technique that was prepared in advance, as well as on the properly collected and analysed research data. The research was performed based on the principle of free will, equality, and information. Anonymity of the research subjects and confidentiality of the received information was ensured without divulging their identity, and received (non-processed) information will not be accessible to any body else, except for research subjects. Obtained data were analysed and compared according to two approaches: Quasi-statistical and Modeling approach, and were presented by employing the structural and interpretive types of the data analysis. For the presentation of the research data a linear-analytical method was chosen (Runeson et al., 2012).

4. Reserach results

During the research business models of one travel organiser – TO and its four partners (accommodation company – AC, catering company – CC, carrier company – CrC and information providing guide – IPG) were analysed and the strategic choices that exist in them were identified. An integrated case of incoming tourism in the Klaipėda city, reflects the incoming tourism in Lithuania, because it includes the mandatory members of the system. The results of this research phase showed that business models of TO and all partners that it investigated are open, of one or two stages, main direction of the activity is business (services) for consumer, models, and the novelty thereof is classified as average. After the performance of the business company model research, the author of the article *present the comparison of the business model element expression*. This comparison shows the similarity or difference of the business models of the analysed companies.

When comparing the elemental expression of the business models of incoming tourism companies, it can be noted that similarity manifested in: relations with consumers, and business model elements of service provision process, service consumer segment, and essential partnerships. Difference manifested in the business model elements of essential activities, value offer, essential resources and skills, as well as cost and income. The strategic choices that exist in the business models of the researched companies became evident as well (Tab. 1).

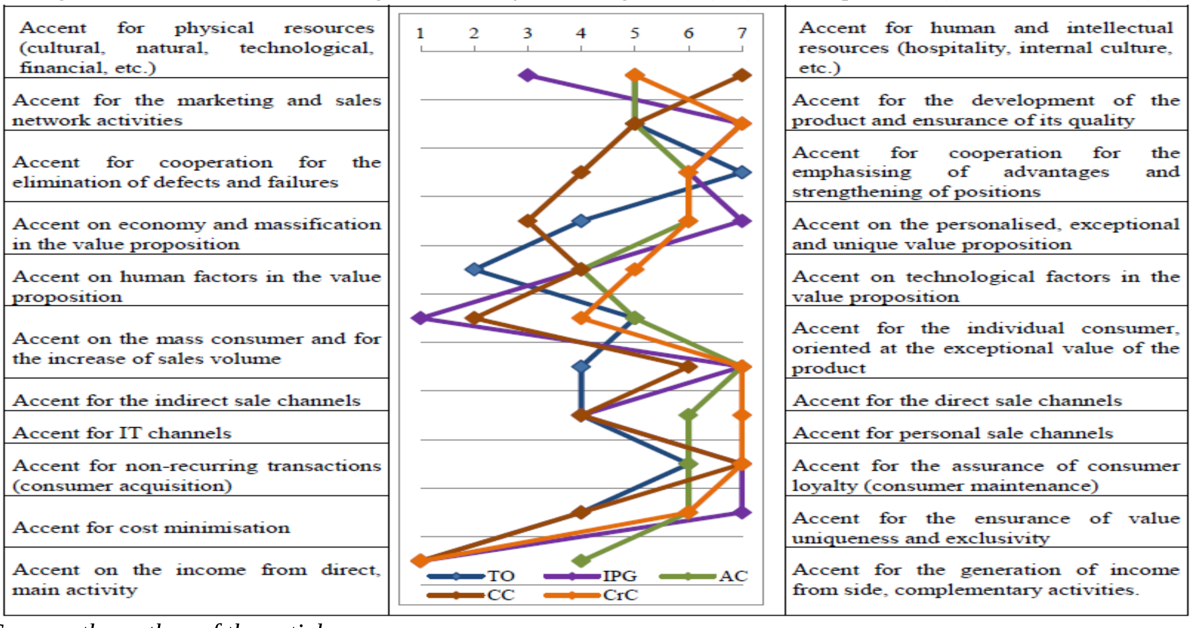
Table 1: Strategic choices in the incoming tourism

BM	Expression of strategic choices in the business models of researched companies
Travel organizer	Strongly expressed are these: human, intellectual resources; product development and assurance of its quality; cooperation for advantage highlighting and strengthening of positions; personal sales channels and assurance of loyal customers, as well as income from direct main activity.
Hotel	Strongly expressed are these: human and intellectual resources; product development and ensurance of its quality; customised, exceptional, unique value offer; cooperation in order to highlight the advantages and strengthen the positions; direct and personal sales channels; ensurance of consumer loyalty and exclusivity of value by allocating more funds.
Restaurant	All strategic choices of the right side of the figure 1 are expressed strongly in the value offer, except for the human and technical factors, and the emphasis on the income from the direct, main and additional activities.
Carrier	All strategic choices of the right side of the figure 1 are expressed strongly in the value offer, except for the emphasis on a mass consumer, the increase of the sales volume and an individual consumer with the presentation of the exceptional product value for him.
Guide	Strongly expressed strategic choices: product development and maintenance of its quality; cooperation for advantage highlighting and strengthening of positions; customised, exceptional and unique value offer; individual consumer, personal and direct sales channel.

Source: based on the authors, who are presented in the table

After summarising strategic choices that exist in the business models of the investigated companies, it can be stated that dominating strategic choices are related to: the creation of the product and the ensurance of its quality, highlighting of its advantages, ensurance of the human factor domination, direct personal sales; ensurance of consumer loyalty and the income from the main activity. For more information see Fig. 1.

Figure 1: Business model strategic choices of travel organiser (TO) and its partners (AC, CC, CrC, IPG)



Source: the author of the article

After summarising strategic choices that exist in the business models of the investigated companies, it can be stated that dominating strategic choices are related to: the creation of the product and the ensurance of its quality, highlighting of its advantages, ensurance of the human factor domination, direct personal sales; ensurance of consumer loyalty and the income from the main activity. During the comparison of the researched business model expression data with the data of the strategic choices, their direct match and dependency is noted. As an example an element of the essential partnerships can be presented, it is maintained in the business models that were studied, by highlighting and strengthening the advantages of the companies, it is also reflected in the evaluation of the strategic choices.

5. Conclusion

In management way of thinking, strategic choice is selection of the best strategic option that helps achieve organization's objectives. Relevant strategic options are evaluated their suitability, acceptability and feasibility. The evaluated strategic options are ranked in order of their potential to achieve objective. The strategic choice is made from among the ranked alternative. 11 strategic choices that exist in the certain elements of the business model were identified and empirically studied in the article. After summarising research data about the strategic choices that exist in the business models of the investigated companies, it can be stated that dominating strategic choices are related to: the creation of the product and the ensurance of its quality, highlighting of its advantages, ensurance of the human factor domination, direct personal sales; ensurance of consumer loyalty and the income from the main activity. Empiric research revealed that business models of the travel organizer and its partners are open, of one or two stages, the main direction of the activity is business (services) for consumer, models, and their novelty is classified as average. After the comparison of the expression of the business model elements, it is evident that their similarity manifested in the following elements of the business model: the relations with consumers, service provision, service consumer segment, and the essential partnerships. Difference manifested in the business model elements of essential activities, value offer, essential resources and skills, as well as cost and income. Author recognize that during the comparison of the information of the expression of the business models that were studied with the information of the strategic choices, their complete direct match and dependency is noted. Therefore it can be assumed that the strategic choices of the incoming tourism company business models are directly related to the expression of the business models and directly affects the complementarity of business models.

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INTERCULTURAL COMPETENCE OF TOURISM GRADUATES – PRECONDITION OF EMPLOYABILITY IN THE GLOBAL WORLD

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Abstract. Global interconnectedness brings structural changes in the environment in which destinations and tourism businesses work with specific impacts on their competitiveness. Tourism is a labor-intensive sector employing one out of every ten people. Globalization has increased competition in tourism markets, and the industry realizes that human resources development become one of the most critical to the success of tourism in many markets. The higher education in tourism should equip graduates with the necessary skills for a global tourism market as employability is regarded as a critical performance indicator for higher education institutions. The paper focuses on the tourism sector requirements regarding the intercultural competence of tourism graduates. The study aims to identify the importance of intercultural competence of graduates in tourism about their employability. First, intercultural competence and its components were determined. The analysis and data represented in this paper are based on primary and secondary research. The study included a review of recent literature and reports on tourism the graduate's employment, and the tourism sector, in general. Then, qualitative research was conducted among representatives of the tourism sector. The interviewees were selected by a purposeful sampling using the-the snowball sampling method. The study disclosed the most required components of graduates´ multicultural competence in the tourism sector. The results show that employers call for the different level of intercultural competence of bachelor and master graduates.

Keywords: globalization, intercultural competence, employability, tourism, higher education institution

JEL Classification: F66, J21, Z3

1. Introduction

Tourism is heavily influenced by globalization. Economic growth in many developing countries, political liberalization, changes in the efficiency and cost of transport, along with rising living standards, added a new dynamic to the international tourism. On the other hand, tourism itself also affects the process of globalization in particular by the rapid expansion of new destinations, the emergence of new needs and new markets. Tourism is considered as one of most transnational economic activities in the world. It is a labor-intensive business capable of generating growth and employment, with a multiplier effect on many other sectors while contributing to the development and economic and social integration. People are critical assets within the tourism sector for sustaining and enhancing competitiveness and quality.

Employability is regarded as a critical performance indicator for higher education institutions as students want a high probability of employability and employers to want employees with a high level of training (OECD, 2013).

The numbers of university graduates and the current economic climate have meant that a degree is no longer a guarantee of employment. The highly competitive environment in the tourism market resulted in the need for the graduates with clear evidence of job-specific competencies in addition to high level of professional knowledge. Intercultural competence is in the tourism sector a necessary precondition for an adequate, successful, and mutually satisfactory communication, and collaboration between people from different cultures. By the effects of globalization, it is essential greatly enhance the intercultural competence of graduates in tourism. This need is compounded by the cross-linking of the global tourism sector.

2. Intercultural competence and employability in tourism

Tourism as one of the largest and fastest growing sectors in the world has a positive impact on economic growth and employment. It is widely labor intensive. Tourism supported 292 million jobs (1 in 10 jobs) in 2016, and it supports 23% of new jobs created. The World Travel and Tourism Council (WTTC) predict that by 2027 the tourism sector will be supporting over 380 million jobs and that the direct contribution to GDP will grow at an average of 3.9% per year over the next decade (WTTC A, 2017).

The WTTC expects that the tourism sector will outperform the global economy throughout the following ten years and “increase its share of global economic activity across each of GDP, employment, exports and investment” and additionally will also “outpace a range of the other leading global economic sectors, including communications, financial and business services, manufacturing and retail and distribution” (WTTC, 2017, A, p. 4).

Cultural differences within a diverse, multicultural community as a result of increased international tourism may give rise to misunderstandings or communication breakdown, clashes, and anxiety (Gardner, 1962; Gu, 2009; Hammer et al., 2003; Kim, 2008; Hammer, 2011). These characteristics indicate that increased importance should be placed on intercultural competence in the preparation of tourism graduates.

Yorke (2004) defines employability as a set of achievements, understanding, skills, and personal attributes that enable graduates to get a job and be successful in their chosen occupations which benefits them, the workforce, the community and the economy. Employability can also be defined as a combination of factors that enable individuals to get a job or stay employed and progress in their careers. This concept includes professional knowledge, skills, and competencies, attitudes and motivation of individuals.

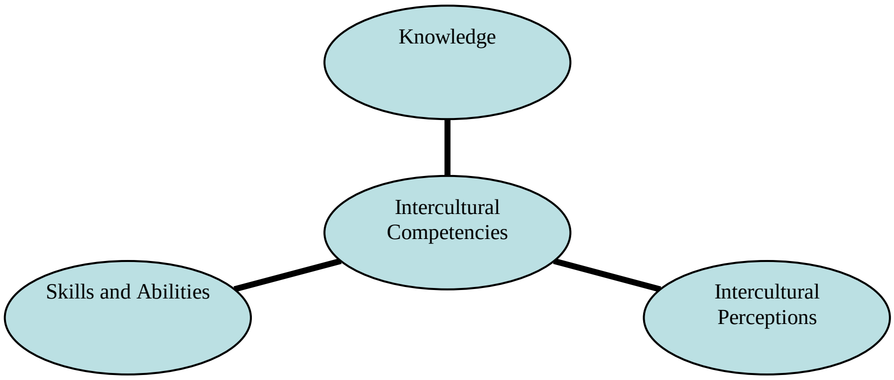
Competencies are perceived as acquired attitudes, knowledge and skills of the individual, which are essential to the job (Arasaratnam, 2005; CEDEFOP, 2014; EC, 2008).

In the multicultural environment of the global tourism market, there is necessary to focus also on the intercultural competence of employees. Intercultural competence is essential for leaders and staff in the tourism sector.

Acquiring intercultural competence is a process of attaining a culture-specific and a culture-general knowledge, skills, and attitudes to effective communication and interaction with individuals from other cultures (Martin, 1989; Morley & Cerdin, 2010). In general, intercultural competence can be summed up as the ability to work and interact across cultures (Hall, 1959; Hofstede, 2001; Trompenaars, 1994).

According to some authors, the fundamental model of intercultural competence can be considered the three-side model (Bennett, 2004; Graf, 2004; Deardorff, 2009; Reisinger, 2009). The three components include the cognitive (knowledge), affective (intercultural perceptions), and the behavioral (skills and abilities) component of the intercultural competence (Fig. 1).

Figure 1: Intercultural competencies



Source: author

The cognitive component represents the knowledge of different cultures. An affective component includes the individual's prerequisites, his ability to perceive his surroundings and its behavior sensibly. The behavioral component links the previous two, to demonstrate the acquired knowledge and skills in specific intercultural situations. Based on this model Graf and Mertesacker´s (2009) identified eight dimensions of intercultural competence: (1) intercultural perceptiveness; (2) open-mindedness; (3) flexibility; (4) knowledge of foreign language; (5) non-verbal communication ability; (6) intercultural awareness; (7) ability to change the view; (8) assertiveness.

3. Methodology

The paper aims to identify the importance of intercultural competence of graduates in tourism about their employability. According to the objective of the study, the following research questions were formulated. Q1: Is intercultural competence of tourism graduates essential for their employability? Q2: Does the tourism sectors´ requirement for intercultural competences of bachelor and masters graduates differ?

The analysis and data represented in this paper are based on primary and secondary research. The study included a review of recent literature and reports on tourism graduates employment, and the tourism sector, along with face-to-face interviews in a one-to-one setting with tourism stakeholders in the Czech Republic. The primary qualitative research aimed to understand the importance of intercultural competence of tourism graduates for strengthening their employability. The intercultural competencies were selected based on Graft and Mertesacker´s (2009). The interviewed stakeholders were asked to sort the competencies by importance on the ordinal scale, as it is a stricter assessment than just positioning on the scale. The interviews were conducted from December 2016 to March 2017.

The respondents were selected by a purposeful sampling using the snowball sampling method. Specific selection criteria as (1) duration of employment in destination management organization or tourism business minimum five years, (2) and holding management position were determinate to ensure the sample could answer the questions. Opinions of thirty representatives of the tourism sector constitute the data used in this study. To provide a broad sample and diverse group of respondents, hotels, travel agencies and tour operators, event agencies, destination management organizations, tourist information agencies, spas, and adventure companies were included in the study. Given the qualitative nature of the information gathered and the size of the sample, the survey responses were not amenable to statistical analysis. paper aims to identify the importance of intercultural competence of graduates in tourism about their employability. According to the objective of the paper, the following research questions were formulated. Q1: Is intercultural competence of tourism graduates essential for their employability? Q2: Does the tourism sectors´ requirement for intercultural competences of bachelor and masters graduates differ?

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4. Results and discussion

Tourism has an important place in the economy of the Czech Republic. WTTC (2017, B) reports that the direct contribution of tourism to GDP in the Czech Republic was US$4.9 billion (2.5% of total GDP) in 2016 while the overall contribution of the sector was US$15.0 billion (7.8% of GDP). The sector supported directly 218,500 jobs (4.3% of total employment) what means in total 475,500 jobs (9.3% of full employment) including jobs supported indirectly. By the relative importance of tourism´s contribution to GDP, the Czech Republic was ranked to 54th (absolute) and 120th (relative size) place out of 185 countries in

2016. WTTC predicts for the Czech Republic 2.2% annual growth in direct tourism contribution to GDP, 1.8% yearly growth in total contribution to GDP, and 0.5% annual growth in employment by 2027.

Based on the results of the Czech Statistical Office (CSO, 2017) employees in tourism sector accounted for 81.9%, and self-employed 18.4% while the self-employment has a declining tendency since 2009. Of the total number of employees' high school graduates accounted for 83.3% followed by higher education graduates (10.4%). The number of employees in both categories is slightly rising since 2014.

CEDEFOP (2014) found that in the Czech Republic, competence deficiencies tend to be more accentuated than in the rest of the EU member states. There is a need to anticipate competence requirements and identify competency gaps that may emerge in the labor market. Studies provided by some authors (Llanes & Muñoz, 2009; Reynolds-Case, 2013) indicate that employers perceive graduates who participated in international mobility program as those with enhanced intercultural competence. Nevertheless, researchers worldwide still identify a gap between the need for the sector and the graduates´ intercultural competences. The research provided by tourism sector stakeholders in the Czech Republic shows very similar results with some differences between requirements for bachelor and master graduates (Kiráľová, Malec, 2014).

The interviewed tourism stakeholders were asked to pinpoint the importance of the competencies on five scaled ordinal scale for both, the bachelors´ and the masters' graduates. The most often scaled competency for bachelor graduates was the knowledge of foreign language, followed by communication ability, intercultural perceptiveness, flexibility, and tolerance. The most frequented competencies for the master graduates were intercultural perceptiveness, knowledge of foreign language, communication ability, flexibility, and open-mindedness.

The study also disclosed that tourism stakeholders require from both levels of graduates knowledge of the primary source markets culture, cultural self-awareness, ability to interact efficiently and appropriately in intercultural situations, respect and value other cultures, cultural diversity, cultural sensitivity and intercultural empathy.

Knowledge of at least one foreign language, a motivation for communicating with people from other cultures and curiosity to learn more about self and others, together with an ability to exchange information, verbal and non-verbal symbols with people from the different culture was stressed for bachelor graduates.

Ability to speak of two or more foreign languages, ability to interpret a document or event from another culture to one's culture, and experience from multicultural environment or participation in international mobility programs together with tolerance to ambiguity, uncertainty, and cultural sensitivity was more emphasized for master graduates.

5. Conclusion

Employability is regarded as a critical performance indicator for higher education institutions as students want a high probability of employability and employers to want employees with a high level of knowledge, skills, and competence. Intercultural competence is an integral part of the requirements of the tourism sector. About changes in visitor behavior in tourism, the effects of globalization appear to be a necessary, significantly enhance the intercultural competence of tourism graduates.

The results show that employers call for different intercultural competence regarding the level of tourism degree. This fact must be taken into account by the higher education institutions when compiling new courses and innovating the existing ones. Higher education institutions should create a methodology for the development of intercultural competence to enhance the employability of graduates. The theory must be extended with practical skills that graduates can acquire through participation in international mobility programs abroad or during training in companies with multicultural clientele and multicultural staff.

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INTERNATIONAL TRENDS AND OPPORTUNITIES OF DEVELOPMENT OF SMALL ENTERPRISES OF POLYMER INDUSTRY

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Abstract. The report focuses on current state, trends and problems of development of polymer industry with emphasis to small business segment. The audience will be acquainted with analyse and base trends of international and Russian market of petroleum and processing industry as well as with polymer industry market. The main interest to this subject is based on obvious opportunities of growth and development of the global polymer industry. Small enterprises considered as the main object of investment on world market. The significant raw material potential of Russia compared with the current low production indicators as opportunity to increase the share of the international polymer production. The progressive growth of global polymer production and the outstripping growth of demand on the domestic Russian market. All this reasons became the huge field for analysis and synthesis of all factors and for research of trend and opportunities on it. The main purpose of research is to provide economic and strategic growth of Russian polymer industry on the world market. And also to find the ways and directions for the development of small enterprises on the domestic and international markets through the use of the hydrocarbon production potential in the Russian Federation.

Keywords: polymer industry, small enterprises, development of production

JEL Classification: L11, L15, L65

1. Introduction

The small business is the base for development of national economic in world practices, including industrial field. The small industrial enterprises have higher level of flexibility and mobility then large enterprises that make them more adaptive in high-speed changing environment (Boso et al., 2017). Besides this form of business is understandable to foreign investors in case of existing potential and creates the preconditions for attraction of foreign capital. The same time some challenges and limits for development of small industrial enterprises exist in Russia, most of them related to operation conditions (McGovern, 2006).

Current geopolitical conditions create new prospects for improving positions for Russian enterprises on the domestic market (Ruskin et al., 2016). The government policy of import substitution gives the possibility of embedding of small enterprises to technological chains of global companies (Aksoy, 2017).

At the same time, an innovative component of economic activity, in particular, the development and / or updating of technologies and products, is important (Clegg et al., 2017). This is required investments to development of production capacities, fixed assets and intellectual capital. The prerequisites for innovation in the polymer industry concern both global trends and specific trends of plastic industry. It's determines main trends of development of polymer industry and its enterprises on global and local markets (Lee et al., 2017).

The polymer industry is highly technological, its production processes take place in hazardous conditions, waste can pose a threat to the environment. Therefore, social and environmental components are important for this sector, which is often a criterion for choosing technology and location of the enterprise. This is reflects the amount of necessary investment and the capacity of enterprises to attract them. Thus, with regard to the polymer industry, it is appropriate to talk about a strategy for sustainable development (Sharma, 2017).

In determining the main trends in the development of the industry, it is important to assess the part of state participation that can be carried out in the following areas: creating favorable conditions for the development of small business, stimulating innovation, environmental regulation of the industry.

The listed actualizes research of perspective directions of development of small enterprises in the polymer industry

Purpose of the research. Determination of the prospects for the development of small industrial enterprises in the Russian polymer industry, taking into account current trends in global and local markets

Methodology of the research. The basis for the study was the theory of enterprise development in the institutional, technological and strategic aspects. Statistical methods of data processing are used to determine the main directions of industrial development. To generalize the results of the study and to formulate the conclusions, the methods of analysis and synthesis

Results. The authors conducted research of the world and Russian markets, revealed the features of the development of the polymer industry, global and national trends. The options of strategic choice are analyzed and the conditions and prospects for the development of small industrial enterprises in the polymer industry are determined.

Conclusions. Proposed the variants of the strategy for the sustainable development of a small industrial enterprise of the polymer industry in global and local markets, taking into account resource, technological, ecological, social, market, institutional features and criteria.

2. Methods

The problems of the development of small industrial enterprises are actively discussed in the scientific literature and practical activities Most researchers connect the possible prospects for the development of small industrial enterprises with the active role of the state in the economy, which implies a vertical industrial policy. In our opinion, the role of the state should be passive and consist in creating conditions for the development of small business in industry, i.e. industrial policy in this case should be horizontal. The above determines the appropriateness of using the institutional theory of development. There is a concept of an internationalizing environment, within which factors that link the dynamics of the local entrepreneurial network to the dynamics of the world economy are considered. This environment should have an effective infrastructure, providing quality living conditions. The density of enterprises certified to ISO standards is a quantitative and qualitative indicator of the internationalizing nature of a particular environment (Blandinier, 2005). We consider it necessary to use this concept, since certification by international standards is an important condition for companies to enter international markets. An increasing number of researchers talk about the advisability of developing an economic development strategy based on structurally balanced development of the economy with optimal interaction of all sectors of the real economy, primarily the mineral and raw materials and processing industries. There were proposals on the formation of an integrated resource-processing model (Kimelman, 2012).

The model of integrated complementary functioning of the mineral-raw and industrial-processing sectors is applicable, first of all, in those regions for which the development of the mineral and raw materials base and the creation on its basis of an industrial-technological mineral and raw materials complex are priorities for the development of the economy (Vetrova & Lapochkina, 2016). Such a concept is applicable to Russia, since there are many such regions, and there is a similar experience in the history of the national economy. Therefore, a resource-processing development strategy based on the region's high production potential, the richness of its mineral resources, the availability of various mineral deposits, including man-made resources, can be implemented everywhere, efficient extraction and processing of which can be used not only for the neo-industrialization of the Russian economy, but also for mutually beneficial international cooperation with countries, poor mineral raw materials. The above applies to the polymer industry. Thus, the use of the strategic theory of development, in particular, the strategy of sustainable development, is justified (Tatarkin & Kotlyarova, 2013), (Tatarkin, 2016). The raw materials for the production of polymers are hydrocarbons, the sale of which in the world market is regulated, the prospects for the development of alternative energy increase the threat of demand reduction, and the products of the polymer industry are in demand in the domestic and world markets. This creates prospects for implementing a resource-processing strategy for the development of the polymer industry in the global market with the participation of Russian companies. This will expand the market for Russian industrial enterprises, increase the added value of the polymer industry in GRP and GDP. The above justifies the need to implement an innovative model for the development of small industrial enterprises in the polymer industry, more of a technological nature based on an integration strategy.

3. Results

The polymer industry in the global economy plays a significant role, since its products are important for the production of most industries - from packaging in retail trade to components of complex technical products. Despite the stagnation of individual sectors of the economy, its role only increases, because there are new ways of using polymers and new markets. On the other hand, the very production and production of the polymer industry poses a certain social and environmental hazard. This implies: first of all, the use of modern technologies to prevent negative impacts; as well as attention from regulators. This situation determines the importance of the institutional environment for the operation of industry enterprises, the social and environmental consequences of their activities. The raw material for the production of polymer products is oil and gas, and the process of obtaining finished products for the mass consumption markets is multi-stage. The technological chain consists of the following links: oil and gas production; production of polymers, rubbers, products of organic synthesis; production of products for all industries. In addition, research and design organizations operate in this market, educational institutions train specialists for the industry, etc. Thus, the polymer industry employs various types of activities, forms of ownership and size. At the same time, the high level of technological variability in the industry, expanding the boundaries of existing markets, contributes to the creation of new markets. This helps to increase the potential for the development of existing and / or emergence of new companies in the market in particular, small, more flexible and adaptive, capable of quickly mastering markets. This determines the importance of small business in the polymer industry, on the one hand, and the importance of investment attractiveness of projects in the industry. Often the links of the technological chain of production of polymeric products go beyond the national framework, which is associated with sources of primary raw materials, transportation methods, locations of production capacities, and the influence of regulators. This determines the importance of researching the trends in the development of the polymer industry in a global context. The research of the specifics of the development of the polymer industry in the global context made it possible to single out the following main features:

- the impact of the processes of globalization and integration on the location, functioning and development of enterprises in the polymer industry;
- high-tech and, therefore, innovative character of the industry (the research of Russian companies revealed that the main results of innovation activity - reduction of energy costs and reduction of environmental pollution, closely correlate with the costs of acquiring machinery and equipment for technological innovation (Kvasyuk, 2014);
- variability of technologies, products and markets in the industry;
- the need to regularly update the fixed assets and capital of enterprises, and, consequently, the need for investment;
- the unstable nature of the development of commodity markets for the polymer industry;
- high level of consumption of the industry's products in foreign and domestic markets;
- the full production cycle of the industry is long, which implies the expansion of private traders of the technological chain and determines the potential of small industrial enterprises;
- presence of dangerous and harmful factors of production;
- requirements of environmental safety of production.

These features predetermine as the main trends - innovative development of enterprises in the industry and the potential for the development of small industrial enterprises in the polymer industry, taking into account technological, environmental, resource aspects. The prerequisites for innovative processes in the polymer industry can be defined in two types: general economic and industry. The main economic prerequisites for the innovation process in the polymer industry include: principles, resources, the conditions of production activity, infrastructure, organizational culture of economic entities. These prerequisites can change depending on global, country and regional factors, forms of integration and internationalization of business, etc. As the sectoral factors of innovative development, it should be noted: high variability of technologies, products, markets, environmental aspects. These factors can significantly change and this increases the risks for market participants. In these conditions, small businesses are most consistent in terms of: adaptability, mobility, flexibility, which determines the object of research - a small industrial enterprise.In the polymer industry of Russia, there are potential opportunities for growth and development, formed by the needs of the market. Interest in this industry is caused by the positive dynamics of the polymer production and processing market. This situation is caused by the following reasons:

- Excess of demand for products of processing of the polymer industry over supply in the domestic market. The volume of consumption of polymer products on the Russian market is significantly behind the world. For example, in Russia for 1 thousand people there are 50m2 of polymer thermal insulation, in the USA - 260, in Sweden - 360. In a modern car, about 200 kg of polymer materials are used. The localization of the car industry in Russia has reached 70%, but the assembly is carried out mainly from imported parts. The Russian market for polymer consumption is growing despite even the crisis phenomena, largely because polymers replace the use of traditional forms of products.
- The reduction in the import of products by retailers, and as a consequence, the need for domestic products. According to the Federal Statistics Service, the volume of imports of non-food products fell from 44 to 38% (2013-2016).
- The growth in demand for polymer materials in the domestic market. For comparison, the total market volume of polymer materials in Russia is 43% less than the market of polymer materials in Europe. Possessing a significant raw material potential and occupying the second place in the world for oil and gas production, Russia has low positions in the production of petrochemical products of basic consumption. In the international market of polymers, Russia produces only about 2% of the total output of polypropylene and 1.5% of polyethylene[19].

If you analyze the annual growth rates of domestic production, you can trace the dynamics of active development: the rate of growth over the past 15 years has been about 7% versus 3% worldwide. Despite the obvious growth in the industry, we should expect a much higher rate of this growth. The reasons for his absence are as follows: (i) low innovative activity and competitiveness of Russian industrial enterprises Tkachenko and all, 2016); (ii) the orientation of extractive industries on foreign sales markets; (iii) unfavorable conditions for the development of small-scale industrial business in Russia; (iv) utilization of production capacities in the industry: increased load increases competition, in addition, domestic demand

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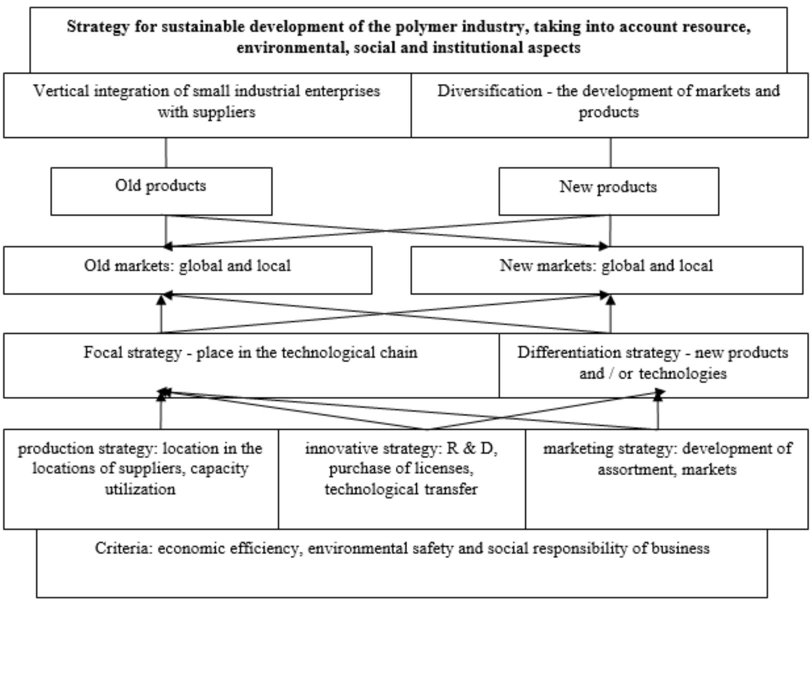
may lag behind the supply, and in foreign markets, high competition with world leaders; (v) remoteness of raw materials from the consumption centers of the industry; (vi) all projects in the polymer industry are long-term, and enterprises are limited in long-term financial resources for development; (vii) insufficient experience in planning and organizing business in this area, taking into account the specifics of production and emerging risks. In these conditions, it is necessary to develop domestic consumption markets, and then, having acquired the competence, to enter foreign markets. In the polymer industry, producers can be divided into two groups: large-tonnage and low-tonnage (Inventra estimates more than 6,000 small and medium-sized enterprises). Since it is difficult for small companies to develop demand for the final petrochemical products under current conditions, we believe that for companies producing large-tonnage polymers it is promising to independently form and expand the potential of the domestic market. At the same time, the creation of zones for the development of low-tonnage petrochemicals near the production of large-tonnage polymers. It becomes obvious that in this sphere it is the small industrial enterprises that are able to quickly adapt to the market. To accelerate these processes, the joint efforts of the participants of the entire technological chain, including regulators, scientific and educational organizations, are needed. Thus, it is necessary to adjust the strategies for the development of small enterprises in the polymer industry, taking into account global trends, social, environmental, technological, market and institutional factors.

4. Conclusion

As a strategy for the development of small industrial enterprises in the polymer industry, in the current global trends, a sustainable development strategy is proposed taking into account environmental, technological, institutional, market and social aspects, Fig. 1. Strategies for integration with resource providers and diversification based on technological and market factors are proposed as the main strategies. Criteria for choosing a strategy are: economic efficiency, environmental safety and social responsibility of business.

Figure. 1. The strategy tree of a small industrial enterprise in the polymer industry



Source: author

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THE IMPACT OF THE GLOBAL ECONOMIC CRISIS ON THE HOUSING SECTOR IN POLAND

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Abstract. The economic crisis typically translates into changes in all sectors of national economy, yet the scale of the influence may differ depending on the resilience to fluctuations of a particular branch of the economy. The aim of the paper is to identify the reaction of the housing markets of the Polish regions to negative macroeconomic shocks caused by the global economic crisis dated 2008-2009. The considerations have been embedded in the evolutionary developmental research, and the regional resilience concept has been adopted as a theoretical frame for analyzing the title relationship. The study covers the dynamics of housing development in the Polish regions in the years 2004-2016 by employing time series regression modelling. The results allow the authors to distinguish three separate reaction types of the regional housing markets to recessionary shocks: (1) enhanced path (positive response), (2) inferior path and (3) recession path.

Keywords: global economic crisis, regional housing markets, regional resilience, time series regression, Poland

JEL Classification: R31, R11, O18, C22, C53

1. Introduction

The economic crisis usually affects all branches of the economy in a country, yet the scope of its impact can vary depending on the resistance of a particular sector to fluctuations. The size of housing market shocks depends on the geographical scope of the market, its tenure structure, type of segment under analysis, as well as sources of financing. The relative stability of the housing market over the long term is guaranteed by immanent features of real estates, such as heterogeneity and stability in place. On the other hand, the local nature of a housing market means that on the regional level there may be significant variations in the course, depth, and pace of recovery from periodic recessions being part of severe economic crises.

The aim of the study is to identify the reactions of the housing sector in Polish regions (16 units level NUTS-2) to the negative macroeconomic shocks triggered by the global economic crisis (the so called *subprime* crisis) dated for 2008-2010. The considerations are embedded in the evolutionary developmental research, and the concept of regional resilience is adopted as a theoretical basis for analyzing the title relationship. In this context, regional resilience is seen as the ability of regional housing markets to respond to economic disruptions, reflected by the degree of crisis-driven change in the sector.

In the course of the research the focus is on trajectories of development within the housing sector in Polish regions as well as identification and reaction of the sector to the specific turning point resulting from the economic crisis phenomena that took place at the end of the 1st decade of XXI century. The research is based on the analysis of housing construction dynamics using the rate of dwellings completed per 10 thousand population (as a fixed-based index of dynamics – the year 2004 = 100). The analysis covers the time series 2004-2016.

2. Financial crisis and its impact on the housing market

The modern global economy is characterized by complex connections that generate networks of relationships between regions and countries. Although the phenomenon of domestic and international problem intervening is not new, the characteristic feature of the current situation is the escalation of these phenomena and their growing complexity (Domański, 1998). The excessive growth of the global economic interdependence manifests itself in the international transmission of downturns in business cycles, especially transmitting the financial crises.

The housing sector in the developed countries, due to its size and complex network of links, has a strong influence on the economy. Conversely, financial markets to a great extent shape relationships and business cycles in the modern real estate markets, they can generate speculative bubbles on them and as a consequence induce real estate crises (Huang, 2013). However, due to the local nature of the property markets, at the local or regional level they may thrive despite the economic downturn on the national scale or cut down on the investment activity despite the dynamic development of macroeconomic indicators. Such divergence in the reaction of regional and local real estate markets to economic shocks make them an interesting subject of spatial analyses. The geographic perspective is also necessary for proper understanding of the causes of the crisis, its course and effects (Case, 2000, p. 157; Martin, 2011, p. 588).

The studies on crises on the housing markets contribute to the broader field of research on residential, financial and economic cycles. Literature review proves that the contemporary analyses of periodization and cause-and-effect relationships of crises mainly cover North America, Australia, Japan, and Western Europe. Experts rarely address this issue in relation to the markets of Central and Eastern Europe (e.g. Łaszek et al. 2008; Lis, 2015; Hardy, 2014). Most of the available analyses are conducted on international level and are devoted to comparison of particular countries. Therefore, Martin (2011), when considering the subprime crisis in the context of the glocalization phenomenon, calls for the expansion of research on speculative bubbles and crises at the local and regional level.

One of the most commonly studied areas of research on the subprime crisis is the analysis of transmission paths from source areas and observations of crisis trajectories in individual countries and regions. One of the most important and most comprehensive publications on this subject is the work of Bardhan and others (2012). The authors focus on the trajectory and transmission mechanisms of the recession and the analysis of solutions at the institutional and regulatory level – the solutions developed in response to the deteriorating performance of national economies. The analysis spans the period immediately preceding the crisis, the time of the largest collapse, and the period of slow market recovery until 2011. Case studies confirm that housing markets and mortgage markets in dozens of analyzed countries are without exception sensitive to economic factors, the institutional and regulatory environment, as well as the international economic relations. However, the scale of crisis-induced phenomena depends on the local context of these markets. The local dimension of reactions to fluctuations and shocks is also highlighted by Rueben and Lei (2010) and Martin (2011).

Another important direction of research is addressing the question of how to avoid similar collapses in the future. Authors either focus on improving econometric models for forecasting financial crises (Follain et al. 2011; Bendixen & Hansen, 2013; Laposa & Mueller, 2017) or identifying factors that support early and accurate detection of disturbing phenomena such as speculative bubbles (Grytten 2009).

3. The concepts of economic resilience

The resilience research was developed on the background of the physical, engineering and ecological sciences (Holling, 1973). Much later the concept was adapted for regional and spatial economic analyses.

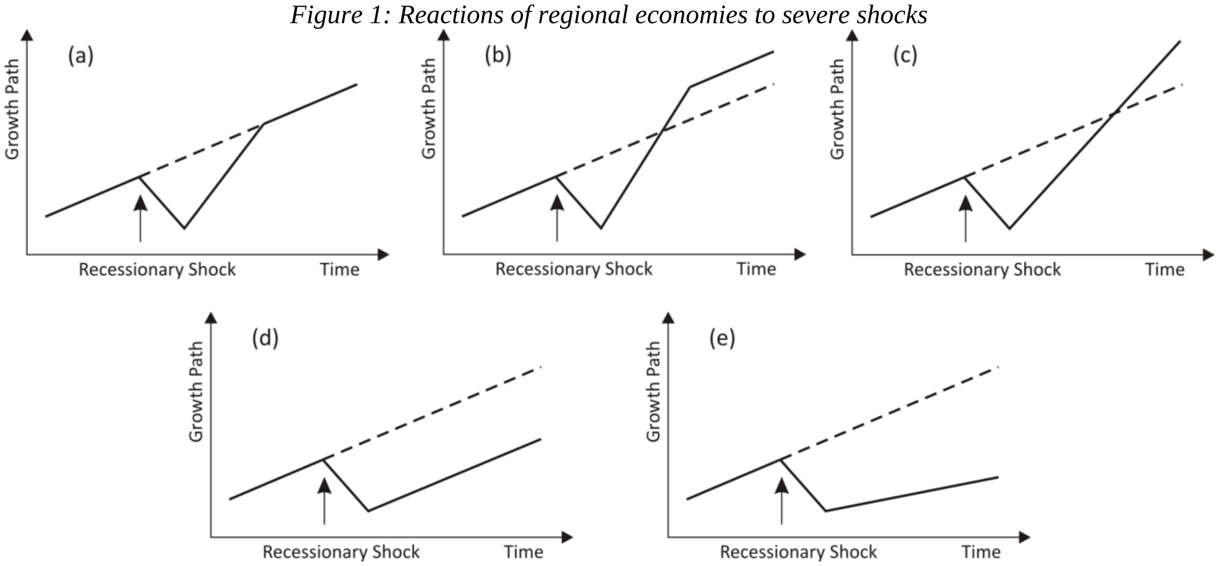
Martin (2012) argues that spatial economists' growing interest in the issue of resilience is the outcome of the evolutionary perspective within economic geography and the application of models developed in other disciplines for the analysis of reaction of spatial economics systems (urban and regional) to exogenous disturbances and perturbations (called shocks) hindering their growth. According to Simmie and Martin (2010, p. 27) such shocks can take form of periodic economic recessions, unpredictable rise of major competitors elsewhere, unexpected plant closures, as well as challenges arising from technological change and the like. Martin (2012) emphasizes that the global economic crisis in the years 2008-2010 has had the greatest impact on the development of the economic resilience research.

In spite of numerous attempts to conceptualize and define the term of regional economic resilience, it still rises concerns. On a general level, it is described as an ability of a region to predict, prepare for, react to and recover from a crisis situation (Foster, 2007). Other definitions equate the term with the systemic property that ensures stability of a system against interference (McGlade et al., 2006).

More detailed interpretations refer to similarities of the concept to resilience researched in the field of physical and ecological sciences, as well as within the complexity theory. In case of physical sciences, the concept of engineering resilience prevails. It is understood as the ability of a system to return to, or resume, its assumed stable equilibrium state following a shock or disturbance. In case of ecological sciences, the focus is on "far from equilibrium" behaviour of a region. It describes the scale of an economic downturn a region can absorb before it is destabilized and moved to another stable position. It is assumed that after exceeding the border of elasticity, the system undergoes changes of the structures and relationships. As a result, the system redirects its equilibrium path (changes its course compared with the pre-existing one). Due to its roots in the ecosystem resilience and stability research, this approach is called ecological resilience. In the third case (the complexity theory), another sphere of resilience is explored. The concept is called adaptive resilience and may be traced back to the complex adaptive systems theory. It focuses on adaptive capability of regions that enables continues adjustment and reorganisation of economic structures and functions in order to minimize the impact of destabilizing disturbances (Pimm, 1984; Holling, 2001; Simmie & Martin, 2010; Boschma, 2015).

Based on the approaches mentioned above, one can distinguish some model reactions of regional economies to severe external shocks (see Fig. 1). In the first reaction type (a) the growth path is recovering from the disturbance caused by the recessionary shock and it is back on the pre-existing trajectory. This situation is identified with returning of a region to its previous steady growth path following the shock. The other types are related to achieving stability in a situation that is far from equilibrium, with positive or negative impact of a recessionary shock on a region’s growth path. The positive impact of a shock on a regional economy can manifest itself in two ways. The regional economy, rebuilding itself after the recession, may return to pre-recession growth rate, yet at a higher level (b) or enter the path of lasting, more dynamic growth (c). Negative impacts of economic shocks occur when a region’s economy fails to resume the previous growth path but achieves the same growth rate on an inferior path (i.e. on a lower level) (d), or undergoes steady decrease both in the growth level and rate (e).

Figure 1: Reactions of regional economies to severe shocks



Source: own elaboration according to Simmie & Martin [2010] and Martin [2012].

4. Research methods

The aim of the research was to distinguish groups of regions where housing markets reacted similarly to recessionary shocks. Contrary to most studies analyzing the real estate market in time and space, this paper does not focus on real estate prices, but the housing market dynamics is determined by changes in dwellings completed. This approach is validated by the thesis that the analyses of housing cycles, including housing crises, should be based on quantitative variables other than price. The focus on quantitative variables refers to the precursory housing studies, where the cyclicality of housing construction is studied using variables such as the number of dwellings completed, the number of dwellings sold, or vacancy rates (Lis, 2015). The analysis begins with identification of changes in the number of dwellings completed per 10 thousand population for each Polish region. The rate is a fixed-based index of dynamics with 2004 as a base year. Excluding former time series from the analysis is due to an anomaly observed in 2003, when there was an exponential increase in the number of dwellings completed (68% increase compared to 2002). Although the buildings (private houses) had been in use long before 2003, the number of declarations grew sharply following the public announcement of massive housing inspections and high penalties for owners lagging behind with declaring the buildings ready for use (Korniłowicz, 2009). This deviation would significantly distort the obtained results and undermine the correctness of the inference on the basis of the research procedure described below. In the next step, the time series are divided into three stages. The first period (here called a pre-recession phase - PR) spans the time until a recessionary shock emerges. It is reflected in a clear change of the growth trajectory in the form of a continuous and significant decrease in the number of dwellings completed. The phase spanning the period between the crush in the regional residential markets and the increase in the number of dwellings completed is a recession phase (RP). The last sub-period is denoted in the paper as a recovery phase (RE). It covers the years after the recession, when the growth paths are in the stage of recovery, yet they experience different scope and dynamics of resumption.

On the basis of the analyzed variable in the pre-recession phase, an ordinary least squares method is used to estimate the linear[20] trend function:

$$y = f(t_{PR}) = b_{PR}t + a_{PR}. \tag{1}$$

Next, the trend is extrapolated on the subsequent time series (between the recessionary shock and the year 2016). This way predicted values are obtained, i.e. the values that would theoretically have occurred in the regional housing market had it not been for the recession. Similarly, the linear trend function is estimated on the basis of the recovery phase data:

$$y = f(t_{RE}) = b_{RE}t + a_{RE}. \tag{2}$$

Finally, coefficients of the estimated trends are compared. This lays ground for developing the typology of Polish regions according to regional housing market resilience to external shocks. The change of slope b (a decrease or increase) is treated as impact of the shock on the growth rate of the analyzed variable (negative or positive respectively).

5. Research results

The survey revealed that the global economic crisis affected the housing sector in all Polish regions, but the recession began in different points of time and spanned periods of different length. In most regions, the downturn appeared already in 2008, but there were also regions where the number of dwellings completed diminished in 2009 (Lower Silesia, Lesser Poland, Masovian and West Pomeranian) and even 2010 (Opole). The crisis in the housing sector lasted until 2010 or 2011. Podlaskie and Świętokrzyskie regions started to recover already in 2009, while it took 3 years for Łódź, Silesian and Warmian-Masurian regions to overcome the crisis. The obtained results showed that the responses of the regional growth paths on the housing markets varied. Negative reactions to the economic disturbances prevailed. The most regional growth paths did not resume the pre-existing level and growth rate of dwellings completed indicator. Only two regional housing markets (Subcarpathian and Świętokrzyskie) recovered from the downturn and assumed an improved growth path (higher growth rate). None of the regional growth paths returned to their pre-existing growth trend following the shock (Tab. 1).

[20] The linear form has been chosen as the best fitted to the empirical data among four tested functions: linear, exponential, logarithmic and power.

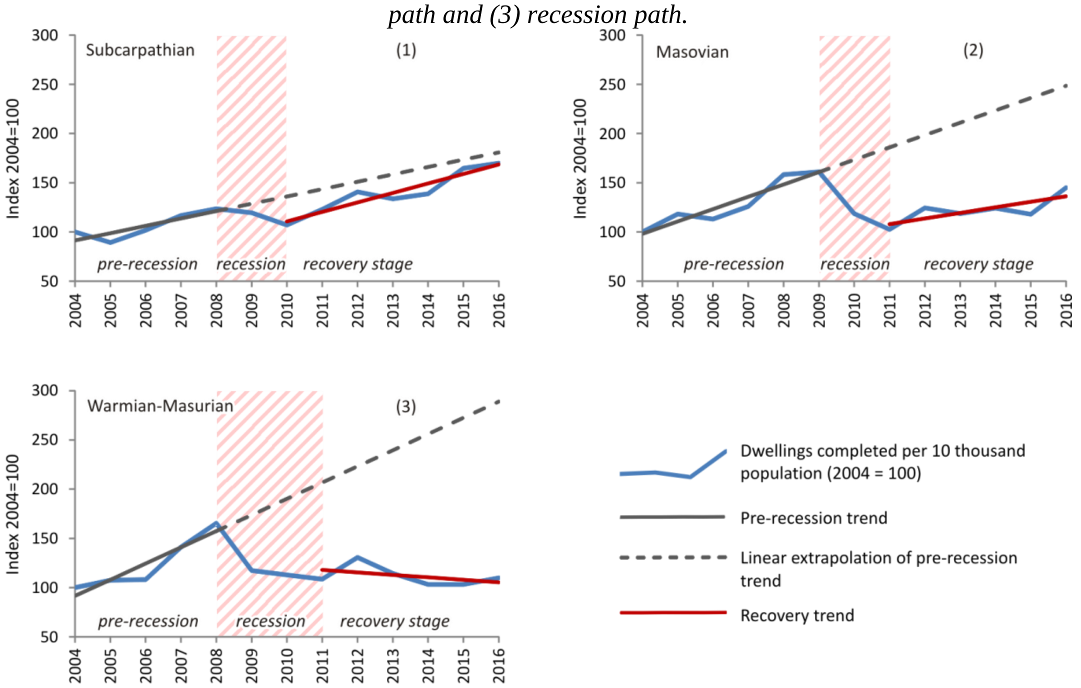
Due to the limited length of the paper, not all regional housing market trajectories have been presented. However, considering reactions of the markets to recessionary shocks, three types of regions have been distinguished: (1) enhanced path (positive response), (2) inferior path and (3) recession path (see Fig. 2).

Table 1: Impact of the global economic crisis on the housing sector in Polish regions – identification of the recession phase and estimation of the slope of the pre-recession and recovery phase trends

Region	**Recession**		**Slope coefficient *b***		**Change**
	Start	**End**	**Pre-recession**	**Recovery**	
Lower Silesia	2009	2011	24,48**	10,86	-13,62
Kuyavian-Pomeranian	2008	2010	15,55**	1,56	-13,99
Lublin	2008	2010	17,29**	2,58	-14,71
Lubusz	2008	2010	12,89*	1,25	-11,63
Łódź	2008	2011	9,81	2,17	-7,64
Lesser Poland	2009	2010	14,35***	6,00**	-8,35
Masovian	2009	2011	12,54***	5,67*	-6,87
Opole	2010	2011	13,84***	1,03	-12,81
Subcarpathian	2008	2010	7,46*	9,66***	2,20
Podlaskie	2008	2009	12,16*	1,75*	-10,42
Pomeranian	2008	2010	15,40***	0,92	-14,48
Silesian	2008	2011	6,93	2,72**	-4,21
Świętokrzyskie	2008	2009	8,21	9,62***	1,40
Warmian-Masurian	2008	2011	16,44**	-2,51	-18,95
Greater Poland	2008	2010	11,24*	3,91**	-7,33
West Pomeranian	2009	2011	9,97***	-0,13	-10,10

*Statistically significant at *0,1, **0,05 and ***0,01 level*
Source:own elaboration on the basis of data obtained from the Polish statistical office

Figure 2: Types of regional housing market growth paths: (1) enhanced path (positive response), (2) inferior path and (3) recession path.



Source: own elaboration

The first type (enhanced path) encompasses the regions whose housing markets obtained new dynamics by achieving higher growth rates of the analyzed variable (Subcarpathian and Świętokrzyskie). In both cases the recovery trajectories do not exceed the extrapolated pre-recession trends until 2016, yet the actual number of dwellings completed in these regions almost equals the theoretical (prognosed) one. Thus it may be assumed that the exceeding is bound to occur soon. The most common reaction of the regional housing markets to the economic turbulence are both a decrease in growth rate and its level. This type, called the inferior path, is identified in as many as 12 out of 16 Polish regions (Lower Silesia, Kuyavian-Pomeranian, Lublin, Lubusz, Łódź, Lesser Poland, Masovian, Opole, Podlaskie, Pomeranian, Silesian and Greater Poland). Despite the lowered growth rate of dwellings completed in these regions, the post-recession trend boasts positive slope. The situation is reverse in the third type (recession path) including two regions (Warmian-Masurian and West Pomeranian). In these regions, housing markets not only fail to resume the former trajectories, but their current growth trends are of negative slope.

6. Conclusion

The research procedure enabled the authors to validate the statement that the global economic crisis of 2008-2010 had different course and impact on the regional housing markets in Poland. The obtained results allowed to distinguish three separate reaction types of the regional housing markets to recessionary shocks. Most of the regional growth paths based on dwellings completed indicator lost their pre-recession growth rate. It is noteworthy that in some of them the crisis lasted until the end of the analysis period, i.e. 2016. Only in two regions a new, more dynamic trajectory of housing market growth was observed. The presented results are part of a wider ongoing research project. The remainder of the study is planned to focus on measuring the recession gap, estimating the difference between the pre-recession and recovery growth rate, as well as analyzing the factors inducing changes of regional growth paths.

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GLOBALIZATION TRENDS IN THE ENTERPRISE MANAGEMENT WITH AN EMPHASIS ON THE SOCIO-ECONOMIC FACTORS

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Abstract. The producing enterprise management is currently undergoing changes due to the globalization trends that shift attention from the solution of technical and technological problems to human resources in the enterprise. These human resources represent a flexible component in terms of performance and benefits for the enterprise. In a global business environment, new management tools are introduced in the business management, one of which is controlling. It is important to know the anticipated reactions, the stuff in different positions that are already in the process of implementing a tool to eliminate negative attitudes. The aim of the paper is to present the identified socio-economic factors in the promotion and use of controlling in the practice of micro and small enterprises in Slovakia. The empirical survey was focused on the detection and analysis of financial and nonfinancial assets of controlling, and psychological aspects of the controlling perception in its implementation and use in the enterprise, on the part of business owners, managers and employees. Based on the results of the analysis, the benefits and barriers of this managerial tool in the enterprise were identified, with an emphasis on socio-economic factors. In the conclusion, a model for the implementation of controlling into enterprise practice of micro and macro enterprises is proposed to reduce and eliminate barriers and enhance benefits for the individual interest groups. The model highlights the critical points and areas in the implementation of the controlling, based on what could be its implementation in practice more simple and effective.

Keywords: globalization trends, management tools, controlling, psychological aspects, human resources

JEL Classification: M5, M11, M12, M14, O35

1. Introduction

Podnikový kontroling, ako nástroj manažmentu, sa vplyvom globalizácie výrobných podnikov a dodávateľsko-odberateľských vzťahov, postupne rozširuje do všetkých druhov a veľkostí podnikov. Ako uvádza Chodasová *(2012),* ide o dôležitý nástroj pre prípravu podkladov pre manažérov, podporuje rozhodovanie a riadenie v podniku. Vďaka nemu sa mení pohľad a prístup k analýze stavu a kontrole naplánovaných úloh, ktorých účelom je plnenie stratégie podniku. Medzi najuznávanejších svetových odborníkov v oblasti kontrolingu môžeme zaradiť Rolfa Eschenbacha (2004) a Petra Horvatha (2003), ktorí sa venujú funkciám, úlohám a zaoberajú sa implementáciou kontrolingu už niekoľko desaťročí. Podľa Manna a Mayera (1992) je kontroling systém, ktorý vykonáva kontrolu plnenia plánu, analyzuje odchýlky od stanovených plánov, vytvára operatívne a strategické plány. Je možné ho tiež označiť ako zbierku pravidiel, ktorá napomáha k dosahovaniu podnikových cieľov *(Eschenbach et al., 2004)* a internacionalizácii podnikov v tejto oblasti. V minulosti bol kontroling presadzovaný hlavne vo veľkých podnikoch. V súčasnosti začína byť implementovaný aj do malých a mikro podnikov, prevažne formou externého kontrolingu. Pri zavádzaní a využívaní kontrolingu je potrebné mať na zreteli aj psychologický aspekt, ktorý pôsobí na interné záujmové skupiny *(Steiger a Lippmann, 2012).* Tento nový internacionálny trend v oblasti manažmentu podnikov prechádza v súčasnom období zmenami, ktoré presúvajú pozornosť z riešenia technických a technologických problémov na ľudské zdroje v podniku. Tieto predstavujú flexibilnú zložku z hľadiska výkonov a prínosov pre firmu *(Seemann, 2016).* Ľudské zdroje prinášajú do podnikov zmeny, ale na zavádzané zmeny jednotlivé záujmové skupiny rôzne reagujú. Pre jeho úspešné zavedenie je dôležité poznať očakávania aj obavy zamestnancov, manažérov aj vlastníkov podniku. Kontroling ako súčasť podniku pôsobí nielen na kontrolu, plánovanie a koordináciu činností (vonkajšie pôsobenie), ale aj ako vnútorný proces ovplyvňujúci správanie a prežívanie všetkých ľudí v podniku *(Fischer a Sawczyn, 2013).* Prostredníctvom psychológie je možné spoznať vnímanie, myslenie, emócie, učenie sa a aktiváciu činnosti. Môžeme teda povedať, že psychológia sa stáva jedným z najvýznamnejších súčastí kontrolingu, pretože majú spoločný objekt ovplyvňovania. Objekt ovplyvňovania môžeme charakterizovať ako človeka, ktorého činnosť v podniku je účelovo formovaná. Ako uvádza Šatanová et al. *(2015), v*o vzťahoch na pracovisku medzi kontrolérmi a ich „zákazníkmi" sa uplatňuje 6 pravidiel z hľadiska psychológie. Patrí sem motivácia, spätná väzba, kooperácia, vytváranie dôvery, zmena a presadzovanie.

Na základe vyššie uvedeného, *psychológia skúma, aký človek je v podniku a úlohou kontroling je upraviť podmienky pôsobenia vzhľadom na toto zistenie*. Prepája sa tým človek a vytýčené ciele, vízie a kultúra v podniku. Kontroling vychádza zo psychológie a naopak, psychológia určuje jeho pôsobenie. Je daná človekom ako emocionálnou bytosťou, od ktorej sú závislé všetky činnosti podniku. Rozhodnutie skúmania psychologických aspektov kontrolingu vychádza z tejto neodlučiteľnej súvislosti. Je chápaná ako predpoklad implementácie a zefektívnenia fungovania kontrolingu.

2. Cieľ a metodika

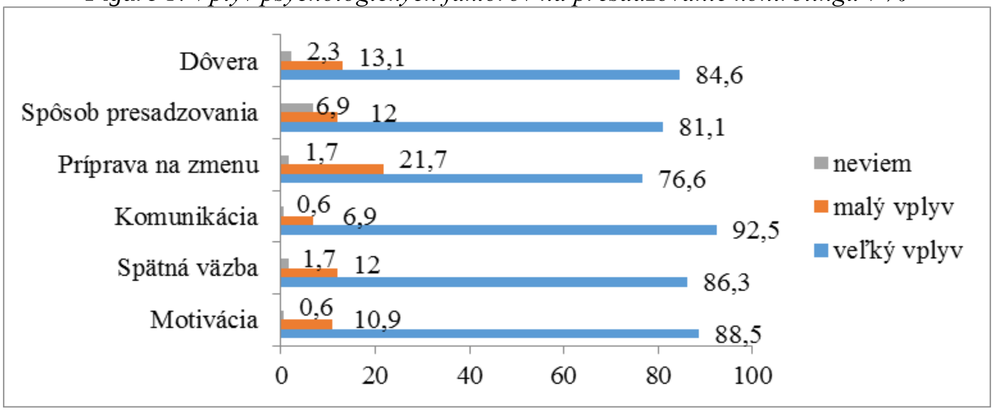
Cieľom príspevku je determinovať rozhodujúce sociálno-ekonomické faktory, ktoré pôsobia na zamestnancov, manažérov a vlastníkov podniku vo fáze implementácie a presadzovania kontrolingu do mikro a malých podnikov na Slovensku. Týmto vytvárame predstavu o účinnosti kontrolingu, so snahou nájsť jeho pozitívne a negatívne vplyvy. Poskytnúť odporúčania k jeho zlepšeniu, tak aby kontroling po zavedení v podniku plnil svoju funkciu a po odstránení bariér, bol plne funkčný. Na základe analýzy sekundárnych zdrojov domácich a zahraničných autorov bola preskúmaná problematika a vytvorený teoretický základ pre návrh modelu. V druhej fáze bol realizovaný empirický prieskum na výberovej vzorke mikro a malých podnikov, ktoré podnikajú území stredného Slovenska. Pre zber primárnych údajov výskumu bola použitá metóda opytovania, formou dotazníkov. Do vyhodnotenia bolo spracovaných 420 dotazníkov. Z celkového počtu bolo 43% mikro a 57%

malých podnikov. Údaje z empirického prieskumu boli vyhodnotené na základe popisných a grafických analýz. V tretej etape boli na základe výsledkov výskumu identifikované pozitívne a negatívne sociálno-ekonomické faktory, ktoré sú kľúčové pri implementácii kontrolingu u jednotlivých záujmových skupín. Následne bol navrhnutý model pre implementáciu kontrolingu do praxe pre mikro a malých podnikov. V závere boli metódou sumarizácie zhodnotené dosiahnuté výsledky a definované prínosy pre vedu, teóriu a prax mikro a malých podnikov.

3. Výsledky a diskusia

U úvode prieskumu bolo zistené, že 30% respondentov pracuje v podnikoch, kde je kontroling implementovaný, 35% ho plánuje zaviesť a 35% opýtaných reagovalo negatívnou odpoveďou. Keďže ide o mikro a malé podniky, v rámci výskumu bola riešená problematika externého kontroléra, pretože pre väčšinu týchto podnikov je to ekonomicky efektívnejšie. U respondentov sa zisťovalo, aký majú vplyv pri implementácii a presadzovaní kontrolingu jednotlivé základné psychologické faktory. Obrázok 1 poukazuje na to, že v priemere 85% opýtaných považuje všetky faktory za veľmi podstatné a myslí si, že majú veľký vplyv pri implementácii. Až 92,5% zúčastnených si myslí, že komunikácia je veľmi podstatná pri zavádzaní a má najväčší vplyv, tesne za komunikáciou sa nachádza motivácia (88,5%). Získané výsledky dokazujú dôležitosť uvedených psychologických faktorov pri implementácii kontrolingu u skúmaných respondentov.

Figure 1: Vplyv psychologických faktorov na presadzovanie kontrolingu v %



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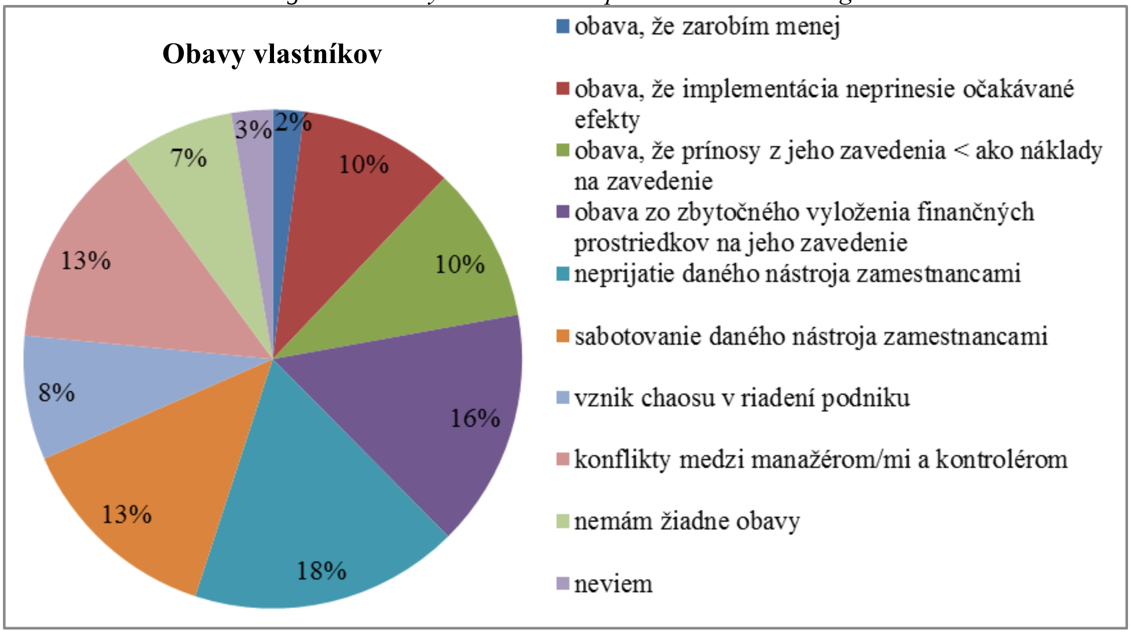
V nasledujúcej časti výskumu boli zisťované obavy pri implementácii kontrolingu do podniku a skúmaná každá interná záujmová skupina samostatne. Každá skupina má iné kompetencie, postavenie, zodpovednosť, a tým aj iné obavy zo zavádzaných zmien. Prieskumu sa zúčastnilo 42% vlastníkov, 27% manažérov a 31% zamestnancov. Na základe predchádzajúcich výskumov mikro a malých podnikov, je možné predpokladať, že predovšetkým mikro podniky, nemajú samostatnú pozíciu manažéra, preto prevahu tvoria respondenti – vlastník a zamestnanec.

Zamestnanci vidia najväčšie obavy v nadmernej kontroly výkonov (20%) a ďalšej kontroly zo strany nadriadených (15%). Žiadne obavy z kontrolingu nemá 18% opýtaných. Iba 2% zamestnancov sa obávajú nevedomosti vykonávať nové činnosti a zhoršenia podnikovej kultúry. Ďalšie obavy sa týkajú nesplnenia noriem, nižšieho zárobku alebo príchodu nových zamestnancov, konkurencie. **Manažéri** sa najviac obávajú neprijatia kontrolingu zamestnancami (21%), 19% nemá žiadne obavy a 13% sa bojí vzniku konfliktu s kontrolérom. Desať percent manažérov sa obáva, že zamestnanci sabotujú tento nástroj. Od 5 do 10% majú obavy z menšieho zárobku, z nesplnenia noriem, zo straty pracovnej pozície, z rešpektovania podriadenými a z nadmernej kontroly. **Vlastníci** majú najväčšie obavy, rovnako ako manažéri, že daný nástroj bude zamestnancami neprijatý (18%). Šestnásť percent vlastníkov sa obáva zbytočne vynaložených finančných prostriedkov na zavedenie kontrolingu do podniku, 13% sa obáva, že zamestnanci kontroling sabotujú. Rovnakú mieru obavy majú zo vzniku konfliktu medzi kontrolérom a manažérom podniku, 10% sa bojí, že implementácia neprinesie očakávané efekty a že náklady budú väčšie ako prínosy. Len 2% uviedlo, že sa obáva nižšieho zárobku. Všetky zistené výsledky uvádza obrázok 2.

Figure 2: Obavy vlastníkov z implementácie kontrolingu

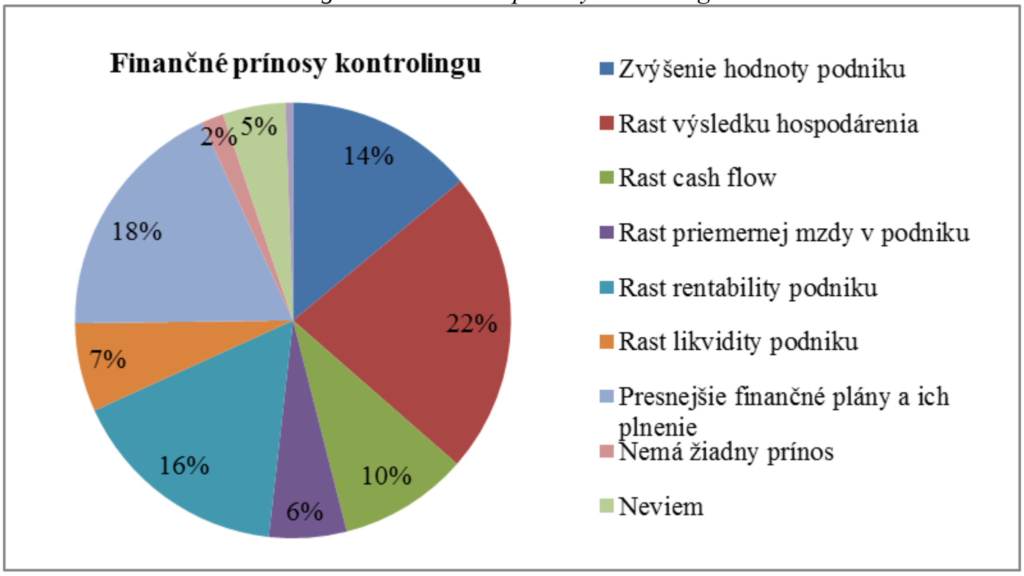


Source: author

Na základe ďalších zistených skutočností možno konštatovať, že pred zavádzaním kontrolingu do podniku je dôležité oboznámiť o danom nástroji zamestnancov, analyzovať pracovné úlohy, uskutočniť potrebné školenia, analyzovať organizačnú štruktúru a pracovné schopnosti. Veľký význam prikladajú komunikácii, motivácii aj spätnej väzbe. Jednotlivé interné skupiny si myslia, že kontroling pozitívne ovplyvňuje výkony zamestnancov, relevantnosť získaných informácií a motiváciu. Negatívne vnímajú kontroling v oblasti pracovných vzťahov a možného väčšieho tlaku na pracovisku. Vlastníci sa obávajú, že zamestnanci neprijmú daný nástroj alebo že ho sabotujú. Obávajú sa tiež vzniku konfliktu medzi manažérom a kontrolérom.

Manažéri majú podobné obavy ako vlastníci *(Feldbauer-Durstmüller a Mühlböck, 2009)*. Zároveň si myslia, že kontroling vôbec neovplyvňuje kariérny postup a počet pracovných miest. V ďalšej časti sme zisťovali najvýznamnejšie **finančné a nefinančné prínosy** zavedenia kontrolingu. Obrázok 3 uvádza finančné prínosy, ktoré pokladajú respondenti za najvýznamnejšie, po zavedení kontroling do podniku. Za najvýznamnejší považujú rast výsledku hospodárenia 22%, presnejšie plnenie finančných plánov podniku 18%, rast rentability podniku 16%, zvýšenie hodnoty podniku 14%, rast cash flow 10%, rast likvidity podniku 7%, priemernej mzdy 6% a 2% si myslia, že kontroling nemá žiadny finančný prínos.

Figure 3: Finančné prínosy kontrolingu



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Za najvýznamnejšie nefinančné prínosy považujú respondenti zlepšenie vykonávaných procesov a znižovanie nákladov 22%, sprehľadnenie informácií 16%, zefektívnenie kvality procesov 15% a rast produktivity práce 14%. Jedenásť percent očakáva kontrolu cieľov na všetkých úrovniach, 10% zosúladenie plánov s cieľmi, 9% odhalenie odchýlok merateľnými ukazovateľmi a 3% si myslia, že kontroling nemá žiadny nefinančný prínos.

3.1 Návrh modelu implementácie kontrolingu do mikro a malých podnikov

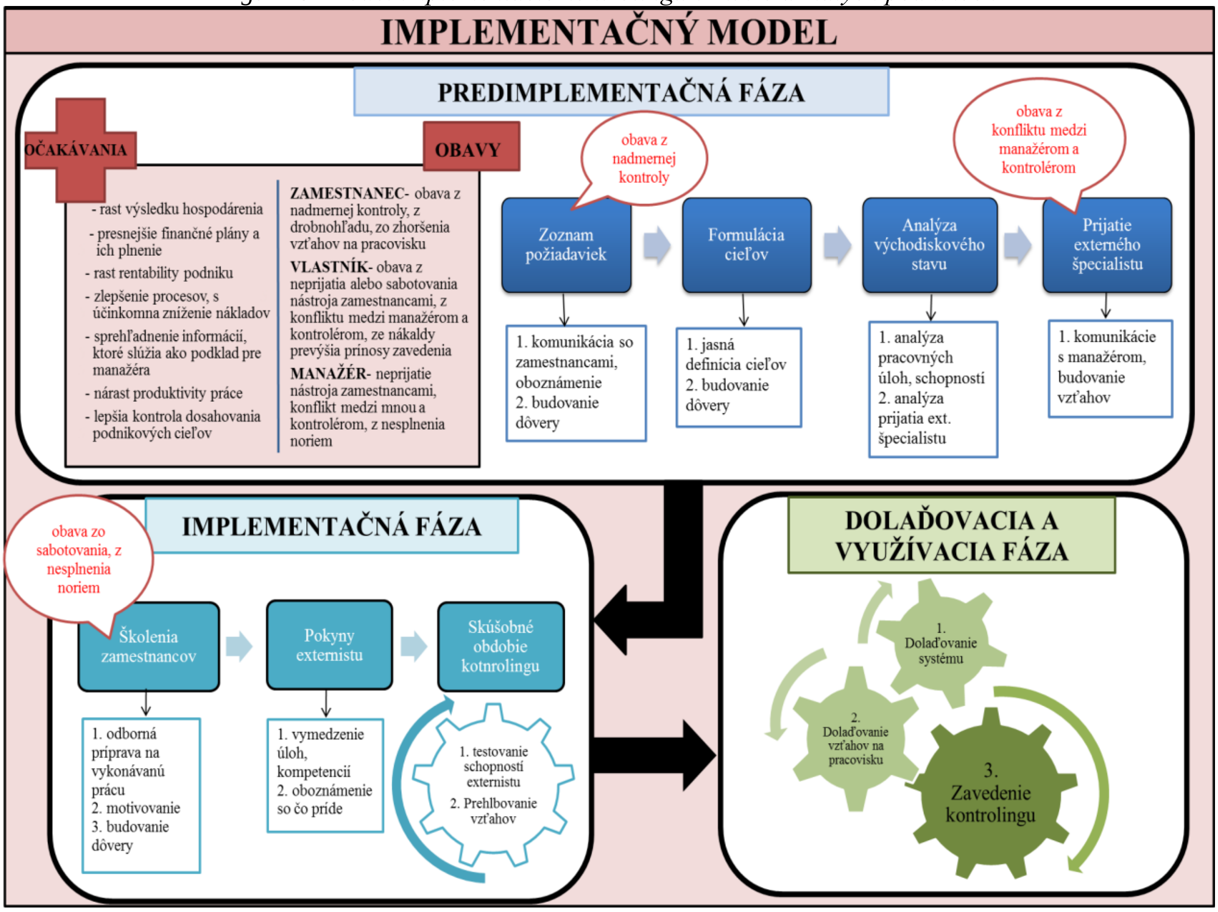
Na základe výsledkov výskumu bol vypracovaný model implementácie kontrolingu pre mikro a malé podniky, s dôrazom na psychologické aspekty. Cieľom modelu je navrhnúť postup, s dôrazom na elimináciu obáv, ktoré respondenti pociťujú a naplniť očakávania a prínosy zavádzania kontrolingu v podniku. Ako uvádzajú Feldbauer-Durstmüller a Mühlböck *(2009)* mikro a malé podniky majú nízky počet zamestnancov a zriadenie pracovného miesta kontroléra by bolo pre nich finančne náročne, v modeli je navrhnutý kontroling pomocou outsourcingu. Je nevyhnutné spomenúť, že v mnohých mikro a malých podnikoch zastáva pozíciu kontroléra vlastník alebo manažér Šatanová a Sedliačiková (2015). Na obrázku 4 je uvedený postup implementácie kontrolingu, rozdelený do troch fáz.

Predimplementačná fáza uvádza zistené prínosy a bariéry jednotlivých záujmových skupín. Ako priorita je stanovená komunikácia medzi internými záujmovými skupinami a na základe toho budovanie dôvery medzi nimi. V mikro a malých podnikoch odporúčame uprednostniť priamu komunikáciu (Musa, Stroková a Musová, 2016). Najväčšie obavy zamestnancov plynú z nadmernej kontroly. Túto bariéru je možné postupne odstraňovať budovaním vzájomnej dôvery. Prijatie externého zamestnanca (kontroléra), rieši obavy vlastníkov, spojené s nákladmi. Predpokladom úspešného vykonávania externého kontrolingu je dobrý partnerský vzťah s manažérom. (Sedliačiková, Vacek a Sopková, 2015) Nevyhnutné je analyzovať **východiskový stav podniku**, úlohy zamestnancov a ich schopnosti. Určiť odkiaľ vychádza a kam smeruje.

Implementačná fáza môže predstavovať najnáročnejšie obdobie. Na jej začiatku je dôležité pre jeho správne pochopenie a prijatie, zabezpečiť **školenia zamestnancov,**

oboznámiť ich s priebehom implementácie a získanie teoretických a praktických poznatkov. To eliminuje obavy vlastníkov a manažérov zo sabotovania alebo neprijatia daného nástroja. Školenie často uskutočňuje externý kontrolér. Je potrebné, aby si počas školenia vybudoval dôveru a dobrý vzťah so zamestnancami. Jeho ďalšie stretnutia budú prevažne s manažérom a vlastníkom podniku. Kontrolér počas školenia zastáva aj pozíciu motivátora zamestnancov. Po zaškolení nasleduje vymedzenie úloh a pridelenie kompetencií. Podľa Sedliačikovej et al. *(2016)* externista vytvorí finančné plány a spracuje informácie o podniku. Nasleduje skúšobné obdobie kontrolingu.

Figure 4: Model implementácie kontrolingu v mikro a malých podnikoch



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Dolaďovacia a využívacia fáza predstavuje doťahovanie detailov v systéme kontrolingu. Závisí od vzniknutých odchýlok medzi očakávaniami a skutočnými prínosmi. Pokiaľ vznikli odchýlky je potrebné ich odstrániť. Dôležitá je spätná väzba. Ak kontroling spĺňa pozitívne očakávania, narastá produktivita práce a pracovná morálka podniku. V prípade zlých vzťahov a narastajúceho negatívneho tlaku na pracovisku, je potrebné komunikovať a analyzovať problémy. Po odstránení systémových chýb a problémových vzťahov sa eliminujú možné bariéry na pracoviskách. Môže sa zaviesť kontroling do podniku s perspektívou plne funkčného využívania. Vo všetkých fázach je dôležitá komunikácia medzi kontrolérom a internými záujmovými skupinami, postavená na dôvere.

Z vykonaného prieskumu možno povedať že „zdravá“ personálna stránka podniku pozostáva z poznania svojich zamestnancov. Pred zavádzaním kontrolingu je rozhodujúce poznať očakávania a obavy interných záujmových skupín. Na základe výsledkov výskumu možno formulovať nasledovné závery a odporúčania pre teóriu a prax:

- jasne vymedziť psychologické aspekty, ktoré vplývajú na zavádzanie a presadzovanie kontrolingu v podniku,
- prehĺbiť znalosti v oblasti kontrolingu všetkých záujmových skupín,
- vytvoriť príručku k danému nástroju v podniku,
- venovať pozornosť zamestnancom, vytvárať pozitívny pracovný vzťah, prehlbovať dôveru
- vypracovať motivačný systém so zreteľom na potreby jednotlivých záujmových skupín,
- komunikovať a sledovať pocity a reakcie interných záujmových skupín vo vzťahu k implementácii kontrolingu.

4. Conclusion

Nové globalizačné trendy v oblasti manažmentu, zamerané na sociálno-ekonomické faktory pri zavádzaní zmien v podnikoch, sa stále častejšie uplatňujú aj v praxi mikro a malých podnikov. Potvrdili to aj výsledky analýzy, zamerané na skúmanie vplyvu kontrolingu. Ekonomicky výhodnejšie je pre nich využívať outsourcingovú formu. Na implementáciu a využívanie kontrolingu v podniku je potrebné pripraviť všetky záujmové skupiny, s rešpektovaním vnímania bariér a prínosov tohto manažérskeho nástroja. Dôležité je vnímanie psychologických faktorov, špecificky pre zamestnancov, manažérov a vlastníkov podniku. Na základe zistených obáv z prichádzajúceho nového nástroja a zmien, vhodnou komunikáciou postupne obavy a bariéry eliminovať a odstraňovať. Pre potreby praxe bol navrhnutý plán implementácie kontrolingu, s dôrazom na psychologické aspekty manažérov, vlastníkov a zamestnancov, v malých a mikro podnikoch. Z modelu vyplýva, že úspešné zavádzanie kontrolingu do podniku sprevádzajú psychologické páky, ktoré sa týkajú motivácie, komunikácie, spätnej väzby, budovania dôvery v daný nástroj, ale i v kontroléra, spôsobu presadzovania a z prípravy na zmenu. S rešpektovaním navrhnutého postupu, by implementácia kontrolingu mala prebiehať jednoduchšie pre všetky záujmové skupiny. Dôležité je pozitívne nasmerovanie zamestnancov, čo vedie k efektívnejším výkonom, rastu výsledku hospodárenia a plneniu finančných plánov.

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CONTEMPORARY GLOBAL PROSPECTIVE OF BRAND'S EQUITY PARADIGM

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Abstract. In terms of globalised marketplace, brand value building and managing is more and more complicated. Surprisingly, the reason of this situation is fragmentation - not only of managerial practice but also of theoretical approaches. Nowadays, fragmentation is perceived as consequence of accelerating globalisation. By adaptation to the specifics of national socio-cultural profiles, managers try to build strong and valuable global brands with increasing equity consisting in unique identity while theorists elaborate partial theories of global brand equity without linking to previously created schools of Keller or Aaker. This situation causes a spiral effect where managers doesn't reach set objectives by applying contemporary theoretical approaches what invokes the need of theoretical solution to numerous partial problems of brand value building and managing patterns failure. So, the theory is fragmenting under pressure of demand of practice and subsequently, the practice applies inconsistent branding patterns. Therefore, the aim of this paper is to provide a brief overview of contemporary theoretical approaches to the brand value building and managing in terms of globalisation and to detect actual brand's equity paradigm on the basis of convergences and divergences in these approaches. We used modified methods of semantic analysis and chronological benchmark. As result, we detected that main brand's equity paradigm consists in the need of behavioural and financial brand value models unification.

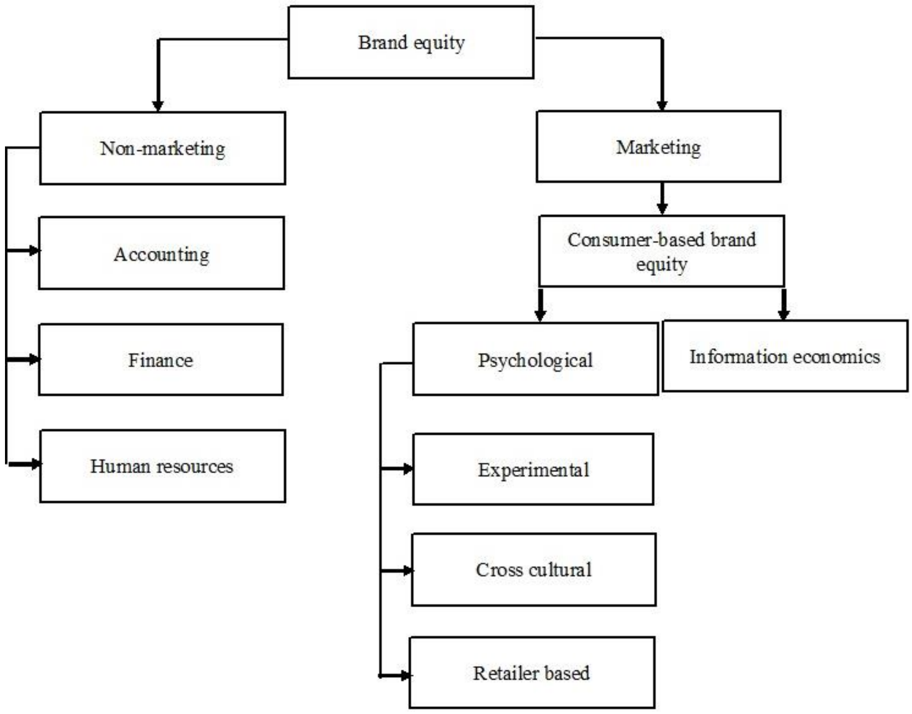
Keywords: brand, branding, brand value, CBBE

JEL Classification: C00, C90, M30, M31

1. Introduction

Since the 1980s, the concept of brand equity has recorded an extensive interest of theoreticians and practitioners worldwide. Brand equity as a term, was for the first time defined by Aaker in 1991. He united this term with a value which the brand has over other competing brands (Anees-Ur-Rehman et al., 2016). In other words, he defined brand equity as a set of assets associated to the brand which can facilitate to obtain a higher price premium over products from competitor brands. This approach is more behaviourally oriented and it is vital to distinguish it from the concept of brand value which is focused on financial aspects of brand assets. However, Veloutsou and Guzman (2017) argue that the concept of brand equity can be discussed in these three dimensions: the customer-based perspective, the financial perspective and the combined perspective. According to this, the brand equity is wider term which contains brand value. The visual expression of such a theory is shown in figure 1, where financial aspects of brand equity are considered as its non-marketing part and behavioral aspects of brand equity are considered as its marketing part.

Figure 1: Brand equity concept in its wider prospective



Source: own proceesed according to Chang and Chung (2016)

As it is shown above, traditional approach to brand equity in its wider prospective is mainly based on selective perception of its non-marketing and marketing components. This approach persists even today although there are some indications of ideational shift towards the need of unification of these approaches and common brand equity detection and quantification (Fischer & Himme, 2017). We based provided semantic analysis and chronological benchmark on selective view of brand equity in terms of modified non-marketing and marketing approach. The modification consists in abstraction from human resources as significant non-marketing element of brand equity. The reason was the nonconformity with the author's philosophy of the paper which highlights the consumer perception of brand value.

2. Contemporary prospective of brand value

2.1 Non-marketing approach

The non-marketing approach consists of accounting, finance and human resources point of view. Nowadays, fist two approaches are even combined and it is difficult to categorize new theories as purely accounting or financial (Lizbetinova & Weberova, 2016). Traditional accounting approach is represented mainly by authors who criticise insufficient brand value quantification aspect in accounting standards and controlling practice worldwide. Their theories are mostly related to previous research and they are ideologically convergent. When method of chronological benchmark is applied, there is observable a strong movement from formal and general criticism to specific partial problems detection. Semantic analysis indicates that formulated theories are internally homogeneous and that they form unique closed system of theoretical flow. Salamovska and Todorovska (2016) states that there is an increasing trend of brand valuation and measuring the brand equity and marketing assets worldwide, but incorporating the value of brand equity and/or marketing equity in formal financial statements continues to be one of the greatest challenges for companies worldwide, especially if observed from a standpoint of financial and accounting specialists. Starr and Brodie (2016) focus on key concepts of certification and authentication of brand value and examining their effects in the context of branding. Peterska (2016) discusses arguments for and against recognition of internally created brands in the company's financial statements and she finds out if the companies disclose brands in their financial statements, and if so, how the brands were originated and how their value is determined. As reaction to these remarks, Sinclair and Keller (2017) detect the so called "Moribund Effect". This effect is defined as an accounting phenomenon by which the value of a brand that is acquired, measured, and added to the balance sheet by a company remains unchanged no matter how well the brand might perform for that company over time. Financial approach seems to be more heterogeneous that accounting. There have been formatted two main fields of research focused on stock market and company aspects of brand value. While first one is consistent, the second one is more heterogeneous in time. Stock market prospective is based on a presumption that we still know very little about the variables moderating the relation between brand value and firm value even though prior studies find a positive impact of brand value on firm value. That is why Dutordoir et al. (2015) address this gap in the literature by developing and testing a new framework on the contingencies affecting the impact of brand value changes on stock returns. Drawing from branding theory, they hypothesize that stock price reactions to brand value changes are more positive for firms with high cash flow vulnerability, valuable growth opportunities, and high potential for further product or service price increases. They detected significant abnormal stock returns on brand value announcement dates, with a brand to firm value conversion rate of approximately 4%. Cross-sectional regression analyses of announcement day abnormal stock returns suggest that shareholders mainly value the potential of brands to reduce cash flow vulnerability to adverse shocks. Basgoze et al. (2016) provides other view of brand value implications in scope of stock market prospective. Their study examines the effects of brand value announcements on stock returns. The findings indicate that selected companies earn positive abnormal returns seven months after the announcement. Similarly, the companies which had greater brand values relative to the previous year, experienced significant positive abnormal returns in the seven-months period. At the corporate level, the financial aspects of correlation between performance of the company and brand value are analysed focusing on: (i) the direct impact of marketing assets on financial performance indicating that in some industries, this impact is contemporaneous, whereas in others, no contemporaneous effects are observed and all of the profitability impact occurs in the future (Mizik, 2014); (ii) the connection between brand health and future revenue expected from customers concluding that brand health is tangible and is linked to current and future value with consumers (Kapur, 2015); (iii) the market share growth evoked by financial performance caused by existence of valuable brand Shuv-Ami (2016).

As it is evident, the financial approach is quite diversified. This situation causes stagnation in the evolution of new financially oriented theories of brand value and equity management. Moreover, other alarming trend is visible – financial and accounting approaches are combining what can lead to devastation of the coherent accounting theory of brand value in the future. So, there is a need of very careful application of combined accounting and financial point of view as it is provided by Hryshova et al. (2016) who detect that the synergy of interaction of the constituent elements of brand creates intangible values, and provides a socio-economic effect, determines the motion vectors of financial flows and their ability to increase the volume in the future.

2.2 Marketing approach

Marketing dimensions of brand are still dominating despite the fact that non-marketing approach of brand value building and management has been identified as more and more developed (Lin et al., 2017). Consumer-based brand equity which forms the basis of marketing approach is defined in its psychological and informational prospective. When psychological approach to the brand equity is applied, three main directions of research are traditionally recognized - experimental, cross cultural and retailer based. Experimental approach highlights the aspect of brand value sources identification by case study or experiment realization. Nowadays, literature identifies these relevant sources of brand value:

- quality, preference, social influence and sustainability (Baalbaki & Guzman, 2016),
- awareness/familiarity and perceived quality (Girard et al., 2017),
- socially responsible performance (Butt et al., 2017; Lin et al., 2017),
- national brand of country of origin (Garrett et al., 2017; Kim et al., 2017).

Cross cultural theory of brand value has been developed form regional studies of brand value specifics. But its importance is decreasing. Recently, only a few studies which reviews applicability of traditional general concepts of brand value management, have been published. Christodoulides et al. (2015) examined the performance of Aaker's dominant conceptualization of consumer-based brand equity in a multi-national and multi-sector European context and highlighted important lessons vis-a-vis the measurement of brand assets across countries. Similarly, Owusu-Frimpong et al. (2015) discussed implementation of the signalling theory to highlight benefits involved in managing inimitable brand identities in the service sector of Ghana that consumers would be happy to associate themselves with. At the same time, emerging markets are profiling as new platform for verification of applicability of general brand value management concepts and its subsequent modifications. (Vochozka, 2010). The paper of Chailan and Ille (2015) examines the branding options offered to emerging countries companies when expanding internationally and its results lead to the conclusion that the notion that only global brands are associated with higher product quality or prestige (in relation to local brands) is not a universal truth and thus needs to be interpreted with caution. Tanusondjaja et al. (2015) refuses the myths that consumers differentiate between local and international brands, and that consumer segments differ between emerging and developed markets because the authors find that brand user profiles in emerging markets rarely differ between local and international brands across age, income and gender. Differences in segmentation are related to geography - which is likely a factor of infrastructure differences. (Szczerbiak, 2016). When brand users are compared, their attitudes towards the brands are also very similar between local and international brands across several attitudinal measures: "high quality", "value for money", "meet/understand my needs", "affordability" and "trustworthiness". Currently, retailer based approach is step by step replaced by consumer equity approach. Romero and Yague (2015) explore the connection between brand equity and customer equity employing a simultaneous equations model in which brand equity and customer equity depend on each other and also on marketing expenditures. These authors that these metrics partially overlap, particularly in some industries and highlight the importance of implementing models that consider the interaction between them in order to obtain reliable measurements of the overall productivity of marketing actions. The issue of interaction between brand and consumer equity is discussed also by Di Benedetto and Kim (2016). Dwivedi and Merrilees, (2016) hypothesize that perceived customer equity is a higher-order consumer evaluation that is measured via brand equity, value equity and relationship equity. They observe that perceived customer equity significantly explains consumer loyalty intentions, and explains greater variance in the outcome relative to that achieved jointly by the three dimensions. Informational-economic approach to brand equity is another debatable point of view. We state that it has a cross-field character with implications in all concepts and approaches mentioned above. Actually, it is mainly represented by authors who highlight sectorally oriented concepts of brand equity (Victoria-Mas & Lacasa-Mas, 2015; Cai et al., 2016; Salem & Cermelli, 2016; Kubicova et al., 2017; Matova et al., 2017; Carter & Amy, 2017). Actually, not only separated non-marketing and marketing concepts are developed. There are visible also indications of comprehensive brand equity theories. Caputa (2015) indicated the relations between the brand value in a marketing and financial dimension. Following this findings, Karimi et al. (2016) and Weede (2016) point that there are two prevailing approaches toward measuring a company's brand value: customer-oriented approach and corporation-oriented approach. The customer-oriented approach is the same as marketing and behavioural approach; and corporation-oriented approach is based on financial data. In their study, they have applied one of the most recent methods of calculating brand value, which evaluates all three dimensions of market, finance and accounting, and is known as the corporation achievement. According to the results the joint impact of advertising budget and brand value on return on assets is confirmed as an indicator of corporation's financial performance. In the case of stock return, only the impact of brand value is confirmed.

3. Conclusion

Although it has been proven, that the concept of brand equity is nowadays developed at the level of all its components and perspectives, comprehensive brand equity theory is still missing. Identified fragmentation of this issue leads to the mistaken implementation of formulated theory by practice and subsequent disillusion of marketing managers which causes disparagement of brand equity concepts.

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PROCESS MANAGEMENT AND LEVELING OF SERVICE QUALITY IN A GLOBAL DENTAL PRODUCT MANAGEMENT SYSTEM

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Abstract. The article presents a model example of the application of global product management system. This system is intended for use by dentists and prosthetic laboratories. The system is designed to assist in the management of the process during high quality prosthetic restorations manufacturing. This model is designed to open dental clinics and laboratories to the international market, while maintaining high quality, competitive prices. This system is designed for the communication in the medical service and production process with included the three participants of the process client (patient) - service provider (dentist) - manufacturer (dental technician). The model system enables customization of customer requirements with regard to quality, availability and price. The presented system plays role as a customer advisor, visualizing the possibilities in the process of designing, selection of material and applied technologies in the organization of the manufacturing process of individual dental prostheses. It takes into account market prices, parameters and properties of selected materials, costs of applied technologies and labour intensity. The customers gains aware of their choices and could make decisions alone in the process of optimizing the quality of the product. Criteria used in the scheme allow for widening of the market and the availability of order fulfillment (widening of the area from regional to national and international).

Keywords: process management, dental service, product management system

JEL Classification: L, 11P, 1C, 20P

1. Introduction

The effectiveness and effectiveness of each organization is determined by the ability to manage multiple processes and tasks that run in parallel or serially, dependent or independent (Amirhossein et al., 2015), (Fidlerova et al., 2014). In project management, both the large (in mass production), and the smaller ones (in the unit production) very important is organization as well as process planning. Well-known process visualization tools such as value stream mapping (VSM), process in technological terms, Gantt chart, Advanced Product Quality Planning (APQP) (Harvey, 2015), (Ulewicz et al., 2016). These tools clearly show the plan of the process, the participants in the process, the transfer of responsibility for each stage, the need to secure adequate technological, financial and material resources (Shailesh et al., 2016).

As it is well known (Harvey, 2015), the process is the entire activities which depends on the input and conversion into a product / service of a certain value (value estimated by the customer). The process is the entire activities related with material and non-material resources which directly affect on the value of a product / service. Processes create the benefits that customers expect by services providing.

Significant difficulties in the implementation of the process arise when the outcome of the process is both the service and the product. Particularly noteworthy are the medical services provided by doctors (a narrow group of specialists) that lead to the manufacture of the product - dental services that are combined with prosthetic treatment. Specialists, which are the main element of this type of service process focus on their knowledge and practice in their field, which is usually a very narrow specialized area with a strictly defined perspective. Specialized knowledge of process participiant causes that the attention is not given to the interacttion (e.g. feedback information, time and action synchronization e.t.c) with others in generating overall results for the client. The more difficult it is to manage the service process, the result of which depends on the cooperation of a group of professionals with different specializations – all of the participiants have to operate within dental standards (Della Bona et al., 2011), make management decisions with patients demands (Demejean-Orliaque et al., 2009), and finally make selection of materials and techniques (Te. Donovan, 2006).

Where the implementation of the medical treatment is only an intangible effect of the whole cycle it is quite easy to define the schema of the process performer (the doctor) – it is possible to assess service quality (Tsuen-HoHsu & Pan, 2009). Significant problems arise when the medical service involves the need to connect two (or more) independent processes - service and manufacturing, e.g dental service, involving the need for prosthetic restoration (Voinea-Griffin et al., 2010), (Yang Zhitian et al., 2017).

Therefore, the process of prosthetic treatment conducted with the participation of three participants patient, dentist and dental technician. This is one of the few processes in which, to this day, the client (in this case the patient) does not have direct possibility of clearly established requirements at the technical level. The state of the situation is due to a one-way flow of information between stakeholders. In the figure 1 the direction of information and feedback flow in the system patient-dentist-dental technician is shown.

Figure 1: The information and feedback flow in the system of patient-dentist-dental technician

Source: author based on Klimecka-Tatar, 2016

2. Preliminary research - recognition of the problem

The first step in creating a model of global system enables customization of requirements with regard to quality, availability and price was to conduct a survey to determine how much patients can/could affect on the choice of techniques and materials applied during their individual prosthetic restorations preparation. The survey has been conducted among patients referred for prosthetic treatment - the study has been conducted in southern part of Poland.

The patients taking part in the study were after the treatment had ended. The study involved 125 people with different age (more than half were 50 years old) with different level of education (mostly secondary education) and differentiated prosthetic treatment (from veneers preparation, crowns, partial bridges and total dentures). The questionnaire contained a number of questions, but for this paper in Table 1 and Figure 2 the results of question have been presented. The question was: *"Which of elements (in Your opinion) is the most important in the design of the restoration? Additionally check all that You could decided about.* Select "X" in the selected heading, where 0 - no effect, 5 – very strong effect).

Table 1: Survey results: patients' evaluation of most important elements in the design of the prosthetic restorations based on the answer for question "Which of elements (in Your opinion) is the most important in the design of the restoration? Additionally check all that You could decided about."

Elements that affect on the quality of prosthetic restorations	**Note, 0 - no effect, 5 – very strong effect**						**Number patients which decided about this element**
	0	**1**	**2**	**3**	**4**	**5**	
Method of treatment	2	8	11	18	65	21	21
Range of prosthetic restorations	28	47	30	13	5	2	17
Dentist qualification	0	0	0	15	20	90	125
Execution time	10	11	16	45	24	19	5
Aesthetics	0	0	0	1	3	121	31
Type of used materials	0	0	0	11	13	101	2
Manufacturing techniques	0	1	1	7	28	88	0
Method of manufacture	1	3	1	31	57	32	0
Contractor qualification	0	0	0	1	1	123	0

Source: own study

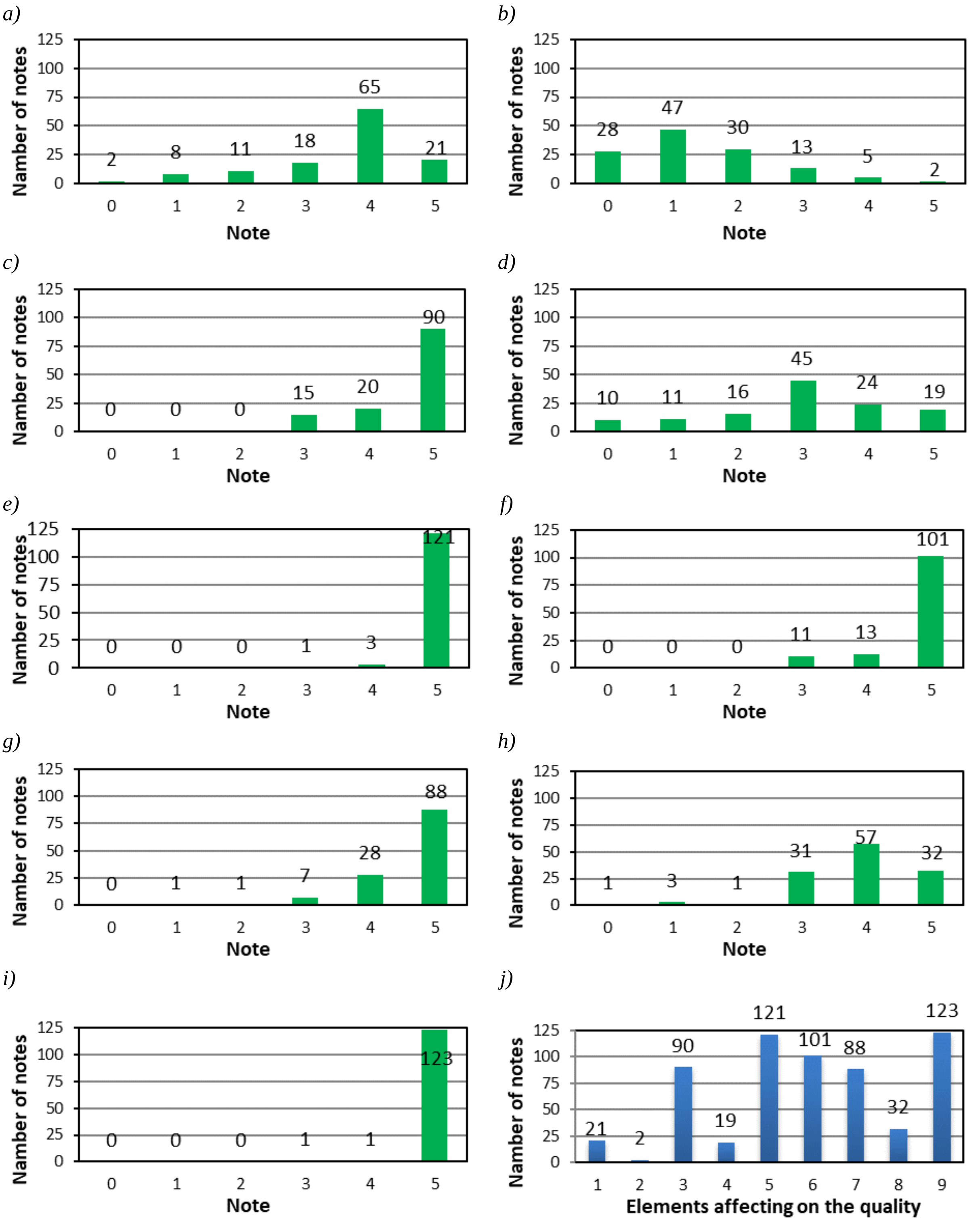
It had to be noticed that the elements that affect on the quality of the dentures can be divided into 3 groups. The first group consists of elements that are closely related to the work of the dentist (method of treatment, range of prosthetic restorations, dentist qualification), the second group are elements that are related to the work of a dental technician (type of used materials, manufacturing techniques, method of manufacture, contractor qualification) and the third group are elements that depend on mutual cooperation of process participants (execution time, aesthetics) – responsibility designated on the basis of scheduling the overall denture manufacturing process (Klimecka-Tatarr & Wysłocka, 2016).

3. Results and discussion

In Figure 2 the results of survey research are presented. The data correspond to patients' answer for question *"Which of elements (in Your opinion) is the most important in the design of the restoration?*

As is is shown in Table 1 and Figure 2, patients are aware that the quality of their individual prosthetic restorations is determined mainly by the following factors: aesthetics, type of used materials, contractor qualification. More than 80% of respondents considered these elements as very important for the quality of prosthetic restorations. Interestingly, for all of the indicated elements the dental technician takes the responsibility. Table 1 also includes the number of patients which had the chance to influenced on the decision in case of the individual items.

Figure 2:The evaluation structure for elements affecting on the quality of prosthetic restorations (based on data from table 1): a) method of treatment, b) range of prosthetic restorations, c) dentist qualification, d) execution time, e) aesthetics, f) type of used materials, g) manufacturing techniques, h) method of manufacture, i) contractor qualification, j) overall structure of the highest note for each element.



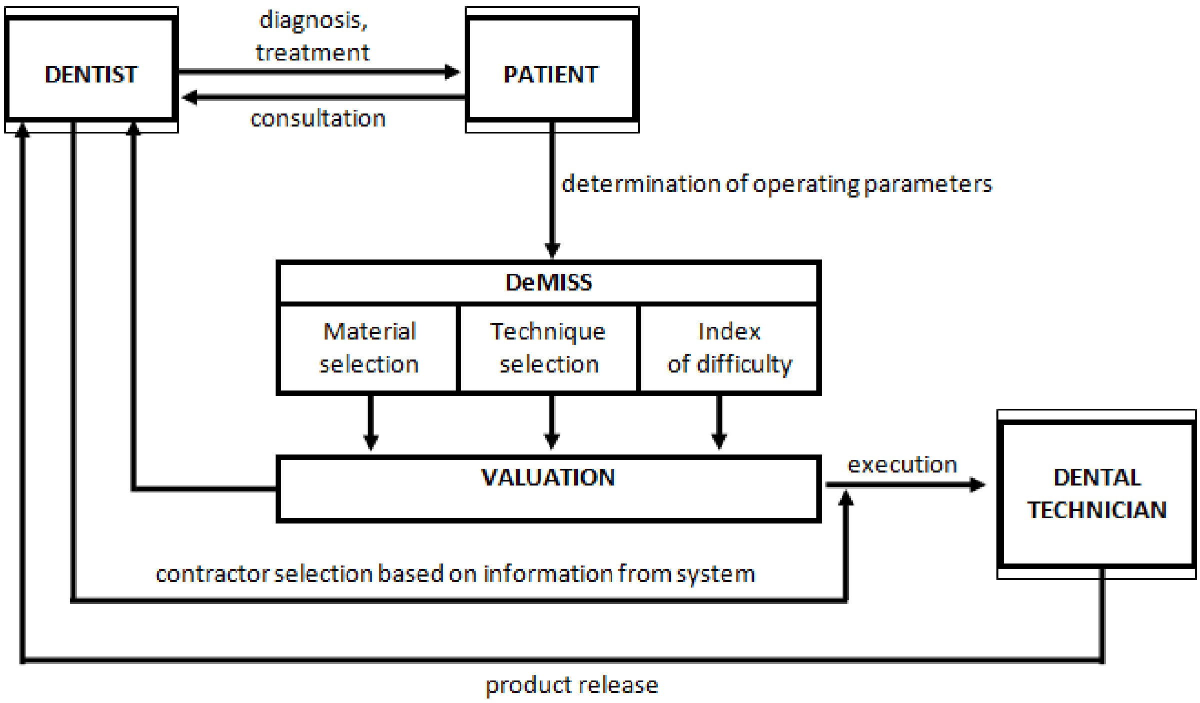
Source: own study

According to the research, patients were not able (they have no possibility) to decide in the area of the most important factors affecting on the quality of individual prosthetic restorations.

The reason for this situation is fact that in a patient - dentist - dental technician system operates one-way flow of information (Figure 1). Patients have no possibility of selecting operational parameters of restoration (materials type and manufacturing techniques, taking into account the characteristics and prices of the final product).

As it is shown in Figure 1 and as results from data in Table 1 and Figure 2, there is a lack of direct communication between patient and dental technician. The communication in this case determine technical aspects of engineering product - the prosthetic restoration. In previous papers (Klimecka-Tatar, 2016, A) it has been suggested the necessity to use the modern techniques (computer-aided) of communication between client and the contractor of prosthetic work. The operation of this system can be based on the programs for 3D processes visualization (Khaled et al., 2016). It has been proposed a general concept of Dental Integral Material selection System (DeMISS) and the general scheme of action and the information flow during the order by the DeMISS system is presented in figure 3.

Figure 3: General scheme of communication between client and the contractor - information flow during the order by the DeMISS system



Source:author based on Klimecka-Tatar, 2016, A

The DeMISS assumes that the patient does not have knowledge of basic materials and techniques used in prosthetics. System is designed for the selection of a set of operating parameters - described in a simple and easy to understand way. In the system, operating parameters are defined by the relationship between:

- price and durability of materials,
- price and technical skills of dental technicians,
- price and technical equipment of laboratories.

These operating parameters clearly define customer requirements, make it easier for dentists to choose contractors, and for the dental technician to selects the proper materials, techniques and methods. Parameters should be based on scientific data about dental materials as well as on the typical technology assessment techniques (Klimecka-Tatar et al., 2015), (Radomska et al., 2016), (Klimecka-Tatar 2016, B), (Ingaldi & Dziuba, 2015).

4. Conclusion

In general, the system of material and techniques selection for prosthesis manufacture contributes to the customization of processes, increasing the network of links between dentists and technical laboratories. And above all, it will create a regional, international, perhaps even global structure of cooperation (while ensuring the standardization of the database). This model is designed to open dental clinics and laboratories to the international market, while maintaining high quality, competitive prices. In the other hands, the system would give patients the opportunity to decide about the parameters in a formal way, thus the right to claim against the non-fulfillment of conditions of the other participants in the process. The customers gains aware of their choices and could make decisions alone in the process of optimizing the quality of the product.

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CLUSTERS AS A TOOL FOR MINIMIZATION OF ENTREPRENEURIAL RISKS ARISING FROM GLOBALIZATION

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Abstract. Enterprises have to handle with entrepreneurial risks. These risks can be understood as opportunities as well as threats. Globalization is able to significant strengthen consequences of these risks, which results to threaten existence of entrepreneurial bodies. Clusters as associations of enterprises can considerably assist to minimization of relevant entrepreneurial enterprise risks. The entrepreneurial strength of clusters is increasing thorough economic strength of each participating enterprise. Production processes organization and the whole production chain what causes improvements in effectiveness and therefore economic strengthen of enterprise. The other possibility to how to be resilient to globalization risks consequences is product quality improvement and growth of production quantity focused on existing or new markets. Therefore, in the paper will be applied risk management as a tool for minimization of identified globalization risks. General overview of problem will be connected with cluster analysis and with possibilities of cluster governance of globalization risks. Results of cluster analysis contains also conditions specification in order to overcome the negative impact/consequences of globalization risks to destruct an enterprise. Paper deals with linked problems as organization, leadership, risk management implementation control in a cluster. Discussion is focused on the support of cluster policy in the Slovak republic. Within the context of support measures will be analysed the framework of increasing competitiveness of small and medium sized enterprises in the Slovak republic. The presented analysis will reflect approach of state bodies to this support of small and medium sized enterprises in the Slovak republic.

Keywords: clusters, cluster policy, globalization, risk management

JEL Classification: O14, O24, O33

1. Introduction

Worldwide is a trend of globalization. There are many definitions of globalization. Globalization is the trend towards increasing integration. This integration is international and base on identification factors that create additional value for entrepreneurs/owners. It does not mean that benefits are spread to all stakeholders proportionally. Enterprises have to exist in these conditions. Some aspects of globalization can be understood as opportunities and some as threats. Therefore, enterprise have to handle these threats and to take advantage from opportunities. One of ways is networking of enterprises better known as clusters.

In the paper, we will deal with clusters, globalization and risk management. The objective of the paper is to discuss the assumption that risk management applied in clusters can improve their competitiveness and support their objectives. There is a range of objectives that support the idea of clusters. Fundamental is that they improve competitiveness via economic strengths that arise from economy of scope and scale, stronger position on the market – not only local but also international. Šoltés & Štofko (2015) claims that, the most visible aspect of globalization is synergy of national economics, which leads to growth of less developed countries by penetration of international corporations onto their markets. In spite of that fact, small and medium enterprises can establish a cluster for better competitiveness on markets.

Cluster´s is not a new term, it known for a long time. There have been lot of initiatives from institutions like EU, OECD and UNIDO, which want to highlight and promote the concept of clusters. According to Porter (1990) a cluster is accumulation of geographically connected organizations, specialized suppliers, services providers, companies in related fields and linked institutions, as are universities, agencies and business companies. However, these organizations are rivals on the same markets. The main idea of clusters is that organizations together can achieve higher profits, when they will be using natural chains (networks) of services that they provide. Development of country GDP is highly dependent on growth of the SMEs. This can highlight utility of cluster cooperation of SMEs as a way for their growth. Advantage of organizations cooperation in clusters can be define as increase of demand for products and services of companies organized in a clusters, improvement of access to local and global markets, costs reduction and efficient usage of regional and municipality public funds.

With connection of globalization and enterprise risk management Hudaková & Lusková (2016) state enterprises, which will catch the risk factors and interpret them in a correct way in time, are getting into mark ant lead and obtaining advantages when comparing to enterprises, which need strong, specific, clearly explainable signals for decision. In the business world, the risk management is becoming a part of the management system of each enterprise. Lusková & Buganová (2011) claim that in enterprises, operating in Slovakia the risk management standard is still undeveloped.

2. Methods

The framework of the paper focuses on key features and characteristics of enterprises risk management during networking in clusters. In addition, we highlight role of clusters as a tool for enterprises how to handle risks results from globalization. In the paper, we briefly describe clusters in Slovak republic. This part is a general review of scientific and professional sources.

The rest of the paper deals with risk management issue in clusters activities. We present our own statistical research in clusters enterprises. Research consists from the risk management survey in clusters. The survey contains several questions linked to risks, which influence enterprise during cluster life cycle. In the paper will be summarized result from that survey linked to the topic of conference. Due to the content of the paper, we apply basic scientific/logical methods as analysis, synthesis, induction, deduction and statistical methods for survey evaluation.

3. Results

Clusters are not a new form of cooperation worldwide. First part of our research was to create a list of clusters in the Slovak republic. It is hard to create a list of clusters in the Slovak Republic, because there is not any specific list or data source.

Only one usable source is the registry of interest group of legal entities and list of interest groups. Summarization research in this registry was made by Balog & Duman (2015) and Kramarová (2016). Results are in the table 1, where you can see the numbers of clusters during the period from 2004 to 2016 divided into self-government regions (SR – Slovak republic, BA – Bratislava, TT – Trnava, TN – Trenčín, NR – Nitra, ZA – Žilina, BB – Banská Bystrica, PO – Prešov and KE – Košice).

Table 1: Number of clusters in the regions of the Slovak republic

	SR	BA	TT	TN	NR	ZA	BB	PO	KE
2004	1	0	0	0	0	0	0	0	1
2005	1	0	0	0	0	0	0	0	1
2006	1	0	0	0	0	0	0	0	1
2007	4	1	1	0	0	0	0	0	2
2008	9	1	3	0	0	1	2	0	2
2009	11	1	4	0	0	2	2	0	2
2010	19	2	7	0	2	3	2	0	3
2011	20	2	7	0	2	3	3	0	3
2012	21	2	7	1	2	2	3	1	3
2013	22	2	7	1	2	3	3	1	3
2014	31	3	8	1	2	3	4	4	6
2015	35	3	8	1	4	4	4	4	7
2016	52	5	11	2	6	7	8	4	9

Source: author based on: (Balog & Duman, 2015) and (Kramarová, 2016)

However in (Janasová et al., 2017) there is stated that in the Slovak Republic there is 70 clusters. Their methodology has a few more resources, than civil registry. These clusters can be divide into three categories:

- Tourism clusters (19 %),
- Technical and industrial clusters (47 %),
- Regional development clusters (34 %).

As we can see, the number of clusters is very low. It is caused by the legislation of the Slovak Republic. There is no legal act concerning clusters. For organizations, it is better to use other form of cooperation/business. The main reason is that their access to the financial sources is less complicated. As the support of cluster initiatives, there were identified seven strategic documents relevant (either directly or indirectly) to the development of clusters in the Slovak Republic. We are talking about the following documents (Chlebnikova, 2016):

- National Strategic Reference Framework 2007-2013 (approved in 2006),
- Operational Programme Competitiveness and Economic Growth – 2006,
- Innovation Strategy of the SR for 2008 – 2010,

- National Strategy of Regional Development of the Slovak Republic,
- Through knowledge towards prosperity. Research and Innovation Strategy for Smart Specialisation of the Slovak Republic,
- Operational Programme Research and Innovation 2014,
- and for the future, we count on the Europe 2020 and the Horizon 2020 that are supposed to support the development of clustering in Europe.

The reason for cluster risks research in general position is the fact that, knowledge of risk contributes to better understanding of the causes and consequences of decisions. Understanding of risk is useful for identifying and anticipation of the cluster future state. On that basis, it is possible to make strategic and operational decisions that anticipate this knowledge. Knowing and understanding the risk profile (a list of key risks), risk factors and understanding the possibilities of their management as well as defining the business model for risk management are all essential tasks related to risk management at the enterprise/cluster level.

Risk management and its application in an enterprise is based on the sequence of steps (Hollá et al., 2010). The objective of risk management is to identify risks and either to mitigate them or to apply them in business operation in order to earns extra benefit (Titko & Byrtusová, 2015). Risk identification for a small and medium sized company is very important. In our case we develop, a logical approach, to cluster risk analysis. It consists from following steps:

- Definition of the relevant elements/phases of the clusters life cycle in relation to its purpose and objectives also activities and tasks which are done during these phases,
- Definition of cluster risks, making the list of risk, define the owner of risks,
- Evaluate the probability of risk phenomena occurrence and its consequences,
- Definition of strategy approach to cluster risks; within the enterprise to apply the approach to defining risk tolerance,
- Define organizational framework for defining the powers and competences the work with risk and adopting measures,
- Define relations between identified risks (risk portfolio),
- The establishment of early warning systems, which would allow to identify possible cross event and activate specific mechanisms in the structure of the company, which have competence to act on the process variable and thus reduced the risks and the potential risks to the overgrowth of the crisis in the company.

Establishing of cluster is a long-term activity. Most important person is a facilitator, who starts cluster initiative. The most important activities are before establishing the cluster. Cluster has to have a purpose, goals, finance and last but not least members. Cluster as network of enterprise and other legal entities has a life cycle.

During life cycle, it is necessary to make a lot of activities and tasks. Therefore, we create a table 2. We present basic phases, activities and tasks during the cluster life cycle in this table.

Table 2: Cluster life cycle activities

Phases	**Activities**	**Tasks**
1. Analysis of conditions	Analysis on place	Localization condition of cluster
		Entrepreneur and company culture
	Market and infrastructure analysis	Market analysis
		Analysis of competition
		Infrastructure analysis
		Geographical and social analysis
		Supplier analysis
2. Identify cluster goals	SWOT analysis	
	Definition of cluster key activities	Partners identification
	Stakeholders participation	Companies, communities, municipalities, local authorities
	Definition of cooperation goal	Goals in activities of cluster
		Goals in cooperation development
3. Creation of Organizational and Operational cluster model	Creation of cluster organization management	Cluster tasks definition
		Identify priorities
		Resources assessment
		Budget creation
		Creation of control and monitoring mechanism
	Creation of cooperation and decision making rules	"Cluster codex"
	Entrepreneur plan making	
4. Influence analysis and cluster finalization	Economic analysis	Analysis of cash flow
		Analysis of payback period
		Assessment of agreement between cluster strategy and cluster goals
	Possible changes	
	Finalization of entrepreneur plan	
5. Cluster management creation	ICT system of cluster	Communication to "customers" and stakeholders
	Communication channel creation	Communication to partners
6. Progressive development	Activity expansion	
	Marketing activities and developing of public relation	
	Innovation	
7. Repeal	Identification and analysis of repeal possibilities	Integration to the another cluster

Source: author based on: (Kocziszky, 2013)

During life cycle, there is lot of risk, which influence enterprises inside the cluster. We have to identify these risks for continuing in the survey. Therefore, we applied PEST analysis. Purpose of this analysis was to create a list of risks.

Results of PEST analysis is stated in Table 3.

Table 3: PEST analysis

Factor	Characteristic	Level/critical factors
P	Political system Clusters legislation Legislation for business entities in the sectors Membership in various business associations	A stable political system Absence of cluster legislation Sufficient legislation in the sectors of the economy Union of Clusters of Slovakia, Slovak Innovation and Energy Agency, Slovak Business Agency
E	Level of macroeconomic indicators development Unemployment rate Sector structure of the economy	GDP growth rate: 3.6%, inflation: -0.3%, unemployment rate: 11.5%, balance of trade balance: 3.303 billion. EUR (ŠÚ SR, 2015). FDI: 0.8 billion USD. (NBS, 2014) The superiority of the industrial sector B - E..
S	Population and demographic composition Mobility Level of education Customer behaviour	Aging of the population Mobility of skilled labour abroad The level of education does not meet the requirements of the economic practice. Customers start to prefer products with quality
T	Technological level of subjects State support for R & D Patents, licenses	Low level of R & D support by the state Low level Intensity of innovation (share of innovation expenditure from total company revenue). Low level of innovation expenditure in industry Prevalence of large enterprises for the share of enterprises with innovative activity, low level of the share of innovation expenditures

Source: author based on: (ŠÚ SR, 2015), (NBS, 2014), (Hudáková, et al., 2015) and (Šoltés & Štofková, 2016)

A number of factors that can threaten their activities and outcomes influences clusters. The main goal of clusters is generally to increase the competitiveness of cluster members by improving their market position and more efficient functioning. In business entities, risk management apply mainly to increase their competitive ability and minimize business losses and losses. The goal of the risk management process in clusters in accordance with is to identify, analyse, evaluate, address and monitor the risks that this cluster's effectiveness might affect. Through the effective implementation of risk management, the cluster could more effectively use its capital, financial and human resources.

Table 4: The mean assessment of cluster cooperation risks by SMEs in the Slovak republic

Risk	Slovakia*	Risk	Slovakia*
Outflow of own customers	3,46	Machinery and equipment	2,6
Competition	3,41	Market trends	2,59
Quality	3,07	Company location	2,59
Taxation	2,95	Industry	2,56
Competence	2,93	Infrastructure	2,47
Partners	2,86	Transport and Storage	2,26
Personal risks	2,68	Energy supply	2,2
Market area	2,67	Retail space	2,19
Slowdown of enterprise`s economic development dynamic	2,63	Raw materials availability	2,07
* average value based on estimation (0,5);		scale: 0-not applicable, 1 - very low risk, ...5 very high risk)	

Source: own survey

Based on stated above and our other research we create a list of risks, which can affect SMEs in clusters. Therefore, we create a survey and we closely cooperate with enterprises in the clusters to find out which risks have biggest impact on their networking into clusters.

Results are in the table 4. As the highest risk, areas for cluster cooperation were observed: outflow of own customers, competition and quality. This research has been performed also for Poland. The results were similar. The evaluation of risk –Research and Development was rather small (1,84). This can follow to not surprising conclusion – SME in Slovakia are not oriented towards production with high value added; the production process is mainly based on labour force and sophistication of production is not the objective. The risk “Cluster production” achieved 2,63 (comparing to Poland – 1,51) what can be interpreted as positive impact of clusters towards production; clusters can mitigate risk of production with higher flexibility.

4. Conclusion

In the article, we present current state of clusters in the Slovak republic. There is only a few clusters, which main cause is Slovak legislation. In the legislation is missing the financial support for clusters, therefore enterprises are not motivated to establish a clusters. We were interested in enterprise look on this topic. In spite of we create a survey on main barriers/ risks, which are connected to clusters issue. According to our research, we are able to state that the main risks are connected to outflow of customers, competition and lower quality. We think that is appropriate to create a risk registry connected to cluster issue. After that is possible to promote pros of the clusters as well as cos of the cluster with knowledge about existing risks. Enterprise risk management can handle these risks.

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CRIMINALITY OF FOREIGNERS IN THE CONTEXT OF GLOBALIZATION AND INTEGRATION

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Abstract. As a result of globalization and integration, travel and resettlement has become more accessible. The process of international migration is undoubtedly associated with positive aspects, but the society is also beginning to perceive the negative aspects of this phenomenon. The possible threats that accompany the migratory process are at the forefront, especially the threat to society's security requirements and the increase in foreigners' crime. For the development of the migration policy of the Czech Republic in modern history, two milestones were crucial. The first was the transformation process of economy, and the second milestone was the entry of the country into the European Union. The increase in the number of foreigners in the country also affected the process of globalization and technical progress, which made the technical and economic barriers to migration diminishing. Today, migratory policy and the shape of international migration in Europe are undergoing changes in the migration crisis. It is related to the global situation in the world. Although the Czech Republic is not one of the countries that would be hit hard by the migration crisis, worries about lower security arise here. The aim of the article is to analyse the criminal behaviour of foreigners in the Czech Republic since joining the European Union, and especially after the outbreak of the crisis. The subject will mainly analyse the criminal behaviour of foreigners and compare the criminality of foreigners with criminality of Czech citizens.

Keywords: criminality of foreigners, index of criminality, migration, migration policy

JEL Classification: F22, F62, K37, O15

1. Introduction

Migration is one of the undisputed aspects of ongoing globalization processes. People's redeployment is becoming more and more accessible it is a result of technological advances and due to modernization of transport. This phenomenon is shaped by population dynamism, regional development, social, economic and political pressures as well as historical and cultural pressures. An important factor that motivates citizens to migrate is above all the difference in the economic situation of individual countries. In spite of the benefits and benefits of the labour market in particular, this process is linked to many negative issues that may arise with the arrival of an increased number of migrants in the country, the risks being highlighted by the risks associated with security, health, economic situation or culture. The Czech Republic is not so popular country for foreigners. It is transit country for most of foreigners and they continue through the state to Western Europe. But the recent increase in the number of foreigners, especially from North Africa and the Middle East, has also been recorded in this country. The security element in the context of migration can be seen in three levels, the first is the threat of migrants in the country from which they emigrate, the threat during their wandering, and the third linking between migration and security can be seen in the host country.

This article deals with the security aspect of migration in relation to the host country. The aim of the article is to analyse the number of crimes committed by foreigners compared to the domestic population and to verify or disprove the hypothesis that the increasing number of asylum cases increases the rate of criminality of foreigners in the Czech Republic. With regard to data availability, the situation will be investigated between 2004 and 2015, ie after the Czech Republic joined the European Union.

2. The theoretical aspects of migration and security

Migration is referred in the literature as a mechanical movement of the population who moving from one place to another. Lee (1966) defines migration very commonly as a permanent or temporary change of residence without specifying the requirements of distance movement, volun- tary or essential whether internal or external migration is concerned. Migration is a key element of population development, in addition to birth rates and mortality. It affects the cultural and social changes in the country. Importance of migration in the 20th century has risen sharply and the volume of migrants has multiplied. The process of migration is currently conditioned by globalization trends that have facilitated population shifts, feminisation of the migration flow, increasing the number of women migrating at work and taking account of security risks. Europe for centuries has been an emigrant continent. The migration balance began to reverse after the Second World War. Today, the countries of Europe are primarily immigration countries, and it is necessary to regulate and control the movement of people across borders. Motivation for migration can be economic, political and social factors, it is an interdisciplinary problem. Massey (1993) draws attention to the individual's attitude and behaviour, based on the conclusions of a neoclassical theory that, in view of the increasing economic growth of the source areas, the income from migration is decreasing and incentives for movement are reduced. (Massey, 1994) Straubhaar and Zimmermann (1993) mention the motives of economic migration; European countries are therefore attractive to migrants and refugees. They come to Europe with the vision of a better life. Johnson (2014) highlights the spatial and regional location of migrants, highlighting the time aspect of the role of the country and uneven access to land.

Migration and the process of relocation of people are also important in Europe with regard to the Schengen area and the right to free movement of persons and the free movement of labour in its territory. The aim is to promote effective deployment of workers. Basiri, Taghiyareh and Ghorbani (2017) dealt with effective international cooperation and the creation of international teams in the context of brain drain issues. In the context of migration, attention must also be given to the integration of foreigners, even with regard to security and their social inclusion. If the state wants to continue to maintain its economic development and society without serious cultural conflicts, it is important to have an effective integration program. The goal of integration policy is to support the process of integrating immigrants into host societies. So that the alien felt part of it, he could secure himself, eliminating the risk of criminal behaviour. The prerequisite for successful integration of the alien into the host society is the mutual understanding of often different cultures and values.

For successful integration, an immigrant must be adapted to the country's rules, and the home country has provided scope for expressing immigrant culture, enabling access to education and employment. The economic and social aspects of immigration have become increasingly important in Europe. Crime perpetrated by foreigners has a particular impact on the perception and position of foreigners in host areas. Becker (1968), Ehrlich (1973) have pointed out that crime is motivated mainly by economic factors and has drawn up a model of choice between crime and labor. People, according to this theory, decide whether to engage in criminal activity on the basis of a comparison of expected crime benefits and expected costs. Immigrants face worse economic conditions, so they can be more susceptible to criminal behavior than the domestic population. Freeman (1999) also highlights the link between criminality and the offender's age. A higher tendency to commit crimes is seen among young people, given the fact that young people predominate in the migrant population, the susceptibility to crime can also be influenced by the age structure of the group. Many studies deal with the criminal behavior of foreigners. Tournier (2017) dealt with the criminal behavior of foreigners in France. It highlights, in particular, that the proportion of foreigners in crime varies according to the offense committed. However, the increased threat to security threats does not have to arise only with foreign migration, as Shukai and Kipnis (2000) point out, who have dealt with the criminality of migrant workers from rural areas to Chinese cities. The sharp increase of migrants in cities has led to an increasing number of complaints from the indigenous population. As the authors point out, in addition to increased crime, the domestic population with increasing numbers of immigrants also felt the growing pressure on public services, housing and transport, which has been the subject of many conflicts. The Karakasidou (2002) study highlights the perception of culture and common traditions by a group of people regardless of nationality. The study highlights the issue of Greece, which is a culturally homogenous country, but in recent years the fears of foreigners' crime have grown. Nunziata (2015) dealt with the empirical relationship between immigration and the victimization of crimes and the perception of migratory waves after 2000. It concludes from this that the perception of the society about the criminality of foreigners can be influenced by informal empirical evidence that negatively affects the natives' view of migrants.

3. Criminality of foreigners in the Czech Republic

The issue of criminality of foreigners in the territory of the Czech Republic became important in the 90s of the 20th century. The Communist regime applied a strict migration policy and the movement across national borders was severely restricted. As a rule, it included only citizens of other socialist countries and it was significantly lower compared to today situation. The situation has changed since the transformation of the economy, until 1997 a very liberal migration policy was implemented. Even with regard to the position of the Czech Republic, foreigners were searched for as a transition country rather than a target country. This usually takes place today. With the growing number of foreigners in the country, the Czech Republic also had to face new types of crimes and new criminals' practices (organized crime).

The tightening of the migration policy occurred since 1999, when Act No. 326/1999 Coll., On the Residence of Foreigners in the Czech Republic and Act No. 325/1999 Coll. on asylum.

Significant changes in migration policy arose after the Republic joined the European Union, adopting the Dublin system, Council Regulation No. 604/2013. A long-term residence permit system was introduced, and a European directive laying down minimum standards for the reception of asylum seekers was implemented. At the end of 2007, the Czech Republic entered the Schengen area, where members of the EU member states can move unlimited. In the Czech Republic, three residence regimes for foreigners are defined, the first includes foreigners from third countries, another concerns EU citizens and their family members, and the third deals with asylum and international protection.

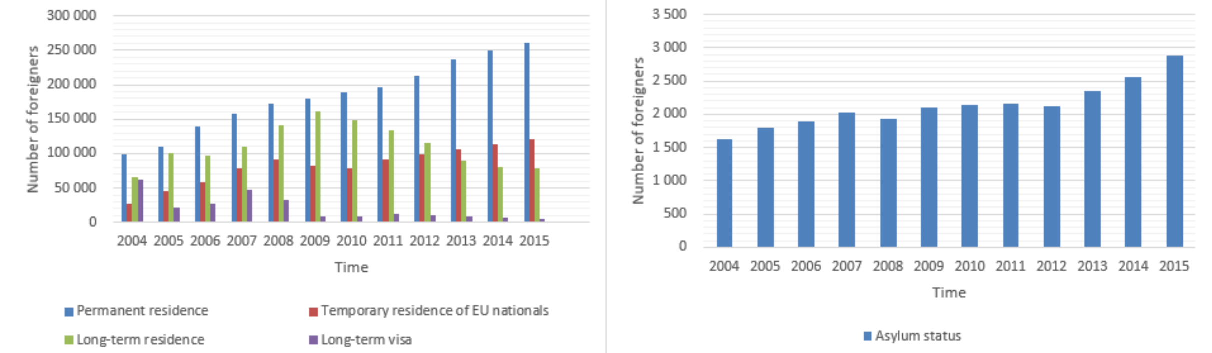
Migration policy is currently responding to the situation arising from the migration crisis. In 2013, European countries are struggling with the growing number of foreigners and asylum applications from African countries and from the Middle East countries. The Czech Republic expected a more massive arrival of migrants from Ukraine due to a continuing conflict in Ukraine, but noted the large-scale arrival of illegal migrants from Kosovo, who were headed to Germany. In particular, the Czech Republic was a transit country for migrants heading for Germany and Sweden.

The following graph in Figure 1 shows the development of the number of foreigners in the Czech Republic. Aliens from third countries dominate the Ukrainians, Vietnamese, Russians, and Moldovans. These foreigners live in the Czech Republic mainly for the purpose of employment. This group of foreigners is issued a visa for a stay of over 90 days and a long-term residence permit, which entitles the alien to move in the Schengen area, to stay over 90 days and to extend the stay. A citizen of the European Union may live in the Czech Republic for any period without a visa or residence permit.

Among them, citizens of the Slovak Republic predominate. From 2004 to 2008, the number of foreigners without asylum seekers increased by 183,581, ie by 71%. In 2009, the consequences of the economic crisis were manifested and many foreigners had to leave the republic because of the loss of employment, at that time approximately 430,000 foreigners lived in the Czech Republic.

In the given period, the number of foreigners with permanent residence grew slightly, while the number of foreigners with a visa over 90 days decreased. The figure also shows the increasing number of asylums granted. Asylum is a complementary protection between forms of international protection. The number of asylum applications had a long-term downward trend, 5,459 applications were submitted in 2004, around 750 applications gradually settled. From 2014, the number of applications is rising again.

Figure 1: Number of foreigners in the Czech Republic



Source: (CZSO, 2017)

Foreigners usually commit ordinary crimes, as well as citizens of the Czech Republic. Such as theft, danger under the influence of addictive substances, driving a motor vehicle without a driving license, rioting, infringement of trade mark rights, trade name and protected designation of origin. Figure 2 shows the development of the number of persons prosecuted in the Czech Republic. The chart shows the number of foreigners, ie citizens from third countries, the number of EU citizens and citizens of the Czech Republic. A person prosecuted can be a person who has been notified of an allegation under §160 of the Code of Criminal Procedure. It can be seen that the number of criminally prosecuted citizens in the Czech Republic is decreasing over the monitored period.

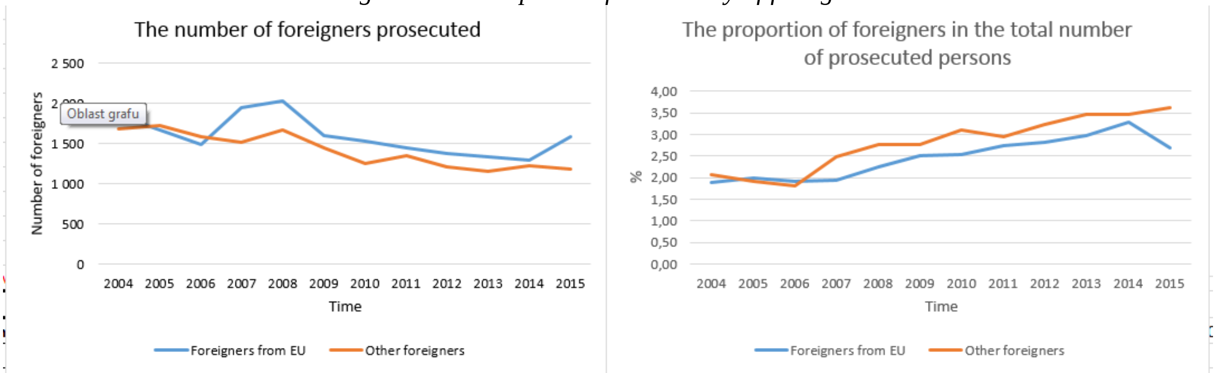
Aliens from third countries participate in the total number of prosecuted persons 2,5% and EU citizens a little more and 2,8 %. The largest number of criminally prosecuted foreigners can be seen in 2005, shortly after EU accession. These foreigners include Slovaks, Poles, Germans, Ukrainians and Vietnamese.

On the contrary, the smallest number of criminally prosecuted foreigners was recorded in 2008. EU citizens have been seeing a declining tendency for prosecuted persons since 2009. The share of prosecuted foreigners in the total number of prosecuted persons has increased since 2006. An important indicator is also the number of convicted persons.

EU citizens were found in the monitored years on average of 1 409 convicted persons. Since 2006, there has been significant growth to 3 153 convicted EU citizens, then the number of people has fallen slightly and since 2010 it is on average around 2 870, which is about 9% less than the highest measured value. Since 2004, the development of EU prisoners has fallen and has risen significantly since 2007, when it has risen to 1 374 in 2008, followed by a large decline of about 400 people. If we focus on convicted third-country nationals in the reference period, we can see a relatively constant development, with an average of 2 152 convicted persons, which is 17.3% less than the average number of EU citizens.

Foreigners with the highest number of convicts reached 1 504 in 2005, mainly from Slovakia, Vietnam, Poland, Romania, Russia.

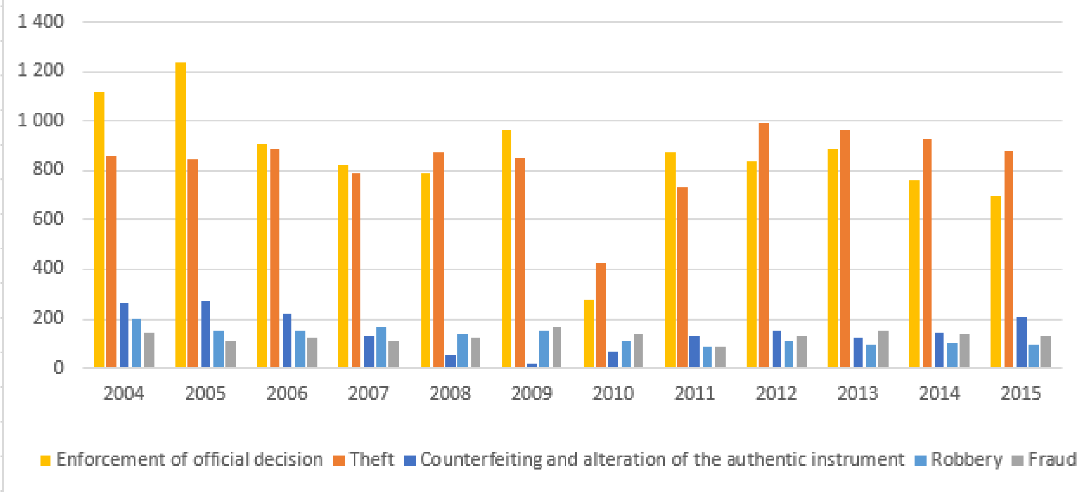
Figure 2: Development of criminality of foreigners



Source: (CZSO, 2017)

The following graph in Figure 3 shows the proportion of crimes committed by foreigners in years. It follows that foreigners most often commit enforcement of official decision and theft. For Czech citizens, crimes of theft predominate, almost 50% of cases, followed by abolition of official decisions and fraud.

Figure 3: Criminality of foreigners



Source: (CZSO, 2017)

The following analysis will monitor the relationship between the numbers of foreigners and crime, especially the question of whether crime is increasing with the increasing number of asylums granted in the Czech Republic. The analysis will be done by means of a correlation analysis, which will test and quantify the interrelationship between the variables. Foreigners will be distinguished by the degree of residence. Criminality will be expressed using the crime index, which expresses the number of perpetrated offenses per capita, as well as the crime rate of EU and third country nationals. The correlation analysis will be processed in statistical software Statistics 12. Based on the tests performed on the normal probability distribution, the Spearman correlation coefficient defined by (Hindls, 2006) was used for the correlation analysis (1):

$$r_{i_x} r_{i_y} = 1 - \frac{6\sum(i_x - i_y)^2}{n(n^2-1)} \tag{1}$$

where *i* expresses the sequence number of the variable in the ordered row and *n* is the number of cases. The results of the correlation coefficient are from -1 to 1, and if the correlation coefficient is close to +1, it can be concluded that there will be a strong direct dependence between the quantities and, if close to -1, there will be a strong indirect dependence among the variables. If the coefficient is equal to 0, the dependence between the quantities does not exist. The results of the correlation analysis are shown in Table 1.

Table 1: Correlation analysis

	Marked correlations are significant for p <,05000					
	Foreigners without refugees	**Asylum**	**Permanent residence**	**Temporary stay of EU citizens**	**Long stay**	**Long-term visa**
Crime Index	-0,709	-0,845	-0,891	-0,700	0,309	0,855
Rate of crime of foreigners	-0,836	-0,891	-0,945	-0,855	0,318	0,773
Rate of crime of foreigners from third countries	-0,873	-0,945	-0,982	-0,873	0,373	0,864

Source: (CZSO, 2017)

The results of the correlation analysis show that the number of asylum seekers is too low to influence the level of crime of foreigners or the level of crime in the country. Positive correlation, statistically significant, has only been demonstrated for the number of foreigners with a long-term visa to stay.

4. Conclusion

This article deals with the analysis of the criminal behaviour of foreigners in the territory of the Czech Republic. Although the number of foreigners in the Czech Republic is increasing, compared to other European countries, the share of foreigners in the population is not significant. Despite this, the growing number of foreigners is a threat. There is a growing tendency to strengthen the measures implemented in the framework of migration and integration policy, in order to integrate foreigners into the majority society. Integration aims to unite foreign nationals with the country's citizens. The integration process is characterized by the concept of integration of foreigners in the Czech Republic, which characterizes the social integration of foreigners, the protection of foreigners from discrimination and the promotion of equal access and opportunities in the labour market, housing, education, health, religion and social care. Integration is related to prevention, which serves as a means of preventing crime and eliminating the commission of criminal offenses. The Czech Republic applies prevention through state administration bodies, security forces, non-governmental and charitable organizations and some business entities. The article first analysed the number of foreigners in the Czech Republic and subsequently dealt with their criminal activities. Although the number of foreigners who are prosecuted for committing a crime decreases in the Czech Republic, the share of foreigners in the total number of prosecuted persons is increasing. In more detail, the relationship was analysed by correlation analysis. The conclusions of the correlation analysis showed that only long-term stays of third-country nationals correlate with crime in the Czech Republic. Correlation coefficients for other types of stays are negative, so it can not be said that the rate of crime would rise with the growing number of foreigners or asylum seekers. From these conclusions it can be concluded that only the qualitative aspect is not decisive, the criminal behaviour will be influenced by a number of other factors, age, education, employment, integration process.

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SHARED SERVICE CENTRES AN OPPORTUNITY TO GROW IN CURRENT GLOBALIZATION

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Abstract. Companies have been implementing shared services centres (SSCs) model since the mid-1980s, but there is still much interest in the topic. Although Ford and other American companies such as General Electric and Baxter Healthcare first applied this concept in the early 1980s, it was not until the early to mid-1990s that the pioneer adopters in Europe such as Inter, Whirlpool, and Allergen proved the pan-European model. Organisations continue to recognise the strategic value of implementing SSCs and Business Processes Outsourcing Centres (BPOCs) concept as well as reducing their cost, improving controls, and enhancing service levels. Both SSCs and BPOCs concepts represent one of the mostly expanded forms of foreign direct investment in last two decades with the high impact to the national, local as well as at company economic indicators. The main purpose of this paper is to point out the history of SSCs and BPOCs and to analyse the role and position of this dynamically expanded industry segment in Slovakia and Central and Eastern European countries. The research strategy was built on a long run study and descriptive research. CEE countries are considered to be the most popular for outsourcing activities of Western European and US companies. SSCs and BPOCs are significantly contributing to the success of these companies and the local economies.

Keywords: shared services centres, business processes outsourcing centres, CEE economies

JEL Classification: M2, F2, F6

1. Introduction

Shared service centres (SSCs) and Business Processes Outsourcing Centres (BPOCs) have primary gained the interest of companies' management to improve efficiency of business. By centralizing activities, the basic premise for SSCs and BPOCs seems to be that services provided by one local department can be provided to others with relatively few efforts and with lower costs. Shared services enable corporations to achieve economies of scale by creating a separate entity within the company to perform specific internal services, such as payroll, accounts payable, travel and expense processing, etc. SSCs can be used to share services between departments within an organization or between organizations. The former kind of SSC type can be called an intra organizational SSC, while the latter kind is called an inter organizational SSC. Scholars refer to SSCs frequently as a form of internal outsourcing, thereby neglecting other perspectives (Click, R. L., & Duening, T. N. (2005) and Seal & Herbert, 2013). SSC concept has its origin in the United States and is still popular for these firms. Early adopters of shared services reported enormous benefits. General Electric - recognized as the first leader of shared services- implemented shared financial and accounting services in 1984 and reduced staff by 30%. GE created shared financial services in 1985, and reduced finance staff by 450 and reported annual savings of $40 to $50 million.

Business Process Outsourcing means contracting business functions to third-party service providers. While call centres are the most visible part of this industry, business process outsourcing also includes many types of back office processing. BPO is typically categorized into back office outsourcing, which includes internal business functions such as human resources or finance and accounting, and front office outsourcing, which includes customer-related services such as contact centre services. In addition, other outsourcing segments within the global industry include business services, energy, technology, healthcare and pharmaceuticals, retail, travel and transport, and telecom and media (Forbes, June, 2015).

This industry largely operates invisibly for consumers in North America and Europe. The sector employs several million people worldwide (Chertok, 2013). Business process outsourcing has evolved with time and this trend is still accelerating. Originally, outsourcing was associated with manufacturing firms, which outsourced large segments of their supply chain. According Forbes (June, 2015) the revenue of the global outsourced services industry rose steadily year over year from $45 billion in 2000 to just under $100 billion in 2012 and India is considered a clear leader in this area, offering a highly skilled, educated, cost effective, English-speaking labor pool. According Richter & Bruhl (2017) more than 75% of Fortune 500 companies have established models of shared services with the aim of gaining superior performance by cost savings and service enhancements.

2. Methods

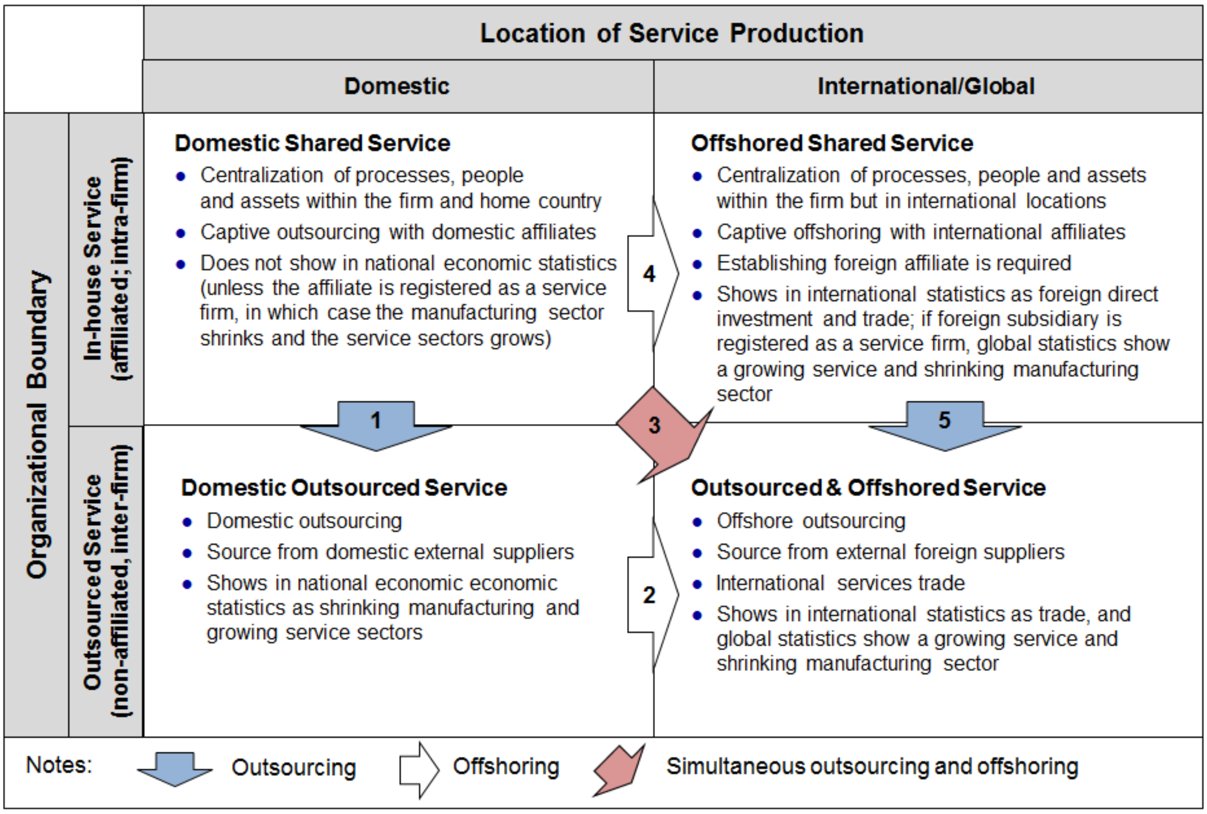
Longitudinal survey and cross sectional study has been used as research methods to analyse the SSCs and BPOCs as a new stream in global business. Applying retrospective type of longitudinal study was based on exploitation and correlation of existing data, scholarly articles, statistic data, and case studies of organizations implementing SSC or BPOC business models in real practice.

Limitation of these observational methods is their less power to detect causal relationship of observed subject. The paper makes a conceptual contribution supported by descriptive data, but without empirical testing The positive aspect of exploited methods is that there allow to compare many different data at the same time and researchers do not interfere with observed subjects.

3. SSC and BPOC business model – motives, process, and assumptions

According to Bergeron, 2003 SSC is not business as usual, and differs from centralized models and outsourcing models (Ulbrich, 2003). Outsourcing relates to the fundamental questions of why firms exist, and whether and what a firm should make or buy (Massini & Miozzo, 2010) and involves greater specialization as firms switch from sourcing inputs internally to sourcing them from independent suppliers (Sako, 2005). Outsourcing refers to products or services that were previously produced internally are bought from another (domestic or offshore) company (Wirtz et al., 2014). The evolution of outsourcing models in global market have been structured into four perspectives (fig.1).

Fig:1 Shared service/Outsourcing business models



Source: Wirtz, J., Sven Tuzovic, S., and Michael Ehret, M. Global Business Services: Increasing Specialization and Integration of the World Economy as Drivers of Economic Growth.

The first scenario (Arrow 1) describes a firm's decision to outsource services locally. Arrow 2 describes a situation where a firm switches from a domestic supplier to a foreign supplier. In some cases, firms make the decision to outsource and to offshore to a foreign supplier simultaneously (Arrow 3). The fourth scenario is when firms source from foreign locations by establishing a foreign affiliate (Arrow 4). This is often referred to as "captive offshoring" (Wirtz et al, 2015).

The crucial assumptions of creating the global shared service centre are (1) Adopt the right transformation approach; (2) Identify processes for shared services by analysing the costs, attributes, and readiness of process activities; and (3) Get business unit clients and internal staff to cooperate and embrace the shared services initiative. When the process is managed properly, shared services reduce costs, improve services, and can even generate revenues (Lacity & Fox, 2008). Authors conceptualised the shared services as four steps programme: business process redesign, organisational redesign, sourcing redesign, and technology enablement whereas business process redesign specifies *what* business processes the organization will perform; organizational redesign specifies *where* business processes will be performed; sourcing redesign specifies *who* performs the business processes, and enabling technologies are used to implement the newly designed business processes and to coordinate work across different organizational units and across sourcing partners.

According Bharadwaj & Saxena (2010), Business Process Outsourcing (BPO) has become a very competitive industry with many players in the market. The challenge all the BPO companies are facing is how to build and sustain business with the clients in such a competitive industry.

In process of any change in organisation Minarova et al., (2015) emphasise the role of managers who appreciably affect the efficiency, quality and overall success in any business. An implementation of SSC or BPOC model in organisation requires radical change. Theodoulides (2016) argues that for most organizations the ability to change is among the few remaining long-term competitive advantages.

3.1 SSCs and BPOCs in Slovakia and CEE countries

Central and Eastern Europe (CEE) region continues to be the most popular region for SSCs and outsourcing mainly from Western Europe. With many small to mid-size European companies entering the SSC market, is expected CEE to further strengthening its position as a major growth region in the coming years. The Czech Republic and Slovakia are two of the most attractive CEE locations and have developed a leading reputation for quality and high value services over the last 10 years (PwC, 2014). The outcomes of PwC research show that both the Czech Republic and Slovakia have a strong database of highly-educated graduates and highly experienced SSC talents that brings significant new investments into the market each year. The main SSCs and BPOCs hubs in former Czechoslovakia are located in Praha, Brno and Bratislava.

The first shared service centres in Slovakia have been established at beginning of the new millennium. SSCs and BPOs give job opportunities to approximately 30 000 people and represent important employers especially of young people.

Foreign and local investors are encouraged to establish and expand SSCs and BOPCs in Slovakia. These centres not only contribute to stabilizing the operation of foreign companies, but also to increase their added value. They have a positive impact on employment and vocational training for young people. Currently, there are over 60 SSCs and BSCs established in Slovakia, with 10% annual average growth in employment. Therefore, Slovakia is becoming a hub attracting many financial, IT, accounting and other service providers. SSCs and BPOCs sector represents one of the most dynamically grow industry for Slovak economy; they provide international support services not just for their mother companies but also for other subsidiaries, moreover these centres execute specific outsourced business processes for third-parties from abroad.

The strategy for further development of shared services and outsourcing models in Slovakia is based on three pillars: labour securing sufficient quantity at required quality, environment sustainable development of SSC and BPOC, and promotion attraction of the new outsourcing investments into Slovakia (SARIO, 2015, 2017).

Further CEE region country that has been observed in this paper is Romania. Country is highly suitable for shared service centres or business process outsourcing, and a large number of companies have grasped this opportunity (Petrişor & Cozmiuc 2016). Companies such as Continental Automotive Romania, Oracle Romania, British American Tobacco, Hewlett Packard, Kromberg and Schubert or Alcatel provide shared services in the area of finance, logistics, credit management services, translation services, administration, human resources services, and controlling. The strategy for SSCs in Romania is to focus on the activities they perform and bring them to excellence.

To compare with the Slovak strategy in the SSCs and BPOCs development the orientation to foreign and local investors is missing. It creates a possibility to gain and sustain the competitive advantage for the Slovakia and enhance the further development of this new global industry.

4. Conclusion

Organisations continue to recognise the strategic value of implementing SSCs and BPOCs model as well as reducing their cost, improving controls, and enhancing service levels. Both SSCs and BPOCs concepts represent one of the mostly expanded forms of foreign direct investment in last two decades with the high impact to the national, local as well as at company economic indicators. It is now estimated that over 80% of Fortune 500 companies have implemented some form of shared service in their business operations.

To create shared services centres, a company requires major capabilities to manage largescale change, re-orient staff, redesign processes, install the enabling technology, establish and enforce standards, and re-organize. Senior managers must consider the right approach toward such major transformation programs (Lacity & Fox, 2008). The progression of the shared service centre from a back-office function to an enabler of growth and product development is remarkable in last decades.

According to PwC survey (2014) CEE is by far the most popular location due to its skilled workforce, and low labour costs, as well as a good quality of life. CEE is the number one destination for outsourcing from Western Europe. An increasing number of smaller and mid-size companies are looking at setting up SSCs and are more likely to choose SSCs or BPOCs solutions in future which should mean further growth in CEE.

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FACTORS DETERMINING THE MIGRATION

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Abstract. This paper considers the impact of migration on national security in globalizing world, the emphasis here is made on intellectual migration. Intellectual migration is considered in terms of "brain drain" and "brain circulation". The factors influencing the migration processes are studied. Diasporas are regarded as one of the factors influencing the migration flows. At present time, the idea of returning of the "brains" is replaced by the idea of the effective use of the "brains" in the host country. In the context of globalizing economy, many researchers say that "brain drain" is a natural process, but we cannot avoid a number of negative effects caused by it. Thus, the aim for diasporas is to maintain ties between homeland and migrants. Lost profits in this case are the funds invested in education and health. The goal is to find the means which enable the identification of migrants, their location, and to classify them in order to maintain contact with them and be able to use their knowledge for the good of the country. This paper consider project CIDESAL (creation of incubators of intellectual diasporas in Latin America) pursues the objectives indicated above. Effective use of these "brains" and the identification migrants is very important. A central goal of the states is to compensate the costs of intellectual migration through the effective use of "brains".

Keywords: intellectual migration, "brain drain", "brain circulation", diasporas

JEL Classification: F01, F22, F29

1. Introduction

In recent years, both in Russia and in the EU, an increase of migration flows was spotted, which raises some concerns of experts and raises the question of obtaining the benefits of migration. Economic, social and information security –are important components of national security, which must be taken into account when considering this issue of migration. There are three levels, affecting the development of migration in the country - geopolitical, economic and demographic.

According to the National Security Strategy of the Russian Federation until 2020, national security – is a system of development of the state in terms of its capacity for self-survival and development in the context of internal and external threats (National Security Strategy, 2015). These aspects largely determine the national security of our country and its individual regions.

On the one hand, the migration of skilled workers can be seen as a process of "brain circulation", i.e. the source of knowledge, competence, experience, on the other side, it is seen as negative aspect - the "brain drain." In the context of globalizing economy, many researchers say that "brain drain" is a natural process, but we cannot avoid a number of negative effects caused by it. For a long time this phenomenon remains little studied. Recent global studies, such as the Global Commission on International Migration, the UN High Level Dialogue on International Migration and Development at the Global Forum on Migration and Development, demonstrated the positive effect of skilled migration in the form of knowledge exchange, inflow of capital, the return of migrants who have acquired new knowledge, formation of international professional communities, which contributes to the problem of switching the "brain drain" into "brain circulation", which promotes social and economic development of the country (Piper, 2017), (Soroka et al, 2016). Departure of qualified personnel abroad cannot be considered as expatriation of the human capital, since it is also a source of many competencies and knowledge that can be used for the benefit of the country. Creating the conditions for the arrival of highly qualified personnel should be a priority of the state.

2. The migration decision

The economics of migration as a separate direction of economic knowledge has appeared relatively recently, and it is connected with the release of the work of Harvard researcher George Boryas, which is called "The Economics of Immigration". In 2014, he published his book, which is called "Immigration economics". However, one must understand that the systematization of knowledge about migration movements, conducted by Boryas, is not a starting point for the existence of the direction. Most migration theories were proposed before the release of his work, and now are an integral part of this direction. The economics of migration is not an independent branch in economic thought. It uses the same methods, concepts, models and the entire methodology of the labor economics. Further in the work will be considered theories, which in modern terms, refer to the labor economy.

The main direction of economic thought in the field of the migration economics are: the neoclassical theory of migration, the theory of the dual labor market, the institutional theory of migration, alternative economic theories of migration, which include structural historical theory and the theory of world economic systems.

Neoclassical theory, considers migration, both at macro and micro levels. The macro-theory of migration is one of the most well-known theories that shows the influence of migration flows on the economic system. In accordance with this theory, in the simplest of its specifications, the reason for migration is the difference in equilibrium wages, which are formed in the labor markets in the country receiving the migrants and the country that provides them. If in country A the equilibrium wage is lower than country B, then the transfer of labor will start from A to B, which leads to a reduction in the supply of labor in the first and its increase in the second, which in turn will lead to an increase in wages in country A and its decrease in country B. This The process will continue until the salary levels are equal in both countries). Given that the new wage level will be W * ', and W0 * <W *', and W1 *> W * '.

The causes of migration according to the neoclassical economists are:

- international labor migration is affected only by labor market mechanisms. In addition to wages in more complex specifications, the level of taxation, exchange rates and many other macroeconomic parameters are indicated.

- international labor migration is a natural process of efficient allocation of labor resources, and state policy in the sphere of migration hinders the natural movement, and accordingly it is not needed.

In classical and neoclassical theories, migration is presented as an absolutely positive phenomenon affecting the economy, in conditions of complete freedom of decision, which lies at the center of the analysis of classics, there may be a pareto-optimal distribution of individuals in both the sending and receiving countries. In countries where the labor force is falling, the labor shortage is decreasing in sectors with high unemployment, inflationary pressure from wages is reduced, migration maximizes the return on productive resources, reduces overall unemployment and will certainly lead to faster economic growth. For the country from which individuals emigrate, there are also economic advantages, in that unemployment is also reduced by the outflow of labor, and there are also models that prove that the migrant almost always returns some of his income back to the country from which he emigrated, which also leads to economic growth in the country from which the individual left.

The conclusions that neoclassicists make are unambiguous, however, this theory is often refuted by empirical evidence. For example, an uncontrolled migration process will lead to the replacement of migrant workplaces with indigenous people, which can lead to increased social inequalities and pressures in the host country of migrants. Also, the issue of illegal (irregular) migration, which not only does not lead to economic growth, but also leads to underestimation of the gross national product, always arises in discussions about migration.

In the microeconomic theory, processes that are influenced by migration, and the migrant himself, are no longer considered. In this theory, the individual is considered, as a rational agent of the economic system, and in the choice to migrate or not to migrate will rely on quantitative indicators of the benefits and costs that will accompany migration. International migration is seen as a form of investment in human capital.

The simplest model of migration decision is as follows:

$$\mathrm{ER}\ (0) = \int_0^n [P_1(t)P_2(t)Y_d(t) - P_3(t)Y_0(t)]e^{-rt}dt - C(0) \tag{1}$$

Where

- ER (0) expected return from migration;
- t time;
- P1 probability of deportation (equal to 1 if migration is legal, <1 if migrant without documents;
- P2 probability of finding a job in a new country;
- Yd income received in the new country;
- P3 probability of finding a job in your country;
- Y0 income received in the home country;
- r interest rate;
- C(0) accounting costs of migration.

If ER (0)> 0, the individual migrates, if <0, then no.

The main assumptions in the microeconomic theory of migration are:

- the cause of international labor migration are: economic factors. In various specifications, other factors of analysis are added, in addition to wages and unemployment;
- other things being equal, individual characteristics of human capital that increase the chance of finding a job and the amount of income received (for example, education, experience, ability to learn, language skills) will increase the likelihood of an individual's migration;
- the individual is rational, if the overall formula of migration is positive, he necessarily migrates;
- aggregate migration is the sum of all individual migrations in the ratio of income to costs;
- only the values characterizing the labor market influence the decision on migration, other markets do not influence the decision.

The opponent of the classical theory of migration is the theory of the dual labor market, which was proposed by Michael Pior, a French economist in 1979. Unlike the classical theory that claims that wages and unemployment risks are the main driving force of migrants, in this theory the main reason for migration is the high structural demand of developed countries for labor, which the economy can not satisfy with an internal proposal.

The demand for labor in developed countries Piora connects with the four main characteristics of industrial society: structural inflation, motivational problems, economic labor market dualism and labor force demographics.

The analysis of Pior is based on the idea that the entire labor market can be divided into 2 sectors: the first sector is the market for low-skilled labor, and the second is the highly skilled labor market. Consider the characteristics of Piore through this prism.

Wages - an indicator that reflects not only the conditions of supply and demand in the labor market, but also transfers the status, prestige and other social qualities of the workplace. There is already a general consensus in the society that wages should reflect social status, there is a direct correlation between the amount of wages and the professional status. As a result, the employer is not entirely free in assigning wages to employees. For example, if an employer wants to attract workers at the bottom of the professional hierarchy by raising wages, then such an action will cause a disruption in the social connection between the status of employees and their remuneration, which in turn will create social pressure on the salaries of more skilled workers.

Thus, with an increase in the wages of low-skilled workers, the employer will have to proportionally raise wages throughout the structure of the organization's professional hierarchy, in accordance with the social expectations that exist in society, a phenomenon called structural inflation. This method of attracting labor in an economy with insufficient supply of labor has too high economic costs and social consequences, so the employer will more likely involve the labor of a foreign labor force who agrees to a lower wage rate.

The problems of motivation in developed countries are also one of the reasons for attracting foreign labor. Since wages in developed countries are not only a source of income, but also a source of social status, problems of motivation arise at the first level of the labor market, namely in the market of low-skilled labor, where in fact the worker has no opportunity to develop his social status.

For an employer who needs low-skilled workers, in fact, an employee is needed, for whom wages are only a source of income, without any need to increase their social status, and if in developed countries, as we said earlier, wages are an indicator of professional status , then in developing countries the attitude to wages is different, it is a source of income, and it is more profitable for the employer to attract foreign labor from developing countries, to fill the low-qualified Rowan jobs in a developed economy.

Bifurcation, or bifurcation, of the labor market is a phenomenon that arises from the duality between two factors of production: labor and capital. Capital is a constant factor, and labor in economic theory is a variable factor. But in the secondary labor market, in the highly skilled labor market, workers are employed in capital-intensive industries, they work with the best and most expensive equipment, hence the need for the employer to invest such workers, and their dismissal is associated with considerable expenses for the employer, so their retention on the workplace is one of the target functions of the organization, hence, the secondary labor market is similar in its property of consistency with capital.

Traditionally, migration is influenced by many factors, among which are those that can be neutralized and adjusted, and constant ones. The latter include the geographical location of the region, agro-climatic conditions, etc. The UN declares that already by 2008 up to 20 million people became migrants due to climate change. Scientists have concluded that the number of "climate" of migrants by 2050 could reach 200 million people (Rai, 2015). Geographical location is also often the cause of migration, as people reaching retirement age in the Northern parts of Russia tend to move to Central Russia.

The region's reputation, legal and investment attractiveness affects migration flows. Many examples, first and foremost, the Moscow region and the large industrial centers with a population of over a million people (they are also the administrative centers of the regions). Aside from them stand regions specialized in raw materials extraction with low population density and high per capita production of minerals, primarily of hydrocarbons, which is a typical example of the Yamal-Nenets autonomous district.

In European countries, as well as in Latin America and Asia, a new trend is forming, when the "donor countries" do not seek to return migrants who have left, and try to use them effectively in their places of residence through diaspora networks. Often the "donor countries" do not have a comparable level of scientific potential and technology development as the host country, so the efficiency of scientific research will be higher in the "recipient country".

The "brain drain" –is expatriation of the most educated segments of the population. Very often the reason for migration is that people do not find jobs in their own country that match their aptitudes and meets their needs. (Steinberg, 2017) This process can start the mechanism of a vicious circle, where the arrival of highly skilled migrants contributes to the migration of less qualified personnel in the industry, which can lead to socio-economic depression of the sector, and this problem is typical for developed and industrialized countries. This problem is especially acute in developing countries, where experts in some areas (doctors, engineers), after receiving education at home, migrate to provide a better quality of life for them. Thus, developing countries cannot provide the effective development of these areas. Some developing countries are beginning to use a variety of programs in order to skilled personnel to stay. At the same time developed countries are using various programs to attract professionals from developing countries.

In the 90's years of the past century due to the wide spread of telecommunications and the Internet, many diaspora networks appeared, consisting of highly qualified specialists. There are several types of these diasporas:

- Diaspora - self-organized groups of fellow countrymen.
- Diaspora Scientific and Technical (DST) - teams of researchers and engineers, people with higher education, called "diaspora of knowledge", "intellectual diaspora" or "highly qualified diaspora".
- Official group of compatriots, who have stable name, organizational structure and management personnel. Among these diasporas following can be identified (Kolesnikova, 2014):
    - Diaspora Caldas (Colombia) has hundreds of members in the US and Europe.
    - Network SANSA (South African Network of Skills Abroad) with more than 2,500 members in 65 countries.
    - Numerous Indian and Chinese associations of several thousand members (American Society of Engineers of Indian Origin, Chinese Association of Science and Technology-USA, for example), particularly common in the United States.
    - Moroccans and Tunisians have several associations (Savoirs et Développement, Tunisian Scientific Consortium, Association des chercheurs enseignants tunisiens de France), which are distributed in France.

Networks of diasporas differ in their nature: scientific, technical, statutory, professional, financial. They are valuable for their countries of origin because they have access to equipment and expertise that does not exist in their country. As a rule, they show interest in cooperation with their homeland, which provides resources for the development of the homeland. To identify the emigrants diasporas are used.

3. Conclusions

In the 90's a process of active restoration of the link between intellectual diasporas and their home countries was carried out (Argentina, Chile, China, Colombia, India). Policy of interaction with the diasporas is becoming more common and legitimate, when the "brain circulation" is interesting as for the host, as well as for the country of origin (Ho&Boyle, 2015), (Korobkov&Zaionchkovskaia, 2012). Skilled diasporas are now recognized at home as a resource for development and growth. At present time, the idea of returning of the "brains" is replaced by the idea of the effective use of the "brains" in the host country. Thus, the aim for diasporas is to maintain ties between homeland and migrants (Meyer, 2008), (Meyer, 2001). Lost profits in this case are the funds invested in education and health.

As an example of the effective functioning of the diasporas we can consider the case of China, a network of researchers and engineers from China spread to the United States in the 90's. The goal is to find the means which enable the identification of migrants, their location, and to classify them in order to maintain contact with them and be able to use their knowledge for the good of the country. Project CIDESAL (creation of incubators of intellectual diasporas in Latin America) pursues the objectives indicated above. This project is run by a specialist of Research and Development Institute (IRD) - Jean-Baptiste Meyer (Kolesnikova, 2014).

Effective use of these "brains" and the identification migrants is very important. A central goal of the states is to compensate the costs of intellectual migration through the effective use of "brains".

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HOW DO YOUNG GENERATION SEEK A JOB?

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Abstract. Nowadays young people, so-called Millennials, are continuous online thanks to they grew up in an electronically increasingly international world. This demographic cohort reached that age when they meet and follow Generation X on the labour market. However, they are more international citizens with fluent language knowledge (e.g., languages of various social network systems are standardized so equal in any cultures). Millennials are open-minded for intercultural diversities so they want to take globalization's advantages. It may be assumed that Millennials use social media anywhere, anytime, in any cases, also during their job-seeking periods. The aim of this paper to observe job searching behaviours and habits among different generation's members, it provides an empirical research based on more than 700 responses. Answering the following questions: what is the first act that they do; who is the firstly contacted person; which methods, tools are preferred during their job-seeking period? Finally, how long it takes finding a new job. But, this procedure is not free, job seekers should realize the amounts of these efforts. I was interested in their wanted wages and asked them to estimate their job-seeking processes' costs. Empirical research was used based on Hungarian fresh graduated students' responses. This paper describes the theoretical background, and presents practical aspects for international companies' employees, as well.

Keywords: generations, job-seeking, network, globalization

JEL Classification: C81, F23, J31, J21, M52

1. Introduction

According the international literature of Millennials[21], Generation Y (or Millennials) dominate the labour market, which means new challenges for the HR departments of recruiting and retaining young talent (Twenge et al, 2010, Constanza et al, 2012). Ng and Parry (2016) provided reasons why it is important to understand how multiple generations at work affect the workplace.

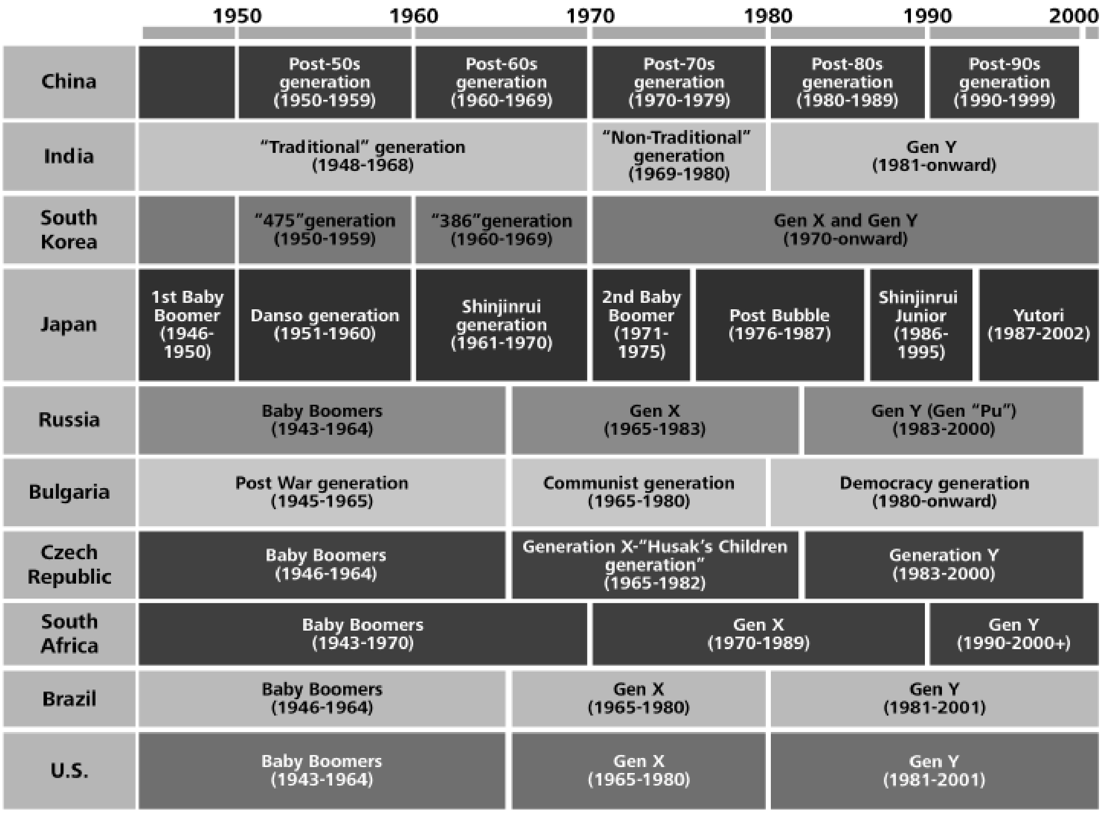
Although there are a lot of attention on generational shifts, but the conclusion has to be drawn from the well-designed and methodologically reliable studies instead of relying on stereotypes. Due to this paper based on empirical findings. Generation is a cohort population, it is a so called age group born in the same era and thus socialized in similar environment can be regarded as a generation. As Ng and Parry referred (2016) generations are marked by specific historic, social locations and are coloured by cultural and environmental differences. Of course, it does not mean that all members of a generation are similar in every detail

[21] Just a small example, typing the „Millennials" expression into the browser, more than 40 million sites can be found, with expression of "Y generation" more than 773 million hits jumped up.

(Twenge & Campbell, 2012). The differences of personalities and other psychological characteristics colour each group differently. Some seemingly generational differences can be explained with educational and developmental psychology's stages (i.e. age differences through individual maturation). As Constanza et al. (2017) wrote researchers should explore whether the studied and found differences are constant over time or dynamic and change. For example, Lyons et al. (2014) suggested that youngers are more mobile and flexible but the elder GenX was also mobile with that age.

Therefore managers should try to motivate employees as individuals and not just as a members of their generations (Twenge, 2010). Finally, the environment in which the person is socialised, is also determined by the aspect of their system of values. Hole and his colleagues (2010) summarized the different generations around the world, see in Figure 1.

Figure 1: Global generation Overview



Source: Hole et al. (2010)

In our case, Hungary can be compared with the Czech classification, but I handled the shift between Generation X and Y because there is no clear and sharp distinction between people born on the edges of various generational stages.

2. Methods

This study does not examine demographic heterogeneity within millennial cohort because the sample consists of students at the Hungarian Obuda University. But sooner or later, all the Millennials will enter labour market.

Table 1: Distribution of the respondents

Sample	Gender		Total
	Male	**Female**	
X Generation (before 1979)	57	28	85
Cuspers (between 1979-1982)	24	12	36
X generation (cumulated)	81	40	121
Y Generation or Millennials (between 1983-1996)	403	259	662
Total	484	299	783

Source: own source

Regarding characterization, I tried to define the research questions from the aspect of labour market. When the differences between generations were to be explored, I focused on the comparison made on the basis of labour market features. Regarding the Hungarian labour market, the Millennials are between ages of 34 and 21 years old.

The aim of this paper is to observe job searching behaviours and habits among different generation's members. This paper provides answers to the following topics:

Q1. Job seeking methods and habits: what is the first act that the respondents do; who is the firstly contacted person; which methods, tools are preferred during their job-seeking period?

Q2. Job seeking costs: how long it takes finding a new job. By the way, job seekers should realize the amounts of these efforts. Due to this, I asked the respondents to estimate their job-seeking processes' costs and time.

Q3. Salary expectations: I was interested in their wanted wages and compared it with standard of living in Hungary and in the EU.

Answering the questions descriptions statistics were used. At the same time, I focused on the following comparison as well: answers were divided by gender, age (e.g. generation differences) and work experiences. Therefor nonparametric tests were used, in case of financial parts I calculated with the following rate, 1 EUR = 310 HUF.

Finally, the goal of this study that nowadays thanking to globalisation, there are no big differences between generations members around the European countries. Moreover, some differences origin from the various cultural backgrounds and economical systems. So the results can be extended to the middle European workforces.

3. Results

3.1 Job seeking methods and habits

In the first part, I have asked the participants: "what would be the first step when you are starting to search a new job?" There were some funny answers, too. Like shaving or opening a browser but when the responses are interpreted with content analysis technique, three groups can be formed. (1) practical job seekers: they want to refresh or create a professional CV with a competitive salary expectation; (2) possibility seekers: they want to find firstly the perfect job, therefor they would searching on the Internet using professional job ad sites or they would just contact a friend; (3) conscious job seekers: they want to clear their wants and needs firstly. Regarding the free association, the frequently mentioned expressions were the following: CV, Internet, job seeking, relatives and friends. In the second part of questionnaire, different job seeking techniques were measured and ranked, on the 1st place was finding a job with help of connections or relationships, the 2nd place was applying for an online job ad (Internet), the 3rd place was directly contact the wanted companies. There were no differences between genders, but I found significant generation differences regarding social capital, i.e. the Y generation's members voted for trainee programs and career expos, exhibitions as a possible source. Although the importance of the social capital was relatively high but the types of contacts and relationships differed from each other. Millennials would rely on family members' help, Gen Xers would turn to friends and relatives firstly.

3.2 Job seeking costs

In frame of research question 2 (Q2), the cost of job seeking procedure was explored. The estimated time period for finding a new position was averagely 3.4 months (range 0-36 months), the estimated cost of finding a new position was averagely 39144 HUF (126 EUR). However, the frequently answer i.e. mode was 0 HUF, accordingly many person (n=111 persons, 14.4% of the respondents) thought that this procedure is absolutely free. There were differences regarding work experiences and level of studies because the costs and needed time increased with. The opinions of the two generations also differed from each other, Gen Xers assumed 50322 HUF (163 EUR), Millennials estimated 37119 HUF (120 EUR).

3.3 Salary expectations

Net monthly salary expectations were asked. After a careful data cleaning altogether 777 answers were tested. The lowest salary expectation was 50000 HUF (161 EUR) and the highest 2000000 (6452 EUR), the mean is 211845.556 HUF (683 HUF) with 155413.555 HUF (501 EUR) standard deviation. Using interval estimation (assumed normal distribution, simple random sampling without replacement), confidence interval is 211846 ±10935 HUF (684±35 EUR 648-719 EUR), with this method it is defined by two numbers between population (here students) wanted minimum salary expectations is said to lie. Although, this statistical analysis is not appropriate when non-random sampling methods are used but shows the average opinions of students. Here were also some differences between groups. According to the genders, significant differences were found (sig level. 0.95, asymp. sig 0.000 using Kruskall Wallis nonparametric test) and there were medium, significant correlation between the genders and salaries (Cramer V 0.358 p=0.000). Detail can be see in Table 2.

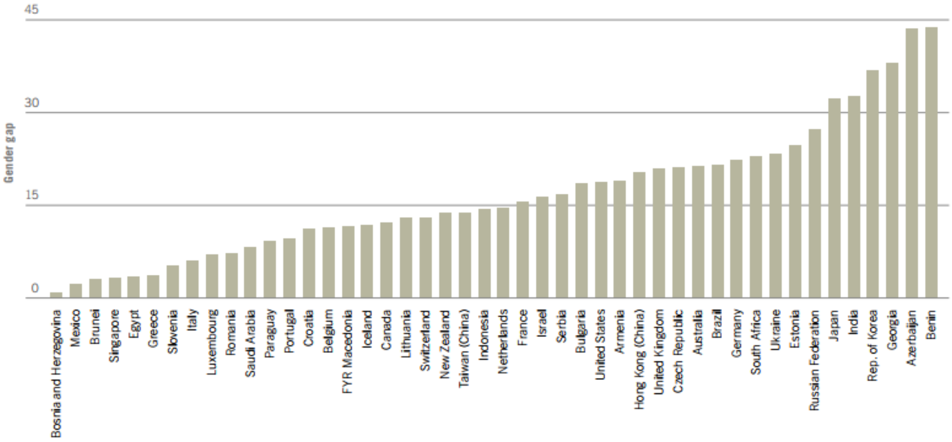
Table 2: Distribution of the respondents

Gender statistics (HUF)		**N**	**Mean**	**Std. Deviation**	**Std. Error Mean**
salary_expect	Male	481	224837,8316	139975,94809	6382,35386
	Female	296	190733,1081	175876,68943	10222,62493

Source: own source

That verified the findings of ILO, namely within the overall wage distribution there are pay gaps between different groups of workers. One of these is the gender pay gap, the percentage shortfall in the average wage of women relative to the average wage of men. (ILO 2017. p. 30) Gender gaps in hourly wages are the highest in Asia, Russia and Africa, see in Figure 1.

Figure 1: Gender gap in hourly wages for a number of selected economies

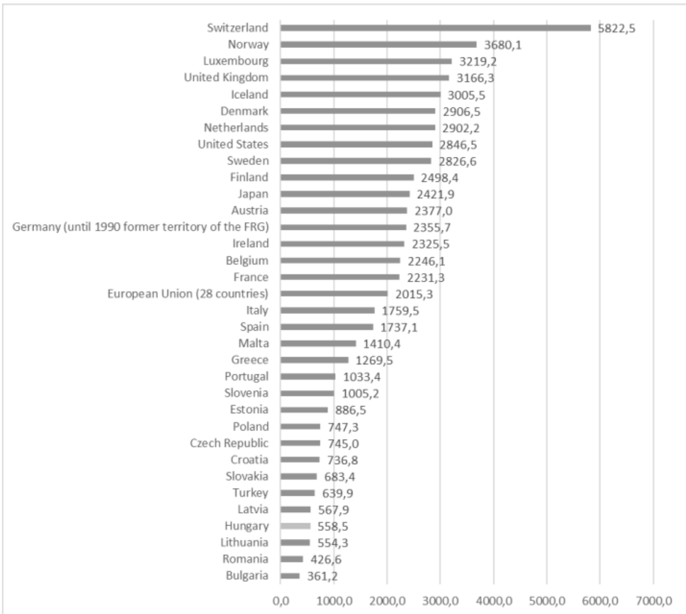


Note: Hourly gaps built with data on average/median wages and average/median hours worked received by the ILO from the respective national statistical institutes or equivalent institutions of the countries included; 94.6 per cent of the data refer to 2013 or a more recent year.

Source: ILO 2017

Related the work experiences, it seems that longer work experiences are equal to higher salary expectations, because there were significant differences between groups (sig. level 0.95 p=0.00). For example, as long as the respondents who are working at that moment (n=225) they would ask 267213.3644 HUF (862 EUR), the other group, who worked as a trainee earlier (n=155) would ask only 187916.1290 HUF (606 EUR). Interesting that between the two generations' expectations there were no significant differences (sig. level 0.95 using Mann Whitney U nonparametric test asymp. sig 2 tailed p= 0.724). Regarding the database of KSH (Hungarian Statistical Office) in 2017 the Hungarian full-time employees' average gross nominal earnings according to the national concept amounted to HUF 297300 (959 EUR) at corporations employing at least 5 persons, budgetary and designated non-profit institutions. Average net earnings by national concept were HUF 197700 (638 EUR) excluding family tax benefits and HUF 205500 (663 EUR) including them. In Figure 2. can be found comparison the abovementioned information with the country-specific nominal wages around the world.

Figure 2: Net monthly earning (100% AW) Currency EUR in 2015



Source: http://ec.europa.eu/

Our results are consistent with a recent large-scale study concluding that only about 600 EUR per a month net salary expectation is reasonable for a modern young people.

4. Discussions and conclusion

Number of papers and studies have mentioned small differences in work values across the various generations but Ng and Parry (2016) documented that Millennials tend to exhibit strong preferences for extrinsic aspects of work like material rewards. Opposite of this my results do not verify it. Twenge (2010) concluded that Millennials are more likely to leisure less willing to work, so life-work balance is more important for them but they are more productive than other generations. As Moore and her colleagues (2014) highlighted other factors (e.g. workplace experiences or maturation) may shape work expectations more than generational differences, e.g. Boyd (2009) found that Youngers focus less on compliance with protocols.

Although Twenge and Campbell (2008) called managers attentions that they should expect to face with more younger employees with unrealistically high expectations, but later Twenge (2010) wrote that Millennials are satisfied with the earnings "just making a living" and from my reading of the data I totally agree with that. Maybe according to Duh (2016) generally consumptions' behaviours and attitudes change more dramatically which origins from the altered family structure. Kim and Yang (2014) focused on the reasons why Generation Y pursues status consumption lifestyles despite the fact that many young adults still rely on parental financial support and limited incomes. Gen Y is more likely to purchase with easy money than serious earned money. The abovementioned authors also found strong gender differences, status consumption by Millennial women, which lead them to spend more money in order to being more attractive among there friends. Telling the truth I did not find that kind of differences in case of current sample. However, it should be noted the differences between genders, my findings mirror Maxwell's and Boadbridge's (2014) results, namely the glass ceiling affects women in the workplace generally.

Generational changes also results from changes of the cultures, origins from more open borders. So what the culture changes and technology plays a major role. Due to this globalisation washes away generational changes among cultures. Although there are strong differences between generations according to the work ethics (Weingarten, 2009) but care should be taken to avoid stereotyping.

In almost every case, there is variance within the group on traits, and in most cases, the variance within the group is larger than the variance between groups. I agree with Pyöriä et al. (2017, p. 10) „All in all, the results indicate that neither young nor old people are a homogeneous group. Work commitment varies by work content and educational level both among younger and older wage earners."

Limitation of this study must be also kept in mind. Like almost all research this one also reports averages. Clearly, not every member of generations appraise the same values. Constanza and his colleagues (2017) suggested researchers studying generational differences using multiple methods and being careful during establish theoretical justification.

From my reading of the data, most generational differences seem age differences through individual maturation rather than real generational diversities suggesting that generational gap can be useful and helpful. Heterogeneous aged groups help each other. In addition, generations can teach each other, as VanMeter and her colleagues (2013) underlined it might serve organizations well to match GenY's with the older GenX's employees in a dual mentoring role-each teaching and learning from the other.

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SUSTAINABLE DEVELOPMENT OF SELECTED EU COUNTRIES IN AGE OF GLOBALISATION – A CASE STUDY

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Abstract. Sustainable development has belonged to strategic priorities of all developed countries since the last century. Along with globalisation, a discussion has started whether globalisation and sustainable development are in opposite or not. Many various sustainable development indicators are recognized by The European Council. They are grouped in ten headline indicators (SDI 1-10). According to SDI 1-10 metrics, the European Council assesses sustainable development of each EU country. Developed EU countries are performing better in comparison with lower-income economies from the point of view of normalised sustainable development indicators. Four countries are selected for the case study evaluating their performance in sustainable development in age of globalisation. Sweden represents the group of the most successful countries in EU in sustainability building. On the other side, Poland represents developing EU countries with low values of indicators but with the highest benefit from the EU investments and funding. The Czech Republic and Estonia demonstrate middle developed countries within the EU. The selected countries have implement the EU-formulated sustainability development strategy in different ways with consideration of different country's historical background, location within the EU, population, GDP, achievement in socio-economic development, sustainable consumption and production, social inclusion, demographic changes, public health, climate change and energy, sustainable transport, natural resources, global partnership, and good governance. Data are analysed by various methods and some results are visualised by means of cartographic outputs.

Keywords: sustainable development, headline indicators, spatial analyses, KOF Index of Globalisation

JEL Classification: Q01, R59, Y80

1. Introduction

Sustainable development is a concept, which has been developed since the 1960s at international level. The term itself has become popular after the book *Our Common Future* was published in 1987. The concept now influences lives, policies and economies of many countries around the whole world because it proposes a development without significant impact on future generations. EU has introduced its strategy and requires member countries to implement their own strategies and plans. (Rogers et al., 2008)

Sustainable development concept itself, including definition of the term, has undergone long debates and changes in the understanding and approaches. It was introduced as a solution to growth problems, it was promoted as an approach how to keep the planet for next generations in a good condition, how to prevent impacts on health and environment or how to provide a better quality of life (Du Pisani, 2006), (Blowers et al., 2012). There is even a discussion if sustainable development is a theoretic concept or practical strategy motivating political actions (Blowers et al., 2012). Many definitions can be found. According to Rogers et al. (2008) it is: "a dynamic process of change in which the exploitation of resources, the direction of investment, the orientation of technological development, and institutional change are made consistent with future as well as present needs".

Sustainable development is connected to cities development and urban planning as a specific issue (Williamsn 2010) and it can be used as a measure of success of e-government (Kopáčková, 2017). Availability of sophisticated decision support tools is important for sustainability assessment and choice of suitable options (Huysegoms & Cappuyns. 2017). To ease and fasten users work, software tools should be designed in a usable form (Hub & Zatloukal, 2008).

The three basic pillars of the sustainable development are very often recognized (Rogers et al., 2008), (Hák et al., 2012): a) environmental (limits); b) economic (potential); and c) social (requirements). Next, the idea of the five dimensions of sustainability was introduced. Time (permanence), human aspects (persons) and space (place represented by three dimensions) are essential to evaluate sustainable development although space and time are not always taken into account (Seghezzo, 2009). Holden et al. (2016) propose to focus on a model of sustainable development based on the following moral imperatives: a) satisfying human needs, b) ensuring social equity, and c) respecting environmental limits rather to seek for balance of the three above mentioned pillars).

Sustainable development and governance are nowadays influenced by globalisation (Pawlowski, 2013), (Zulean, 2011). Global companies are accompanied by unification of consumer expectations and consumption (i. e. cultural and social situation), production growth and the development of newer versions of products. In this way, technological development is supported too but the growing production and new technologies intensify utilization of resources and environmental pressure (Pawlowski, 2013). Some environmentalists, human rights advocates, etc. support anti- and alter-globalization movements to protect e.g. environment and local cultures. Many people perceive sustainable development as an alternative to globalisation and anti- and alter-globalization movements; they perceive it as an inclusive globalization. (Gawor, 2008), (Pawlowski, 2013). Competitive Sustainable Globalization and Competitive Sustainable Manufacturing were later introduced as a new paradigm to address local and global aspects of manufacturing and other contemporary challenges (Jivane et al., 2017).

Effects and impacts of globalisation are evaluated and measured in various ways. KOF Index of Globalisation is one approach which can be used. Figge et al. (2017) used Ecological Footprint as a comprehensive indicator to assess effects of globalisation and showed that globalisation has an effect on the environmental footprints.

Space issues are very important as well, as far as there many disparities between regions and countries caused by globalisation and development. Utilization of sustainable development indicators is one of suitable approaches (Ostasiewicz, 2012).

Aim of the paper is to evaluate performance of selected four EU countries in sustainable development in age of globalisation. Headline sustainable development indicators (SDI) used by EU are used for evaluation. All countries are taken into account and attention is paid to Sweden, Poland, Estonia and the Czech Republic as representatives of developed and developing EU countries. Differences in their sustainability strategies implementation are included to illustrate the situation.

2. Evaluation of Sustainable Development of Selected EU Countries

2.1 Methods

A comparative case study is based on sustainable development indicators as they are provided by Eurostat. The study focuses on four different countries to demonstrate differences using a qualitative approach. Methods of spatial analyses (quartile classification, directional distribution and hot spot analysis based on Getis-Ord Gi*) and cartographic methods are used to provide in-depth view, including benchmarking approach. For spatial analyses, all countries are included to better demonstrate commonalities and differences.

2.2 Sustainable Development Indicators

The European Council distinguishes more than 130 sustainable development indicators, which are grouped in ten theme groups, which are represented by headline indicators (Eurostat, 2016). The European Council utilizes the SDIs to evaluate performance of member countries. The measured theme groups and their headline indicators are (Eurostat, 2016):

- Socio-economic development: Real GDP per capita, growth rate and totals
- Sustainable consumption and production: Resource productivity
- Social inclusion: Persons at-risk-of-poverty or social exclusion
- Demographic changes: Employment rate of older workers
- Public health: Healthy life years and life expectancy at birth, by sex
- Climate change and energy: Greenhouse gas emissions, Primary energy consumption
- Sustainable transport: Energy consumption of transport relative to GDP
- Natural resources: Common bird index
- Global partnership: Official development assistance as share of gross national income
- Good governance: No headline indicator; Some operational indicators are available, e.g. Policy coherence and effectiveness (measured as New infringement cases), Openness and participation (measured as Voter turnout in national and EU parliamentary elections) and Economic instruments (measured as Shares of environmental and labour taxes in total tax revenues from taxes and social contributions); Economic instruments are used in the study because there is available a full time series.

Earlier study comparing member countries (Ostasiewicz, 2012) was based on SDIs Developed EU members with high-income economies demonstrate advantage over developing

EU countries with lower-income economies in values of normalized sustainable development indicators. Sweden, Austria, the Netherlands, the UK, Luxembourg, and Belgium represented the major high-performing countries in sustainability. On the opposite Bulgaria, Poland, Hungary, Slovenia, and Romania, as representatives of EU developing countries, showed low indicator values (Ostasiewicz, 2012).

2.3 Selected Countries and their Brief Profiles

Based on EU's data, Sweden was selected because it represents the high-performing countries, which started with sustainability very early – in the 1960s. Poland represents developing countries; it benefits the most from the EU investment and funding support to its economy transition (Dilba et al., 2015). The Czech Republic and Estonia demonstrate a middle development within the EU. The countries follow different paths in the implementation of sustainability development strategies – based on different historical background, location within the EU, population, GDP, etc. KOF values are from (ETH, 2017). The **Czech Republic** is comparable to Sweden in terms of population. Its economic system belongs to successful ones within its region. The Czech government approved the first Sustainable Development Strategy of the Czech Republic on 2004, December 8th (Ministry of the Environment of the Czech Republic, 2017). $KOF_{2015} = 84.1$ (13th country) (ETH, 2017). **Estonia** is a country with very high level of advancement of information and communication technologies. It is the first country in the world with online votes (in 2005). The Sustainable Development Act was prepared and adopted by parliament based on the Agenda 21 program in 1995 (Statistics Estonia, 2017). $KOF_{2015} = 79.35$ (24th; ETH, 2017). **Poland** introduced its first national SDS in 2000, followed by several other documents. All the documents are aligned with the EU strategy, but none of them gives a direction for implementation (European Sustainable Development Network, 2004). $KOF_{2015} = 79.43$ (23th). **Sweden** was the first country adopting legislation focusing on environmental conservation in Europe and it still belongs to leaders in environmental protection. Sweden drafted and adopted its first Sustainability Development Strategy (SDS) in 1994. $KOF_{2015} = 86.59$ (6th).

2.4 Results – Evaluation of the Countries Based on Particular Headline Indicators

Full description of indicators and procedures of collection and calculation are described by Eurostat where all data are available for download (Eurostat, 2016).

Socio-Economic Development: Sweden shows high GDP; it can provide extra economic resources to be invested in the future by addressing environmental and social issues.

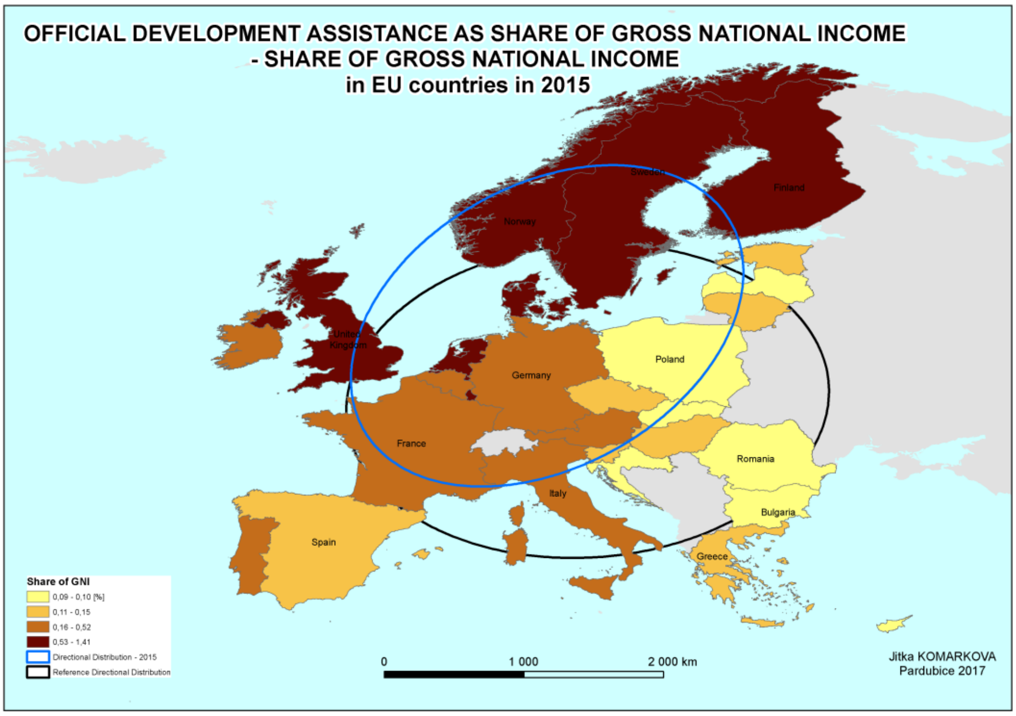
Sustainable Consumption and Production: The lowest Resource productivity of Sweden (1.70 EUR per kg) recorded in 2000 is more than 2.5 times higher than the highest Resource productivity of Poland and Estonia in 2015 with 0.49 EUR per kg and 0.65 EUR per kg.

Demographic Changes: Sweden is almost two times better than Poland**.** An increase in the indicator shows that the country pursuits the employment policy of the EU.

Public Health: It is evident that women in Sweden enjoy a higher life expectancy than that in Czech Republic, Estonia and Poland. During 2010-2013, Sweden recorded a decline but then increased it to 73.6 years in 2014. Poland has even demonstrated higher ratio over the selected years and 65.9 years in 2004 to 71.8 years in 2015.

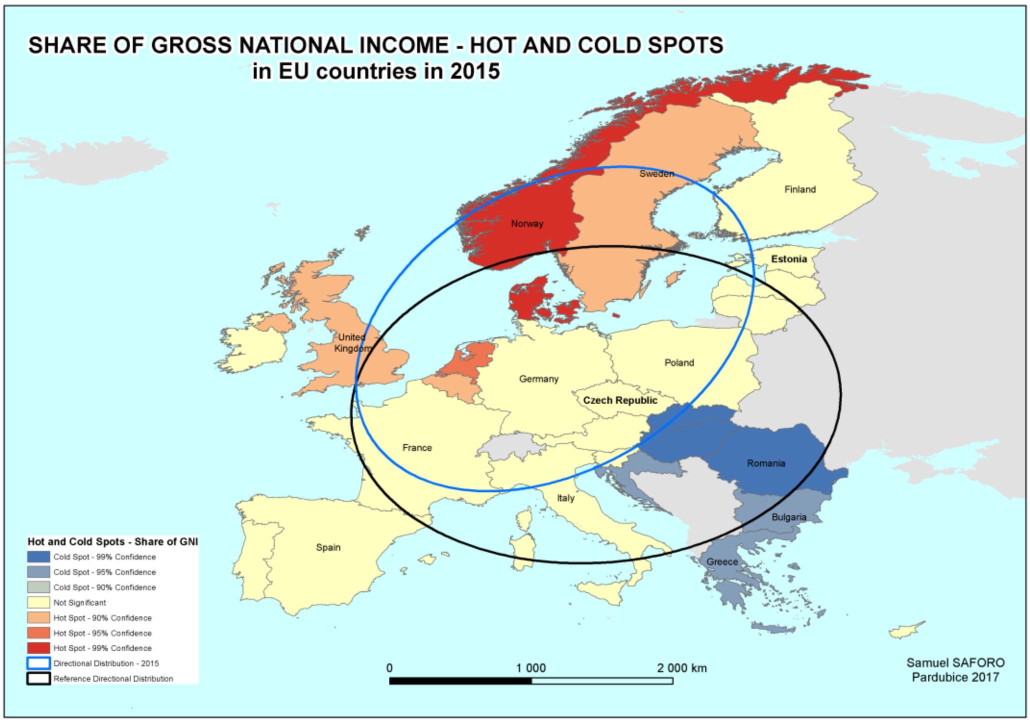
Global Partnership: High-income economy of Sweden (and Norway) is capable of allocating funds for official development assistance of the EU membership, while transitional economy of Poland needs financial assistance itself likewise Estonia and the Czech Republic. See Figure 1 and 2 for the spatial distribution of this indictor over EU.

Figure 1: Official Development Assistance as Share of Gross National Income



Source: authors, based on data from (Eurostat, 2016)

Figure 2: Official Development Assistance as Share of Gross National Income



Source: authors, based on data from (Eurostat, 2016)

Social Inclusion: Poland illustrated a considerable decrease in the quantity of people being at risk of poverty of social exclusion for the chosen period. The country managed to reduce social vulnerability from 45.3 % in 2005 to 23.4 % in 2015. Though the social exclusion ratio remains much higher than the one of Sweden (23.4 % versus 16 %), the country illustrates a positive trend in improving well-being of its people and reducing poverty rates.

Climate Change and Energy: Sweden and the Czech Republic significantly reduced greenhouse gas emissions. Poland and Estonia has not been able to achieve any progress in reducing greenhouse gas emissions. But, Estonia produced less greenhouse gases then all other countries during the whole time. Poland produced less greenhouse gases than Sweden till 2010. Then, Sweden decreased greenhouse gasses emission. Concerning the energy consumption, Estonia consumes significantly less than all other countries. Poland belongs to countries with higher level of energy consumption in Europe.

Sustainable Transport: Poland and Estonia decreased energy consumption of transport relative to GDP to lower level than Sweden and the Czech Republic.

Natural Resources: Czech Republic recorded higher number of bird species in the 1990s but during the time it underwent similar development to other countries – a high decrease. But still, it results belong to top level countries.

Good Governance: Shares of Environmental and Labour Taxes in Total Tax Revenues from Taxes and Social Contributions index can be used for a comparison. According to it Poland and Estonia are able to collect more than the Czech Republic, followed by Sweden.

3. Discussion

Currently, sustainable development is a global issue. Governments of both developed and developing countries pay attention to this concept as far as wide utilization of finite resources, more and more discussed water insufficiency, global supply chains, changing climate, etc. have brought new challenges on one side and adoption of sustainable business models along with regional, national, and international policies on the other side (Bilgramy, 2015). Sustainable development is even perceived as an alternative concept to globalisation (Gawor, 2008), (Pawlowski, 2013), (Jivane et al., 2017). EU countries have different historical roots and they have followed different paths in implementation of sustainable development strategies, policies and action plans. Sweden started its first activities in this field in the 1960th, other countries after year 2000. Poland in the beginning did not work on implementation activities (European Sustainable Development Network, 2004). An evaluation of SDIs established by EU for a period of ten to sixteen years illustrates the dominance of Sweden in sustainability aspects within the observed countries. Sweden provides significantly better results (as a higher economically developed country with 42,700 GDP index) than the Czech Republic, Estonia and Poland with 16,200 GDP index, 13,400 GDP index, 10,900 GDP index in 2015. This inequality in economic resources may be another reason for other disparities in sustainability development of the countries. However, all countries belong to highly globalised countries according to KOF Index (ETH, 2017). **Sustainable Transport** seems to be the theme when the Czech Republic, Estonia and Poland are better than Sweden. All the countries decreased energy consumption of transport from 2010 to 2015 more than Sweden. It seems that transitional economies were able to build an effective and suitable transport system. A surprising result shows the indicator **Shares of Environmental and**

Labour Taxes in Total Tax Revenues from Taxes and Social Contributions index. Poland and Estonia succeed in collection of environmental taxes in comparison to Sweden and the Czech Republic. As Ostasiewicz (2012) and Seghezzo (2009) stated, the space is another important issue to be taken into account. This paper provides spatially-oriented point of view in a form of cartographic outputs to identify disparities between regions.

4. Conclusion

Sustainability and sustainable development belong to important issues in all EU countries. The EU requires adoption of new approaches and initiatives to support development of all countries in the time of globalisation with focus on many different aspects, including sustainability, globalisation, local issues, welfare and competitiveness. Sweden represents a well-developed country within EU, which has focused on sustainable development for a very long time period. The Czech Republic and Estonia have made some progress, which does not provide so good results as a Swedish system but it is still slightly better than Polish approach and results. All countries are highly globalised. Utilization of spatial analyses can bring both global and local view to better identify the spatial distribution and similarities/disparities within a region. Together with benchmarking, these methods can bring a new point of view, which includes influence of location.

Acknowledgment

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THE RISE OF SMART CITIES – RESULT OF GLOBAL PROBLEMS OR TECHNOLOGY CHALLENGE?

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Abstract. Urban areas are confronted with the problem of high concentration of people with implications for the sustainability, quality of life, and competitiveness of the region. A United Nations (UN) study points out that, for the first time in history, more than half of the population on the planet (54.6 percent or 3.6 billion people) lives in cities. As a consequence of globalization, cities have to solve more problems, public funds need to be better targeted and natural resources need to be explored consciously and responsibly. Digital revolution brought possibility to use technology as a driver to solve old problems by new ways. Moreover, it also brought new options how to enhance sustainable development. Smart City initiatives can be viewed as an innovation as it align new technologies with new processes, new participatory policy, and new management methods. In sum, Smart City represents changes in governance and daily life. In our article we conceptualize Smart City as socio-technical system with focus on the social part. We use traditional socio-technical model, proposed by Leavitt in 1965. We also consider approaches to evaluation of the success of Smart Cities initiatives with possible metrics. As the result we propose evaluation framework for the evaluation of success of Smart City initiatives.

Keywords: smart city, technology, socio-technical system, evaluation

JEL Classification: H70, M15, O32, O33

1. Introduction

The term Smart City is very popular in these days, so that it is almost buzz word. The phrase has been adopted since 2005 by a number of technology companies (Townsend, 2013) for the application of technological innovations to integrate the operation of urban infrastructure and services. Technology can serve as driver to solve old problems by new ways, and also as an innovation that brings new options how to enhance sustainable development (Caragliu et al., 2011; Mulligan & Olsson, 2013).

Smart City concept (Neirotti et al., 2014; Albino et al., 2015) is not new if we think in the dimension of alignment between technology and city governance. Different other concepts have appeared in the past. First attempts to digitize the city date back to the beginning of the millennium with different concepts: Wired City, Digital City, U-City, Information City, Efficient City, Intelligent City or Cyber City. All of those concepts are based on the same assumption that technologies can help cities to be a good place to live.

We can say that cities search for smart solutions that meet three criteria – possibility, desirability, and viability. From technological point of view the solution must be possible. Possibility depends on technological progress as the external factor. However, what is possible depends also on some internal factors – awareness (if we do not know about some solution we cannot use it) and technical infrastructure. Second criterion comprises needs of citizens, business units and city government. Only such technology innovations will be adopted that are desirable. Third criterion focuses on costs and benefits. Even many solutions would be possible and desirable, if there is poor economic viability at the same time, they cannot be realized.

2. Methods

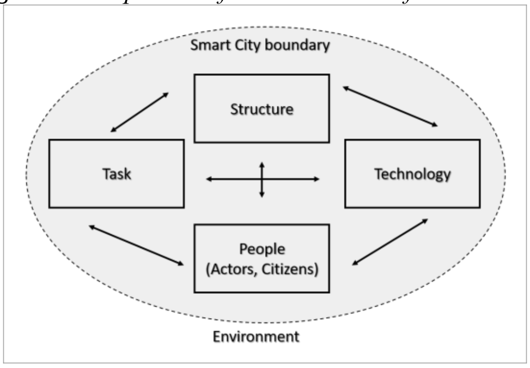
Evaluation of the success of smart city initiatives is necessary for many reasons - in the preparation phase shall be defined expected benefits, after realization of project have to be used metrics to compare reality with expectation, outputs of the project can be compared with similar ones, and even successful projects can be used as examples of good practice (Lee et al., 2014). Today can be found different evaluation frameworks as European Smart Cities Model (Giffinger et al., 2007), Innovation™ Cities Index (2006), Smart City Performance (Lombardi, P., et al., 2012), CITYkeys assessment methodology (2016), etc. All mentioned frameworks have one thing in common, derivation of the frameworks were experience based. Only minimum research articles focused on the evaluation of impacts of smart city initiatives. In this paper, we use Leavitt's model (Leavitt, 1965) to conceptualize smart city as socio-technical system with its elements and relations. Then we try to assign indicators of CITYkeys methodology into Leavitt's model in an attempt to determine whether they are compatible.

3. Conceptualization of Smart City as socio-technical system

H. J. Leavitt (1965) defined organization as "rich, volatile, complicated but understandable system of tasks, structures, tools (technology), and people in states of continuous change". The concept of people covers all humans in the organization who contribute to the realization of task. Task is the purpose of organization, why the organization exists (e.g. produce goods, provide a service, teach students, serve public). Structure comprises everything what defines the organization - formal and informal structures, processes, ways of communication, and so on. The last concept is technology – all tools, machinery, information technology, mobile technology, etc. Leavitt's model explains that the change in one part of system influences or even may have a negative impact on other parameters.

Municipal government can be also taken as organization in this point of view. We can find all components present plus some more. Most important added component is citizen. People component in Leavitt's model covered only employees while customers were not supposed to push changes or otherwise influence the system. Whereas citizens in smart cities can actively participate on structure changes and even push changes in tasks and technology. New component of the environment correspond to all forces outside city borders influencing system stability. That can be legislation changes, technology development, security and privacy threats, political situation, etc. The city is not only a passive recipient of stimuli from the neighborhood, but it can also influence the environment, especially by its example of good practice. The whole model is depicted in figure 1.

Figure 3: Adaptation of Leavitt's model for Smart City



Source: own adaptation of Leavitt's model (Leavitt, 1965)

3.1 Technology

The development of information and communication technologies is so fast, that enumeration of available technologies would be obsolete even at the time of publication and also too expansive (Paroutis et al., 2014). Instead we divide them into four broad categories: (1) Network infrastructure, (2) Sensor devices, (3) Communication interfaces, and (4) Control centers. Described technology classification for Smart Cities is temporal, we expect that in future will appear new categories with emphasis on quality of the solution (Komarkova et al., 2007; Sedlak et al., 2015) as the development will continue.

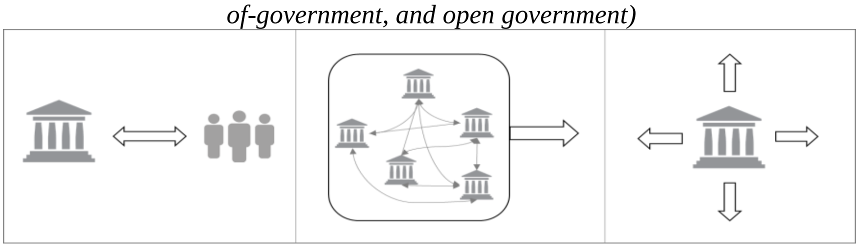
3.2 Task

This part of model address the problem of scope, functions that city performs (Batty et al., 2012). Main function of traditional city is to be safe, livable place that offer its citizens services provided by city government. Essential services cover: city administration, management of utilities, economic development, public safety, management of public buildings, city transport, health services, education, and environment protection.

3.3 Structure

Structure in Leavitt's model represents hierarchy, formal structure, communication channels, and informal structure. Traditional structure of municipal governance expects that citizens engage in public affairs only at election time and then elected representatives take care of the city with minimal interference of citizens. When using Leavitt's model to describe Smart City we need to broaden understanding of structure. Figure 2 shows three most important changes in structure: participatory government, whole-of-government, and open government.

Figure 4: Changes in structure invoked by technology changes (participatory government, whole-of-government, and open government)



Source: own processing

Participatory government means that municipal governments can use information technologies to engage citizens into decision-making. Crowdsourcing can be used for identification of problems, prioritization and finding solutions. Online forums and voting systems give citizens possibility to comment on current events and vote for some alternative. The term whole-of-government expect government departments and agencies to work together as a team for the desired outcome. Smarter government means communication, collaboration, and coordination across departments to be more effective and to be more citizen-centric (Simonova and Novak 2015). Government agencies collect large amount of data that serve as the source for decision-making. But some of those data can be used as open data, which anyone can access, use or share. By opening and sharing of information, Smart Cities can become more transparent.

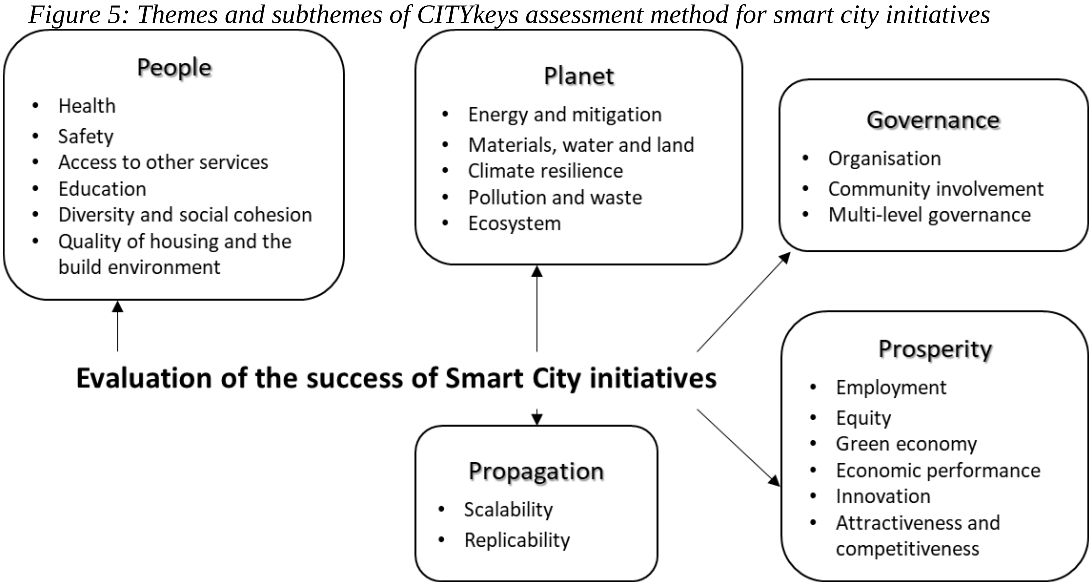
3.4 People

In Leavitt's model are people considered as employees that will be affected by the change in technology, that's why they have to be prepared for this change in order to get expected benefits. In this paper we broaden this perspective to cover users of services (citizens, business), administrators and leaders.

4. Evaluation of the success of Smart City initiatives

For the evaluation of impacts of smart city initiatives, cities can use some published frameworks or they can make their own methodology. The CITYkeys assessment methodology will be used further in this text because it is up-to-date, and it has been created to evaluate European cities thus fits into a cultural context.

Figure 5: Themes and subthemes of CITYkeys assessment method for smart city initiatives



Source: adapted from CITYkeys assessment methodology (2016)

CITYkeys is common integrated performance measurement framework (see figure 3) created to enable cities or other stakeholders in projects to learn from each other, create trust in solutions, and monitor progress. CITYkeys contains indicators for smart city projects, indicators on city level and relations between those two. We will focus on the project level where the majority of indicators have been selected from existing indicator frameworks only

21 new indicators were added specific for smart city projects. Success of project is evaluated according to five themes: people, planet, prosperity, governance, and propagation. People are in the centre of attention that is why city needs to offer quality living for its inhabitants. Second theme is planet, which includes all topics related to sustainability issues. Prosperity means economic viability through economic performance measures, equity, green economy, innovations, etc. Special theme governance is devoted to project management issues, so it is about how the project is being implemented. The last theme propagation is there to show the potential of the project for dissemination to other locations and contexts.

5. Evaluation framework based on Leavitt's model

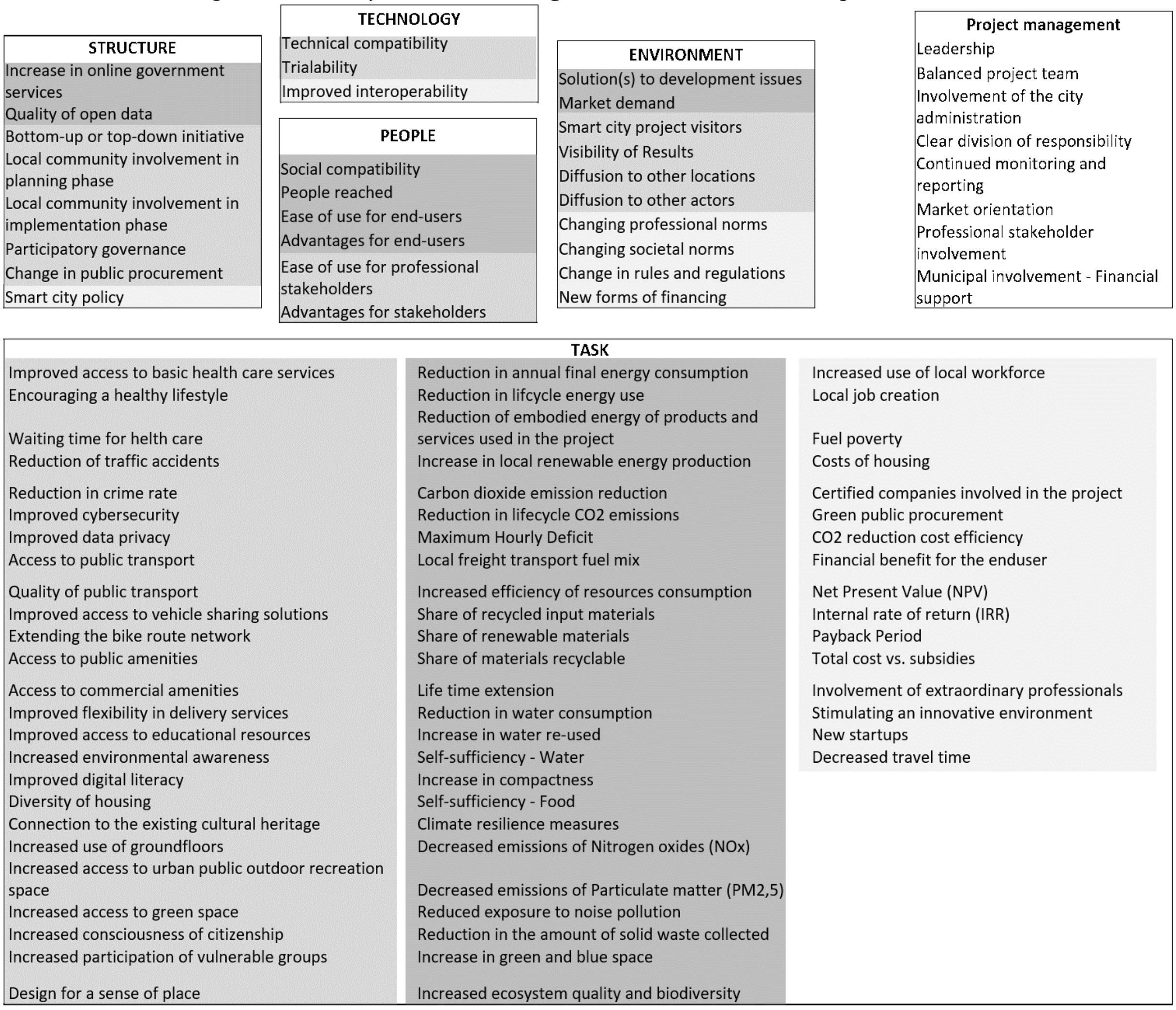
In this chapter we discuss CITYkeys indicators in relation to particular components of Leavitt's model. The aim of this comparison is to determine whether the methodology takes into account all components – structure, people, technology and task. In figure 4 are depicted CITYkeys indicators assigned to Leavitt's model components with majority of indicators assigned to task component.

First question that needs to be answered is the reason why cities strive to make changes in the way how they do things (offer services). Why do they invest in smart solutions? Is it just because it is possible, meaning that the driver is technology, or is it because cities need to solve some problem so the driver is task? We believe that the second is true. When thinking about some smart city initiative, at the beginning we need to define expected benefits. For the measuring of benefits we can use indicators listed in task component. Some initiatives would focus only on one theme as transportation, security, health, etc., whereas other can be more comprehensive. For example installation of intelligent lampposts can have positive impact on different domains – saving of energy, safety, access to other services (wifi), etc. Offering of indicators for task component is quite exhaustive as the range of services provided is really high. We divided them into three parts – citizen centric, ecocentric, and prosperity centric. Although most of them will be topical even after some time, we can expect changes in services and even broadening of indicators in future.

Selection of task indicators is only initial activity in impact analysis of the change. Assuming city to be a system, we have to expect that change in one component will affect other components, due to their connectedness. At first we will focus on the impact on the structure. As we mentioned in chapter 1.3, traditional structure with citizens that can express their opinion only at election time on one side and municipal government being the authority is slowly changing. At least three new concepts appeared recently – participatory government, whole-of-government, and open government. CITYkeys indicators that would fall under this component cover all three concepts. However, we can see that the greatest attention gets participatory government while integration of public administration (whole-of-government) has only one indicator. We believe that this is an important concept that allows citizens easier access to public services, so the number of indicators should be higher. Possible measures in this area can be - coordination of smart initiatives, sharing of information, security of shared information, clear division of responsibility, online services integration, etc.

If we think about the impact on people, we can do it in two ways. First, what the solution brings to people, what will be the benefits. On the other hand we must ask what that solution will require from them and if they accept it. Indicator of social compatibility forms a precondition for possible acceptance of solution while people reached measure real values of the acceptance. Further there are indicators measuring advantages for end-users and professionals, and ease of use for both. Overall, indicators can be said to be sufficient and we do not expect them to expand.

Figure 6: CITYkeys indicators assigned to Leavitt's model components



Source: own processing

Changes in task necessarily invoke changes in technology. Although smart city innovations are highly dependent on technology, indicators for technology component in CITYkeys methodology are only three. Two of them measure suitability of technical innovation (compatibility and trialability) and only one measure real impact of the solution. According to Rogers (2010) we propose complexity as another suitability measure. The reason is that complex solutions pose more problems in the implementation phase and even during maintenance so this is negatively related to success of initiative. What else we are missing in this component are indicators focused on the quality of implemented solution. Only improved interoperability among systems is present. Software quality metrics (ISO/IEC 25010, 2011; Grady and Caswell, 1987; Walters & McCall, 1979) offer many indicators that can be used. We consider these indicators to be essential and suitable for measuring of success of smart city initiatives: (1) functionality, (2) performance, (3) reliability, and (4) security.

Last component of adapted Levitt’s model for smart cities is the environment. We added this component because the initiatives are influenced by examples of good practice and even by forces from central government. On the other hand successful initiatives can be replicated and spread across the globe. Globalization is the driving force for the diffusion of innovations. We divided environment indicators into three parts. First two indicators verify that the innovation is needed, this is the precondition for diffusion of innovation. Following four indicators observe popularity of particular initiative. Other indicators focus on the impact of the initiative – if it made some change.

During the evaluation of CITYkeys methodology we discovered some indicators that did not fit into any component of Leavitt’s model. In fact, they were indicators that did not evaluate the impact of the initiative but its course. According to De Witt (1988) we need to differ between success of the whole project and success of project management. „A project can be a success despite poor project management performance and vice versa” (De Witt, 1988). Even though project management criteria are temporal, we accept them to be important during the realization of project.

6. Conclusion

Smart city initiatives bring change into the governance and even everyday life of the city. Most projects are focused on the integration of technological innovations. As the city is complex system with many related components we have to count on that change in one component (technology) would change also other components. In this paper we tried to find indicators for measuring the impact of the change. We used adapted Leavitt’s model to define all components and CITYkeys methodology containing indicators for measuring success of smart city initiatives. By combination of those two instruments we proposed addition of new indicators where it was necessary.

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NEW APROACHES IN COMPANY INNOVATION MANAGEMENT AND ITS APPLICATION IN SLOVAKIA

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Abstract. Recent economic crisis and achieving the employment and growth targets of the Europe 2020 strategy requires a competitive industry that builds its competitiveness on innovation in all its forms: development and application of technologies at the technology frontier, new business and organisational models reaching out new geographic markets. The innovation capacity of industry depends not only on large enterprises with market power but crucially on ambitious entrepreneurs and small enterprises aiming for radical innovations and fast growth.[22] Despite of globalization processes SMEs are creating the majority of new job positions in the European economy. While major new drivers for SME innovation are hardly recognised by the public support provided, established support services assist mainly clearly defined technical projects within single enterprises. Public support pays much less attention to the creation of favourable ecosystem for SME innovation in which public enterprises, SME intermediaries, direct and indirect customers, end-users, suppliers and enterprises with complementary skills are encouraged to collaborate for radical innovation. The new approaches in innovation management support are elements of a broader action to develop the ecosystem of innovation support to SMEs also in Slovakia. A highly specialised support services are now established at European level to complement existing national and regional services. Generally, the actions are designed to provide opportunities to enhance services through collaboration, peer-learning and uptake of new approaches.

Keywords: Innovation, Management, SMEs

JEL Classification: O30, O31, O32

1. Introduction

Following the institutional part of the economic transition and the legal/political involvement in European integration process, the Central and Eastern European countries (CEEC) must promote their innovation capacity and competitiveness through innovative processes and products to attain the real transition (Hauptman at al., 2009).

Small and medium enterprises (SME) are faced with the need for a strategic response to the changes in global business environment (Lesáková, 2008). Insufficient innovation management particularly in the SMEs is one of the barriers in development, growth and

[22]Available on: http://ec.europa.eu/

internationalisation of the technology based and innovation companies, not only in Slovakia. The services supporting the innovation management are usually insufficiently available or very expensive for the small companies.

Slovakia ranks among the five EU 25 countries with the lowest innovation performance. It lags behind mainly in the size of R&D expenditures, in the share of tertiary educated population, in the innovation activity of SMEs and the patenting activity is also minimal. The essential reason of insufficient innovativeness of the Slovak economy results from the weak support for innovation activities on the side of economic policy (Gabrielová, 2005).

Nowadays situation since the competitive advantage of Slovakia has been based on cheap and relatively qualified labour force and on energetic and material intensive production has a bit changed. However, this competitive advantage is just temporary in globalisation circumstances. As a consequence, western companies, including Slovak companies, need to continuously anticipate customer needs, generate attractive ideas, and transfer them into successful products, processes, services and business models. This requires both a systematic management of innovation and the appropriate alignment of the internal organization. Industry leaders are demonstrating day-by day how to achieve profitable growth by focusing on innovation. Those who have to develop their innovation capabilities will have to develop a proven approach and tools to manage innovation with the aim to maximize effectiveness and efficiency while focusing on the generation of sustainable value. Only basic innovation management capabilities are no longer sufficient to compete in the globalized business environment (Žižlavský, 2011). In order to maintain the competitiveness of innovative enterprises it is necessary to master the sophisticated methods of management in their complexity. Especially project management is becoming an instrument of strategy implementation (Vacík & Kracík, 2015).

Further, the innovation effort must improve not only to products and services, but also the very processes used to run the business (Morris, 2017). Louis Gerstner (Gerstner, 2002) puts it this way: In almost every industry, globalization is leading to overcapacity, which is leading to commoditization and/or price deflation. Success, therefore, will go to the fittest – not necessarily to the biggest. Innovation in process – how things get done in an enterprise – will be as important as innovation in the products a company sells.

Yes, innovation is important, necessary, and difficult; this much is obvious.

The current global economic crisis is peculiar in many aspects. One of the key ones is the cumulating of more crisis phenomena at the same particular time (virtualization of the financial sector, polarization of wealth and poverty in society, immense increase of the moral gamble, but also unsustainable level of living standard, debt crisis, increase in arms expenses, wars, climate changes´ effects etc.). Both theory and practice talk about globalization, however, in reality, both theory and practices remain bound to the national level. The ethical dimension, inhibition of corruption, removal of inefficiency in the public sector as well as new forms of regulations all create the necessary base for solutions to these problems (Hontyová & Ivanová, 2012).

Changes of the global conditions of entrepreneurship logically resulted from the mass development and utilization of information and communication technologies, mutual pervasion of market and enterprise. Competition dynamics thus generates pressure on innovation and shortening of the company strategy life cycle (Okruhlica & Marsina, 2012).

Intensity of competition is one of the most important determinants of innovation rate (Dujava, 2013).

National economies are looking for ways to stabilize their performance and ensure continuous economic growth. Innovative environment that supports innovation activity of enterprises can stimulate firms to increase efficiency and finding new business opportunities. Strategic innovation and continuous process of innovation are the determinants of sustainable competitive advantage (Miklošík at al., 2012).

Based on these facts and long-term experience already applied in developed countries in Europe and abroad, innovation experts started to provide the specialized services focused on enhancing the innovation management capacities of SMEs. This kind of services are fully provided since 2014 also in Slovakia targeted to participants of the SME Instrument under the Horizon 2020 Programme[23] as well as for SMEs with high potential for growth and internationalisation through introduction of innovative products and services to the market.

Main objective of the action is improving the innovation management capacity of two SME target groups:

- Beneficiaries of the SME Instrument (SMEI)[24] by provision of the specialised Key Account Management services (KAM).
- SMEs with significant innovation activities and a high potential for internationalisation through the targeted enhancing the innovation management services (EIM).

This action supported by the European Commission is aimed to provide specialized consulting services addressing innovation management capacity to SMEs which possess significant innovation activities.

2. Innovation management capacity improvement services

Many analysis and studies confirm that there are subsequently disappear the differences between the technology and non-technology innovation character, by ICT introducing are the products innovated, processes and organization structure of the service enterprises. On the character and innovation activity intensity in the services affects lot of factors. Initial platform is the implementation of the innovation on the macro-level supported by the state policy. Slovak republic in European context queues into the countries with the non-adequate pursued innovation policy in practice. Service sector heterogeneity included knowledge-intensive services as well as less sophisticated services targeted on the knowledge is the next factor that influences on the innovation activity of the services. There-fore is important to identify the key areas of innovation implementation according to individual section production character

[23] Activities provided in the framework of the Horizon 2020 work programme 2016-2017, Ref. H2020-EEN-SGA2-2017-2018, from European Commission, Executive Agency for Small and Medium-sized Enterprises (EASME).

[24] Provided with about € 3 billion in funding over the period 2014-2020, the SME Instrument helps high-potential SMEs to develop ground-breaking innovative ideas for products, services or processes that are ready to face global market competition. Available to SMEs only, which can however organise a project in the way that best fits their business needs – meaning that subcontracting is not excluded – the new scheme has opened a new highway to innovation through phased, progressive and complimentary support.

of the services, in conformity with the business strategy and with the acceptation of the specific service properties (Kubičková & Benešová, 2011).

The consulting support to Slovak SMEs is rather limited especially in the field of innovation management enhancement. Technology based SMEs are often excellent in product or process innovation but weak in business model innovation, especially in marketing and internationalisation.

Innovation management capacity improvement services support SMEs in development of their innovation strategy which should be strongly connected to economic output, turnover and employment growth. Special consideration is on increasing innovation results as this target is being hardly reached even by excellent innovation performers. This kind of services are following two sets of impact objectives:

- Direct impact on significantly enhanced growth and profitability of SMEs receiving the services. Innovation processes are conducted more efficient and more effectively. The direct impact is results of the implementation of the action plan performed by the lead coach (in case of KAM services) or innovation experts (in case of EIM services).
- Indirect impact is expected from the introduction of high quality innovation management capacity assessment and support services in all regions across Europe.

2.1 Key Account Management services

Successful introduction of innovative products on the market supported by the SME Instrument may be limited by insufficient management experiences and skills of SME managers (especially those spin-offs coming from the academic field). Based on previous examples it could be expected a higher impact of the coaching on improvement of the company strategy, process optimisation, adjustment of human resources processes, definition of marketing and selling channels not only in connection to the project but for company as such.

In the following years 2017-2018 it is expected that more than 50 Slovak SMEs will be supported, among them those successful in SME instrument obtaining and technology based companies with growth potential. With the view of facilitating the commercial exploitation of the innovation activities resulting from SME Instrument, specific activities are proposed. These can include support for further developing investment readiness, linking with private investors and customers through brokerage activities, assistance in applying for further EU risk finance, and a range of other innovation support activities and services offered via the Enterprise Europe Network (EEN)[25] represented by Business and Innovation Centre Bratislava.

For the beneficiaries of the SME Instrument the Executive Agency for Small and Medium-sized Enterprises (EASME)[26] is implementing a central methodology and uses the smE-MPOWER[27] approach for analysing the gaps and setting the criteria for the lead coach selection. The tool has already been used by the KAM in previous period several times.

[25] http://een.ec.europa.eu/

[26] https://ec.europa.eu/easme/en

[27] http://www.sme-mpower.eu/

Specially tailored Key Account Management services (KAM) for beneficiaries of the Horizon 2020 SME instrument covering phase 1 and phase 2 are focused on identification of gaps, suitable coaches and support their work that would address the recognised barriers to growth on the basis of a jointly agreed coaching plan. In Phase 1 of the SMEI the services are targeted for identification of barriers in the company in realisation of the business plan approved by the European Commission. According to the results of the analysis experts assist the SME in selecting a suitable coach who is developing a Coaching Plan for the SME and focus on facilitation of the interaction between the coach and the SME. During Phase 2 of the SMEI the services are focused on facilitation of the interaction between the coach and the SME. In case of the first time participant (i.e. SME did not benefited from the KAM services before) the service package starts with complex gap analysis. In the case of continuation of KAM services for the client involved in previous support the follow-up of the gap analysis is performed. According to the results of the analysis the expert assist the SME in selecting a suitable coach who is developing a Coaching Plan for the SME and focus on facilitation of the interaction between the coach and the SME.

In both SMEI phases further support is also provided in smooth management and implementation of the project and/or searching for alternative sources of funding for the project (e.g. in the case of unsuccessful attempt for the Phase 2 of the SMEI).

2.2 Enhancing the innovation management services

In terms of provision of innovation management enhancement services for the SMEs with significant innovation activities and a high potential for internationalisation outside the SME Instrument is broadly used the tool recommended by the European Commission and EASME - IMP^{3}rove[28], since the assessment process of the innovation management capacity based on SME performance requires deeper analysis and the tool provides wider possibilities for development and implementation of the action plan. The IMP^{3}rove tool has been successfully implemented in Slovakia since 2014 and it appears to be a suitable tool for evaluation of the innovation management performance in the SMEs.

The IMP^{3}rove was initiated to accelerate Europe's global competitiveness through innovation. Because SMEs are the main source of jobs and employment in Europe, the European Commission DG Enterprise launched IMP^{3}rove to support Innovation Management. Administered by a European Consortium, IMP^{3}rove combines a wide range of expertise and research to support SMEs in the quest for innovation and also helps them gain access to financing and valuable management consulting. The insights generated from this project are the result of deep analyses and comprehensive testing of this state-of-the-art Innovation Management approach.[29]

IMP^{3}rove's Innovation Management approach addresses all aspects of Innovation Management relevant to SMEs. These include innovation strategy; innovation organisation and culture; innovation life cycle processes with idea management; and the development of new products, services, processes, organisational structures, and business models; as well as the launch and continuous improvement. The IMP^{3}rove approach also addresses enabling

[28] IMP^{3}rove is the initiative of the EC to IMProve Innovation Management Performance of SMEs with sustainable IMPact

[29] The results are documented at the IMP^{3}rove website, www.improve-innovation.eu.

factors for Innovation Management such as project management, human resource management, and knowledge management. In this way, IMP³rove builds on a holistic approach to Innovation Management (Engel et al. 2008).

After completing the IMP³rove Innovation Management Assessment SME has three options: Involve an IMP³rove consultant now for analysing the results, or continuing with the IMP³rove Root/Cause Analysis and then take the results from both assessments as basis for discussion with the consultant. In addition SME can move on with the IMP³rove Sustainability-Driven Innovation Management Analysis and also discuss the results with consultant. SME can also start the IMP³rove Certification Process.

The IMP³rove approach to Innovation Management is also highly integrated. It combines efficient online benchmarking with personal support provided by trained IMP³rove innovation experts. The goal of the IMP³rove approach is effective and efficient impact and better services in Innovation Management for SMEs. The personal support provided by IMP³rove experts, who guided SMEs through the IMP³rove process, turned out to be a critical success factor. This enabled the SMEs to see the value-added from the IMP³rove Innovation Management Assessment, Root/Cause Analysis, Digital Innovation Quotient Analysis, Sustainability-Driven Innovation Management Analysis, consulting services and follow-up processes.

Innovation experts are carrying out a diagnostic assessment of selected SMEs that are capable of growth and successful internationalisation in order to develop and implement a tailored action plan to improve their capacity to manage innovation processes.

According to the Innovation Management Standards[30], the work is tackling the full innovation process from idea generation and its management to market introduction and generation of economic return. The general practices and skills of the company for external cooperation for innovation are an integral part of the analysis. Based on an action plan agreed with the SME the expert is addressing some or all identified bottlenecks and/or accompany and supervise the work of other public or private sector consultants addressing these bottlenecks.

Based on the initial analysis of the client's suitability for the service, the EIM services are implemented through the standardised seven-day service packages as follows:

- Getting acquainted with IMP³rove and the SME
- Meeting and mobilising the SME
- Executing the IMP³rove assessment
- Developing and presenting the recommendations
- Facilitating the implementation of actions
- Monitoring the implementation of actions
- Measuring the achieved results

[30] CEN/TS 16555-1 standard available: http://finnkollerup.com/

3. Conclusion

The theory and some empirical evidence proved positive outcomes of entrepreneurial activity, but mixed evidence on the role of entrepreneurship in economic growth. Entrepreneurship activity, especially innovation-oriented one, is correlated with economic growth, but this relationship is influenced by the economy's developmental stage as well as by specific characteristics of certain years (Crnogaj at al., 2015).

In recent years, there has been more frequent documentation of the role played by knowledge in the innovation creation process and in increasing the competitiveness of individual companies and regions (Prokop at al., 2017). The article summarizes the issue of innovation management and nowadays supporting activities available on market in order to increase SMEs innovation capacities and finally their competitiveness. Current situation not only in Slovakia shows the importance of innovation management activities and its impacts on overall effectiveness and competitiveness of SMEs behind the presently fading economic crisis and extremely competitive globalization environment.

Presented services and tools focussed on Innovation Management can be used by SME as an important development factor for sustainable growth of economic activities and market position.

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ENTRY MODES AND BARRIERS TO INTERNATIONALISATION OF SMES IN SLOVAKIA

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Abstract. The purpose of this paper is to investigate the barriers of internationalisation of small and medium-sized enterprises (SMEs) in Slovakia. We will discuss trade barriers that SMEs are likely to encounter in export markets. To ensure a greater depth of understanding on SME internationalisation barriers, this paper analyse various approaches to export barriers. Some studies distinguish between internal (associated with limited available organisational resources) or external barriers (which stem from the market environment within which the firm operates). Most of the researchers believe that Central and Eastern European (CEE) enterprises (including Slovak ones) seem to internationalise only in similar countries; the concept of proximity is fundamental in deciding where to expand. In summary, this study examined a number of parameters related to export structures and success of Slovak companies. In particular, the study identified perception of barriers to internationalisation for Slovak companies. This study has used primary data collected through questionnaires from 176 SMEs. Within the external factors, foreign competition showed the highest obstacle for Slovak companies followed by the need to invest in promotional activities and limited access to capital as internal factors. The study summarises the results from the survey of Slovak small and medium-sized enterprises (conducted in 2016) operating in various fields of production and trade. In general, the questionnaire instrument addressed the issues of company characteristics, respondent characteristics, level of international involvement, entry mode and perceptions related to barriers to internationalisation.

Keywords: barriers of internationalisation; small and medium-sized enterprises; methods of exporting; entry modes

JEL Classification: E22, F19, F13, F49

1. Introduction

Many recent studies (Olejnik & Swoboda, 2012; Cardoza & Fornes, 2011) concern on entry modes and barriers to internationalisation of SMEs. However, the internationalisation of SMEs from CEE countries (incl. Slovakia) appears to be relatively under-researched, even when compared to other transitional or emerging economies.

The small and medium-sized companies ("SMEs") are the backbone of the EU and Slovak economy as well. SMEs make up 99.8% of all EU28 enterprises, 57.4% of value added, and 66.8 % of employment in 2015. Of the 1.2 million exporting SMEs (in 2015), 1 million were exporting to the EU27 and 0.6 million were exporting to countries outside the EU27, and a number of these SMEs were exporting to both. Exporting micro SMEs tend to export mainly within the EU, with less than 50% engaging in outside the EU exports. In contrast, 85% of exporting medium-size SMEs are exporting within the EU and 72% are exporting outside the EU (Muller et al. 2016).

With the objective of contributing to the understanding of how internationalisation takes place in Slovakia a literature review was adopted. The analysis is based on quantitative and qualitative studies.

The article is structured as follows. First, it describes the process of SME internationalisation. Then, it offers descriptive statistics about the data set of the reviewed articles related to the entry modes and barriers to internationalisation. Third, it describes the methodology of research provided and analyses the data. Finally, it synthesises the main findings from the primary research and then proposes some avenues for the future research in this area.

2. SME internationalisation

Comprehensive literature has covered the topic SMEs internationalization (Cardoza & Fornes, 2011). According to some researchers (Aulakh et al., 2000; Meyer & Peng, 2005) small companies from CEE frequently may have lacked the resources required for international involvement.

At the same time, most of the researchers believe that CEE firms seem to internationalise only in similar countries; the concept of proximity is fundamental in deciding where to expand. Proximity is intended as physical proximity (geography), cultural proximity and language proximity Caputo et al., 2016).

Researchers have explored the effect of networks in studying the internationalization of SMEs and have concluded that business relationships with various parties have helped the firms in access external resources and valuable information (Chetty & Holm, 2000).

In order to effectively motivate local firms, particularly SMEs, to enter foreign markets, it is necessary not only to understand the factors stimulating SMEs to export but also the barriers they face to successfully enter and operate sustainably and efficiently in foreign markets (Leonidou, 2004).

The growth in numbers of SMEs internationalization facilitated the structural changes in world markets, technologies, institutional constraints, and consumers' preferences. This leads to risen the modern communication and transportation technologies, the increasing importance of science as a basis of R&D, and the globalization of both businesses and individual consumers (Buckley, 2009).

3. Entry modes and barriers to internationalisation

When companies decide to undertake an internationalisation process, the first question they ask for advice is the optimal entry mode according to their objectives (Angels Niñerola, Sánchez-Rebull & Hernandez-Lara, 2017; Yip, Biscarri, & Monti 2000). The entry mode choice has an impact on company performance because each form of entry implies a different degree of commitment and risk (Brouthers & Brouthers, 2003; Hill et al., 1990).

In the context of SMEs, there are three dominating pathways – steady way to enter in foreign markets as explained by the Uppsala model, rapid way to enter in foreign markets as clarified by born global and radical but late as evidenced by born-again global firms (Olejnik & Swoboda, 2012).

Exporting is one of the most attractive entry modes for SMEs because it involves minimum risks, requires low financial and human resources and at the same time, offers high flexibility of movements (Pinho & Martins, 2010). Similarly Burpitt and Rondinelli (2000) consider exporting as a dominant entry mode into international markets, and the first success in exporting activities motivates small firms to internationalize in the later periods.

Premise of the study relates to SMEs internationalization barriers (Cardoza & Fornes, 2011). Leonidou (2004) defines that internationalization barrier as barrier to the national and international expansion of SMEs is those hindering this internationalization process.

To ensure a greater depth of understanding on SME internationalisation barriers, this paper analyses various approaches to export barriers and classification of the factors that influence the form of entry into a foreign market. Following the classification used by Parola et al. (2013), we have analysed previous studies about these factors: internal, external and cross-cultural.

Some studies (Leonidou, 2004; Ortiz & Ortiz 2010) distinguish between *internal* (associated with limited available organisational resources) and *external barriers* (which stem from the market environment within which the companies operates). The internal factors that have attracted most research attention were the product strategy variables, followed by price, promotion and distribution. Shaw and Darroch (2004) found that the main barrier for non-exporters appears to be company size, as these companies perceive that they are too small to internationalise. On the other hand, other studies concluded that small companies are just as capable of being successful in international markets as large companies (e.g. Shaw & Hassan 2002; Calof 1994). As well as internal factors affect the way of entry into a foreign country, external factors, particularly related to market characteristics also determine the choice of ownership structure (Pla-Barber et al., 2010).

The importance of cultural factors (cultural proximity) is underlined by Stoian et al. (2016).

They state that mainly companies which chose to enter non-European markets only did so after gathering sufficient international experience and know-how within the European market.

There are also researchers who introduced their own categorisation of exporting barriers. In the research proposed, the categorisation according to Leonidou (2004) will be followed. A wide range of categorisation of exporting barriers makes it rather difficult to integrate the results obtained from previous studies.

Considering the context of the study we believe that all these factors can be determinants for the analysis. In the following chapters, the internal, external and cultural factors that influence the entry mode choice are analysed and the entry barriers.

4. Methodology for researching SME internationalisation

The key motivation of this study was to investigate the barriers that SMEs face while trying to enter into foreign markets.

The research was carried out by an electronic survey of Slovak SMEs operating in the fields of production and trade. The data used in this study were collected by Matej Bel University between February and May 2016. In general, the questionnaire instrument addressed the issues of company characteristics, level of international involvement and perceptions related to barriers to internationalization. The questionnaire was developed based on the modified model of Leonidou (2004) that classified exporting barriers into external and internal. According to this classification the internal barriers (related to organizational capabilities, resources and company approach to export business) and external barriers (related to the home and host environment within which the companies operates. The final sample consisted of 300 SMEs with different level of export experience (the length of time the companies have been exporting, the number of markets they serve and the intensity with which they serve their markets) without non-exporters. Completed responses were received from *176 respondents*, with a resulting response rate of 58.6 %.

The categorisation of companies by size based on the European Commission (2010) classification was used in this study.

5. Data analysis and results

A majority of exporting SMEs agreed that the *two most important barriers* in SMEs exporter were part of *external barriers*, incl. *high prices* of their products, 64% of respondents (compared to similar products on other markets) and *stiff competition* (75% of Slovak companies mentioned mainly strong competition, mainly from Poland or China). The findings also indicate that many barriers are related to the external barriers compared to the internal.

As for *internal barriers*, they were associated mainly with *limited organisational resources* by 38% of SMEs (the shortage of workforce which seems to be quite problematic across all industries in Slovakia) and *language barrier* identified by 15% of respondents (especially by SMEs operating in third countries). Similar barriers (language barrier and human resources) were also identified by other recent researches (Angels Niñerola, Sánchez-Rebull & Hernandez-Lara, 2017; Roy, Sekhar & Vyas, 2016). Language difference is considered as the key barrier to enter in foreign markets in many theories including the Uppsala model.

In Slovakia, one of the factors that influence the entry mode is the degree of market knowledge. According to Slovak SMEs surveyed, the existing networks considerably help them to get the valuable information about foreign market. In some cases, (11% of respondents) the assistance of state agencies (e.g. Slovak investment and trade development agency) is used by SMEs to become familiar with new potential markets.

Major limitations of the study include the following: first, a database accumulated the SMEs that were involved mainly in manufacturing activities in Slovakia. Second, our sample focuses on SMEs from different sectors, i.e. textiles, food, agro products, engineering, and chemical products.

6. Conclusion

The aim of this study was to identify the exporting barriers faced by SMEs in Slovakia. In particular, the study identified perception of barriers to internationalisation for 176 Slovak SMEs. Results suggest that foreign competition (external factor) is considered to be the most significant barrier followed by the high price of Slovak products compared to their competitors. As for internal barriers, limited organisational resources were mentioned, together with language barriers. This study partly focused also on entry modes, where the direct exporting is prevailing among SMEs in Slovakia. The membership in various networks helps companies to facilitate the information flow and improve their ability to follow the latest changes in legislation, taxes or other regulations. As is the case of most empirical studies, this study has a limitation. This research focused only on production and trade SMEs which might influence the final results.

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