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THE CURRENT SUSTAINABILITY OF LOCAL BUDGETS IN THE CZECH REPUBLIC

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Abstract: The area of sustainability of public budgets is currently a key global issue of public economy worldwide. The sustainability of public budgets affects not only the domestic economy but also affects international relations, foreign trade, the balance of payments and the country's position on an international business scale. It also directly affects the level of interest rates on government bonds and hence the financing of public debt management. To manage the public economy is thorough knowledge of the real decision-making and allocation mechanisms at all levels of public budgets. From a budgetary perspective, the public economy in the Czech Republic is characterized mainly by the state budget, 6.249 municipal budgets and 14 budgets of local government units, including budgets of state funds, public health insurance companies, state-owned enterprises and micro-regions. Indebtedness in 2015 was showed in 3.255 municipal budgets and in all 14 local government units, which are comparable to the situation 10 years ago. All of these all units are together subject to annual statutory audit, which mainly represents the analysis of the system of the Audit informative and monitoring indicators (ASIMI). Municipalities reported at the end of 2015 the total debt of EUR 3,10 billion and local government units of EUR 0,94 billion, which is by 3,0 % more than in the previous year. Municipalities and local government units currently show better indebtedness ratio than the state - of the total volume of public debt, it accounts for only 9%. The paper analyzes the outcome of the audit with the use of absolute and relative indicators and suggests possible changes and consolidation of municipal and local government budgets in the Czech Republic.

Keywords: municipality, local government unit, public budget, debt, GDP

JEL Classification: H60, H62, H63

1. Introduction

The public sector is part of the national economy, whose main area of interest is to carry out a public service, who are funded from public funds as well as are managed and administered in public administration. Decisions within public sector are made on public option and are subject to public control (Volek, 2005). From a material standpoint, the issue of control of public administration is more difficult than controlling the business sector of the national economy, and moreover, is subject to the principles of publicity, the principles associated with the obligation to give public entities the requesting information (Becker et al., 2005). Public sector represents one of the hallmarks of public administration and its name is derived from the fact that it is implemented in the public interest (Barro, 2014).

By the end of 2016 there is a total of 6,249 municipalities and 14 Local Government Units (LGU) in the Czech Republic. The task of each municipality is to allocate sufficient funds to finance the activities that the municipality has in its scope and activities, as well as those which are transmitted by the state (Rektorik & Selesovsky, 1999). Municipalities and LGU seek comprehensive development of its territory and ensure the needs of its citizens through public goods and services.

On July 1st 2004 came into effect law No. 420/2004 Call., on the Act on the audit of municipalities and LGU, where articles 1-9 of § 4 oblige the rule to provide (till 30th June of current year) the audit management for the past year. The audit shall be conducted in accordance with law No. 93/2009 Coll., on Auditors and the International Auditing Standards and related application clauses of the Czech Chamber of Auditors.

2. Objectives and methods

For the preparation and fair presentation of financial statements in accordance with accounting standards of the entity, there are data sources obtained from the Czech Statistical Institute and the Czech Ministry of Finance. These data were analyzed using both the absolute and relative methods of managerial accounting. Based on these data and analysis the main objective of the paper is to evaluate the main results of audit of municipalities and LGU in the Czech Republic and determine possible directions of its future reform. Part of this responsibility is designing, implementing and maintaining internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error (Pospisil, 2013).

3. Principles of budget survey

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks that the financial statements contain material misstatements due to fraud or error (Krugman & Eggertsson, 2012). When assessing these risks, the auditor considers internal control relevant to the preparation and fair presentation of the financial statements. The aim of the assessment of internal controls is to propose appropriate auditing procedures, not to comment on the effectiveness of internal controls (Rubin, 2010). An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management as well as evaluating the overall financial statement presentation (Lucas & Moll). The role of the auditor is to issue the audit opinion on the financial statements.

Data review on the annual management of municipalities and LGU, which forms part of the final account are based on law No. 420/2004 Call, § 2, article 1-2:

a) the income and expenditure of the budget, including cash transactions relating to budget funds,
b) financial transactions related to the creation and use of monetary funds,
c) the costs and benefits of business,
d) cash transactions related to pooled funds expended under an agreement between two or more municipalities or LGU or under contract with other legal entities or individuals,

e) financial transactions related to foreign sources within the meaning of the legislation on accounting,
f) management and disposal of funds provided from the National Fund and other funds from abroad provided under international treaties,
g) the billing and settlement of financial transactions to the state budget, the municipality and LGU budgets other budgets, state funds and of other persons.

Financial management in the context of this paper is characterized by basic financial indicators and the relationships between them as the following (including the types of financial documents where the indicators can be found). Table 1 shows the list of used and analyzed indicators of municipal and LGU budgets in the Czech Republic at present.

Table 1: Analyzed indicators of municipalities and LGU

Municipality profile	**Balance sheet**	**Budget**
Identification number	Fixed assets	Tax revenues
Number of inhabitants	Current assets	Non-tax revenues
Performs state administration or not	Total assets	Capital revenues
	Total current accounts	Accepted transfers
	Own sources	Total revenues
	External sources	Current expenditures
	Total liabilities	Capital expenditures
		Total expenditures
		Annual budget balance

Source: own processing

For analyzing the financial management of municipalities, auditors use basic financial analysis ratios, such as the following balance sheet indicators:

Fixed assets / Total assets;

Current assets / Total assets;

Own sources / Total liabilities;

External sources / Total liabilities;

Total current accounts / Total liabilities.

In additing to the indicators mentioned above, beginning from July 2004 Czech government approved municipal debt regulation through the debt service ratio (DSR). The actual formula for the calculation is:

$$DSR = \frac{\text{debt serice}}{\text{debt base}}\ x\ 100 = \frac{\text{interest + principal and bond instalment +leasing instalment}}{\text{tax revenues +nontax revenues +received transfers}} \quad (1)$$

4. Results

The Ministry of Finance of the Czech Republic calculates the debt service ratio for each municipality and in case the ratio overruns 30 % than the minister of finance sends a letter to the municipality. The debt service ratio was first calculated in April 2004 from the 2003 data. Table 2 shows current indebtedness of municipalities in the Czech Republic in 2015 divided in different size group.

Table 2: Indebtedness of municipalities in 2015

Size group	**Number of municipalities**	**Distribution of debt to assets ratio (%)**			**Distribution of debt to income ratio (%)**		
		Median	**75th percentile**	**95th percentile**	**Median**	**75th percentile**	**95th percentile**
< 200	1456	1	4	19	7	22	110
201-500	1998	3	8	27	14	45	130
501-1000	1361	4	10	30	25	57	149
1001-5000	1161	6	10	24	32	61	134
5001-10000	141	6	11	21	35	52	104
>10000	132	7	11	17	41	57	96

Source: own processing

The municipality is required to explain within three months the reasons for this overrun and suggest measures to improve the situation (Maaytova et al., 2015). At the same time the municipality submits the audit report and the multi-annual budget outlook. Then the ministry evaluates these documents together with the total debt, debt per capita, tax revenues per capita, debt in the past years, size of the municipality and its overall financial situation (Barro, 2013). In case of overrun of the debt service ratio in the next year the Ministry of Finance will put the municipality on a list, which will be passed on to the grant providers (ministries or state funds). The described procedure is effective only for a short time, however several problems arose (Lucas, 2003). The debt service ratio does not say much about the total indebtedness and about the ability to pay off the debt (Lucas & Moll, 2014).

Audit system of informative and monitoring indicators (ASIMI)

The Ministry of Finance of the Czech Republic, on the basis of Government Resolution dated November 12, 2008 no. 1395 on audit of the management of municipalities and repealing Government Resolution of 14 April 2004 no. 346 on the regulation of indebtedness of municipalities and counties through the debt service, annually performs Audit system of informative and monitoring indicators (ASIMI) for all municipalities and contributory organizations established by them and evaluate the results of the calculation, building always on data 31.12. relevant year (after final enrollment). ASIMI indicators are divided into two separated parts and are audited and evaluated all together:

Informative indicators:

a) population of the municipality,
b) total income (after consolidation),
c) interest,
d) payment of installments for bond and borrowed funds,
e) total debt service,
f) debt service indicator (%),

g) total assets,
h) liabilities,
i) balance at bank accounts in total,
j) loans and municipal bonds,
k) received repayable financial assistance and other debts,
l) total debt,
m) the debt to foreign sources (%),
n) 8-year balance,
o) current assets,
p) current liabilities.

Monitoring indicators:

a) share of foreign sources to total assets (%),
b) total current liquidity,
c) 5-year development if indebtedness and annual change of indebtedness.

The Ministry of Finance of the Czech Republic performs annually - from the submitted financial and accounting statements - calculation of ASIMI for all municipalities and evaluates the results of the calculation. Municipalities whose indicator of overall liquidity will be by 31.12. of the current year in interval <0; 1>, while the share of foreign sources to total assets will be greater than 25 %, will receive a letter from the Minister of Finance and asked for an explanation of this state and the opinion of the council of the municipality. The Ministry of Finance will, upon receipt of the municipalities concerned, inform the government of the Czech Republic on results of monitoring of municipal finances for the current year.

Municipalities (including their subordinate governmental organizations) reported at the end of 2015 the total debt of EUR 3,10 billion. Compared to the previous year with a decrease of 2.3 %, in absolute terms, the debt declined by EUR 71,4 million. The total volume of municipal debt includes bank loans from financial institutions, issued municipal bonds, repayable financial assistance received and other debts, incl. loans from state funds. Table 3 shows summary data on indebtedness of municipalities in the Czech Republic in 2010-2015.

Table 3: Summary indebtedness of municipalities in the Czech Republic (billion EUR)

Variable/Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Loans	2,14	2,18	2,44	2,46	2,42	2,36
Municipal bonds	0,56	0,50	0,49	0,54	0,42	0,38
Received repayable financial assistance and other debt	0,27	0,27	0,28	0,30	0,34	0,36
Total	2,97	2,95	3,21	3,30	3,18	3,10

Source: Czech Statistical Office; own processing

In the structure of the debt of municipalities have the greatest weight the long term loans, whose share during 2015 decreased by 0,1 percentage points to 76,1 %, the share of municipal bonds issued decreased by 1,0 percentage points to 12,3 % and the remaining part of the debt of municipalities (11,6 %) were consisted of repayable financial assistance and other debts.

Total debt of municipalities in 2015 contributed 4 largest city of the Czech Republic by 50,4 %, the value of their debt amounted to EUR 1,55 billion.

Loans that municipalities have adopted from financial institutions, similarly to previous years, chiefly aimed at reconstruction and construction of technical infrastructure for pre-investment projects co-financed from EU funds and the regeneration and construction of housing (Reinhart & Rogoff, 2010). Municipalities also used these funds for reconstruction, insulation and expansion of educational facilities, sports arenas and other public facilities (Stiglitz, 2015). These loans are characterized by relatively low interest rate and very long maturities. Debt itself cannot be evaluated negatively (Stiglitz, 2016). Without a loan or credit, many municipalities cannot fund its development (gasification, local roads, sewers, water mains, sewage, preschool and school facilities, etc.).

Indebtedness in 2015 was showed in 3,255 municipalities out of a total of 6,249 municipalities (52,1%). Number of municipalities that have shown indebtedness in recent years remains broadly stabilized, although in the last year there has been a slight increase (by 20 municipalities).

LGU (counties) including contributory organizations established by them, reported at the end of 2015 total debt EUR 0,943 billion. From 2014 to 2015 the value of debt fell by EUR 42 million (4,4 %). On the line of credit was recorded decrease debt by EUR 20 million. The share of loans in total debt reached up to 92,0 %. LGU did not issued any bonds in 2015. Table 4 shows summary data on indebtedness of LGU in the Czech Republic in 2010-2015.

Table 4: Summary indebtedness of LGU in the Czech Republic (million EUR)

Variable/Year	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**
Loans	593	700	793	839	871	868
LGU bonds	9	14	7	26	24	5
Received repayable financial assistance and other debt	80	82	75	91	90	70
Total	682	796	875	956	985	943

Source: Czech Statistical Office; own processing

Some LGU continued drawdown of loans granted by the European Investment Bank, which pre-finance and co-finance massive investments in regional infrastructure. These loans are generally disbursed in several tranches with different maturities, typically in excess of 10 years.

5. Conclusion

Municipal and LGU regional budgets in aggregate by the end of 2015 showed indebtedness of EUR 4,043 billion, which is by 3,0 % (EUR 122 million) more than in the previous year. The total volume of loans taken by the territorial budgets was increasing in 2015 as well (non governmental organizations) amounted to EUR 3,228 billion. (increase of 1,9 % over the previous year). In the institutional area of public finance, the Czech Republic has been criticized for a weak budgetary framework for several years although it has always met its obligations in terms of general government sector performance over the last years. Since the termination of the excessive deficit procedure with the Czech Republic in June 2014, the medium-term budgetary objective has been met every year. A set of proposals for regulations on budgetary responsibility (a draft constitutional law on fiscal responsibility, a draft law on rules for fiscal responsibility and a draft law amending certain laws in connection with adoption of fiscal responsibility regulations) was approved by the Czech government already in February 2015, and after then it was under consideration in the Chamber of Deputies of the Parliament of the Czech Republic until October 2016.

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FINANCING OF COMPANY: MODELLING THE PROCESS OF MAKING DECISIONS UNDER THE CONDITIONS OF GLOBALIZATION

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Abstract. The majority of companies are in a rather difficult financial position and are incapable of competition in the global market. The paper presents the results of research the availability and reliability of company's financing sources. It is shown that the high frequency of crises in the global economy, associated with decline in production, the loss of business solvency makes it necessary for the company's constant search for additional financial resources, which, in turn, updates the development of methods to assess the availability and reliability company's financing sources in order to effectively financial management of capital structure. These circumstances determine the need for development of methodological approach of improving the availability and reliability of companies financing sources with limited financial resources and taking into account the importance of factors affecting the optimization of the capital structure, which will allow, firstly, to justify appropriate methods for selecting financing sources, which take into account the size of the company and the economic cycle, and secondly, to develop guidelines for the organization of monitoring availability and reliability of financing sources in the financial management of the company. At the stage of selection and validation of financing sources, the management of the company's capital structure it is advisable to take into account the results of the its availability and reliability assessment. Therefore, the purpose of this work is to create the economical model of the decision-making with regard to the choice of companies financing sources under the conditions of globalization.

Keywords: globalization, financing, companies, phases of the economic cycle, integrated indicator

JEL Classification: G31, G32, F65, O16

1. Introduction

The majority of companies are in a rather difficult financial position and are incapable of competition in the global market. Theoretical and methodological problems of company's financial resources selection actively studied Foreign and Russian scientists (Brealey, 1997;

Buzila, 2015; Cohen & Lys, 2006; Gong, 2013; Van Horne, 2006; Michaely, 1999; Tolstel, 2009; Wang, 2010 and others). Despite the large number of works devoted to the study of financial and investment decision-making, and methods of financial resources choice, there is a need for a comprehensive study of the principles, methods and algorithms of financial resources estimation, the formation of company's financial strategy.

The paper presents the results of research the availability and reliability of company's financing sources. It is shown that the high frequency of crises in the global economy, associated with decline in production, the loss of business solvency makes it necessary for the company's constant search for additional financial resources, which, in turn, updates the development of methods to assess the availability and reliability company's financing sources in order to effectively financial management of capital structure (Raifur & Almir, 2015). These circumstances determine the need for development of methodological approach of improving the availability and reliability of company's financing sources and the importance of factors affecting the optimization of the capital structure, which will allow, firstly, to justify appropriate methods for selecting financing sources, which take into account the size of the company and the economic cycle, and secondly, to develop guidelines for the organization of monitoring availability and reliability of company's financing sources. At the stage of selection and validation of financing sources, the management of the company's capital structure it is advisable to take into account the results of the its availability and reliability assessment. Therefore, the purpose of this work is to create the economical model of the decision-making with regard to the choice of companies financing sources under the conditions of globalization.

2. Methods and materials

2.1 The Economic Categories «Availability» and «Reliability» of Financing Source and Their Characteristics

Traditionally, under the «availability» of company financial resources is referred to as only the terms of the financial resources without regard to their effect on its financial condition in the future. From the author's standpoint, it is advisable to consider the wider availability in the context of management, based on expectations of profitability of the company by external economic actors (Expectations Based Management - EBM), which allows to take into account the consequences of financial decisions on the financial future of the business.

Thus, the availability of financial resources is a set of conditions and requirements for retrospective and forecast levels of financial flexibility and stability, to attract financial resources. The available financial resources for the company can be identified depending on the level of its financial flexibility and stability.

Availability's evaluation as the primary selection criteria of financial resources for the company, which is a comprehensive indicator is included assessing a number of factors that determine the real possibility of attracting funding from a particular source.

Traditionally, the availability of financial resources for the company is considered by comparing the cost of raising funds and its development level and economic cycle phases, which is an important omission. Stages in the life cycle of the company are characterized by the gradual accumulation of quantitative and qualitative changes in its activities, which certainly affects the levels of its financial stability and financial flexibility and defines a set of available financial resources for the company (Nishibe, 2015; Novotny, 2016; Phillips, 2017).

An analysis of common situations in business in the Russian market and these characteristics allows to identify the most probable set of available sources of funding for the company, given its size and stage of the economic cycle (Table. 1).

Table 1: The availability of financing sources, depending on the stages of the economic cycle and the size of the company.

Phases of the Economic Cycle	Strategic Goal of Attracting Financial Resources	The Availability of Companies Funding Sources			
		Micro	Small	Medium	Large
Growth	The establishment of production and marketing processes, «incubation» business ideas, increase market share; optimization of the organizational structure in order to more effectively conduct business activities	-Income (Profit); -Mutual Financing; -Short-Term Credit; -Long-Term Credit; -Budgetary Financing; -Venture Financing; -Microfinance	-Income (Profit); -Stock; -Grant; -Mutual financing; -Short-Term Credit; -Long-Term Credit; Venture Financing; -Budgetary Financing; -Project Financing; -Factoring; -Leasing	-Income (Profit) ; -Stock; -Grant; -Mutual Financing; -Short-Term Credit; -Long-Term Credit; -Budgetary Financing; -Venture Financing; -Project Financing; -Leasing; -Factoring	-Income (Profit); -Stock; -Grant; -Mutual financing; -Short-Term Credit; Long-Term Credit; -Leasing; -Factoring; -Budgetary Financing; -Project Financing; -Debt Financing
Stability	Profit maximization through maximization of the market; maintaining the achieved level of development	-Income (Profit); -Mutual Financing; -Short-Term Credit; -Budgetary Financing; -Leasing; -Microfinance -Venture Financing; -Long-Term Credit	-Income (Profit); -Stock; -Grant; -Mutual Financing; -Short-Term Credit; -Long-term credit; -Budgetary Financing; -Leasing; -Factoring; -Venture Financing	-Income (Profit); -Stock; -Grant; -Mutual Financing; -Short-Term Credit; -Long-Term Credit; -Factoring; -Leasing; -Venture Financing; -Project Financing	-Income (Profit); -Stock; -Grant; -Mutual Financing; -Short-Term Credit; -Long-Term Credit; -Factoring; -Leasing; -Project Financing; -Debt Financing

Recession	Extensive development, including due to absorption of the younger companies; resolving internal (structural) conflict; greater control of internal company processes, but not their efficiency	-Income (Profit); -Mutual Financing; -Short-Term Credit; -Long-Term Credit	-Income (Profit); Mutual Financing; -Short-Term Credit; -Long-Term Credit; -Leasing; -Factoring	-Income (Profit); -Mutual Financing; -Short-Term Credit; -Long-Term Credit; -Leasing; -Factoring; -Project financing	-Income (Profit); -Stock; -Mutual Financing; -Short-Term Credit; -Long-Term Credit; -Leasing; -Project Financing; -Debt Financing

Source: own work

Table 1 shows that almost the entire range of financial resources available only to large companies, and small and medium-sized regional companies, as a rule, have to be limited to its own funds, bank loans, mutual financing. For successful development of the business, overcoming the earliest stages of the company's life cycle, and under certain conditions available government funding and grant system (Aschauer, 1989). However, government funding is available for the micro companies (individual entrepreneurs) at the growth stage in the form of public services (subsidies) receipt to promote self-employment of unemployed citizens of the Russian Federation (Vlasova et al., 2016).

Evaluation of the financial resources reliability is a set of conditions and requirements on the part of the subject recipient of funding to the subject, to provide financial resources. Consequently, the reliability of the funding source as a criterion for the selection of the financial channel is characterized by levels of financial flexibility and stability of financial resources suppliers (lender, investor, etc.), which subsequently form a channel of funding. Reliability characteristics of the financing channels are conditions of cooperation, barriers to entry and exit from the channel, the reputation of participants in the channel, the relationship between the participants in the channel, and others. The channel financing should provide company the financial resources needed it amounts at the right time, for a certain period and under certain conditions. In addition to assessing the reliability of economic subjects of financial relations, the analysis of the financing channels includes an assessment of technology as a set of funding arrangements, operations, procedures (regulations), aimed at providing financial services, information technology and facilities that provide the financial resources.

The paper shows that company's financial management need to increase the expected return on the actual, rational management structure of the financial resources, combined with multi-factor availability and reliability assessment of funding sources. By following the above conditions, the company is able to expand the financing channels and the spectrum of available financial resources, thereby providing sufficient resources for sustainable business development.

2.2 Methods of assessing the availability and reliability of financing sources

When selecting funding sources to assess their availability and reliability is advantageously carried out in the context of the future profitability expectations, as in the long term when exposed to levels of financial flexibility and financial stability of the economic entity is not sufficient to manage its financial capital structure, and requires consideration of the financial and nonfinancial stakeholders interests. Based on author's definitions of funding sources availability and reliability, assess the level of availability, we offer a comprehensive assessment to determine the financial flexibility and financial stability, which will form appropriate expectations of the investor (or lender) on the levels of financial flexibility and stability of the company (borrower).

The reliability of the financial channel involves the assessment of financial flexibility and financial stability of the financial resources supplier from the perspective of the recipient in order to select stable (reliable) sources of financing.

Selection of a suitable funding source for the company is advisable to carry out based on the evaluation of the financing sources availability and reliability integral index, taking into account the expectations of the financial flexibility and stability projected level and harmonization of their financial interests.

The calculation of the financing sources availability and reliability integral index as follows: the expected performance defined by the availability and reliability, the results of which formed the availability indicator (AIc) and funding sources reliability indicator (RIc) ranging from 0.00 to 15.00.

Assigning a minimum and maximum score is dependent on the extent to which these factors: the mismatch value of the index takes a value of zero when overlap - the minimum or average, with full - maximum. Then calculated the integral index of financing sources availability and reliability using the formula:

$$ARIc = AIc + RIc \tag{1}$$

The maximum permissible value of the integral index is 30.00 points, the minimum - 7.50 points. Depending on the obtained values of the financing source' availability and reliability integral index company can be attributed to one of the following: 1) 7.50-14.90 - low; 2) 15.00-24.00 - medium; 3) 25.00-30.00 - high. Analysis of the funding source availability and reliability integral index, depending on the level of the calculated index suggests the priority selection of the test financial resources when released into the medium and high levels of funding availability and reliability. The results are within the proposed range of scoring, it is proposed not to consider, as they characterize the unavailability and unreliability of the funding source.

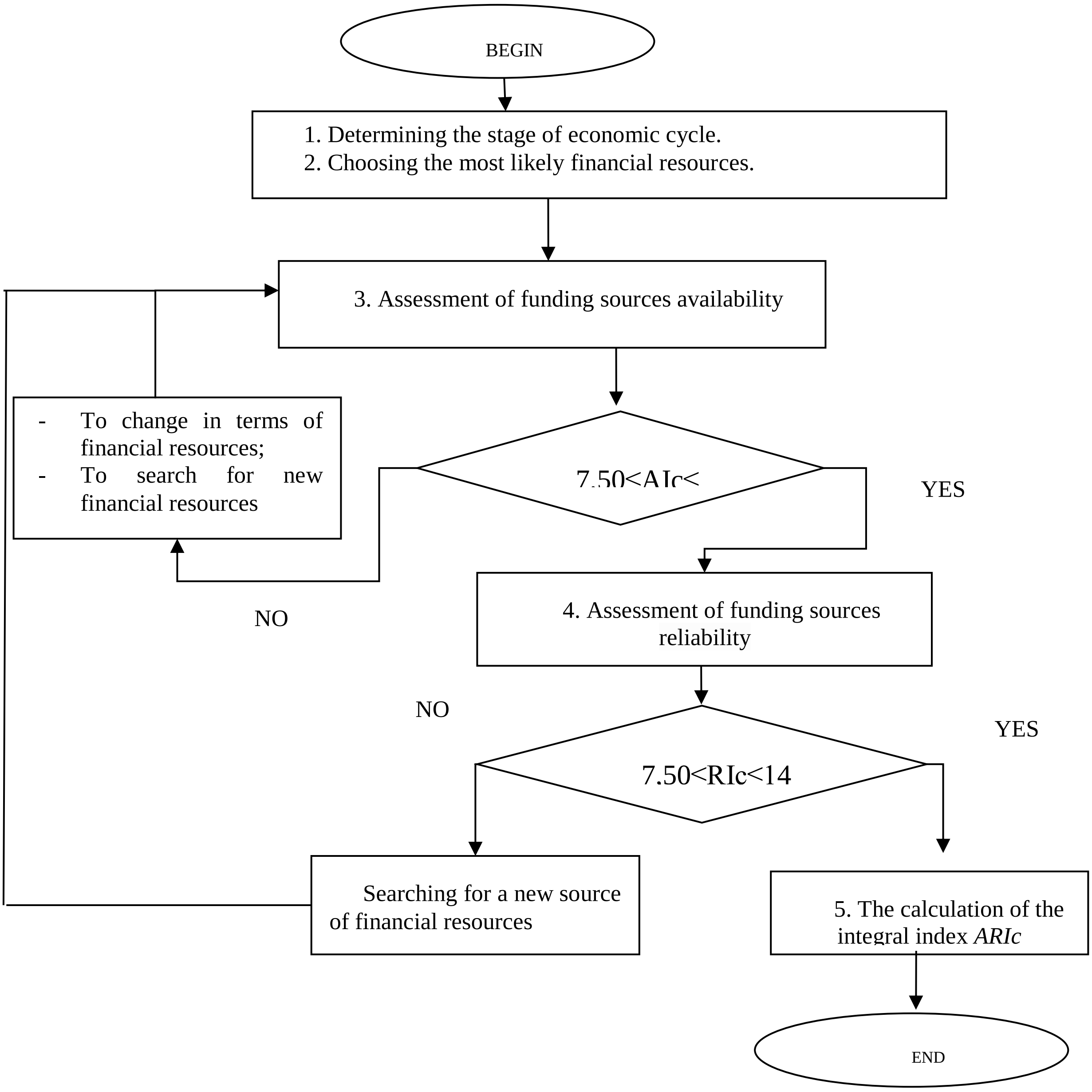
For analyze of financial resources and determine the degree of financing sources availability and reliability authors offer an algorithm (Figure 1)

After formed a set of available financial resources for the company, need to the assessment of the financial resources suppliers' reliability - financial channels. If in the process of analyzing the company does not exceed a minimum threshold of AIc, the reliability of the channel of funding is in doubt, respectively, company should search of new financing entity, which will need to assess financial conditions one more times. If an acceptable level of availability and reliability of the source of funding go to the calculation of the integral index of availability and reliability (ARIc), the value of which will help choose the most affordable and reliable sources of funding for the company.

The selection algorithm funding sources was the basis of monitoring system funding availability and reliability. Monitoring contributes the most optimal and consistent study of the financial resources effectiveness, which will select the right funding sources and maintain financial stability.

Monitoring the availability and reliability of financing sources is a system of observation, analysis, evaluation, diagnosis, and adjustments to the financial policy of the company; its implementation leads to increased financial stability. Monitoring allows you to take into account the impact that the sources of funding for financial flexibility and stability of the company, the role entities providers of financial resources in making financial and investment decisions, and quickly monitor, diagnose and make adjustments of the decisions taken.

Figure 1: The algorithm of company financing



Source: own work

3. The analysis result

In the traditional literature, availability is regarded as one of the main selection criteria of financial resources, while reliability goes by the wayside and not necessarily affect the decision on raising funds. In addition, evaluation of financial resources takes place on the actual performance, without taking into account the predicted values. When selecting financial resources to assess its availability and reliability is advantageously carried out in the context of the future profitability expectations. Based on the author's definitions of funding sources availability and reliability, we offer a comprehensive assessment to determine the financial flexibility and financial stability, which will form appropriate expectations of the investor (or lender) on the level of company's financial stability (the borrower). The reliability of the financial channel involves the assessment of supplier's financial flexibility and financial stability from the perspective of the recipient, in order to select stable (reliable) sources of financing.

Author's algorithm allows to choose the most appropriate source of funding depending on the stage of the economic cycle, industry characteristics, as well as forward-looking expectations of management and investors about company's financial performance, namely financial stability (financial flexibility and financial stability). If the forecast figures, availability and reliability of financial resources exceed actual performance, the company has surpassed the expectations of investors and increase its market capitalization (Petrach & Vochozka, 2016). If the forecast figures, availability and reliability of funding sources below its actual performance, the company failed to meet expectations of investors and its market value will decline, despite the possible increase in the dynamics of profit and investment.

4. Conclusion

In the context of author's theory, availability of financial resources is a set of conditions and requirements for the retrospective and the forecasted level of suppliers' financial stability. The funding source reliability reflects the level of financial resources providers' financial stability, which subsequently form the channel of financing, taking into account the expected changes in the level of its financial stability. Every company, depending on its size corresponds to specific set available financial resources with different reliability. In order to select the strategy of company's financing key methods to attract financial resources should classify based on availability in accordance with the stages of economic cycle, and then define a set of available funding channels depending on the size of the company. Choosing the most appropriate for the company's financial resources is advantageously carried out based on the evaluation of the financial resources availability and reliability integral index, taking into account the expectations of the financial flexibility and financial stability projected level, defining the future financial stability.Thus, monitoring the funding sources availability and reliability makes it possible to identify at an early stage problems when selecting the company's financial resources, the use of which can help improve the performance of the company. Obtained in the course of monitoring information allows to find and evaluate the best ways to finance, to predict financial flexibility and stability of the company, to identify the challenges to financial stability, as well as interact with the financial institutions, and other stakeholders related to the provision of financial resources.

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THE FISCAL RULES IN CONTEXT OF GLOBALIZATION

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Abstract. The globalization processes force the changes in fiscal policies of states. These processes require the uniformity of European Union policies, including monetary policy, cohesion policy, regional policy, and also fiscal policy. Fiscal policy decisions should primarily stimulate economic growth as well as stimulate or curb demand in the economy, mitigate business cycle fluctuations, reduce unemployment and ensure the sustainability of the public finance sector. So far, the fiscal policy has been national nature and has been shaped by national socio-economic and political factors. In the context of globalization, decisions are increasingly made on the basis phenomena resulting from globalization and on the basis phenomena resulting from the openness of economies. The global economic crisis has intensified and widened the problem of rapidly rising debt of the Member States of the European Union. This problem requires making increasingly radical fiscal policy decisions. In the condition of globalization, fiscal policy decisions continue to be national solutions, but increasingly they have to take into account external shocks related to the internationalization of economic processes and they have take into account the impact of globalization on public revenues and expenditures. While business cycles are crucial for determining the dynamics of government budget deficits, in this paper we study the dynamics of budget deficits along the cycle. Thus, we present the model in which fiscal rules take into account two components: the cyclical bias and discretionary tax reductions. We present the new generation fiscal rules that be based on a combination of expenditure and revenue rules.

Keywords: globalization, new generation fiscal rules, business cycle, government expenditures, government revenues

JEL Classification: F62, C22, C61, H60, H61

1. Introduction

In the context of globalization, the effects of the global crisis are felt in different degrees in the economies of all countries because it exists so called "infecting effect". The EU economy and the globalization in context the macroeconomic policy analyze Saroch and Smejkal (Saroch & Smejkal, 2016) and Przybylska-Mazur (Przybylska-Mazur, 2016, b). In the global economy, there is a network of financial relationships and the facility of information transfer, which accelerates the spread of the crisis. This situation has a negative impact on the condition of public finances as well as it generates multi-faceted consequences for business.

As a result of the strong economic slowdown and the unfavorable structure of this growth from a fiscal point of view, there is a significant aggravation of fiscal imbalances. After the financial crisis in 2008, in almost all EU countries the general government deficit increased and the public debt exceeding the limit values in the Maastricht convergence criteria.

Therefore fiscal rules in the EU have a transnational character. All EU Member States must to maintain the general government deficit not larger than 3% of GDP and to maintain the public debt of not larger than 60% of GDP.

Leading the fiscal policy in condition of globalization, the countries should base on the fiscal policy model which allows to achieve long-term sustainable economic growth. This model should allow an existence of fiscal impulse to stimulate the economic situation during a recession, but it can not lead to a permanent increase in the general government deficit and public debt. We note that the fiscal sustainability, as an integral part of macroeconomic stability will strengthen the protection of the economy against various types of shocks. About the fiscal sustainability and about the impact of fiscal rule on the stabilization of fiscal policy write Sacchi and Salotti (Sacchi & Salotti, 2015), Andres et al. (Andres et al., 2006) and Ryoo and Skott (Ryoo & Skott, 2017).

Therefore, in order to assess the state of public finances, we should not evaluate them in the single year, but we should analyze them in the perspective of the whole business cycle.

2. The importance of fiscal policy based on rules in globalization

Fiscal policy decisions about the size and structure of government expenditure, government revenue, general government deficit and general government debt should be made on the basis of fiscal rules. In the context of globalization, fiscal rules should allow for the implementation of the country's government economic program with a pre-designed framework ensuring that the general government deficit and public debt are maintained. These rules could prevent pro-cyclical fiscal policies as well. The fiscal policy, bounded by rules is an important component in the success of reducing the general government deficit and general government debt.

The importance of fiscal policy rules analyze Guerguil et al. (Guerguil et al., 2017) and Przybylska-Mazur (Przybylska-Mazur, 2016, a).

When we make the rules-based fiscal policy decision in globalization, we protect the economy against various types of shocks. Moreover, we note that Article 5 of the Council Directive of the European Union (COUNCIL DIRECTIVE 2011/85/EU of 8 November 2011 on requirements for budgetary frameworks of the Member States) says that „Each Member State shall have in place numerical fiscal rules which are specific to it and which effectively promote compliance with its obligations deriving from the TFEU (ed. of the Treaty on the functioning of the European Union) in the area of budgetary policy over a multiannual horizon for the general government as a whole…" Whereas, the Article 7 of this Directive requires that „the annual budget legislation of the Member States shall reflect their country-specific numerical fiscal rules in force".

We have the different kind of fiscal rule: the golden rule of public finance, the expenditure rules, the revenue rules, the budget deficit rules and the public debt rules (see eg. Przybylska-Mazur (Przybylska-Mazur, 2017), Kendrick and Amman (Kendrick & Amman, 2011), Kliem and Kriwoluzky (Kliem & Kriwoluzky, 2014), Heinemann et al. (Heinemann et al., 2016) and Mitze and Matz (Mitze & Matz, 2015)

Making fiscal policy decisions in a globalization, it is important to take into account the golden rule of public finances, which postulates to finance only the investment expenditure, ie long-term expenditure, by government deficit, while current government spending should be covered in full by current budget revenue. On the basis of the golden rule, the government should strive to maintain a balanced budget over the whole business cycle. The concept of the golden rule requires knowledge of the business cycle and its profile so as it is possible to determine a forecast of the fiscal path for the whole business cycle. Taking into account this fiscal rule, we assume also the recurrence of business cycles of a similar intensity of economic recession. The spending limit should be the product of the amount of projected revenue and the economic ratio, ie the quotient of the GDP forecast for the whole economic cycle and the GDP forecast for the budgetary year. In addition, it is assumed that budget surpluses generated during expansion, can cover the government deficits that are the results of the recession. Therefore, over the whole business cycle, the budget should be balanced.

Currently, most often used fiscal policy rules are: budget deficit rules and expenditure rules. The application of expenditure rule is designed to prevent negative consequences of changes in government expenditure caused by fluctuations in GDP in the business cycle. When the government allows an existence of budget deficit, the government will be able to maintain the investment spending at an appropriate level, unlike in a restrictive balanced budget rule that leads to underinvestment of public infrastructure in the period of economic downturn. In the expansion phase, when a rapid economic growth is observed, the desire to maintain budgetary balance would entail additional expenditures or a reduction in taxes.

So-called new generation fiscal rules are based on a combination of expenditure and revenue rules. They have a significant impact on the economy. In globalization condition, when we consider the rules on the expenditure side and the rules on revenues side in whole business cycle, we can strive to achieve a balanced budget in whole business cycle. In globalization it is important the creation of new generation rules that are designed to cope with the asymmetric behavior of fiscal variables over the business cycle. Then we study the rules that take into account the stage of the business cycle.

3. The new generation of fiscal rule

In the so-called new generation fiscal rules that combine the government expenditure approach with the government revenue approach, the bias of deficit is changing in the different phases of the business cycle. At the beginning, in order to determine the bias, we present the model describing fiscal variables: governmemt revenues and government expenditures.

3.1 Method

We take into account the classic approach in which we assume that taxes are linear functions of GDP. Thus, the equation describing the government revenues $D_i(Y)$ in the i phase of the business cycle is following (Strawczynski, 2015):

$$D_i(Y) = t(Y)\cdot Y = (A_i + B_i \cdot Y)\cdot Y \tag{1}$$

where:

i	phase of business cycle, $i = E$ ($E-$expansion) or $i = R$ (R - recession),
Y	GDP,
$t(Y)$	tax function.

The problem of the cyclicality of taxes study Srebrnik and Strawczynski (Srebrnik & Strawczynski, 2016). In this model we assume that the tax is progressive. In addition, the long-term GDP is constant and it is equals $\overline{Y}$. Therefore the value of long-term tax functions is. $t(\overline{Y}) = A + B \cdot \overline{Y}$.

In the model used in this paper, government expenditures $W_i(Y)$ in the i phase of the business cycle describe the function of the form (Strawczynski, 2015):

$$W_i(Y) = g(Y) \cdot Y = (C_i + D_i \cdot Y) \cdot Y \tag{2}$$

where:

i	phase of the business cycle, $i = E$ ($E -$ espansion) or $i = R$ (R - recession),
Y	GDP,
$g(Y)$	a function that describes the government's propensity for spending.

Therefore in i phase of the cycle: marginal revenue is equal $\frac{\partial D(Y)}{\partial Y} = A_i + 2 \cdot B_i \cdot Y$ and marginal expenditure is equal to $\frac{\partial W(Y)}{\partial Y} = C_i + 2 \cdot D_i \cdot Y$, where B_i is marginal tax revenue coefficient and D_i is coefficient describing propensity to government spending.

According to the formal definition (Act of 27 August 2009 on Public Finances) the government budget balance is the difference between revenues and expenditures. Taking into account the fulfillment of the Maastricht criteria, the general government deficit to GDP ratio is very important. Thus, in the practical aspect, the general government balance to GDP ratio should be considered.

The general government balance $S(Y)$ to GDP ratio in i phase of the business cycle is equal to:

$$\frac{S_i(Y)}{Y} = \frac{W_i(Y)}{Y} - \frac{D_i(Y)}{Y} \tag{3}$$

The bias in i phase of business cycle is defined as the marginal general government balance in i phase of business cycle

$$\left.\frac{\partial S_i(Y)}{\partial Y}\right|_{Y=Y_t} = C_i - A_i + 2 \cdot Y_t \cdot (D_i - B_i) \tag{4}$$

and informs how the units will change the general government balance in i phase of business cycle if the GDP will change by 1 unit.

Since the so-called new generation of fiscal rules should combine the aspect of government revenue and expenditure, and should take into account the asymmetric behavior of revenue and expenditure in the various phases of the business cycle, it is important to know the magnitude of the bias in the various phases of the business cycle.

In article we treat the output gap i_{Y_t} as a business cycle variable. We define the output gap as the ratio between the potential GDP, and the current GDP:

$$i_{Y_t} = \frac{Y_t^P}{Y_t} \tag{5}$$

where:

Y_t the current GDP,

Y_t^P the potential GDP.

Strawczynski (Strawczynski, 2015) take into account the trend GDP as the potential GDP. In this paper we take into account the potential GDP Y_t^P calculated on the basis of the Holdrick Prescott filter

If $Y_t < Y_t^P$, that is $i_{Y_t} > 1$, then we have a recessive episode and we calculate the recession bias from the following formula:

$$\mathrm{Re}cession\,Bias = \left.\frac{\partial S_R(Y)}{\partial Y}\right|_{Y=Y_t} = C_R - A_R + 2\cdot Y_t\cdot(D_R - B_R) =$$

$$= 2(Y_t - Y_t^p)\cdot(D_R - B_R) + Y_t^p\cdot(D_R - B_R) \tag{6}$$

Thus the recession bias to PKB ratio is equals to:

$$RBtoGDP = (D_R - B_R)\cdot(2 - \frac{Y_t^p}{Y_t}) = (D_R - B_R)\cdot(2 - i_{Y_t}) \tag{7}$$

If $Y_t > Y_t^P$, that is $i_{Y_t} < 1$, then we have a boom period and we calculate the expansion bias from the following formula:

$$Expansion\,Bias = \frac{\partial S_E(Y)}{\partial Y_t} = C_E - A_E + 2\cdot Y_t\cdot(D_E - B_E) =$$

$$= 2(Y_t - Y_t^p)\cdot(D_E - B_E) + Y_t^p\cdot(D_E - B_E) \tag{8}$$

Thus the expansion bias to PKB ratio is equals to:

$$EBtoGDP = (D_E - B_E)\cdot(2 - \frac{Y_t^p}{Y_t}) = (D_E - B_E)\cdot(2 - i_{Y_t}) \tag{9}$$

Finally, we consider the last case where the real GDP is equal to the potential GDP. We assume also that the likelihood of recession and expansion is equal to 0.5.

If the value of GDP is equals to the value of potential GDP, the general government balance to GDP ratio over the whole business cycle is:

$$\frac{S(Y^P)}{Y^P} = \frac{W(Y^P)}{Y^P} - \frac{D(Y^P)}{Y^P} =$$

$$= 0{,}5\cdot[\sum_{t=1}^{N_E}(C_E - A_E) + \sum_{t=1}^{N_R}(C_R - A_R) + \sum_{t=1}^{N_E}(D_E - B_E)\cdot Y_t^P + \sum_{t=1}^{N_R}(D_R - B_R)\cdot Y_t^P] \tag{10}$$

where:

N_{E} number phase of expansion,

N_{R} number phase of recession.

Thus, the budget over the whole business cycle is balanced when

$$N_E \cdot (A_E - C_E) + N_R \cdot (A_R - C_R) = \sum_{t=1}^{N_E} (D_E - B_E) \cdot Y_t^P + \sum_{t=1}^{N_R} (D_R - B_R) \cdot Y_t^P \qquad (11)$$

4. Result for Poland

For the analyzes we use the general government revenues (annual data in mln zł), general government expenditures (annual data in mln zł) and GDP (annual data in mln zł). We take into account the data published by Central Statistical Office (www.stat.gov.pl) for Poland from the period 2003-2016 The potential GDP is determined on the basis of the Hodrick – Prescott filter.

In the table 1 we show the output gap that we treat as a business cycle variable. The table 1 contains also the conclusions on the business cycle phase.

Table 1: The output gap and the business cycle.

Year	The output gap	The business cycle phase
2003	0,893	Expansion
2004	1,020	Recession
2005	1,016	recession
2006	1,006	recession
2007	0,997	expansion
2008	0,997	expansion
2009	1,0004	recession
2010	1,004	recession
2011	0,996	expansion
2012	0,999	expansion
2013	1,002	recession
2014	1,021	recession
2015	1,035	recession
2016	0,872	expansion

Source: Own calculations

We obtain the following equations describing the government revenues in the recession and in expansion:

$$D_E(Y) = (0{,}23263343 - 0{,}00000003 \cdot Y) \cdot Y$$

$$D_R(Y) = (0{,}25851688 - 0{,}00000004 \cdot Y) \cdot Y$$

and also the following equation describing the government expenditures in the recession and in expansion:

$$W_E(Y) = (0{,}21792500 - 0{,}00000003 \cdot Y) \cdot Y$$

$$W_R(Y) = (0{,}26114976 + -0{,}00000004 \cdot Y) \cdot Y$$

In table 2 we present the recession bias or the expansion bias and the these biases to PKB ratios.

Table 2: The output gap and the business cycle.

Year	Th kind of bias	The level of bias	The bias to GDP ratio
2003	Expansion bias	-0,003	-0,000000003
2004	Recession bias	-0,011	-0,000000012
2005	Recession bias	-0,012	-0,000000012
2006	Recession bias	-0,013	-0,000000012
2007	Expansion bias	-0,004	-0,000000003
2008	Expansion bias	-0,004	-0,000000003
2009	Recession bias	-0,017	-0,000000012
2010	Recession bias	-0,018	-0,000000012
2011	Expansion bias	-0,005	-0,000000003
2012	Expansion bias	-0,005	-0,000000003
2013	Recession bias	-0,021	-0,000000012
2014	Recession bias	-0,021	-0,000000012
2015	Recession bias	-0,022	-0,000000012
2016	Expansion bias	-0,007	-0,000000004

Source: Own calculations

4.1 Discussion

GDP increase by 1 million PLN causes a decrease in the general government balance both in expansion phases and in recession phases. In addition, based on the used model in analysis, we see that during the recession phase, the decrease in the budget balance is greater than during the expansion phases.

Furthermore, on the assumption that GDP will be equal to the level of potential GDP, it was found that the budget was not balanced over the whole period considered.

5. Conclusion

In globalization it is important the realization of suitable fiscal policy. The aim of this policy is by lowering and then stabilizing structural fiscal deficits in the context of globalization. The aim of this policy is to achieve permanent fiscal sustainability by a reduction of structural government deficit and a stabilization of this deficit. In addition, in a global economy, low levels of debt to GDP ratio can be a key element of a competitive advantage of a country. In globalization the fiscal stability, as an integral part of macroeconomic stability, will strengthen the country's economy from various shocks and create conditions conducive to growth of potential GDP.

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TENDENCIES OF INTERNATIONAL MIGRATION IN EUROPE: IS IT POSSIBLE TO CONTROL MIGRATION AND ITS IMPACT ON PUBLIC SECURITY IN EUROPE IN AN ERA OF GLOBALISATION?

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Abstract. Recent processes of globalisation have determined the rise of immigration all over the world: migration flows, their trends and scope have changed. According to numerous statistic data, many European countries face the ever-growing extent of international migration, including irregular migration. The European Union has become one of the most important destinations for migration movements, resulting in a serious debate among Member States on migration control. Migration patterns differ widely among Member States. The changes of geopolitics and instability in the world, war in Syria and violations of human rights, other threats to human security determined the changes of migration. According to the data provided by FRONTEX (European Border and Coast Guard Agency), migratory situation has changed significantly since 2015. European countries recognized migration crisis as one of the most important issue and therefore European law-makers and policy-makers made many decisions regarding this question at the national and at the European level. It was realised that these spreading in-flows of immigrants have a strong impact on the social and political climate of host countries, which are often challenged by the growing number of immigrants and, thus, have to review their immigration politics to match them to contemporary processes of globalization. It is important to investigate the contemporary trends in international migration and to discuss current changes in the social situation and immigration politics in European countries. So far no researches were made, for example, evaluating the impact of newly announced possible threats of global migration to economics and industry of security (inventing new devices of search, biometric gadgets, and other examples).

Keywords: globalisation, international migration, legal regulation of migration, socio-economic impact, State border guards

JEL Classification: K33, K37, K42

1. Introduction

According the data of EUROSTAT, of the approximately 500 million people living in the EU, around 20 million are citizens of non-EU countries (EUROSTAT, 2016). Migration is a dynamic phenomenon involving different theoretical and practical approaches. Driven by a multitude of possible reasons, migrants may move temporarily or permanently, transnationally and nationally, individually or in groups, return to their countries of origin or migrate to another country, or move between two or more countries in a circular way (Bediova1a et al., 2016). According to the data provided by FRONTEX (European Border and Coast Guard Agency), migratory situation has changed significantly since 2015. European countries recognized migration crisis as one of the most important issue and therefore European law-makers and policy-makers made many decisions regarding this question at the national and at the European level. Migration processes have come to be widely perceived and governed as a matter of security.

The migration issue and its correlation with public and private security has currently been a live issue discussed at various dimensions and in different contexts and levels, politicians aim to define new policies towards immigrants and migration processes. As many authors indicate, current events are undoubtedly connected with globalization and it is closely associated with migration, which usually is analyzed in dimensions of economic and security impact on society (Bediova1a et al., 2016; Bobakova & Chylkova, 2016; Kurekova & Hejdukova, 2016; Hejdukova, 2015; De Roo et al., 2016; Betianu & Georgescu, 2009; Colombo, 2015). One of the key elements of globalization is migration which takes various forms: legal and illegal, voluntary and forced (Butkus et al., 2016). It should be noted, that considering migration as a security challenge frequently precisely irregular migration is kept in mind. Irregular migration causes lot of dilemmas for destination states, most states, however, failed to manage or control irregular migration effectively or efficiently. Therefore it is necessary to provide new approaches towards issues of this phenomenon that recognize both the concerns of states especially in the respect of public security and the need to integrate migrants into the society.

The aim of this paper is to determine the trends of migration in Europe in the context of globalization ant to reveal impact of irregular migration on public security, bearing in mind divergences between the interests and policies of different EU member states.

The paper contains results of the analysis of international, regional and national legal acts and the secondary analysis of statistical data of European Union agencies and international organizations. It should be stated the interdisciplinary character of this paper, which corresponds to a recent wide development of interdisciplinary research methods basically in the field of social sciences (law, economics, sociology, etc.), therefore it is aimed to carry out some "interdisciplinary synthesis" (Kirdina, 2015) through conclusions of this paper. In order to achieve the above-mentioned goals, the authors will use a variety of methods: from selection and analysis of primary and secondary sources to descriptive, comparative and synthesis methods. Such analysis requires multitudinous, broad and diverse base of empirical data, which could not be collected by authors. Accordingly, the authors will use the data and publications Eurostat, European Commission, FRONTEX (European Border and Coast Guard Agency), as well as scientific, operational and theoretical reports related to the issue of migration processes and their determinants.

2. Trends of international migration in Europe

The Treaty on the Functioning of the European Union (Article 21 paragraph 1) indicates that every citizen of the EU shall have the right to move and reside freely within the territory of the Member States, subject to the limitations and conditions laid down in the Treaties and by the measures adopted to give them effect. In other words, the right to free movement is one of the fundamental rights of the whole idea of united Europe. However we must not forget that this right originally was designated to citizens of EU member states. Nowadays the regimes for movement of people in the EU are increasingly regulated by the distinction between EU citizens and third country nationals (Konstantinova, 2013). It must be noted that migration inside EU of Member State citizens usually is determined by economic reasons, and the reasons of immigration of the persons of third countries are more complex, usually connected with personal safety and unbearable conditions of living in native countries. Migrating persons seek for the more advantageous conditions for their life and in particular social security that are mainly provided by the "old" Member States of the European Union (Bajzik, 2016). Persons from third countries are those who usually are considered as irregular migrants. Irregular migration includes people who enter a country without the proper authority (for example with fraudulent documents); people who remain in a country in contravention of their authority (for example by staying after the expiry of a visa or work permit); people moved by migrant smugglers or human trafficking, and those who deliberately abuse the asylum system (Koser, 2005). Therefore the control of external borders of European Union is one of the priorities of the common policy in EU. External borders refer to the borders between Member States and third countries. The borders between Schengen Associated Countries (Liechtenstein, Norway, Iceland and Switzerland) and third countries are considered as external borders as well. The borders between Schengen Associated Countries and Schengen Member States are considered as internal borders. Based on data of FRONTEX (FRONTEX, 2017) it could be stated, that the irregular migration pressure at the EU's external borders has been continuously easing after October 2015. The total number of illegal border-crossings during 2016 amounted to less than half of the number reported in 2015, but the level of irregular migration in 2016 remained significantly higher than before the crisis year of 2015 (Table 1).

Table 1. Main migratory routes into the EU (by land and sea)

Route	Countries	Illegal border crossings
Eastern Borders route	6000-kilometre-long land border between Belarus, Moldova, Ukraine, the Russian Federation and its EU eastern Member States (Estonia, Finland, Hungary, Latvia, Lithuania, Norway, Poland, Slovakia, Bulgaria and Romania)	1920 in 2015 1349 in 2016 2017 in 2017 (January - May)
Eastern Mediterranean route	Sea route	885 386 in 2015 1820534 in 2016 13 060 in 2017 (January – June)
Western Balkan route	EU borders - Yugoslav Republic of Macedonia, Serbia Croatia	764 000 in 2015 122 779 in 2016 555 1 in 2017 (January – June)
Central Mediterranean route	Sea route	153 946 in 2015 181 126 in 2016 85 063 in 2017 (January – June)
Western Mediterranean route	Morocco to Spain route	7 164 in 2015 10 231 in 2016 6 410 in 2017 (January – May)
Western African route	The route between Senegal, Mauritania and Morocco and the Spanish Canary Islands	874 in 2015 671 in 2016 113 in 2017 (January – June)

Source: FRONTEX, 2017

In 2015 there were 1.8 million irregular border crossings registered which in net migration terms corresponded to approximately 1 million people who reached the EU Member States or Schengen Associated Countries. It is obvious, that The EU has confronted the problem of illegal and extensive international migration.

In the academic literature it has become common-place to assume that migration is treated as a security issue in the EU, and that EU migration policy has become "securitized" (Niemann & Schmidthaussler, 2012). The overview of the migration trends to Europe clearly explains, that the idea of securitization is not only a political decisions, but also may rise "from the bottom", i.e. from societies of destination states. After a tremendous crisis of migration, that begun in 2011 at the borders of EU because of events in Northern Africa and Arabian spring, Schengen area's rules became suddenly very important due to the fact, that migrants have to be controlled on external borders of the Schengen area. Some states thus tended to control their borders, including those states having their borders inside of the Schengen area. In spite of the fact, they acted in accord with EU conventions, they have been criticized by EU politicians (Dokoupill & Preis, 2016). However, it is no longer possible to hide that the concept of migration as a threat has a very deep roots in the society. Linkage between security and migration could be observed not only in regulation adopted in national level of EU Member States, but also exploring information in mass media and different statistic data indicating the attitude of native citizens of EU Member States towards migration processes.

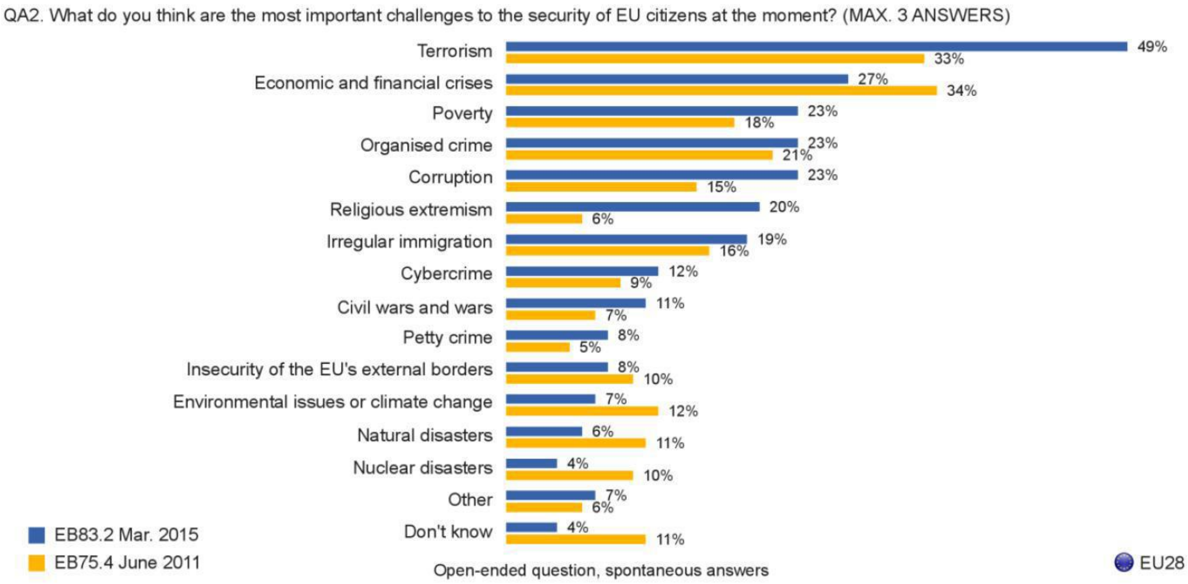
3. Impact of migration on public security in Europe

Migration and security: the words seem to run together. They possess a certain mutual affinity and cohabit rather naturally. Like law and order, or peace and stability, they seem to belong together (Walters, 2010). Migration is often described as a threat to social cohesion. The arrival of newcomers destabilizes receiving societies and jeopardizes the sense of belonging and common identity that lies at the core of community life (Pecoud & Guchteneire, 2006). Migration movements during past decades have drastically affected the socio-demographic characteristics states, they have influenced the skill structure of the labour force, the age structure of the population, and the geographical distribution of consumers (Aubry et al., 2016). In the public consciousness security threats arising from migration have often been conflated with several different issues at once: from crime, to terrorism, to drains on economic well-being and even cultural and ethnic dilution and tension (Richards, 2012).

The empirical data for the conclusions of this paper has been collected by the request of the European Commission, Directorate-General for Migration and Home Affairs and co-ordinated by the Directorate-General for Communication, it was implemented in April, 2015 (European Commission, 2015). This study first established how secure European citizens feel and the impact of various factors on this feeling. The Survey represents attitude of EU citizens towards security, and indicated the impact of immigration (especially of the irregular one) on the subjective understanding of security and its challenges. The Survey covered the population of the respective nationalities of the 28 European Union Member States, resident in each of the Member States and aged 15 years and over. In total 28 082 respondents were interviewed from 28 EU Member States. Approximately forty questions regarding different aspects of security were asked. Based on the data of the survey the figures are made and conclusions provided by the authors of the paper.

In general citizens of EU Member States think that EU is a secure place to live (79% of respondents agree with this statement). When respondents were asked about the most important challenges to the security of EU, the migration related issues are seen. Irregular migration and insecurity of external EU borders in fact are two sides of the same coin, and those circumstances were indicated as challenging public security by 27% of the respondents (Figure 1). Bearing in mind, that the major indicated challenge – terrorism – was chosen by 49% of the respondents, and subsequently taking into account the fact that terrorism almost always is presumed as being connected with illegal migration or unsuccessful integration of immigrants – the attitude towards migration issues is being more that negative.

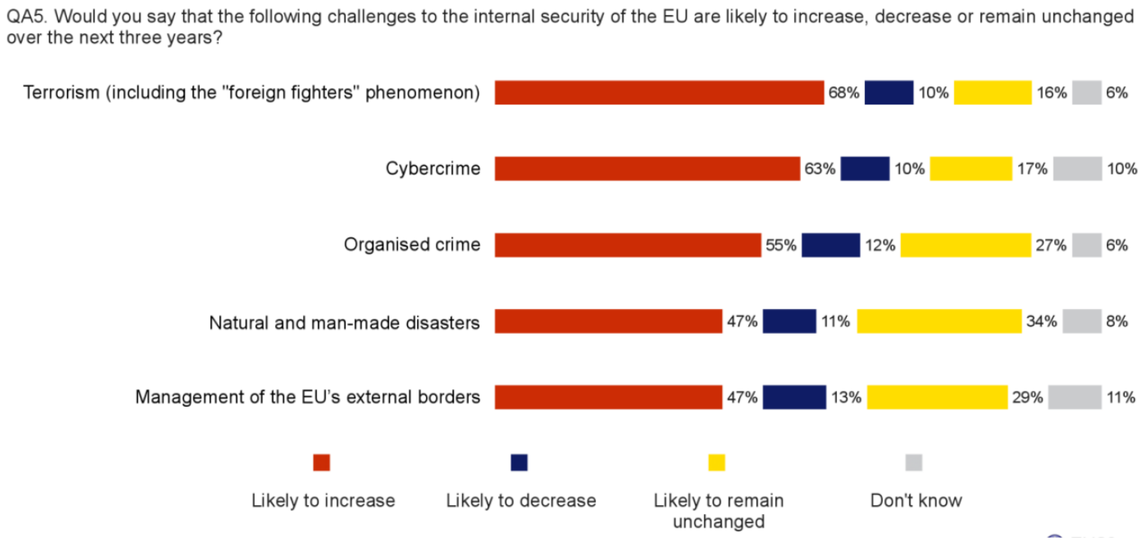
Figure 1: Challenges to the security of the EU



Source: European Commission, Directorate-General for Migration and Home Affairs

Also it is obvious, that the proportion of Europeans who see terrorism and religious extremism as the main challenges to EU security has increased considerably since 2011. Over two-thirds of respondents think that the threat of terrorism, linked with the threat to external borders of EU, is likely to increase over the next three years (Figure 2).

Figure 2: Possible future changes in security challenges



Source: European Commission, Directorate-General for Migration and Home Affairs

Absolute majority of respondents thought that the police and the judicial system (correspondingly 68% and 61%) are seen as being chiefly responsible for ensuring the security of citizens. For national authorities this means, that migration and state border control policies will need to be re-evaluated and re-considered with a great intense. Therefore it is obvious, that the trend to consider migration, in security terms, as a “threat”, may require to write this idiom without quotation marks.

4. Conclusion

The analysis of trends of migration flows to Europe during pas decades and attitude of citizens of EU Member States towards migration processes indicate, that an objective debate is needed in respect of dichotomy of migration concept – is it a right and a positive phenomenon, or is it a threat to security of a state and of an individual member of that state. It is no longer possible to stay politically correct and not to admit, that there may be rise even bigger problems than today, associated with irregular migration. Flows of immigrants have a strong impact on the social and political climate of host countries, which are often challenged by the growing number of immigrants and, thus, have to review their immigration politics to match them to contemporary processes of globalization. The migration issue and its correlation with public and private security has currently been a live issue discussed at various dimensions and in different contexts and levels, politicians aim to define new policies towards immigrants and migration processes.

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MARKETING PRACTICES OF RETAIL CHAINS FOCUSED ON CHANGES IN EATING HABITS OF POLISH CONSUMERS

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Abstract. In recent years we have seen an increase in the importance of marketing activities of retail chains based on a promotion and popularization the eating habits of consumers in Poland. This results in significant changes in the behavior of retail chains, which are beginning to treat it as a new strategic challenge The goal of the paper is to analyse marketing practices of selected retail chains that contribute to changes in eating habits of Polish consumers. An assumption is made that retail chains are increasingly more active in the sphere of promoting and featuring products of pro-health qualities and properties in their offer. The main results of the analysis have made it possible to: a) identify commercial chain activities promoting healthy eating; b) presentation of selected examples (good practices) in the retail trade, conducive to change in the dietary habits of Polish consumers. The subject of research are the marketing activities retail chains to change eating habits of Polish consumers. Selected retail chains operating in the market of Fast Moving Consumer Goods are research entities. In spatial dimension, the paper refers to Polish conditions. The following research methods are applied for the purpose of implementation of assumed goals: critical analysis of the literature of the subject and the case study is used based on the example of selected retail chains operating in Poland. The author present the results of research and observation conducted on the market retail chains in Poland in the years 2015-2017.

Keywords: retail chains, eating habits, consumer

JEL Classification: L81, P36, E21

1. Introduction

Considerable changes have been observed for some time in marketing activities of retail chains functioning in Poland. They largely result from newly emerging market needs and the environment. They are manifested by more and more demanding customers who are increasingly more aware of their rights. On the one hand, their buying behaviours show favouring such values as comfort, speed and ease of purchase, as well as „smart shopping" reflected in search for lower price of better quantity or quality and price ratio (Reformat, 2015; Atkins & Sae-Young Hyun, 2016)but on the other hand, more and more consumers show interest in health aspects of purchased products (e.g. in the context of sugar or salt content or their natural origin). This situation results in the fact that consumers' awareness in the sphere of significant relationships between the diet and their health condition is growing (Lee & Shin, 2010).

Recognising the aforementioned activities as extremely important for the health of Polish consumers, but also as quite an innovative trend of development of retail chains in Poland, the author of the paper make an attempt to analyse selected marketing practices of retail chains in the sphere of promotion of healthy food products.

2. Marketing practices of retail chains in the sphere of promotion of healthy food products

In recent years, we have seen an increase in the importance of a knowledge-based economy and sustainable development in the retail trade (Rabontu et al., 2016). This results in significant changes in the behavior of retail chains, where the responsibility for consumers' health and eating habits, and maximizing their satisfaction, is now becoming an important area of competition. In order to meet these requirements, they must undertake specific marketing practices, such as promoting healthy food.

Consumers' awareness of proper nutrition and the development of proper nutritional habits are increasing. It also changes the creation of market value, which in the new economic conditions depends to a large extent on the knowledge of retail chains, which should be skillfully used. These facts cause in Poland changes in the behavior of the retail chain in terms of actions promoting good dietary practices, as well as the way they think about them (Reformat & Bilinska-Reformat, 2016). Being one of the important areas of competition, they become the tool of change, the generation of new value and profit.

2.1 Responsible offer shaping, i.e. BIO and ECO certified products

It can be noticed in previous observations of retail chains operating in Poland that they increasingly more intensely undertake marketing practices contributing to changes in eating habits of Polish consumers (Domanski & Bryła, 2010; Gorska-Warsewicz & Krajewski, 2013; Bryła, 2015).

Building awareness and trust in certified products among customers is one of the trends of such activities. Consequently, this should result in changes in buying behaviours (Grunert et al., 2014). Focussing on this aspect of activities has been one of the key expressions of development of products certified with BIO and ECO symbol (Figure 1).

Figure 1. BIO and ECO symbol

Source: (https://www.dreamstime.com/royalty-free-stock-photo-bio-eco-symbols-set-natural-symbol)

BIO symbol and ECO symbol in the case of all retail chains means that:

a) the product was manufactured in eco-friendly way that respects natural biological cycles and minimises the impact of people on the environment;
b) crop rotation is applied in cultivation, thanks to which the soil elements are effectively used;
c) application of genetic modification (GMO) is not allowed;
d) animals are reared in the free-range and fed on organic feed (compliant with EU regulation (EU) no 834/2007 clause 23).

It must be added that according to EU law, the term Bio means the same as Eco, and the difference was adopted from different languages, mainly German and English. Therefore, their meaning is the same. In all EU languages, these terms can therefore be used only in labelling and advertising with reference to certified products. It follows from the above that products with BIO and ECO symbol are environmentally friendly, do not contain preservatives or substances enhancing flavour, artificial flavouring or colouring substances, and they are not chemically processed (Bostan, 2016). Due to these essential reasons, they have very beneficial impact on health of their potential consumers which is emphasised in advertisements of commercial chains presented on their websites.

It is estimated that 3.7 thousand stores belonging to large chains currently offer BIO and ECO assortment (Fajerski, 2016). Auchan retail chain is one of them. Its BIO and ECO products are promoted in all stores belonging to the chain and in each of its catalogues. Products are displayed on special EKO/BIO shelves that are marked with green leaf, the so-called euromark, or euroleaf that is typical of certified BIO and ECO products and is shown in Figure 1.

Euroleaf is a relatively new ecological mark that was introduced on 1st July 2010 and it is gradually replacing the old logo of European ecological agriculture applied since the end of 1990 year. The new European Union symbol of ecological agriculture shows stars arranged in the shape of a leaf on the green background which constitutes the reference to its main message of nature and Europe. This symbol placed on a product or its packaging means that the producer, processor or importer obtained ecological certificate confirming compliance with all European Union requirements concerning ecological food.

Food products with EU ORGANIC BIO LOGO certificate can, in turn, be found in the offer of Lidl retail chain. They are for example bananas, apples, carrots and dairy products sold under private label of *Biotrend, Rainforest Alliance* (all pineapples available in the chain stores), or chocolate with almonds of *Bellarom* brand. On the other hand, the offer of BIO products include fruit and vegetables, for example BIO-potatoes, BIO-apples, BIO-carrots, BIO-kiwi fruit and BIO-lemons. Moreover, lactose-free and gluten-free products can be found there.

Adoption of long-term obligation concerning reduction in salt and sugar content in private label products by 20% until 2025 is an essential challenge undertaken by Lidl chain in connection with the endeavours to change eating habits of Polish consumers. This reduction should be perceived as limiting weighted mean content of added sugar and salt by 20% in the whole purchased private label assortment of Lidl chain (Lidl, 2017). In a long time perspective, these activities should limit the incidence of diabetes in Poland that is mainly caused by high consumption of sugar and lack of physical exercise.

According to World Health Organisation (WHO) an adult person should obtain less than 10% of the energy coming from easily accessible sugar (monosaccharides such as glucose and fructose, disaccharides such as sucrose and also products that naturally contain sugar, including honey, syrups, juices or concentrates), which at daily consumption of 2000 calories corresponds to 50 grams of sugar daily (World Health Organization, 2015).

On the other hand, salt consumption may lead to development of the so-called civilisation diseases, including hypertension (the amount of daily consumption of salt for an adult person recommended by WHO is less than 5 grams, which is less than non-full teaspoon).

Noticing serious threats associated with unhealthy eating habits caused by excessive consumption of sugar and salt, the aforementioned chain started appropriate education in the sphere of healthy eating. It was first decided that salt and sugar content in private label products that are most eagerly consumed by children and young people would be gradually reduced.

In further stages of activity, reduction of salt and sugar in various assortment groups, while also focussing on other consumer segments is expected (Prandota & Rejman, 2014).

Their food education shall mainly consist in reading product labels, comparing them and choosing those that contain smaller amount of substances that are harmful to their health.

2.2 Actions and programs of trade chains oriented at promotion of healthy eating habits

At the beginning, it must be emphasised that trade chains implement the largest number of actions promoting healthy eating habits in Poland. There are many examples of them, however such chains as *Organic Health Farm*, *Carrefour*, *Tesco* or *Netto* are worth mentioning. They organise at least once a month specific events aiming at promotion of healthy diets. Selected examples of such activities are presented in Table 1.

Table 1: Examples of promotional actions of selected trade chains oriented on promotion of healthy eating habits

Name of retail chain	**Type of promotional action**	**Major assumptions of the action**
Organic Health Farm	A cookbook entitled „ Cook with Organic” 2) “vegetable + fruit”	1) 40 recipes for ecological meals 2) weekly promotions of ecological fruit and vegetables;
Tesco	“ Full in healthy way” (within the program) „Tesco for schools”	- regular actions paying attention to the principles of healthy eating of children and students;
Ladybug (Biedronka)	1) “Read the labels” 2) „Green land”	1) teaching consumer how to interpret properly the information presented on labels of grocery products and thus making reasonable eating decisions; 2) a series of culinary and educational workshops for children at school age that include interactive talks concerning the principles of healthy eating, common preparation of meals from fresh fruit and vegetables, presentation of dietician and cook professions, as well as educational games and plays. Children learn to prepare a daily menu on their own, to compose nutritious meals appropriately and to prepare healthy alternatives for traditional sweets;
Lidl	1) “Bio week – naturally in Lidl” 2) “Lidl market”	1) presentation and promotion of a broad offer of organic products, gluten-free products, lactose-free products and the so-called superfoods (natural and unprocessed food); 2) daily promotions and interesting display of fresh fruit and vegetables thanks to which their consumption is successively growing;

Netto	„White Saturday”	- enables the chain customers to check the level of sugar in blood, get advice from professional dietician and taste the products of reduced sugar content; -action participants also receive leaflets and other educational materials on the subject of a balanced diet.

Source: own case study based on the vivisection of Internet websites of descry-bed trade chains)

Apart from promotional actions contributing to the development of proper eating habits among Polish consumers, retail chains implement innovative programs aiming at promotion of healthy lifestyle and social education in the sphere of healthy diet. Their selected examples are presented in Table 2.

Table 2: Examples of programs of selected retail chains aiming at social eating education and promotion of healthy lifestyle

Name of retail chain and the program of its implementation	**Major program targets**	**Method of implementation of adopted program of actions**
Carrefour: 1 ABC of healthy eating 2 From love to Health	- nutritional education of children and elderly people; - raising consumers' awareness about healthy diet; - modification of eating habits;	- organisation of 240 workshops, conducted by 70 experts from 6 scientific centres; -preparation of around 30 brochures reaching the underprivileged people from the environment of poor social and economic situation; - starting a special Internet website: www.abczywienia.pl, where interesting educational materials can be found;
	promotion of healthy lifestyle among customers and employees of the chain;	- sponsoring sport events; - healthy diet education;
“Ladybug” “Five handfuls of health”	- regular eating of fruit and vegetables; - healthy, balanced diet;	- one handful of health represents one portion of vegetables and fruit a day; - 5 handfuls encourage to consume healthy products five times a day;
Tesco “Healthy appetite”	- change in eating habits;	- a program facilitating individual eating plans and healthy recipes as well as changes in eating habits,
Auchan “Healthy with Auchan”	- promotion of balanced diet; - change in eating habits, particularly of children;	- program preventing overweight, obesity and chronic diseases resulting from them;
Netto „ Healthy Shelf”	- focussing consumers' attention on products ensuring healthy eating;	- program facilitates finding a regular place in the chain stores where for example gluten-free products, sugar-free products, products for people with allergies and many other products that can be approached as alternatives for meat can be found;

Source: (own case study based on the vivisection of Internet websites of described trade chains)

In turn the Carrefour Poland retail chain responding to growing consumer interest in healthy eating, the expands and promotes an assortment of high-quality natural health products. Promoting healthy food among consumers, the chain has developed since January 2015. Concept of freshly squeezed juices. Only within 5 months the number of stores offering customers self-squeezed orange juice increased by 100%.Summing up it must be assumed that marketing actions that raise awareness of potential consumers about how important healthy eating and following a healthy lifestyle is, have a crucial importance in marketing activities of commercial chains. On the one hand, they contribute to increasing buying awareness of Polish consumers, and on the other hand to changing their previous buying habits and preferences.

In a dynamic perspective, the implementation of targeted information campaigns can play a decisive role in the development of healthy products (Annunziata & Paola, 2009). These campaigns should focus their attention on disinterested consumers, that do not have yet a strong involvement with organic and functional foods,and could, in the absence of incentives for consumption of such products, turn to other types of products that respond to their health needs.

Mode for a healthy lifestyle, and consequently for healthy eating in Poland, develops very quickly. A study by Nielsen shows that the trend of healthy eating in the coming years will be strengthened. For 65% of Poles health is of paramount importance and therefore more and more attention is paid to the products they buy (Report, 2015).

3. Conclusion

Concluding up must be stated that the subject matter undertaken in the research is only and introduction to a more extensive discussion over marketing practices of commercial chain focussing on changes in eating habits of Polish consumers. As a result of implementation of described actions promoting healthy eating habits, commercial chains establish positive relationships with customers while strengthening at the same time their competitive position on market.

While affecting consumers in a very positive way they make them reach for healthy products more willingly. On the other hand, thanks to investments in education of children and young people, retail chains contribute to expected development of the generation of consumers who are „smarter" and more aware of what is good for them.

Increasing interest in healthy foodstuffs, as well as building a competitive retail chains, based not only on relatively low labor costs and cost reductions, but on responsible actions that contribute to changing eating habits and creating conditions for long-term competitive advantage. As a significant positive effect of these chains.

At the same time it should be emphasized that in order for the healthy products offered by retail chains to become a source of competitive advantage, their actions should be conscious, systematic and consistent with such factors as needs, preferences, size and type of demand, level of knowledge and awareness Client offering as well as the concept of responsible trade. In the implementation of the above objectives helps the concept of Knowledge Based Marketing (Kohlbacher, 2009), where the idea of focusing on the one hand, to the sharing of knowledge and its use, and on the other hand, for the exploration of marketing knowledge (creating) through relationships and interactions with consumers in other to gain completive advantage.

However, given the limited scope of the paper, the above issues were only signaled and discussed against the background of the author's presentations of exploratory analyzes, which form the basis for further substantive discussions.

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GLOBALIZATION-NATUR CAPITAL-PRODUCTION-CONSUMPTION-WASTAGE

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Abstract. In today's globalized technology-oriented society, there is a close link to natural capital. Natural capital is what nature provides to us for free (Helm, 2015). Natural capital, specifically natural resources and ecosystems, are essential for creation in all economic activities. The quoted author in the Natural Capital book a set of procedures for establishing a balanced, economically sustainable and viable natural capital policy. Natural resources form the basis for production. They further enable us to meet our needs. Do we appreciate that? Are we protecting natural resources? The current global trend of continuous economic growth leads to overproduction and leads to ever higher consumption (Regnerova, et al., 2016). The current consumer society treats the natural resources as if they were infinite, eternal. Such a society often produces regardless of demand and consumption. What is not consumed goes to waste. Waste is a wasting in general terms. Valuation of natural capital (natural resources and ecosystems) becomes economically global importance in defining a new stable framework for sustainable growth. Respect for the environment and natural capital should be part of every economic planning at all domestic and international levels Finding new approaches towards sustainable development[1] is the subject of theoretical research, which is linked to practical situations in the present article.

Keywords: globalization, natural resources (capital), production, consumption, wastage-waste

JEL Classification: Q5, Q01**,** O44, D12

1. Introduction

Today, for the first time, humanity's global civilization—the worldwide, increasingly interconnected, highly technological society in which we all are to one degree or another, embedded—is threatened with collapse by an array of environmental problems (Ehrlich & Ehrlich, 2013). Food availability for all becomes one of the great challenges of human society now and in the future. In contrast, we meet with overproduction and waste (not just food) in economically advanced countries.

Therefore, it is important to consider (examine and predict) climate change in terms of its impact on food availability, as stated by Lobell, et al. (2011): "Efforts to anticipate how climate

[1] **Sustainable development** as a continuous process representing the balance of economic, social (including ethics) and environmental aspects of life prosperous society that will gently use its resources (own and imported). Sustainability is not a target state, but it is permanent process in which it is necessary to deal with the most pressing and actual.

change will affect future food availability can benefit from understanding the impacts of changes to date. The environment and sustainable development is also an important issue ever increasing population in the world and thus the number of consumers of food. The concept of sustainability across the dimensions of the food system has not been inadequately explored so far (Reilly & Willenbockel, 2010).

2. Methods

The data obtained from external and internal sources determine the goal of the article: importance and irreversibility of natural capital (Natural Capital and ecosystem services, 2016), natural resources and the availability of food and non-food needs for people in a globalized world in relation to wastage and waste.

The following were used in the methodological procedure for solutions and to achieve the objective:

a) Definition of the basic concept (category) natural capital, the content of which is necessary for explanation and clarification of the relation "production-consumption-wastage-waste".
b) Secondary data obtained from internal and external sources regarding the relationship growing household consumption and food wastege.
c) Primary data obtained from the study of food wastege in the Czech Republic, including general comparisons.
d) Primary and secondary data were analyzed and compared. The information obtained was processed, evaluated and used in the present article. The method of induction-deduction (Hendl, 2012) was used to search for answers, whether of regularity studied phenomena (such as overproduction in manufacturing and food wastege in households) can derive the general rule applies to the phenomena in another place and at another time (exploring sustainability across dimensions food system).

3. Results and Discussion

Very questionable view that environmental protection is an obstacle for economic progress, exists between a number of businessmen, economists and politicians. The link between the environment, economic progress and growth is often overlooked and natural resources are taken for granted.

3.1 Natur capital

Natural capital includes all the goods and services nature provides to man. The following are part of natural capital:

- natural resources - raw materials that are taken from nature for production such as water, minerals or wood
- and ecosystems - a functional system of living and inanimate environmental components that are interconnected by substance exchange, energy flow, and information transfer, interacting and evolving in a certain space and time. (Act No. 114/1992 Coll., On Nature and Landscape Protection, as amended).

Natural capital, defined by law, is an important concept in its content. It has its roots in the real world. The human-consumer himself is part of this world. Everything that he needs for his existence, he draws directly or indirectly from nature: water, raw materials, energy to satisfy his basic, luxury and development needs. He could not exist without them.

3.2 Sustainability inspired by ideas of ecological economics

Sources that allow us to meet our needs (natural capital) are not inexhaustible. The current global trend of constant economic growth leads to overproduction and thus to a steadily higher consumption. Consumer Society (Hes, 2014) allows people to still greater satisfaction of needs. Although new (modern) and practice-induced technologies reduce the demand for some natural resources (raw materials), the world's population is growing and hence other demands on energy needs, etc. Many scientists, economists and politicians have paid considerable attention in recent years to climate change and renewable energy (Whalen et al., 2017), natural resources and their flux,(circular), including economics wastage-waste.

This issue has its roots already in the second half of the last century. At that time the problem was strongly reflected in the development of the economy at the expense of enormous pumping of natural resources. In the 1980s, the "Rome Club" persuaded the UN to make a decision to cut growth. It failed. Yet, reports of problems have prompted scientists, professionals and technicians to find more efficient technologies - to make more use of fuels, raw materials and "waste" not only in the production and recycling of used materials. The world became aware of the critical state of nature and its importance for the sustainability and existence of life.

Then, in the 1990s, a document entitled "Sustainable Development" was adopted at the Rio de Janeiro World Summit. Yet, for more than ten years, China has hesitated to sign, only when it joined the WTO. The US president declined to "sign" something that Americans would have driven into the problem of unemployment (Jirásek, 2006). Even now the US position on greenhouse gas reduction is unclear (the United States is abstaining from the Paris Climate Agreement, 2017).

3.3 Sustainability, economic growth and waste

Sustainable development in the process of globalization of the world (Ignatius, 2017) is very closely related to the extraction of raw materials, production, distribution, sale, purchase and consumption. Responsible approach of each entity from raw material extraction, primary producer through processors, distributors, retailers to final consumers in the logistics chain Mining - Production - Consumption becomes an important determinant of sustainable development. The current global trend of continuous economic growth leads to overproduction and a permanent higher consumption. Consumer society allows people to still greater satisfaction of needs. This also leads to greater exploitation of natural resources which are not unlimited. How to connect the ever increasing demands of people with sustainable development (Da Silva et al, 2017)?

In the article "To operate sustainably or not to operate sustainability - That's the long-term question" Philip Lawn describes an alternative to the macroeconomic model in which it focuses on examining the sustainability of economic output. The society is confronted with the choice between sustainable and unsustainable way. Unsustainable path offers a higher level of consumption, but only in the short or medium term. The society can decide. It depends on how much the present generation values future consumption on the basis of its own current utility, or on the basis of an ethical approach that binds contemporary society to sustainable consumption (Lawn, 2004 A).

Can natural capital (natural resources and ecosystems) to replace the human-made capital? Is natural capital perfectly replaceable with human inputs (modern technologies)? The idea arises whether a kind of economic perpetual mobile can be created. Both types of capital need to be viewed and perceived as complementary, ie mutually complementary, not substitutable (Lawn, 2004 B).

Continuous economic growth and also overproduction are an asset to rising human demands, which is reflected in an increase in the standard of living. Negative impacts are often overlooked, but they act in the long run. The challenge of sustained economic growth in the context of sustainable development is highlighted by a number of scientific studies, as reported by Foukis et al. (2017) and Urbaniec et al (2017). Overproduction manifests itself directly and visibly through the growth of over-consumption of food, alcohol and cigarettes, resulting in a deterioration of health, and others. This indirectly and dangerously leads, for example, to a rise in people's indebtedness. What is not consumed is waste and goes to waste (Gustavsson et al., 2011). Waste disposal is a major problem of the devastation of nature and the great danger to natural resources and thus also to the human being itself.

According to the European Commission:

42% of European food waste accounts for households

39% per manufacturer,

5% to the seller and

14% for the hospitality sector.

The European Commission estimates that only 90 million tonnes of food is spent annually in the EU, with a large proportion of these foods still fit for human consumption. According to UN data, the Czech Republic "produces" 729,000 tonnes of food waste per year. This number per capita represents that every citizen of the Czech Republic produces nearly 70 kg of food waste per year (Food Waste, 2014). Sustainable development is the balance of the economic, social and environmental (environmental) aspects of a prosperous society that will use its resources gently. And the reduction of food waste (food waste) in households (42%), production (39%), hospitality industry (14%) and grocery stores (5%) is an important phenomenon of this sustainability.

3.4 Consumption and changes in consumer behavior

The ever-increasing share of climate gases and their serious environmental impacts are directly and indirectly related to private consumption (European Environment Agency-EEA, 2010). In terms of contributing to addressing climate and other environmental challenges, it is necessary to focus more deeply on the behavior and responsibility of consumer households (Thøgersen, 2005 A). In industrialized countries, consumers largely accept part of the responsibility for solving these problems, as stated in European Commission, 2011. However, in terms of changing behavior in ways that reduce their "ecological footprint"[1], consumers everywhere respond much goes by. The basic aim of the research consumer behavior on the

[1] **Ecological footprint** is most often cited as a global indicator of the impact of man on the environment

environment is understanding how it can be achieved by changes in behavior (Steg & Vlek 2009).

Changing consumer behavior is needed at many levels (Stern, 2000):

- Some behavioral changes are the result of a one-time decision with long-term consequences (eg, investment decisions of different types).
- Other behavioral changes are frequent and repeated many times, such as daily purchases of consumer goods, daily use of equipment (eg automobiles, home appliances, etc.), waste disposal etc.
- Other behavioral changes are repeated, but they are less frequent (device maintenance, device setup, etc.).

Many tools are used by governments and other stakeholders to achieve environmental changes that are considered desirable or necessary from the environmental point of view (Thøgersen, 2005 B). Economic measures (taxes, subsidies, fee structures) and regulation are in many areas the most commonly used and usually the most effective instruments. Such structural measures are often met with public and political resistance that can prevent their making and implementation, and they are often inadequate.

4. Conclusion

Economic growth brings advantages for mankind, but it also has its disadvantages manifesting waste and thus negative impacts on the status of sustainable development. The risk of excessive, reckless and irresponsible food purchases resulting in Food Wastage can be characterized as a set of factors that under the given conditions are against the intent of sustainability. These factors modify or restrict the balance of individual aspects of sustainable development. Knowledge of risk analysis relationships (asset, threat, vulnerability, countermeasures) allows prevention or reduction (wastage reduction) of its impact on the observed phenomenon (sustainable development), as stated by Smejkal and Rais (2013).

Current patterns of consumption in a globalized world are recognized as unsustainable. Efforts to address urgent environmental and social issues through consumption patterns support the growth of environmental behavior among consumers. Many of these patterns of consumption are still institutional or legislative. The wider question of the visible effect of changes in consumer behavior in terms of consumption, which is specifically related to sustainable measures, the current areas for research projects and their solutions (McNeill, 2017).

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HUNGARIAN MILLENNIALS' ONLINE BEHAVIOR DURING LOOKING FOR A JOB

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Abstract. With globalization, the possibility of free employment has a huge impact on members of the Y generation in the European Union. Millennials have a reputation for job-hopping all over the world. Unattached to organizations and institutions, people from this generation -- born between 1980 and 1996 -- are said to move freely from company to company, more so than any other generation. According to a recent Gallup report, the Millennium generation has changed jobs three times more than non-millennium generations. Nowadays we can find work anywhere in Europe or even across the globe in different international companies through the Internet. How do they look for the job on the online platforms? In 2012 92% of Gen Y were conducting job search online. 13% of members of Gen Y had their own professional website and half of them take the time to check their online reputation and clean it up. It is a question of course if they actually use these devices properly. The current research aims to explore what trends can be observed in the international labour market, how the members of Hungarian Generation Y use the Internet to look for a job, whether they are conscious users of individual online platforms and which platforms they prefer and whether they try to think with the employer's head.

Keywords: millennial, generation, job searching, being online, conscious user,

JEL Classification: J11, M51, O15

1. Introduction

Generation Y- they are twenty - and thirty-some years old now. Their classification according to their birth dates is disputed by the experts. Some researchers say (Singleton et al., 2007) that those born after 1976 can be put in this group, but the latest research agrees that the young generation born after 1982 can be regarded as Generation Y (Howe & Strauss, 1991, Pais, 2013). There are also different opinions about how long we can talk about Generation Y, although in this case the debate is only between 1995 and 1997. Perhaps it is not the date of birth, which basically determines the possibility of separating generations. The references give plenty of features about this generation, on the basis of which their members form a clearly identifiable group. Their everyday relation to technology and digital world; the natural use of computer and internet are probably the most typical features of them. It is equally important, however, that money, career and success have utmost importance for them because they learnt that only these can take them forward in a consumer society. They are not obedient employees (VanMeter et al., 2013), but often rather autonomous personalities, for whom the workplace is not a lifelong connection; it can be changed at any time. They are not going to stay in a workplace, where the pressure and the expectation of loyalty is too strong. Individual freedom, family, friends, self-expression and the „Carpe Diem" are much more important for them.

(Boyd, 2010). They can easily change not only their employer, but any scene of their life (Ng & Parry 2016). It is also enhanced by the lack of existential ties to their home country and the migration processes all over the world. The possibilities for contracted work also creates a supporting environment for them.

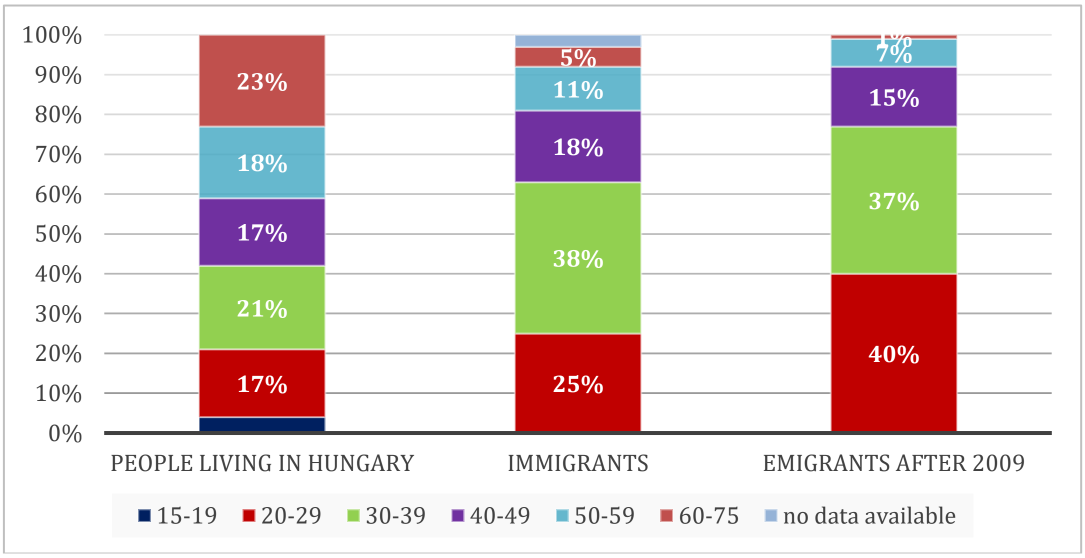
1.1 Working habits of millenials

In Hungary, the number of active employees belonging to this age group was almost 1,3 million during the census in 2011. More than 200,000 young Generation Y people studied full-time and the same number struggled with unemployment. It means that one-third of the total active workforce – amounting to approximately 3,7 million in that year – belonged to this age group. Therefore it is obvious that the employers had to realise very quicly that these employees had different expectations regarding their workplaces and they are searching jobs differently. Hungary is in a specific economic situation, which means that unemployment is a serious issue but at the same time there are a lot of vacancies advertised for potential employees. There is an increasing competition on the labour market for highly qualified experts, thus it has become important to examine this huge group of active workforce. There was a survey performed by Gallup in 2016 in the United States, where 23% of the total population belongs to Generation Y (Stewart et al. 2017), and it definitely proved that the members of Generation Y do not like long working hours (they prefer to work 30 hours per week); they are less attached emotionally to their workplaces than members of Generation X; besides finding a good job it is equally important for them to find high-level well-being and they long for active community and social life (Twenge, 2010). There are bigger differentces regarding their European counterparts due probably to the historical past and the diversity of economic situations. According to the European research (Deal & Levenson, 2016, Schäffer, 2015), the members of the European millenials do not respect management authority; it does not come from the position for them but from social and economic utility. Thus the management of the companies have a hard time with them. The members of this generation move extremely easily in the world of information technology; they are available online almost all day but they do not like if constant online presence is expected from them. The main scenes of their social life are the different social networking platforms. Unemployment hits harder the less qualified layers of this age group thus they regard further education and higher education studies important. Their ratio compared to Generation X, however, is lower in Europe than in the United States, thus there is a serious competition on the labour market to get well-qualified Generation Y employees. Examining the Hungarian historical contexts in terms of sociology and politics, Valuch et al say that the members of Generation Y were born after 1982 and they were strongly affected by the explosive development of information technology, globalization and drastic transformation of educational system (Robert & Valuch 2013)

1.2 Working abroad

The migration processes have apparently been expanding in the recent years all over the world and this has led to the development of a very specific way of living. (Porter, 2008) The volume of the problem is well-demonstrated by the fact that 1,3 million employees in the European Union moved from their home countries to other European Union member states in 2014. According to Eurostat figures, 18,5 million European people lived in EU-28 on 1st January 2015 who were born somewhere in the European Union but later moved to another EU member country. Hungary should also face this issue because the lack of workforce due to emigration leads to serious economic difficulties. According to a research carried out in the frames of SEEMIG project the number of people leaving Hungary increased sixfold and the pace of growth will not slow down in the coming years, either. It should also be mentioned that the age composition of emigrating Hungarian population has also changed and increasingly narrowed down to younger – less then 40 years old – people. (Blaskó & Gödri, 2014).

Figure 1: Breakdown of emigrants according to age groups compared to the Hungarian population



Source: Blaskó & Gödri, 2014

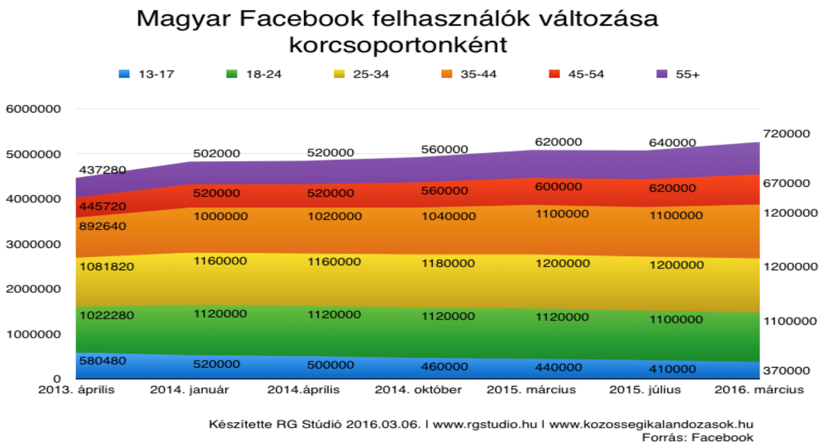
It is quite obvious from Figure 1 that almost 80% of people emigrating after 2009 are in their active working age, under 40 and half of them are under 30. Bediova et al confirmed in their examinations that the different generations relate to leaving their homeland or accommodating immigrants differently. They regard it as a basic principle that different cultures cannot prevent them from developing a unified European culture and attitude (Bediova et al., 2016). Regarding school qualifications, the SEEMIG research has proved that the number of graduates among emigrants is disproportionately higher and this also adds to the problem. While approximately 18% of the adult population have higher education qualifications, this ratio is 32% among emigrants. 84% of the respondents indicated job-related issues as reason for emigration. Thus the Hungarian labour market should cope not only with the declining number of workforce but also with the jobs, benefits and salaries offered by companies in other member countries of the European Union. Regarding the emigration data of 2010, Hungary is somewhere in the middle together with Slovakia; Slovenia and Italy is before Hungary, while Romania, Bulgaria and Serbia are behind it. Therefore it is also obvious that the issue is not local but rather global, induced by globalization impacts.

1.3 Online presence

By the improvement of technology and expansion of smart phones, the permanent online presence has become natural and – according to some research - this may become seriously addictive. (Zhitomirsky-Geffet & Blau 2016). According to the latest statistical reports, Facebook currently has 1,65 billion users and more than 2 million enterprises can be found on this platform. Approximately 40% of the European adult population use this site. Although the distribution of genders has not changed in recent years (the ratio of female users is 1-3% higher), the generation indices have changed. The older generations have also turned up on the platform. Facebook is still regarded the most popular networking portal, but the recently introduced platforms also attract an increasing number of members from younger generations (Hutchinson

2017). Twitter, Pinterest, Instagram and Linkedln are more and more popular. These sites, however, can be used only in English, therefore they are less visited than Facebook and they serve people who have different demographic characteristics than those on Facebook. The most popular networking site in Hungary has been the Facebook for a long time now. Approximately 5,2 million Hungarian people – more than 50% of the population - used it in March 2016.

Figure 2: Hungarian Facebook users by age groups



Source: Levai, 2016

The aim for visiting these websites is to maintain relations and collect news and information and thus creating a specific form of communication (Subramaniam & Rasak, 2014). Generation Y manages their social life on this platform almost entirely but they give less attention to security settings and protection of privacy. According to a Gallup survey in 2015 (Fleming, 2015), the members of Generation Y think that their personal details are not secure. They say that information about individual users can be easily stolen from the databases of companies and PR enterprises, as well as from social networking sites. As the Facebook users in Hungary spend an average of 203 minutes on Facebook (Lévai, 2016) it is extremely important that the personal data, which can be accessed through this and other online platforms, are kept safe. There is a further danger that viruses and other malware may ruin IT devices through the open channels. The members of Generation Y are also well aware of the dangers and the harmful activities on the Internet. (Freestone & Mitchell 2004)

2. Method

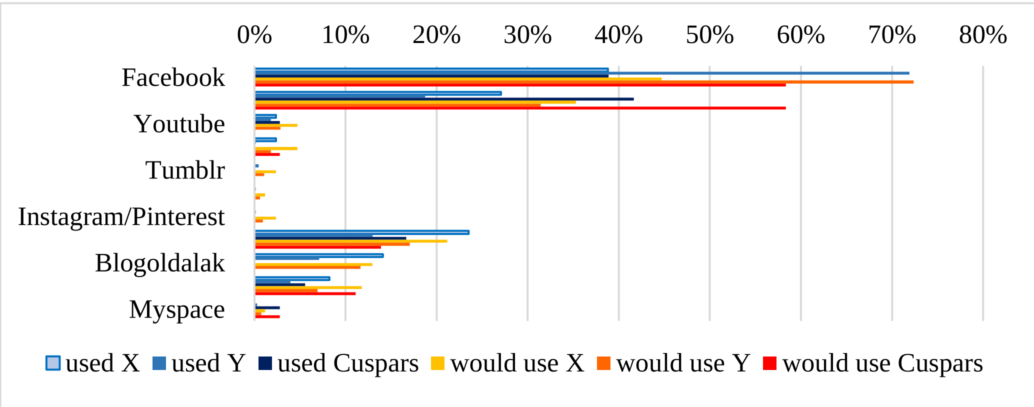
The aim of the current research was to explore the job seeking habits of Generation Y. It was examined how the members of Generation Y look for jobs because they move around the online space much more comfortably than the members of Generation X. It was also analysed whether they consciously use this channel; what platforms are preferred; whether they can utilize the opportunities; know the advantages and dangers.

First of all the students of our university were asked about the above through the internal university network. Focus-group examinations based on qualitative methods helped to explore what the members of Generation Y and X regard as typical about themselves and how they perceive the other generation. The questionnaire of quantitative research was compiled on the basis of this and then sent out to all the students of the university and each respondent was classified in a generation category on the basis of the selected features. Checking the responses of almost 800 respondents, 783 questionnaires could be used for the work. According to the outcomes, the members of generation Y were those born after 1982 on the basis of characteristics selected by the respondents. However, the respondents who were born between 1980 and 1982 represented a special transition group that was called Cuspars. They could not be classified either as Generation X or Generation Y on the basis of their responses

3. Result

94% of respondents are Facebook users, which is much higher than the statistical average of the country. This can be due to the fact that major part of respondents are students at our university, they are highly qualified and networking with fellow students is done on this platform. 86% of Facebook users come from the members of generation Y. The number of registered users was especially high on Youtube – 78% of all the respondents – and in Skype and Viber applications, where 78% of respondents – 86% of the Y generation – are registered members. The ratio of registered users is only 26% on Linkedin; 76% of this come from generation Y, but it is only 20% of generation Y in total. By contrast, almost 40% of generation X members are registered users on this site. These sites were used and/or would be used by the respondents for job search, too (Fig 4.) It is obvious from the figure that the members of generation Y have already used the social networking sites, like Facebook and LinkedIn, for finding jobs and would concentrate more and more on these platforms in the future. Use of blogging sites and applications assisting online phone calls should also be mentioned. In case of all the four above mentioned pages, the shift between 'used' and 'would use in the future' was significant (p=0,000) towards future planning. It means that the online surface for job search will further move in this direction in case of respondents.

Figure 3: Job search on websites

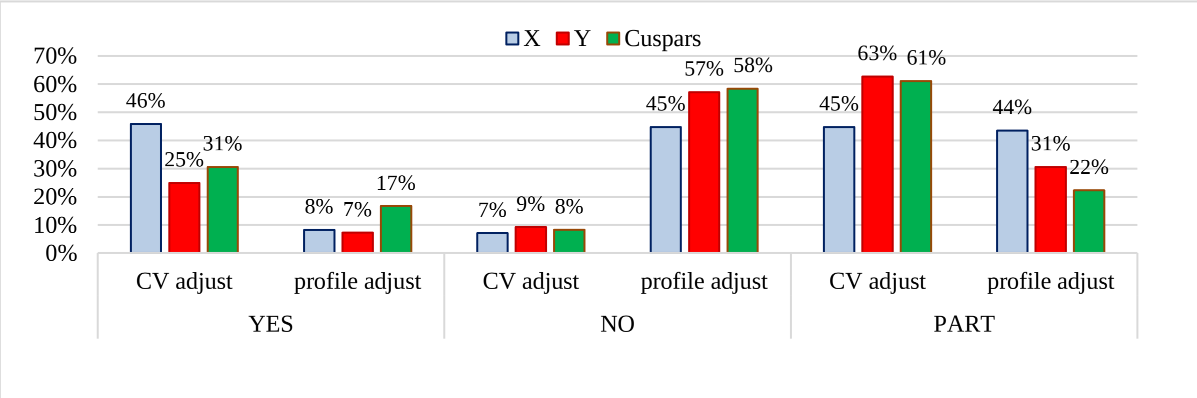


Source: authors

27% of all the respondents change their written curriculum vitae if they apply for new jobs. This figure rises to 45% within generation X, while only 24% of generation Y make amendments to their curriculum vitae. 30% of Cuspars members do the same. It was even more surprising that hardly 8% of the 783 respondents modifies their profile and 92% do not change anything when they are looking for a job. There is no difference in this issue between the generations. They do not modify anything, in spite of the fact that 88% of them would search for the job applicant if they were the employer, 68% of them would go first of all to the Facebook account of the applicant, 18% would use Google search engine and only 9% would go to LinkedIn. It is interesting, however, that the ratio of no-changers is also very high among those who would look up for applicants; 60% of them do not adjust their own profile to the company they apply for. Within this, the LinkedIn users are slightly more conscious, only 38%

of them leave their profile unchanged. In total it is obvious (Fig 5) that keeping the traditional curriculum vitae updated is still preferred for both generations.

Figure 4: CV and profile amendment features of generations



Source: authors

Only half of respondents requires permission for the visibility of their profile set up on different networking sites. The respondents searching for the applications are not concerned more either, they not only leave their profile unchanged but 50% of them do not check who can see their stuff or they do not know what it means exactly, therefore they cannot use this security feature properly. These figures did not show any significant deviation between generations. Those people, however, who require permission for the visibility of their profile, seem to be extremely conscious users, because almost 80% of them modify their profile partly or totally.

55% of all the respondents have secondary school qualifications, 19% graduated from bachelor courses and 5% from master courses. Comparing the two largest websites used for job search, it is obvious that LinkedIn users are qualified significantly higher (p=0,000) than the others. The ratio of higher education graduates is twofold on this site.

4. Conclusion

As the sampling method could not produce representative sample, the present research can be regarded mainly as exploratory. The results, however, can offer an important starting point for employers and employees as well as for the development of future research. It can be declared that major part of respondents are registered users on the currently most popular social networking site – Facebook – but they turn up on other online platforms, too. It can also be seen that these sites are also used for job search and the use of LinkedIn, Skype and Viber applications, as well as blog sites for this purpose will definitely be expanding in the future. The companies should target these sites with job offers and vacancies and they should use phone applications and advertisements on these platforms to find the best employees, also considering the fact that Facebook rather attracts people with high-school qualifications, while LinkedIn is for higher education graduates.

The research has revealed that the users do not pay special attention to their curriculum vitae submitted in their job applications and do not adjust its content to the requirements of the job they apply for. In spite of being fully aware that their profile can be easily checked on online surfaces and they would also search for a job applicant if they were recruiters, they do not bother amending their profile according to the needs of the targeted company and half of the respondents do not regard it important to modify the security settings regarding the visibility of their personal contents. Although they spend a lot of time on these platforms and – according to the research – they are fully aware of the dangers of these platforms and that the company where they apply for jobs can search for their profile, they do not try to use these platforms for landing the job. The LinkedIn users are much more deliberate because this platform is expressly the site of professional job offers and job search. Therefore the use of this platform may be extremely important in the future both for job seekers and recruiters. It is certain, however, that the generations should work together as a team in order to be successful (Weingarten, 2009); thus they also have to learn and adapt to the habits of each other.

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FOREIGN INVESTMENTS IN SELECTED SECTOR AS A SUPPORT OF COMPETITIVENESS IN CONDITIONS OF GLOBALISATION

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Abstract. One of the most discussed topics by economists, the academic community and governments is the role of multinational corporations in the development of regional economies. Multinational corporations are globalising their activities and using their financial position and access to global markets to raise capital in a cost-effective and efficient way. They are able to provide products at lower average costs and prices for customers in comparison with domestic competitors, they bring advanced technology to less developed countries, bring jobs and standards, which are same for all countries, improve the quality of life for citizens of host country and contribute to research and development. These activities are connected with capital flows, which have become an important characteristic of the world economy. Foreign investments facilitate the process of globalisation and stimulate economic growth in host countries. On the other hand, MNCs might unfavourably dominate the market, can gain tremendous profits and do not share their wealth, which reflects in small wages of employees from host country. MNCs seek to gain a monopoly position in the industry, often represent a threat to the environment and it results in the displacement of domestic competition from the market. The contribution analyses the current state of foreign investments in the Visegrad Four countries, the impact of foreign investments on industry and thus the development of regions in the Slovak Republic. Based on the research results a new "Automotive cluster" is proposed in the Zilina region.

Keywords: foreign investment, cluster cooperation, globalisation, automotive industry, multinational corporation

JEL Classification: E22, F21, L14

1. Introduction

Industrial revolutions are momentous events and by most debates there have been only three up to now. The first was caused by a steam machine and mechanical weaving machine in the 18th century. The second revolution was triggered by electricity and serial production around the early 20th century. The third industrial revolution was caused by a computer in the period after the World War II. Based on today's digitalisation and interconnected digital technology we can claim that we are facing the beginning of the fourth industrial revolution. This revolution connects businesses and countries more closely through global supply chains and sensor networks and thus supports globalisation. (Sledge, 2006) The current period is characterised by the* ongoing processes of globalisation and the increasingly stronger competitive environment caused mainly by large companies and multinational corporations (MNCs). MNCs have sufficient capital and are able to invest the capital appropriately in the digital technology innovation that Industry 4.0 brings (e.g. the Internet of Things, data capture and analysis, advanced robotics and artificial intelligence, sophisticated sensors, cloud computing, data capture and analytics, digital fabrication including 3D printing, software-as-a-service, smartphones, mobile devices, platforms using algorithms to direct motor vehicles including autonomous vehicles, etc.). MNCs are able to integrate these elements into interoperable global value chain that is shared by other branches in many countries. (Geissbauer et al., 2016)

1.1 Cluster initiatives

Increasing competitiveness and sustainable regional development are the most important part of regional policy strategies. (Zauskova, 2010) Regions and business entities operating in regions are the basis for economic growth and the development of national economies. (Bucek & Kovarnik, 2007) Small and medium-sized businesses (SMEs) represent the most numerous group of economic entities affecting the growth and development of the region. (Janasova et al., 2017) Low economy self-sufficiency is a disadvantage of SMEs because they are not able to initiate innovative changes of a major importance in comparison with MNCs. (Chlebikova, 2016) On the other hand are SMEs the main sources of incentives for technological innovation changes. (Loucanova et al., 2015) Clustering businesses into cluster initiatives can be response to this problem due to the fact that clusters are an effective tool for collaboration among cluster members with application of innovative solutions. (Stejskal, 2011)

Different definitions of the term cluster can be found f.e. “*business enterprises and non-business organisations for whom membership within the group is an important element of each member firm’s individual competitiveness. Binding the cluster together are “buyer-supplier” relationships or common technologies, common buyers or distribution channels or common labour pools.”*(Bergman & Feser, 1999). M. E. Porter in book The Competitive Advantage of Nations (1990) suggests that interconnected industries, geographically concentrated in a defined territory are the driving forces of national, regional and local development. (Kramarova, 2016) He defines cluster as: ”geographic concentrations of interconnected companies, specialised suppliers, service providers, firms in related industries and associated institutions (e.g. universities, standards agencies, trade associations) in a particular field that compete but also cooperate. (Porter, 1990)

We can conclude that cluster is (geographically concentrated) a group of interconnected sectors whose links enhance each other’s competitive advantage. Competitive advantage is the ability of company or sector to operate in global markets. (Havko et al., 2016) Sector is defined by a specific type of products (e.g. personal computers but not computing, or enzymes but not biotechnology, etc.), services (e.g. financial advice). (Butek & Stofkova, 2016) The geographical concentration of the clusters represents the achievable distance i.e. the area where is possible to travel within one day.

1.2 Foreign direct investment flows

Foreign direct investment (FDI) refers to an investment made to acquire lasting interest in enterprises operating outside of the investor’ economy. The investor's purpose is to gain an effective voice in the management of the enterprise. (Stofko, 2016) The foreign entity or group of associated entities that makes the investment is termed the “direct investor”. The unincorporated or incorporated enterprise (a branch of subsidiary, in which direct investment is made) is referred to as a "direct investment enterprise". (UNO, 2016) According to OECD FDI flows record the value of cross-border transactions related to direct investment during a given period of time, usually a quarter of a year. FDI flows consist of: equity transactions, reinvestment of earnings and inter-company debt transactions. (OECD, 2016). Outward flows represent transactions that increase the investment that investors in the reporting economy have in enterprises in a foreign country, such as through purchases of equity or reinvestment of earnings, less any transaction that decrease the investment that investors in the reporting economy have in enterprises in a foreign country, such as sales of equity or borrowing by the resident investor from the foreign enterprise. (Madudova & Kolarovszki, 2016) Inward flows represent transactions that increase the investment that foreign investors have in enterprises resident in the reporting economy less transactions that decrease the investment of foreign investors in resident enterprises. FDI creates stable and long-lasting links between economies. FDI flows of the Visegrad Four countries and European Union represents the following table.

Table 1. The FDI flows in the Visegrad Four countries in Million US dollars.

Country	FDI flows in Million US dollars			
	2015		2016	
	Inward	Outward	Inward	Outward
European Union	7 730 032.6	9 041 201.3	7 581 097.0	9 032 979.0
Poland	183 869.1	22 280.8	186 471.2	26 464.9
Czech Republic	116 627.8	18 591.4	115 203.7	18 644.1
Hungary	84 460.5	34 860.0	79 243.3	24 907.6
Slovak Republic	**43 689.5**	**2 370.0**	**41 613.9**	**2 650.5**

Source: Own elaboration based on OECD, 2017.

The Slovak Republic has the lowest FDI flows among the Visegrad four countries. OECD gives quarterly reports, but we decided to use more detailed data published by the National Bank of Slovakia to express values of FDI of previous 9 years (Table 2). Slovakia has become one of the leading countries in the automotive industry as evidenced by the considerable investments of foreign automobile manufacturers. Jaguar Land Rover plans the completion of automotive plant in Nitra in the second half of 2018. Compared with Volkswagen AG, which has invested in the Slovak Republic about 1.65 billion euros since 2012 Jaguar Land Rover plans to invest about 250 million fewer. In October 2016 announced Volkswagen AG its plans to build a new logistics center to the end of 2017 that will cost about 150 million euros. The building of logistics center will reduce costs and contribute in the unemployment reduction in the Slovak Republic. The currently ongoing construction of the Porsche Cayenne body shop, in which Volkswagen AG has invested about 500 million euros, is planned to be completed in 2017. Volkswagen is currently considering countries suitable for placing production plants for car batteries, due to growing interest for electric vehicles. (Toma, 2016)

Table 2. The FDI development in Slovak Republic.

Month	**FDI in Million €**									
	2008	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
January	198.4	45.4	304.3	523.5	252.9	-74.5	403.2	221.4	381.3	709.4
February	128	653.7	292.9	277.1	158.7	112.5	215.5	855.1	384.5	673.1
March	118.7	878.7	616.6	595.6	622.4	487.9	36.1	386	707.4	858.2
April	-23.6	-104.7	109.3	165.5	798.9	-379.8	-139.3	-254.7	207.5	-18

May	236.7	170.9	229.2	278.3	-453.5	-76	-462.6	-414.7	255.3	521.4
June	383.2	153.7	-232.5	-545.9	-520.7	-233	135.8	339.8	-596	774.6
July	138.9	-82.4	15.1	-38.3	15.2	248.2	325.1	246.7	241.1	600
August	131.9	231.1	264.4	353.2	80.4	100	-89.1	-494.6	526.2	-
September	578.2	-26.7	96.5	824.8	-109	809.9	33.7	8.1	176.9	-
October	212.2	26.6	-286.2	430.1	445.1	49.9	183.6	-82.2	518	-
November	205	-285.4	134.8	568.9	81.9	-185.9	57	-169.1	693.5	-
December	922	-423.8	16.9	528	-16.1	-102.5	-1,023.2	374.7	700	-

Source: Own elaboration based on Trading Economics, 2017.

According to these new findings and analyst expectation is FDI expected to be 425.61 Million Euros by the end of September 2017. In long-term is FDI projected to trend around 416.42 Million Euros in 2020. Nevertheless, the suppliers and subcontractors of automotive industry in the Slovak Republic may have new investment plans, consequently it is necessary to monitor the FDI development in the next quarter of 2017.

2. Methods of economic activities identification suitable for cluster

We used localization coefficient calculation to identify the appropriate industries according to the following formula:

$$LQ = \frac{x_i / X}{y_i / Y} \tag{1}$$

where:

LQ Location Quotient for employment in the region,

x_i the number of employees working in the sector in the region,

X total number of employees in the region,

y_i number of employees working in the sector in the state,

Y total number of employees in the state.

Economic activity with LQ higher than 1 represent the potential for cluster formation. (Furkova, 2016) Based on the LQ we compared the results from individual sectors and subsequently individual economic activities according to SK NACE. We identified the economic activity with the highest potential for cluster formation. Therefore, we conducted a questionnaire survey which lasted from 4.4.2017 to 28.4.2017 and got responses from 41 businesses (Tier-1, Tier-2, Tier-3).

3. Results

The automotive industry occupies the dominant position in the Zilina Region. Based on the LQ results, we found out that the SK NACE sectors of Construction and Manufacturing are suitable for the potential cluster creation. Consequently we calculated the LQ for individual economic activities based on data on the average registered number of employees. The LQ results are shown in the following table. (Table 2).

Table 3: Localization coefficients for individual economic activities according to the average registered number of employees

SK NACE Rev. 2 Group		LQ	
		2014	2015
10	Food production	0,723824	0,069962
13	Textile production	1,316533	1,091499
14	Manufacturing of wearing apparel	0,912729	0,828228
15	Manufacturing of leather and leather goods	1,255699	1,027242
16	Woodworking	1,709642	1,610002
17	Manufacture of paper and paper products	2,268487	2,367271
18	Printing, reproduction and recorded media	1,732198	1,806979
20	Chemical production	0,199499	0,198901
22	Manufacture of rubber products	0,704544	0,692638
23	Manufacture of non-metallic products	0,552186	0,522732
24	Production and processing of metals	0,336633	0,344183
25	Manufacture of metal structures	1,031922	1,089773
26	Manufacture of computer products	1,291535	1,416738
27	Manufacture of electrical equipment	0,991483	1,010341
28	Manufacture of machinery and equipment n.e.c.	1,768858	1,840691
29	Manufacture of motor vehicles	1,121605	1,179173
30	Manufacture of other transport equipment	2,317125	2,309607
31	Manufacture of furniture	1,518382	1,285322
32	Other production	0,275597	0,37429
33	Repair and installation of machinery	0,321827	0,335311
35	Electricity, gas and steam	1,211177	1,075811
36	Water collection, treatment and supply	0,399173	0,374335
38	Waste collection, treatment and disposal	0,873193	0,908457

Source: authors.

Based on the LQ results are the most suitable activities: Manufacture of paper and paper products (17) and Manufacture of other transport equipment (30) that reach the highest values. However, we chose the **Manufacture of motor vehicles (29)** that recorded a relatively high increase in the LQ compared to the previous year, employs 19.61% of the employees and 56.57% participates in the total gross turn of the Zilina Region.

The questionnaire survey results

It is appropriate to use a combination of quantitative and qualitative methods so we conducted a questionnaire survey focused on the interest of businesses to enter into a potential cluster. The suppliers Tier-1, Tier-2 and Tier-3 of KIA Motors Slovakia, the largest automobile manufacturer in Žilina, attended the survey. We received responses from 41 businesses out of 46. The largest group of respondents was medium-sized businesses (51-250 employees) and 68% of respondents recognised the term of cluster. Acquisition of skilled and educated graduates and training of workers (16.5%) and support and access to purchases of cluster products and services (14%) are the main motivations for businesses to join cluster. 49% of respondents expressed interest in joining the cluster. High financial costs discourage the largest percentage of respondents (75.6%) from entering the cluster. 48.8% of respondents are concerned about the loss of confidential information and 41.5% about the partial loss of sovereignty. A denial of dominant businesses dictatorship rejected 26.8% and 22% of respondents denied the maladjustment of the support system. 19.5% of respondents were worried about the inappropriate way of spending funds and for benefits also for businesses that did not finance them. After the comparison of the results from the questionnaire survey we can conclude that in the Zilina Region exists a potential for the creation of automotive component suppliers cluster.

4. Discussion

The automotive industry suppliers in the Zilina Region, interconnected with the biggest MNC – KIA Motors Slovakia, are suitable members of the potential cluster and we included also suppliers located outside the region but in its geographical proximity. The legal form of the cluster will be an association of legal entities. We propose to join in the cluster the following businesses: : MOBIS Slovakia Ltd., SUNGWOO HITECH, Ltd., Donghee Slovakia Ltd., YURA Corporation Slovakia, Ltd., TI-Hanil Slovakia, Ltd., Sejong Slovakia, Ltd., Sejong Slovakia Ltd., MAHLE Behr Námestovo Ltd., SL-HELLA Slovakia Ltd., PLAKOR CZECH Ltd., PHA Slovakia Ltd., KFTS, Ltd., Hyundai Steel Slovakia Ltd., Hyundai Dymos Slovakia, HYUNDAM SLOVAKIA Ltd., WEBASTO DONGHEE SLOVAKIA Ltd., KOBIT - SK, Ltd., ZWL Slovakia, Ltd. and KOREA FUEL-TECH POLAND Sp. l.l.c. The University of Žilina and Secondary school of electrical engineering in Žilina. It is necessary to cooperate with existing clusters in the Slovak Republic and abroad, cooperate with secondary and higher education institutions, universities and scientific and research institutions. We propose the active cooperation with the Z@ict cluster (ICT), Automotive cluster – Western Slovakia and the Slovak Plastic Cluster (most member of potential cluster produce plastic parts). The proposed cluster should cooperate with the Upper Austria Automotive Cluster (engine shop of BMW) and with the North Hassen regional cluster (Volkswagen - component plant). We propose joining the international project consortium ClusterFY (SIEA is member since January 1, 2017). The consortium aims to create conditions for the clusters inclusion at regional, national and international level, thus creating the potential for new innovative solutions. The development opportunity is also cooperation with Israeli businesses who are encouraging from 4Th August 2016 to submit applications for subsidies for joint proposals and plans in the field of industrial research and experimental development which support mutual cooperation between businesses of the Slovak Republic and businesses of the State of Israel. The proposed cluster has a vision of developing cooperation with secondary schools and universities through the professional internships, student employment and participation in the study plans development. The automotive industry is currently facing a serious problem – a lack of skilled labour. The proposed cluster must focus on its removal.

5. Conclusion

Based on the LQ results we can conclude that there exists a potential for the creation of automotive suppliers cluster in the Zilina Region. Car production is concentrated in one KIA Motors Slovakia plant in Teplicka nad Vahom. To ensure the production it is necessary to obtain required number of components purchased by KIA Motors Slovakia from its subcontractors located in the geographical proximity. Therefore we addressed in the questionnaire survey the automotive suppliers (level of Tier-1, Tier-2 and Tier-3) who are potential members of proposed cluster. Based on the questionnaire results, 20 businesses (49%) are interested in joining and supporting the cluster. Cooperation with self-government, access to new financial sources, recruitment of skilled workers and cost savings are the most important motivating factors for joining the cluster. The most common factor that discourages joining the cluster are financial costs. Funding for the proposed cluster consists of membership fees as well as foreign resources such as grants from international cooperation, from the ClusterFY project consortium, the National RIS 3 Strategy and the 2014-2020 Operational Program Research and Innovation. The cluster issue is also a current topic in the Slovak Republic. However, it is necessary to raise awareness of cluster initiatives leading to the use of know-how, the knowledge economy and increasing competitiveness at national and international scale.

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REAL ESTATE AND GLOBALIZATION: MODERN TENDENCIES, POSSIBILITIES AND OBSTACLES

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Abstract. The real estate market development was traditionally viewed separately from the processes of globalization. This is due to real estate qualities - it is not possible to move and sell it abroad. But the general globalization involved in the international circulation this immovable product which became the object of the international investment. And investments, including foreign investments are necessary of the real estate market development. Conversely, investment policy making in the country affected business and industry competitiveness improvement opportunities. The evaluation and planning of the opportunities for enhancing the competitiveness of companies involved in the real estate sector becomes more complicated, because not only internal factors affecting the competitiveness of a company, but also public investment policy, state of the economy and globalization processes should be taken into account. This study aims to evaluate the contemporary trends, possibilities and obstacles to the real estate market in the context of globalization. The study will characterize globalization and the real estate market competitiveness in the context of globalization, as well as perform an insight into the real estate market development and assess housing regeneration opportunities in Latvia. In the final section will be given the main conclusions of the possibilities to promote the real estate market in Latvia in the global environment. In the study will be used the following research methods: monographic, analysis and synthesis, graphic and logical constructive method.

Keywords: real estate market, competitiveness, globalization

JEL Classification: F21, F63

1. Introduction

Several authors point out that processes of globalization play an important role in economic growth and integration in the global economy is really important (Bianchi & Civelli, 2015). International integration stimulates knowledge accumulation and the efficiency of that process, as well as affects the incentives for technological diffusion (Gozgor, 2015). Opening of national economies to the globalization process significantly increases exports and international trade (Sliburyte & Masteikiene, 2012).

General economic globalization is one of the key determinants of global development, which also has a serious impact on the real estate market. The globalization of the real estate market begins with the opening of the market for transnational investors. In the process of globalization, the cardinal changes that are taking place in the global economy are more evident. Precisely financial capital is the key to breaking the boundaries of the national economy.

Globalization has become a characteristic of the modern world system, which determines the development of civilization. This process cannot be stopped or cancelled even with all the disadvantages and advantages, this is a historical fact.

In turn, in a market economy, housing is a visible indicator of growth, which reflects the dynamics of different economic sectors and people's confidence in their future and the country as a whole. Consequently, the development of the housing market is one of the most important characteristics of the socio-economic development of the country.

2. The globalization process and the competitiveness of the real estate market in a globalized environment

The concept of "globalization", for the first time was used in the period of great geographic discoveries, when the means of communication began to develop (first of all maritime transport) and the conditions for international exchange were created (Жданова, 2012).

In the scientific environment, the debate about globalization began in the 80's of the 20th century, when this concept began to be developed and popularized by R.Robertson and F.Lechner (Robertson & Lechner, 1985). However, in other sources, it is mentioned that the term "globalization" was first mentioned in an article by the American economist T.Levit that was published in the Harvard Business Review in 1983 (Молочников & Поддубная, 2014). Since the end of the 80s, most of the searches in the theoretical field are concentrated in the new general direction - the development of theories of globalization. In 1990 the collection of articles "The Global Culture" (Arnason, 1990) is published, where leading theorists such as Mike Featherstone, Roland Robertson, Immuel Wallerstein, Margaret Archer, Arjun Appadurai, Bryan S. Turner and others published their articles. Since then fundamental monographs on globalization appear one by one, published by L.Sklair (Sklair, 1991), R. Robertson (Robertson, 1992), O.Ianni (Ianni, 1992), M.Waters (Waters, 2001), A.Appadurai (Appadurai, 1996), U.Beck (Beck, 1997) and others. The essence of the conceptual changes that took place in sociology was clearly articulated in the introduction by M. Featherston & S.Lash in the article "Global Modernities": the discussion of globalization arose because of the "debate on modernity and post modernity in the context of socio-cultural changes" (Featherston & Lash, 1995).

With each passing year the issue of globalization becomes more and more relevant. In the scientific publications are viewed the impact of globalization on the migration process and its security (Soltes & Stofko, 2015) and their influence on national social factors (Luo & Stone, 2017), including the role of globalization in the development of housing (Fernandez, Aalbers, 2016).

In the era of abolishing borders between countries, unification and liberalization of legislation, the internationalization of the real estate market is no longer surprising. For middle-class representatives the acquisition of real estate abroad became an ordinary transaction, one of the ways in which private funds were invested. There are several factors behind this:

1. Flight availability to any country in the world;
2. Development of mortgage loans;
3. Considerable price difference among real estate objects with similar characteristics in different countries of the world;

4. The struggle for attracting foreign investment in construction in many countries has turned into the most simple procedure for acquiring real estate - various tax rebates for foreign customers, the possibility of obtaining a residence permit or citizenship in the seller's country, maximum security of investments and infrastructure development in the recipient country (Лукьянсков, 2012).

According to experts, real estate globalization takes place in the following directions:

- investment migration associated with the opening up of real estate markets to transnational investors (investors leave overheated markets);
- foreign customers entering the market (in all countries);
- entry of private investors into the market (through real estate investment funds);
- rapid exchange of experience, management, standards, technology from developed markets to development (universality of scientific and technical ideas and standards);
- the ideology of globalization in architecture and construction (the same architects, engineers, designers design, build, decorate buildings and manage them on all continents) (Brett & Schmitz, 2009). These factors have a serious impact on the national real estate markets.

On the other hand, in the context of globalization, the only criterion for the company's operational efficiency and demand for the product placed on the market is their competitiveness. It is one of the most important categories of goods and services markets, as well as one of the most important factors in entrepreneurship that affects any company operating in the national economy, also determining the competitiveness of the company itself, including the company operating in the real estate market.

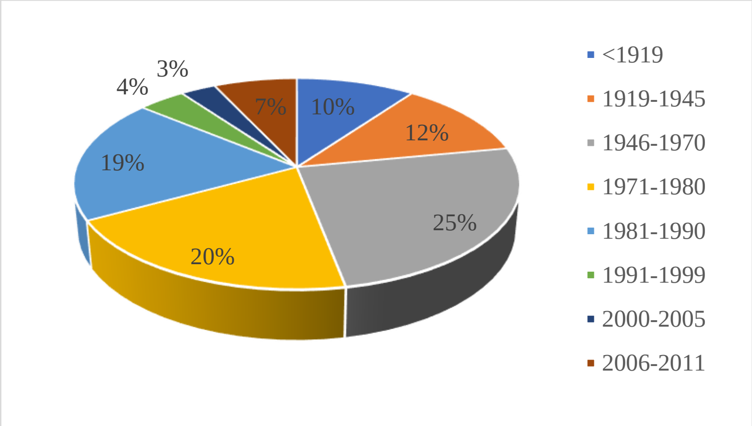
In recent years is viewed a surge of academic and political attention devoted to the concept "competitiveness": the new conventional wisdom is that states, regions and cities have no option but to strive to be competitive in order to survive in the new marketplace, forged by globalisation and the new information technologies (Ciot, 2015). More and more attention is being paid to the competitiveness of the regions (Baula et al., 2017) and cities in the context of globalization (Pershina et al., 2016).

In the context of globalization, businesses, including those working in the real estate industry, must take into account not only internal and external factors that influence competitiveness but also global factors, including the economic and political conditions and investment opportunities of a country, in the construction of a competitive upgrade model.

3. Real estate market development in Latvia

As already mentioned, ensuring access to housing is one of the most important tasks of the state social policy. The level of availability of a housing stock in the country depends on the development of the construction industry; therefore, the development of this sector is significant for the state and society. It is necessary regularly monitor the housing market situation in order to make timely decisions that are aimed at market development.

Figure 1: Residential building age structure in Latvia (%)



Source: authors' construction based on Brick&Smiles property brokers data (http://www.bands.lv)

The structure of housing in Latvia is reflected in Figure 1 and it can be seen that most (86%) of residential buildings in Latvia were built up to 1990. Only 10% of the residential houses were built from 2000 to 2011, which means that the housing stock in Latvia is changing and developing relatively slowly, but the existing housing is aging (Figure 1).

According to the Latvian Cabinet Regulation the average life expectancy of residential buildings of massive buildings, depending on the standard design series, is 50 to 70 years, which means that some of these buildings have a life expectancy end or soon end.

This conclusion encourages state policy to find ways to improve and develop the housing market, in particular, in the construction of new projects, due to the age structure of apartment buildings, because the issue of resettlement fund renewal with each passing year becomes relevant.

4. Restoration of the housing stock in Latvia

Restoration of the housing stock is possible both in the construction of new residential buildings and in the renovation of existing ones. In turn, the development of the real estate market requires investments, including foreign investments.

Table 1: Comparison of significant amendment to the Immigration Law related to the Residence Permits (RP) receipts for investments in the real estate (RE)

Conditions of issue 01/07/2010	Conditions of issue since 01/09/2014
– if purchased and owns one or more RE in Riga, Riga Planning Region (RPR) or other cities which total transaction amount is not less than 100 000 lats, – one or more RE is outside the city of Riga, RPR or other cities, which total transaction amount is not less than 50 000 lats.	– the value of a RE is at least EUR 250,000; – there are no RE tax arrears; – the payment of the total value of the RE was paid in clearing; – the cadastral value of the RE at the time of its acquisition is not less than EUR 80,000 or the market value of the RE determined by the certified RE evaluator is not less than EUR 250,000; – upon requesting a first-time temporary residence permit, pays 5% of the value of the RE in the state budget; – RE does not include agricultural land or forestland.

Source: authors' construction based on Immigration Law

In order to increase the attractiveness of real estate market of Latvia for foreign investors, under the Investor Support Program, on July 1, 2010, amendments to Article 23 of the Immigration Law were adopted that allow foreigners to obtain a temporary residence permit (TRP) in Latvia for investments in the Latvian economy, including investing in real estate.

On the other hand, M. Porter emphasizes that the competitiveness can also be affected by the change in public policy (Porter, 1990). During these years, the Immigration Law has been amended several times, clarifying the conditions for issuing temporary residence permits to foreign investors. In 2014, Section 23 of the Immigration Law was amended by stipulating more stringent conditions for obtaining TRP for investments (Table 1).

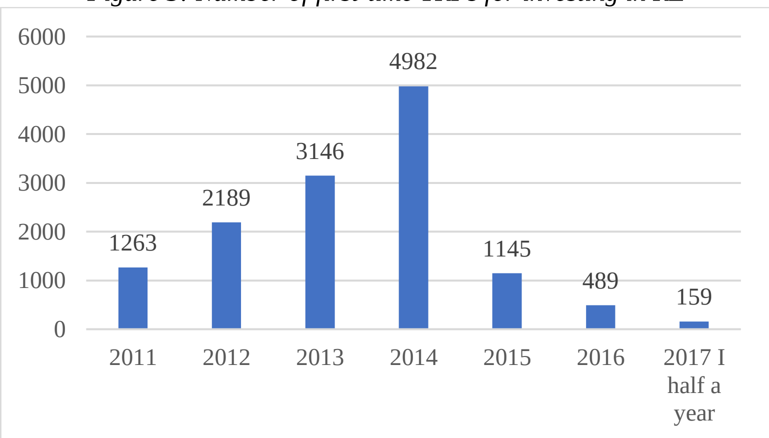
Due to changes in the Law, the amount of investments also changed, especially in real estate investments, which can be seen clearly in Figure 2.

Figure 2: Investment volume in the framework of TRP program (mln. EUR)

Source: authors' construction based on Office of Citizenship and Migration Affairs (OCMA) data (http://www.pmlp.gov.lv)

After the amendments in Article 23 of the Immigration Law in 2014, the number of TRPs applied decreased (Figure 3).

Figure 3: Number of first-time TRPs for investing in RE



Source: authors' construction based on OCMA data (http://www.pmlp.gov.lv)

Only a long-term improvement in competitiveness determinants can result in a stable increase in the company's competitiveness (Габибова, 2015). Continuous legislative amendments do not allow real estate developers to build a sustainable model of competitiveness enhancement. In turn, due to changes in Latvian legislation, increasing the investment amount for issuing TRPs for investments in real estate, the prices for housing in new projects also increased.

5. Analysis of housing prices in Latvia

Summarizing the data on the number of new single-apartment houses (without summer cottages, garden houses) and the number of two or more apartments, the actual prices of the area and construction production volume, it can be seen that fluctuations in the number of new apartments put into operation during the last seven years were not drastic. In turn, the price for 1 m^2 increased more than three times from EUR 116.47 to EUR 380.95. (Table 2). According to Global Property Guide, investment analysis the global housing boom appears to be losing momentum in the year 2017, with most of the Middle East, Latin America, and some parts of Asia experiencing either house price falls or a rapid deceleration of house price rises. However, Europe, Hong Kong, China and Canada continue to experience strong price rises.

Table 2: Summary of the number, area and price of new apartments to be commissioned

Year	Number of apartments	Area, thousand m^2	Price, thousand EUR	Price per 1 m^2, EUR
2010	1924	384,6	44793,70	**116,47**
2011	2662	380,8	59907,00	**157,32**
2012	2087	429,7	61543,40	**143,22**
2013	2201	426,5	90872,70	**213,07**
2014	2631	483,5	150064,30	**310,37**
2015	2242	444,7	124906,40	**280,88**
2016	2200	373,1	142132,80	**380,95**

Source: authors' construction based on CBS data (http://www.csb.gov.lv)

In Latvia, like in several European countries, real estate price rises were 5.13% compared to the beginning of 2016 (Table 3).

Table 3: Housing price developments around the world in light of inflation

No.	Country	year on year (%)			No.	Country	year on year (%)		
		Q1 2016		Q1 2017			Q1 2016		Q1 2017
1	Hong Kong	-9,51	↑	17,27	24	France	0,39	↑	1,62
2	Iceland	5,10	↑	16,01	25	Vietnam	1,93	↘	1,13
3	China - Shanghai	16,99	↓	13,16	26	Taiwan	-7,65	↑	0,69
4	Canada	5,67	↑	11,70	27	Spain	1,69	↓	0,41
12	Slovak Republic	1,53	↑	6,61	35	Thailand	0,38	↓	-1,37
13	Swedan	9,70	↓	6,59	36	Switzerland	2,18	↓	-1,69
14	Germany	6,25	↘	5,79	37	Greece	-3,65	↗	-3,13
15	Latvia - Riga	2,24	↑	5,13	38	Singapore	-2,35	↓	-3,45
16	Estonia - Tallin	-1,31	↑	4,76	39	UAE - Dubai	-9,26	↑	-3,69
17	Portugal	3,18	↑	4,18	40	Brazil - Sao Paulo	-7,62	↑	-3,75
18	Lithuania - Vilnius	3,56	↘	3,56	41	Ukraine - Kiev	-2,97	↓	-5,05
21	Japan - Tokyo	5,45	↓	2,93	44	Russia	-13,05	↑	-8,33
22	Turkey	7,37	↓	1,84	45	Qatar	9,36	↓	-10,63
23	UK (Nationwide)	4,57	↓	1,84	46	Egypt	-9,49	↓	-16,68

↑ = more than 1 prcentage point increase in house price change
↗ = less than 1 prcentage point increase in house price change
↓ = more than 1 prcentage point decrease in house price change
↘ = less than 1 prcentage point decrease in house price change

Source: authors' construction based on Global Property Guide data (http://www.globalpropertyguide.com)

In turn, in order to determine the reason for the rise in real estate prices in Latvia, the study should continue and a comprehensive analysis of the factors contributing to the real estate market should be carried out.

6. Conclusion

a) Real estate is no longer a local market product. In the face of globalization, it is a global player in the international market.
b) Foreign investors enter the real estate market, which promotes the import of quick experience, management, standards, technologies, unifying scientific and technical thoughts and standards. The ideology of globalization begins to dominate in architecture and construction.
c) In the context of globalization, the only criterion for the company's operational efficiency is their competitiveness.
d) The development of the real estate sector is also important for the society, because the level of availability of a living fund in the country depends on it, which is one of the most important tasks of the state social policy.
e) 86% of the Latvian housing stock was built up to 1990, and only 14% of the residential houses were built from 1990 to 2011, which means that the housing stock in Latvia is changing and developing relatively slowly, but the existing housing is aging.
f) Investment attraction is one of the possibilities of restoration of the housing stock. In the framework of the investor support program in Latvia, amendments to the Immigration Law were adopted in 2010, which allows foreigners to obtain a temporary residence permit in Latvia for real estate investments. The amendments to this law were successful until 2014, when changes to the current law were adopted. Amendments to the Immigration Law also affected the prices of new housing.
g) Continuous legislative amendments do not allow real estate companies to develop a sustainable model for increasing competitiveness.
h) It should be encouraged to find ways to improve and develop both legislation and the housing market, in particular in the construction of new projects, due to the age structure of apartment buildings. This opportunity should be aimed at increasing the competitiveness of enterprises active in the real estate sector, thereby also increasing the competitiveness of the state.
i) In view of the globalization process of real estate, this study should continue and complete the comprehensive analysis of the risk and prices formative factors of the real estate market.

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FACTORS AFFECTING BUSINESS PERFORMANCE IN THE OPEN ECONOMY

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Abstract. The international trade and the cross-border movement of capital, which are main factors of globalisation, puts pressure on strengthening the competitiveness and growth of business performance, as well as eliminating inefficient processes. In particular, this pressure affects enterprises operating in an open economy, such as the Czech Republic. It is the export of machinery and transport equipment that has the highest share in total export. For the firms operating in this sector it is vital to identify the value drivers, i.e. key performance indicators contributing to value creation. Based on the undertaken literature research, a value driver is each factor affecting the value of the business. Quantitative value drivers are mostly financial indicators; qualitative value drivers represent quality of company management. Effective performance management requires eliminating processes, which may jeopardise the business value growth. According the previous research, factors reducing the business value include the lack of capital, lack of strategic management systems and poor quality of production. In order to gain further insight into the topic, the paper presents the results of the research identifying factors adversely affecting the performance of mechanical engineering enterprises in the Czech Republic. The collection data took place through a questionnaire survey among company senior managers. The research results show that the factors representing the highest risk for the performance and value of businesses include the incompetence of management staff and the failure to respect customer requirements.

Keywords: value drivers, financial ratios, non-financial indicators, threats of performance, mechanical engineering companies.

JEL Classification: G30, G39, L25**.**

1. Introduction

Interconnecting national economies increases the pressure on the competitiveness of businesses facing not only national but also international competition. Only companies with a unique product, a sophisticated management system of all business activities which can generate sufficient returns for reinvestment, i.e. perform better than competing businesses, may succeed in this competition. The Czech economy is characterised by the high volume of foreign trade, which has grown year-on-year permanently. It is positive that the overall balance of exports and imports is positive, i.e. exports exceed import volumes – see the following table.

Table 1: Foreign trade development statistics

Indicator/year	2010	2011	2012	2013	2014	2015
Total export (mil. CZK)	2,532,797	2,878,691	3,072,598	3,174,704	3,628,826	3,883,249
Total import (mil. CZK)	2,411,556	2,687,563	2,766,888	2,823,485	3,199,630	3,477,000
Total balance (mil. CZK)*	121,241	191,128	305,710	351,220	429,195	406,249
Export – import ratio (%)	105.00%	107.10%	111.00%	112.40%	113.40%	111.70%

** Balance = export - import*
Source: Czech Statistical Office, 2016

Exports of goods and services in the Czech Republic in 2010 – 2015 represented more than 80% of the GDP. Most of the exports (83.4%) are directed to the European Union countries. The Czech Republic's largest import and export partner is Germany, accounting for almost 39% of Czech foreign trade. The success on these markets may only be secured by companies with high competitive capacities, while achieving high performance at the same time. The fact that enterprises with a predominant export orientation achieve higher performance has been confirmed by previous research (e.g. see Lee et al., 2017).

This paper presents the partial results of our research focusing on the identification of the key factors affecting the performance of the company, so-called value drivers. Due to the fact that the export of machinery and transport equipment represents the highest share of exports (approx. 55%), our research has focused onto mechanical engineering enterprises.

2. Business Performance and Value Drivers

Business performance is considered to be the capacity to achieve business goals. It serves as a tool for implementing a business strategy using performance benchmarks. The authors such as Rappaport (1998), Copeland et al. (2005) and others consider the growth of the enterprise value as the basic business objective. The enterprise value management system then consists of strategies, processes, analytical techniques, performance benchmarks, and corporate culture. According to Young & O'Byrne (2001), corporate value management should include the following elements: strategic planning and budgeting, efficient capital allocation, process performance measurement, managerial remuneration system, and internal and external communication. This serves as a basis for the total value management system, referred to as value based management. Thus, the essential task of value-based management consists in searching for and identifying the factors contributing to the increase in the corporate performance and value creation (the so-called value drivers). These are the factors reflecting the business environment in which the business operates and they can be used to measure the business performance and the value of its corporate strategy. Identification of these drivers and their interrelations is expected to improve resource allocation, performance measurement, and the design of information systems by identifying to specific actions or factors that cause costs to arise or revenues to change (Ittner & Larcker, 2001).

The relevant literature specifies a wide range of the qualities of the concept of value drivers. For instance, according to Rappaport (1998), Copeland et al. (2005), Scarlett (2001) and Akalu (2002), it is any variable affecting the business value. A similar definition of value drivers may also be found in Koller et al. (2010). Woodcock (1992) states that these are all internal and external mechanisms which may affect the creation or destruction of an enterprise. For each enterprise and industry, there are specific value drivers and their identification is a key factor in successful business management.

Value drivers may be divided into certain groups depending on the strategies, the structure of the business and its surroundings. Based on the literature research, Acur et al. (2012) determined several value generators subsequently submitted to respondents, and their answers showed that the value drivers included strategic planning, innovativeness, environmental munificence, technological change, technological alignment, market alignment and new product development marketing alignment. As the strategic value drivers may also be considered the factors defined by Wang (2011) on the basis of the Balanced Scorecard. Within the financial perspective, he found out that important factors included profitability, debt solvency and operation ability. Customer perspective focuses mainly on customer satisfaction. The internal operations perspective includes the R & D process and operation process. The last one is the innovation and learning perspective and the related employee quality. In their research, Richards & Jones (2008) also focused on identifying the key factors of value creation in terms of the customer perspective, i.e. in terms of the company's capacity to influence value for customers. Their research indicated the following value drivers: target profitable customers, integrate offerings across channels, improve sales force efficiency and effectiveness, customize products/services, improve customer service efficiency and effectiveness, individualize marketing messages and improve pricing. Bakutyte & Grundey (2010) consider important value drivers from the marketing perspective, i.e. marketing knowledge, strong brands, customer loyalty, market selection, and differential advantage. Within the concept, they got inspired by other research (for instance Sristava et al., 1998). In the area of human resources, Becker et al. (1997) consider as value drivers, in particular, key knowledge, abilities and skills of employees. Lin & Lin (2006) divided the factors selected from previous research using two aspects: employee and process dimension. They found out that from the employees' perspective, Taiwanese companies considered important distinctive skills, satisfaction and achievements, learning and training, knowledge, teamwork, personal rewards and benefits, capability and motivation, trust and organizational value, and customer-linking capabilities. In terms of processes, they consider important R & D capability, core competence, knowledge assets, innovation and evolution, capability for differentiation, future perspective, distinctive expertise, trustworthy environment, niche advantages and successful strategy. Lin & Tang (2008) focused on the research into intangible assets as value drivers in the Taiwanese high-tech industry. The following qualitative value drivers were determined by the synthesis of individual evaluations in the questionnaire survey: innovation and technology, employee capability, goodwill, customer relationship and alliance, and management capability. Chan & Chan (2004) include among value drivers time, cost, value and profit and health and safety.

It is obvious that value drivers are not merely financial indicators but any quantitative and qualitative factors affecting business performance. Value drivers should be transformed into a performance measurement system. An enterprise performance measurement system may then be defined as a tool which can influence positively or negatively activities leading to the implementation of the selected strategy. The success of enterprise performance management depends on selecting appropriate metrics and their use to influence business processes.

3. Methodology and Data

The data for the research were obtained by means of a questionnaire survey and supplemented with publicly available data from the financial statements. The questionnaire was divided into three parts. The first part focused on identifying the enterprise and obtaining more information about it. The second part concerned the methods for measuring and managing the performance of the surveyed enterprise and the factors affecting the performance (e.g. what kind of management information system the respondent uses; what indicators are monitored and what factors the respondent considers to be the most jeopardising or supporting the improvement of the company performance). The last part examined what the respondents considered as the value drivers in the managed enterprise. The questionnaire was distributed to the businesses via emails, addressing top business executives. The questionnaire consisted of three types of questions: questions with an optional answer, with only one possible answer; questions with an optional answer, with one or multiple possible answers; and questions with an open response, leading to the identification of qualitative value drivers.

The logarithmic method for the pyramidal breakdown of the top indicator was used to identify the quantitative value drivers. In this case, the return on equity (ROE) served as the top indicator. This indicator has been used due to the fact that it is a decisive factor in creating the economic value added and thus the business value. Within the research, a dynamic variation of the breakdown has been selected i.e. the examined factors influencing the year-on-year change in the value of the top indicator (see Kislingerova & Hnilica, 2005; Strnadova et al., 2013). The methods of descriptive statistics have been used to determine the basic characteristics established in the questionnaire survey and also to identify qualitative value drivers.

The basic population consisted of capital companies operating in the Czech Republic in the field of *Manufacture of general-purpose machinery* (see CZ-NACE 28.1). The questionnaire was distributed to a total of 1,107 enterprises, i.e. to all the companies the contact to which was obtained from the AMADEUS database. The return rate of the questionnaires was only 7.23%, i.e. 80 responses.

Table 2 shows the description of the research sampler according to the size (sales volumes and number of employees):

Table 2: Basic characteristics of the research sample

Company size	**Number**	**%**	**Number of employees**	**Number**	**%**
Petty	18	22.50%	Less than 10	15	18.75%
Small	16	20.00%	11 – 50	31	38.75%
Medium	36	45.00%	51 – 250	23	28.75%
Big	10	12.50%	More than 251	11	13.75%
Total	80	100.00%	Total	80	100.00%

Source: own research

The research sample is predominated by small and medium-sized enterprises, which corresponds to the structure of the whole industry.

4. Results and Discussion

On the basis of the accounting data of the entities involved in the questionnaire survey for the years 2009 – 2015, a breakdown of the return on equity was performed and quantitative value drivers were identified accordingly.

Table 3: Influences of individual sub-indicators on the primary indicator

Indicator/Period	**09/10**	**10/11**	**11/12**	**12/13**	**13/14**	**14/15**
ROE (return on equity)	-2.74%	-5.89%	1.39%	0.29%	1.58%	-3.24%
Financial leverage	0.29%	-1.56%	-1.57%	-1.05%	0.74%	-3.58%
Liability/equity	0.55%	-2.46%	-2.93%	11.90%	-0.65%	2.66%

Liability/assets	-0.26%	0.90%	1.36%	-12.95%	1.39%	-6.24%
ROA (return on assets)	-3.03%	-4.33%	2.95%	1.34%	0.84%	0.34%
Asset turnover	0.12%	1.33%	-0.40%	-0.40%	-1.39%	5.54%
Asset turnover period	0.12%	1.33%	-0.40%	-0.40%	-1.39%	5.54%
Current assets turnover period	5.73%	0.74%	-0.30%	0.00%	-0.86%	2.94%
Inventory turnover	-0.03%	0.31%	-0.13%	0.00%	-0.85%	2.83%
Debt days ratio	5.79%	-0.12%	-0.23%	0.00%	-0.01%	0.11%
Short-term financial assets turnover period	-0.02%	0.55%	0.06%	0.00%	0.00%	0.00%
Long-term financial assets turnover period	-6.44%	0.58%	-0.06%	-0.02%	-0.18%	1.50%
Other assets turnover period	0.83%	0.01%	-0.04%	-0.39%	-0.35%	1.09%
ROS (from EAT***) – return on sales (from EAT***)	-3.15%	-5.65%	3.36%	1.74%	2.24%	-5.20%
ROS (from EBIT**) – return on sales (from EBIT**)	-3.04%	-6.60%	2.37%	1.50%	3.41%	-6.01%
Value added/sales	-2.20%	-4.91%	0.42%	0.14%	1.82%	-3.82%
Personal costs/sales	0.13%	-1.59%	3.99%	1.57%	0.38%	-1.53%
Other costs/sales	-0.54%	0.34%	-1.56%	-0.38%	-0.03%	-0.36%
Profit margin/sales	0.29%	1.84%	0.07%	-0.08%	-0.69%	-0.04%
Revenue/sales	-1.40%	-2.55%	0.19%	0.17%	1.49%	-2.28%
Consumed purchases + services/sales	-1.09%	-4.20%	0.17%	0.06%	1.01%	-1.49%
EAT***/EBT*	-0.31%	1.14%	0.69%	0.19%	-1.38%	0.79%
EBT*/EBIT**	0.20%	-0.20%	0.29%	0.04%	0.20%	0.02%
EBIT**/EBT*	0.20%	-0.20%	0.29%	0.04%	0.20%	0.02%
Interest cost/EBT*	0.20%	-0.20%	0.29%	0.04%	0.20%	0.02%
EBT*/interest cost	0.20%	-0.20%	0.29%	0.04%	0.20%	0.02%
Net income/interest cost	0.15%	-0.13%	0.24%	0.04%	0.15%	-0.12%
Operating income/interest cost	0.11%	-0.09%	0.04%	0.17%	0.15%	-0.20%
Financial income/interest costs	0.04%	-0.04%	0.20%	-0.13%	0.00%	0.08%
Tax income/interest costs	0.05%	-0.06%	0.05%	0.00%	0.05%	0.14%

Note: Valued are indicated in percentage points.
** EBT = Earnings before Taxes; ** EBIT = Earnings before interest and taxes, *** EAT = Earnings after Taxes*
Source: own research

The performed breakdown has shown that the factors most affecting the change in the business performance include, in particular, return on assets (ROA), financial leverage, return on sales (ROS), value added, personal costs, sales performance, and the consumed purchases and services.

The question concerning the value drivers was divided into two parts: we enquired about both the value drivers, i.e. those increasing the business value, and the negative ones, i.e. causing the destruction of the business value. The factors jeopardising the business performance comprise, in particular, the incompetence of responsible employees and disregard of the customers' requirements (average score of 10). Other factors which, according to the respondents, quite significantly jeopardise the business performance (average score of 8) include: inflexible corporate systems and strategies, inability to seize market opportunity and absence of long-term strategy. They are followed by inadequate corporate spending, poor definition of the reward system and a lack of capital for investments (average score of 7). The respondents also indicated a high negative impact in the case of insufficient information system (average score of 6).

Table 4: Average assessment of the factors jeopardising the increase in business performance

Factor	Rate	Factor	Rate
Incompetence of responsible employees	10	Focus on too many factors and their management	5
Insufficient MIS	6	Inability to stabilise corporate processes	5
Inflexible corporate systems and strategies	8	Absence of long-term strategy	8
Ignorance of modern management methods	3	Disregard of the customers' requirements	10
Inadequately defined competences and responsibilities	5	Inadequate corporate spending	7
Unintelligible organisational structure	2	Risky growth strategy	1
Complicated internal structures	5	Poor definition of reward system	7
Sluggish cooperation between departments	5	Inappropriate media presentation by managers	1
Absence of ongoing results evaluation	5	Inappropriate owner's intervention in decision-making	1
Managers addressing operational issues	5	Lack of capital for investments	7
Inability to seize market opportunity	8	High "rewards" paid to owners	5

Source: own research

The factors most supporting the advancement of the business performance include: innovation, quality, flexible demand satisfy (average score of 10). These are followed by goodwill (average score of 9), utilization of new technologies, motivation of employees to continuous improvement, and added utilization of production capacity (average score of 8), increased employee knowledge, acquisition of a specialist in field of activity, and increase in the asset turnover ratio (average score of 7). The least significant factors positively affecting the business value are considered diversity investment (field of activity) and acquisition of clients' database from competition companies (one respondent even stated that acquiring the clients' database of competitors was inconsistent with their corporate strategy). The acquisition of new enterprises in field of activity is perceived as a neutral factor. The results are summarised in Table 4.

Table 5: Positive value drivers

Factor	Answer frequency	Factor	Answer frequency
Human resources (employees) and skills	37	Capital	10
Goodwill	41	Information	5
Business flexibility	28	Business development	4
Quality	24	Technology and technological equipment	6
Performance and productivity	27	Team of employees	7
Market position and competitiveness	21	Cash flow	4
Assets	26	Cost reduction	4
Innovation	12	Pricing policy	4
Investment	18	Family background	3
Know-how	12	Other factors	2

Source: own research

While according to the entities taking part in the research, the most frequently mentioned factor affecting the business value is goodwill, according to foreign surveys, the most frequently mentioned value generators include customers and loyalty and satisfaction. The importance of human resources and business received similar assessment (for instance, see Becker et al., 1997; Lin & Lin, 2006; Richard & Jones, 2008; Lin & Tang, 2009; Wang, 2011). The assessment of market position and competitiveness corresponds to the research results of Lin & Lin (2006) and Acur et al. (2012). The importance of the factors such as goodwill, technology and technological equipment and cost reduction was also stated in the research of other authors – see Acur et al. (2012), Chan & Chan (2004), Lin & Tang (2008), Richard & Jones (2008). Innovation and investment corresponds to the research of Lin & Lin (2006), Lin & Tang (2008), Wang (2011), and Acur et al. (2012).

5. Conclusion

The aim of this paper was to present the research results focusing on the identification of key indicators of business performance affecting the business value. The research was based on both the accounting data provided by the enterprises involved in the questionnaire survey for the period 2009 – 2015, and the data obtained through a questionnaire survey among senior managers. Within of the questionnaire survey, the respondents assessed the factors reducing the business performance, as well as the factors improving the business performance, i.e. potential value drivers.

Identifying the quantitative value drivers made use of the dynamic breakdown of the ROE indicator using a logarithmic method. The breakdowns implied that the factor most affecting the business performance include, in particular, internal factors (ranked according to their importance), such as utilization of the company’s available assets, financial leverage, return on sales, value added, personal costs, and consumed purchases and services. These factors may be considered as the quantitative value drivers.

The questionnaire survey, which was used to obtain primary data, implied other factors which the managers of the surveyed companies perceived as essential for affecting the business value (either in a positive or negative manner). The factors jeopardising the business value may include the incompetence of responsible employees and disregard of the customers’ requirements. On the other hand, the factors supporting the growth of the business value may comprise human resources (skills), innovation, quality, investment, know-how, and goodwill.

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MIGRATION OF QUALIFIED WORKERS IN THE CONTEXT OF CREATING KNOWLEDGE-BASED ECONOMIES

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Abstract. Creating a knowledge-based economy requires considerable human capital. Its essential characteristic is the unlimited need for competencies and non-routine know-how. Because of globalization and building knowledge-based economies, developed countries turn to a global supply of human capital and adjust their migration policy in terms of adapting their legislation so as to facilitate the recruitment of qualified foreign workers. Permanent emigration of qualified workers from developing countries to economically advanced countries may have a number of negative impacts. In economically advanced countries, emigration can lead to a decline in the supply of skilled domestic workers, as well as a decline in their governments' motivation to finance the education of their residents. In developing countries, the biggest negative of the emigration of their highly qualified workers is reflected in brain drain and the consequent negative impact on economic growth. A possible solution to prevent this negative impact is changes in the migration policy of economically advanced countries. One of them could be stimulating circulating migration. Brain circulation allows workers from poor countries to gain some competencies during their stay in rich countries, which they can use after returning to their country of origin. Remittances, which enable to reduce poverty and accumulate capital in developing countries, also play a significant role. At the moment, there is also a need to consider in the field of migration policy about potential opportunities for joint international governance of this phenomenon. In the current situation, a non-cooperative balance is characteristic. This is stable, despite being ineffective.

Keywords: labor migration, immigration, labor market, knowledge economy, migration policy

JEL Classification: J21, J64

1. Introduction

The current world is changing its shape more and more, not only as a result of ongoing political and economic changes, but also due to migration processes. Migration processes have political, social, economic, religious, and other causes (Pongraczova & Klimko, 2015; Elsner, 2013).

The term knowledge-based economy comprises three components: the first of them being the volume growth of a phenomenon known in the industrialized society as the human capital, i.e. the rise of the contribution of education and training to the production process. The second component equals the information technologies (IT), which represent an important accelerator for the development of the knowledge-based economy by supporting the information flow. The third component is the rise of science, innovation and development-related costs. These are becoming the dominant factors in the competition between different businesses and countries on an international level.

The economies which have already entered the stage of knowledge-based economy need to utilize these three components effectively, in order to produce new goods, since the knowledge-based economy is characterized by the unlimited need of competences and non-routine know-how. International migration of highly qualified workforce is indispensable within the field of knowledge-based economy. A well IT-equipped country is not the sole condition. It is necessary to have the competences necessary for the transformation of all the freely accessible information of no value, in case they were not transformed into new knowledge. In order to transform the information into new knowledge we need well-educated people, scientists etc. Due to their insufficient number, it is necessary to exploit the global reserves of the human capital. Hence the effort of economically developed countries to motivate the qualified and "talented" workers to migrate on an international level.

The article is divided into three parts. The first part represents an analysis of the increasing brain-drain causes in the conditions of knowledge-based economy. In the second part, we will explain the consequences of the international migration of the highly-qualified workers for the host countries and for the home countries of the migrants. Finally, in the third part we will attempt to identify the changes within the migration policies of developed countries and propose a solution possibly beneficial for both parties involved.

2. The causes of the increasing brain-drain in the conditions of knowledge-based economy

The first studies on the international mobility of elites date back to the 1960s. A significant number of research papers of both theoretical and empirical character was reported in the end of the 1970s. Nowadays, it is possible to observe the renewed focus on this issue in both economic research and politics.

The main reason for this focus is related to the steep rise of the number of qualified migrants. Docquier and Rapoport suggest that in the period of 1990-2000 the number of qualified migrants has been increasing two-and-half times more rapidly than the number of unqualified migrants. Thus, the brain-drain still represents a current phenomenon (Docquier & Rapoport, 2012). The empirical studies are the evidence of both absolute and relative rise of qualified labour migration. This can be explained by three categories of causes:

a) Migration propensity increases proportionately to the level of qualification

Decision to migrate is generally based on a simple principle: the worker wishes to settle down in a region, which would ensure him the highest level of prosperity possible with regard to eventual migration costs (Sjaastad, 1962). Migration can be considered to be an investment resulting from the comparison of expecting advantages and migration-related costs.

From the point of view of expected revenues, the impact of qualification on the migration propensity in not so clear: it depends on the relative rewarding of the human capital in the host countries (Borjas et al., 1992). In other words, if rich countries value mostly the competences, then the most qualified workers will tend to migrate into those countries.

On the other hand, from the point of view of the migration-related costs, the migration selectivity is undoubtedly beneficial for the qualified workers. One of the explanations can be that the migration generates costs related to the transport, to the search of a new domicile or of a new employment, which are necessary to invest in. It generates also some psychological costs which are connected to the separation of workers from their relatives and to the adaption difficulties. However, financial and psychological costs reduce proportionally to the migrant's level of qualification.

Since the pension is strongly correlated to the level of qualification, the qualified workers generally do not encounter any pension limits which would otherwise complicate the mobility funding (Field, 1979).

An important fact is also that foreign language proficiency could possibly reduce the migration costs by facilitating the integration of the migrant into the society. "Prior studies suggest that new immigrants assimilate into the labor market by acquiring such skills as language proficiency, familiarity with the host country's culture, and contacts in the labor market, thereby promoting rapid wage growth" (Bratsberg et al., 2002).

Empirical studies of several countries of migrants' origin claim that the migration propensity increases with the level of qualification (Hoddinott, 1994). At the same time, it is also found that occupational differences by gender is more important than occupational differences by nativity status (Edo & Toubal, 2017; Edo & Toubal, 2015).

b) The role of selective migration policies

Most of the countries have been modifying their statutory regulations in the course of the last decade to facilitate the recruitment of foreign qualified workers. Mainly two types of measures are taken for this purpose.

The aim of the first type of measures is to simplify and speed-up the process of attribution of residence and work permits for the professions with the lack of workforce. This is represented in the most of the EU countries by activities in the state of boom (resulting from the technological development, the development of the service sector and the population ageing), which require skilled staff, whose current supply is insufficient. This is the case of certain professions in the field of information technologies, financial economics, insurance industry and public health service. Naturally, the adaptation of education systems represents a form of solution, which effectively reacts to these needs. However, their realisation takes time.

The second type of measures tries to attract qualified workers chosen on the basis of specific competences without necessarily offering a specific employment. Briefly, these measures facilitate the arrival of highly qualified job applicants. Australia and Canada were the first countries to apply very similar point based systems in the 1980s for the selection of immigrants. The essence of these systems is based on an attribution of certain number of points to each applicant according to the age, the level of linguistic competences, education, professional experience and his occupation. Each year, a certain number of points is set for the candidate to reach, in order for him to be approved as a permanent resident.

c) The increase of human capital reserves in the developing countries

Another factor which accounts for the increase of the level of qualification in the international migration composition is the increase of the reserves of the human capital in the developing countries. Southern countries have reported a significant rise in the number of graduates. It is the natural effect of decolonisation: if there is a field, were these countries were forced to respond to the society's interest, than it is the education and therefore they collectively created elite. And since their labour markets cannot absorb all the competences introduced in the market (the reason being their insufficient development), young graduates are condemned to the internal selection - the possibility to accept a low qualified job (taxi drivers, catering service etc.) – or working abroad. Cadena claims that lowskilled immigrants tend to settle in states with low and stagnant minimum wages (Cadena, 2014). Thus, they attempt to increase their chances when searching for a job adequate to their level of qualification, earn a salary adequate to their needs and the level of their education investments. «Native and immigrant workers of similar education levels may differ in several respects. First, immigrants have skills, motivation, and tastes that may set them apart from natives. Second, in manual and intellectual work, they may have culture-specific skills and limitations such as limited knowledge of the language or culture of the host country. Third, immigrants tend to concentrate in occupations different from those mostly chosen by natives because of diaspora networks, information constraints and historical accidents (Docquier et al., 2013). For example, in the UK, "for a native-born worker a response that their highest qualification is in the "other" category almost certainly means a low level of education" (Manacorda et al., 2012; Forlani et al., 2015). These are so-called push factors which force people to migrate.

3. Economic consequences of the highly-qualified workforce migration

The immigration of qualified workers enables the northern countries to respond to the needs of a specific workforce. However, this kind of policy is not risk-free, as it can have two negative consequences.

Firstly, relying on foreign qualified workforce can in a longer term cause the decrease in the supply of autochthonous qualified workers. The introductory rise in the qualified job offer can decrease the relative wage for type of jobs and thus decrease the stimulation of autochthonous population to acquire education in the given professions.

Secondly, the possibility to utilize the qualified workforce without necessarily incurring expenses for its education could decrease the government's and companies' motivation to finance the education of their residents. The primary increase in the qualified workers reserves induced by immigration could be, in the long term, compensated by the decrease of the number of the qualified autochthonous population.

As far as the southern countries are concerned, these are usually the victims of the negative consequences connected with the brain-drain. Most of the theoretical and empirical studies report two negative consequences of the brain-drain.

First of all, the most qualified workers are those who contribute to the public budget. The migrant's countries of origin thus loses a crucial resource of profits, which in these countries could be subject to taxation and redistribution. The countries concerned therefore fund the education of their emigrants without a real return. To achieve a certain degree of compensation some authors suggest taxing the emigrants abroad and then redistributing the obtained finances in the migrant's country of origin[1].

Another situation which can occur is that in accordance with the theory of endogenous growth which states that the engine of the economic growth is the educational accumulation, the loss of human capital resulting from the emigration of qualified workers could result in the

[1] The problem is discussed in detail in the special edition of Journal of Publics Economics „Income taxation in the presence of international personal mobility“, 1982.

drop of income of the workers who stayed in the country concerned, as well as in the decrease of economic growth of the migrant's region of origin (Hague & Kim, 1995).

However, more recent studies conducted in the field concerned report certain ways of shifting from the brain-drain to the brain-gain. According to Mountford (Mountford, 2007), some empirical studies prove that the elite migration could ex-ante be an impulse for the workers to educate themselves. The fact that the qualified workers' salary in the economically developed countries is higher and at the same time, there is a way to move in to those regions increases the motivation to educate. In case if some workers are not able to emigrate, the stimulation effect towards the education could compensate for the direct negative consequence of the brain-drain on the qualified workforce resources. The work of Beine, Docquier and Rapoport accounts for this positive feedback in a very interesting manner (based on the real-life examples) (Beine et al., 2002).

If the level of migration exceeds 20%, this effect becomes negative. It seems therefore that the motivating effect on education could compensate a primarily negative influence of the brain-drain on the qualified workforce in the developing countries only if a significant part of the educated workers cannot in the end emigrate. If the selective migration policy provides to the experts from the developing countries a kind of opportunity to emigrate, a negative consequence arises.

Furthermore, it is possible for the migration to support the economic growth of developing countries if the workers after their arrival to their country of origin utilize the experience acquired abroad (Domingues dos Santos & Postel-Vinay, 2003). Many case studies conclude that migrants who return to their mother country tend to, thanks to the financial reserves generated abroad, set up a business. It is necessary to emphasize, however, that these effects are conditioned by the return migration.

Many studies in the field of highly-qualified workers migration focus on the profits possibly generated from the financial transfers made by migrants for the development of their mother country (OCDE, 2005). In some countries, these transfers allow a certain reduction in the level of poverty (Privarova & Toma, 2014). Furthermore, they enable the financial investment into the human capital, which is essential for the growth. However, temporary migration could support the spread of know-how and the financial transfer in their benefit.

Permanent qualified workforce emigration from the less developed countries could have a negative impact on their growth possibilities. On the other hand, temporary migration could support the dissemination of know-how and the transfer of financial resources in their benefit.

We can generally observe significant flow of circulating migrants in the first decade following the fall of Berlin Wall. These flows represented the vast majority of the migration between the European west and east. Expecting the entry of several countries into the EU, these countries started to perform various forms of migration circulation: the mobility became their lifestyle.

These migration circulations exist in other regions of the world as well, the statutory conditions might be less favourable, as the migrants are subject to the visa requirement. Those privileged (double citizenship, repeat entry visa, traders and businessmen, intellectuals) create migration networks where the bread business and trade activities are a typical phenomenon. The more open borders, the more the migrants circulate and the less they permanently settle down. On the other hand, the closer the borders, the bigger tendency to settle down as a result of the fear not to be able to return to the host country. Circulating migration is becoming one of the basic current mobility trends.

4. Changes in the migration policy of the economically developed countries

Permanent migration of qualified workers from poor to rich countries is a problem for these countries. Poor countries are definitely deprived from the competences necessary for their growth and at the same time, it is a source of the migration pressure which is put on the host countries. On the other hand, a conducted circulation of qualified workers could result in a situation beneficial for both parties involved.

The "brain-circulation" could help the workers from poor countries acquire certain competences during their stay in rich countries. These could be consecutively utilized after the return of migrant back to his country of origin. The brain-circulation thus provides the workers an opportunity to benefit from a higher income. On the one hand, workers send their income to their homeland. It is possible to observe that the temporary migrants send more money to their homeland than the permanent migrants do. Furthermore, some studies prove that the temporary migrants have a higher tendency to get employed and thus create financial reserves. Temporary migration of qualified workers thus supports the decrease in the level of poverty and the capital accumulation in the developing countries.

From the point of view of the host countries the short-term migration enables to satisfy the needs of the workforce as the migrants arrive already trained and the host country does not need to train them anymore.

The brain-circulation can be effective only if two conditions are met. Host countries must express a will in their migration policy. Obviously, the residence permits and work permits awarded by a foreign expert should be temporary. Besides, the temporary immigration should not represent a way how immigrants could acquire permanent residency. Furthermore, the international mobility of qualified workers is related to the significant migration costs and adaptation costs, as well. The way of return funding should be anticipated and planned at the moment of the migrant's departure from his country of origin. At the moment, the financial aid is not sufficient for the return of the qualified workers to their mother country where they could use their skills and invest their reserves correctly.

It is obvious that each country realising currently its own migration policy aimed at highly-qualified workforce is not interested in a shift from its contemporary strategy. For instance, a northern country, which would refuse to accept the foreign experts would refrain from their competences without necessarily having a beneficial impact on the country of migrant's origin (southern country), if this would not simply lead to the migration of citizens to other countries in the competitive position. In other words, the current non-cooperative balance is stable despite the fact that it is inefficient.

As can be stated from the game theory, the only way to ignite an efficient collaboration in the field of migration policy is that the parties concerned will respect simultaneously the new game rules. We believe that the EU has the right to lunch such a process. It has the political, financial and human resources to begin a comprehensive and extensive programme for supporting those circulating migration forms, which would be beneficial for all the parties involved.

5. Conclusion

In the context of forming a knowledge-based economy, the profile of an international working migrant has significantly changed. Nowadays, the migrants are more educated than their antecedents (OCDE, 2014). The goals of migration policies have changed, as well. The current discussion is focused more on the social cohesion. The public opinion demands a guarantee related to measures in favour of the integration of immigrants, as well as the guarantee that the work migration management will enable the efficient stimulation of the economic growth.

Selective policies, whose aim is to accept these qualified workers, were introduced in 1980s in Australia and Canada and were later institutionalised by the United States in 1990s. Nowadays, many European countries have changed or adjusted their legislation in this field. Economically developed countries compete to attract the foreign experts without necessarily consulting these questions whether mutually or directly with the countries of the migrants' origin.

In fact, the international mobility of qualified workers is a potential resource of profit as well as of loss for both migrants' host countries and countries of their origin. The interdependent relations established between the international migrations of the qualified workers logically lead to the need to reflect on potential possibilities of a common management of this phenomenon.

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BUSINESS LOGISTICS IN THE CONDITIONS OF GLOBALIZATION

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Abstract. Economic change, the explosion of information and communication technologies, business orientation on quality, globalization of world trade, production automation, reduction of production costs, increasing importance of system access and, last but not least, the level of customer service and consumer satisfaction have led to a new understanding of logistics. Business logistics, under the influence of globalization and the rapid development of technology and systems, is transformed into modern logistics, which is a significant source of competitive advantage in the market. The process of globalization also has a significant impact on logistics itself, as logistics has globalization functions in international chain and flow of goods. This creates a relationship between globalization and logistics, with logistics being the strategic management of chains, with a view to customer satisfaction and synergy effect. Every company should reflect this fact, which should be flexibly adapted to market needs. The current dynamic time brings change, new challenges and tendencies in logistics itself. If a company wants to stand up to a competitive struggle, it must be subordinate to it, track its development, and integrate new ways, methods, techniques, approaches, and business logistics technologies into its genesis. The primary survey was carried out on companies located on the territory of Slovakia. The aim of the article is to analyse the factors affecting business logistics in companies based on the secondary and primary surveys. This area in company has become strategic, so it must not be neglected and must be given sufficient attention.

Keywords: globalization, business logistics, tendencies of business logistics

JEL Classification: F60, L90, M11

1. Introduction

Every company is subject to the phenomenon of globalization. The emergence of globalization gradually dominated every area in the company. Very rapidly growing number of business activities that are affected by the global nature of the world economy. The world is getting smaller and more connected. Globalization brings new unprecedented possibilities. Internationalization, co-operation, constant progress in the development of new technologies also change the functioning of logistics in the company. Just the logistics sector brings many positive changes in the business of companies operating in the global market.

2. Literature review

Globalization is the integration of economies, industries, markets, cultures and policymaking round the world. Globalization describes a process by which national and regional economies, societies, and cultures have become integrated through the global network of trade, communication, immigration and transportation (Ceniga & Sukalova, 2015).

Global competition imposes higher standards. Reorganization of business processes, coordination of business operations and increased efficiency are the results of investments in the development of logistics or cooperation with external partners on the performance of logistics activities (Milic & Zoric, 2017).

Globalization is the most important factor of business development for any industry, including the market of transport services. Started late last century, it was caused by such reasons as the availability of cheap labour with high labour productivity, the location of sources of raw materials with the establishment of industries near them, as well as the emergence of new markets. Globalization is characterized by increased competition, the accelerating pace of growth of foreign direct investment, increase in the volume of intra-firm trade and the establishment of global multinational companies. Transport plays an important role in the globalization of economic systems *(*Kazanskaya *&* Palkina, 2016*).*

Current economic situation that is determined as a recession, gives a chance to total reformation of future economic affairs. It is evident that the mankind will have to address the challenges of the civilization (environment, food supplies, portable water, alternative sources of energy, poverty) and pass to new technologic production pattern based on genetic engineering, information, nano- and other green and blue technologies. It is related to finding new sources of world economic development (Zhuravleva & Panichev, 2016).

According to Yu & Hu (2009) the integration of E-Commerce and supply chain fully changed the exchange style and operation of the original supply chain such as logistics, information flow, and capital flow, which makes full use of resources, improves the efficiency, reduces the cost and improves service quality. However, as the worsening global environment issues, every country makes more and more stringent environment regulations and strengthens the green barrier continuously.

According to Romanova & Bolek (2014) rapid progress both in the economic field, in science, technology, the technology highlights the need for change, innovation, continuing education and use of information and communication technologies as key factors of competitiveness. Information and communication technologies penetrate into social life and into all levels of the economy, which transforms society into information. It can be defined as a company in which the main focus is information and information technology.

In any globalization process, distribution of goods and services between and within local industrial and consumer markets is of great importance. Globalization of markets and reorganization of distribution are mutually dependent processes that involve changes in market structures. Contemporary examples of this are the emergence of global supply chains, internationalization of wholesale, retail and transportation firms and the development of sales via the Internet (Mattsson, 2003).

Tundys (2015) in the era of globalization defined green and sustainable supply chains. It seems to be reasonable to distinguish these concepts. However, by the construction of the evaluation system it can generally be noted that both areas are similar and a part of this instruments can be used in both of supply chain.

Trade liberalization, intensification of flows of products, services, capital, technology, information and an increasing international competition, standardization of tastes and changing customer requirements, providing the customer with the right product to the right place at the right time, force companies to make such improvements in the flow of products and information in the supply chain. One of the possibilities to improve the flow management is the appropriate use of selected methods or concepts that contribute to faster and more economically efficient movement and that in the era of globalization lead to such important element as the elimination of waste during the flow of products from procurement through manufacturing to distribution, which ensure a high level of service for all participants in the supply chain (Piasecka-Głuszak, 2016).

Dzubakova et al. (2016) warn that globalization and the opening of international markets significantly affect the scope and structure of the certification of management systems.

Nowadays, the vast majority of businesses, including logistics companies, are determined to implement product, technical, technological and organizational innovation. The newest solutions such as Internet of Things, Big Data and Industry 4.0 create opportunities to meet the needs of customers and also contribute to the development of logistics and supply chains management (Witkowski, 2016).

In the last decade, logistics has become one of the decisive factors in the world economy. Reasons were mainly according to Malindzak & Takala (2005):

- Globalization of the world and the globalization of world trade - the market has opened up and the space for the movement of investments, materials, products, energy, information, people, finance has been liberalized. Significantly it contributed to the construction of transport systems, road, rail and air transport. Electronic commerce increases efficiency and productivity and supports the management of business activities - commercial logistics. Companies realize competitive opportunities, build chains, our network and logistics network develops macro-logistics.
- The imbalance between resources, production and consumption and their allocation across the globe - is due to the historical development, the state of the economy, the geology of the territory, population development and living standards. The proportionality of these potentials, and thus the existence of flows, is a matter of decades and centuries. For this reason, logistics will play an increasingly important role in cost and competitiveness.
- The development of new management technologies - the development of logistics also contributed to the development of outsourcing methods, risk management methods, management of distribution companies' productivity, concentration of capital in large companies, The development of distributed management, modeling and simulation methods, multi-critical optimization, and their use in global information networks, provides tools for managing flows across the globe.
- Cost factor, cost, global competition - logistics time - automation and computerization have increased the productivity of production systems. Without them today, we can hardly imagine successful production. The cost reduction area is therefore in follow-up operations, providing processes and their logistics management. Compared to automation and IT technology, the application of logistics is less costly and more efficient.
- The new direction of modern business logistics in the 21st century will affect the acquisition of a competitive advantage on the global market through high quality logistics services. This is also related to the introduction of world class logistics - World Class Logistics. The term includes attributes: time compression, reduction of logistics

costs, increasing quality of logistics services (Mesaros et al., 2007). Observing these attributes is challenging because the business does not guarantee world-class achievement as long as it is done within the overriding ineffective understanding of its logistics system. The new challenges are necessary to lead by consistent logistic reengineering, which can bring the company closer to the "world class logistics".

Bukova (2008) points out that in recent years companies have been operating in other conditions, which has led to a change in all areas of the company, including logistics.

A fundamental change in the logistics of an industrial company in the 21st century can be seen as a change from the period of the industrial era to the era of informatics. In this situation, each industrial company has to prove its efficiency and adapt to the new environment full of dynamic changes. More detailed change can be seen in Table 1.

Table 1: Change in the 21st Century Logistics

Logistics Company	
In the era of industry	**In the era of informatics**
Logistics as an implementer of material and associated information flow: the right product in the right amount of the right quality at the right time, the right place, with minimal cost.	Logistics as part of the strategy: time conditioned distribution of resources as goods, people, capacity and information, operates within the meaning of substitution of material processes for information processes.
The level of logistics services is determined beforehand and it is obtained at the lowest cost.	Logistics services are one of the key tools to achieve greater corporate competitiveness.
Logistics is seen as closer integration of material handling, packaging, storage and transport with information.	Logistics is based on: - Forecasting, strategic management, project management, process management, information technology - Customer service, distribution, creation of reserves, inventories of stocks, purchasing and procurement, export and import - Planning and operational management of production, including the determination of the product range - Management of material management, packaging, transport, storage, handling and recycling - quality
Logistics specialists are recruited mainly from workers of the aforementioned areas.	Logistics specialists are trained completely: - In the area of professional know-how: logistics strategy, customer service, logistics systems including transport systems - In the methodological know-how: logistics systems design, selection and award of forecasting models, logistic systems

Source: (Pernica et al., 2008)

3. Methods

The main objective of this paper is based on the study of theoretical knowledge and implementation of the questionnaire survey to analyze the factors influencing the business logistics in the era of globalization in Slovak companies.

The main objective is based on several sub-objectives:

- comparison of the globalization perspective in business logistics,
- analyze factors of business logistics,
- mapping of factors in Slovak companies.

The objectives of the paper are achieved by using more general methods of examination. In the processing and comparison, we used the literature search, analysis and synthesis, induction and deduction, comparison and scientific abstraction, querying, sorting method, elimination method and graphical method.

4. Data analysis

The primary survey was conducted in Slovak companies. The total number of companies was addressed 180, but the return was 83,33 %, which represented 150 companies. High returns mean that companies are not indifferent to logistics and its direction.

The survey found that in the globalization era, business logistics are influenced by several factors. It is these factors which determine its further direction. When evaluating the factors from the primary survey, we used the Likert scale. This scale is one of the most used and reliable techniques for measuring attitudes. From the scale of 0 to 6 in the questionnaire survey, we approached in the article the scales from 4 to 6 when evaluating the survey. We used the scale of 4 to 6, because respondents in this scale are partially or very influenced by the factors.

From the primary survey, we found that business logistics is the most important factor in the digitization of logistics processes. The percentage was 86 %. A high percentage is the constant improvement of business logistics in the area of information and communication technologies, because many processes are simplified.

The second largest percentage represents a cost reduction in logistics. The percentage was 83,33 %. Every company tries to optimize their processes with the help of cost reduction in logistics. Costs of business logistics account for approximately 40 % of the total cost of the product. For this reason, this factor is important in business logistics.

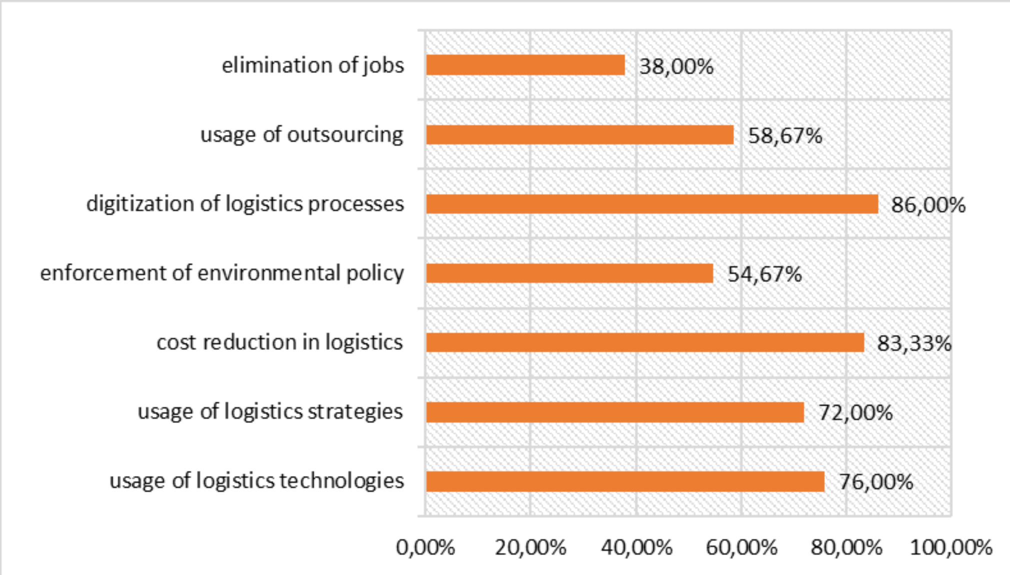
The third largest share is the usage of logistics technologies. The percentage of this factor was 76 %. The status of logistics technologies in Slovak companies is dominating. This also shows the results of the survey. Business logistics with technologies such as Kanban, Just in Time, Hub and Spoke, Efficient Consumer Response, Quick Response and others do not.

Percentages above 50 % also had the following factors: usage of logistics strategies with a 72 % share, usage of outsourcing with 58,67 % and enforcement of environmental policy 54,67 %. Logistics strategies are dominated by systems that deal with material, energy and information flows in terms of time and space outside, as well as inside and storage. In logistics outsourcing, the Slovak companies are mainly used at level 3 PL and 4 PL. It is expanded mainly in procurement, distribution, green and reverse logistics. In the 21st century, man has a much greater impact on the environment through his activities. The development of science, industry and the continuous advancement of information and communication technologies are also largely facilitated. Concepts such as climate change, global warming, water pollution, soil, and air are becoming increasingly bloated. Even the companies themselves have become aware of the adverse environmental consequences, which also results in the enforcement of environmental policy.

The results of the survey are evidenced by the fact that, at least during the period of globalization, company-based logistics in Slovak companies is subject to elimination of jobs. The percentage is 38 %. Labor demand in logistics will continue to grow. Companies will create new professions with requirements to reflect on the digitization of production and logistics. We see great potential in the large use of Industry 4.0 in Slovak companies. Industry 4.0 in Slovakia is gradually starting to grow and will be a significant source of competitive advantage in the market.

The percentage of factors influencing business logistics in terms of globalization is shown in the following graph.

Figure 1: Factors acting on the business logistics in the era of globalization in Slovak companies



Source: own processing

5. Conclusions

In the paper, we tried to analyze the factors influencing business logistics in conditions of globalization, based on the studied literature and the conducted survey. We have come to the conclusion that in the process of globalization, business logistics is most affected by the digitization of logistics processes. At least, business logistics in terms of globalization is elimination of jobs.

The onset of digitization is based not only on professional terminology but also on the results of the questionnaire survey in Slovak companies. Companies understand the digitization of logistics processes as one of the important factors, confirms the results of the survey. At the same time, companies do not consider reducing the labor force in the logistics department as an important factor. Prejudices from the onset of digitization in companies in the form of Industry 4.0 invalidate the theory that there would be redundancies in companies. Digitization rather changes the nature of work because it simplifies many processes and eliminates monotony and strenuousness. The intellectual workforce, which, alongside new technologies, will become the cornerstone of the development of the digitization of logistics processes.

We can state that in today's globalized world in every part of business logistics, digitization will play an important role. An innovative environment will probably continue to undergo the changes brought about by the phenomenon of digitization. We are waiting for the fundamental, profound and revolutionary changes in logistics that every company will have to accept.

Acknowledgment

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THE IMPACT OF GLOBALIZATION ON THE DEVELOPMENT OF ALTERNATIVE ENERGY IN RUSSIA

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Abstract. The attitude towards renewable energy sources has changed under conditions of globalization. Alternative energy is booming all over the world. Interest in this direction of energy development is influenced by many factors: the growth or decline in prices for oil and other fuels, the problems of energy security of states, the possibility of reducing the dependence of a number of countries on oil and gas imports, as well as the general concern about climate change on the planet. The purpose of this article is to analyze the experience of the energy policy pursued by the governments of the leading states in the field of alternative energy, and to assess the possibility of applying the accumulated experience to Russia. Many countries of the world are currently pursuing a national energy policy in the field of the use of renewable energy sources. Among the government measures aimed at developing alternative energy are the formation of a new tariff policy in favor of the use of alternative energy sources, the use of insurance mechanisms, the establishment of a minimum level of energy costs produced with the use of alternative energy sources, etc. At the same time, the Russia's fuel and energy complex based on the use the traditional technology to ensure the national security.

Keywords: globalization, renewable sources of energy, alternative energy, government economic policy

JEL Classification: F63, Q42, Q43, Q48

1. Introduction

The world economic community is transformed into an integrated economic system, where national economies and other economic entities are united by an international division of labor, global value chains, the global financial system and the World Wide Web. At the same time, national, in essence and global economic relations are beginning to change roles. The role of the leading as the formation of supranational financial and other institutions and transnational value-added structures is increasingly gaining worldwide relations. Moreover, national economic mechanisms are compelled to adapt to the realities of the emerging global economy. And the importance of the regulatory functions of national states, which were called upon to protect the economy from unwanted foreign economic and political impacts (including through import barriers, export subsidies, the national currency exchange rate, public opinion, etc.) is becoming increasingly noticeable.

In the context of globalization, the public of different countries seriously thinks about the exhaustibility of energy resources, the need for careful treatment of energy and nature. Undoubtedly, it is necessary to think about the future, to experiment, to search for and use new energy carriers and the possibilities of their use, especially as in the conditions of globalization the information economy is developing, a global network space is being formed.

To help the industry reduce energy and material consumption and the associated environmental impact, UNEP and UNIDO have launched the Program for Resource Efficient and Cleaner Production. Since 2016, 17 sustainable development goals, outlined in the "Agenda for Sustainable Development for the period until 2030", officially adopted by the world leaders in September 2015 at the historic UN summit, have officially come into force.

Globalization dictates the fulfillment of certain conditions. Russia must fulfill some international obligations, since the task of introducing alternative sources of energy is set in international agreements ratified by the Russian Federation. The purpose of the article is to analyze the experience of the energy policy pursued by the governments of the leading states in the field of alternative energy, and to assess the possibility of applying the accumulated experience to Russia.

The role of alternative energy sources in energy policy has been widely discussed for many years in domestic and foreign specialized literature and in the media. The spread of opinions and assessments about the need to stimulate the use of alternative energy sources is very wide. Characterizing alternative energy, most scientists focus on the economic component - the efficiency calculations (Horschig & Thrän, 2017; Gastal, 2007). Recall that to date, many energy production based on the use of alternative energy sources are unprofitable and subsidized by the state. For example, Germany spends tens of billions of euros to support this industry (Growitsch, 2016; Growitsch & Meier, 2015). Too many other countries and not only to European less affluent countries such a policy is "too expensive" (Chodkowska-Miszczuk Justyna, 2017). Since the use of alternative energy sources is not profitable, programs for the development of alternative energy sources in countries in energy resources, for example, in Australia and South Africa, are difficult (Byrnes, 2013; Forrest, 2013; Lombard, 2015).

Interest in the use of alternative energy sources from almost all countries in the world is growing. In addition, for many countries that are poor with their own energy carriers, this program helps reduce dependence on their imports.

Obviously, the goals of environmental protection are also important, but far from decisive in the introduction of alternative energy sources. Activities related to the thermal insulation of buildings, as well as more efficient handling of heat in general, work to reduce emissions of harmful substances into the atmosphere on transport, give a more serious result for maintaining the ecological balance than the implementation of measures related to the replacement of fossil fuels with alternative and renewable sources in the production of electricity (Ürge-Vorsatz, 2009). But no one disputes the fact that at present it is necessary to look for and find opportunities for using alternative energy sources in order to conserve natural resources for future generations.

2. Methods study

Despite the fact that alternative energy is a relatively new modern, to some extent even a high-tech industry, a significant path has already been passed in its development. The documents characterizing the energy policy of Germany, Russia and some other countries were analyzed. Comparison of reserves and extraction of energy resources was carried out in different countries of the world, power capacities of power plants working on the use of alternative sources were estimated.

It is known that the production of electricity through alternative sources has its pluses and minuses. Unlike fossil fuels, alternative sources of energy at the present stage of technology and technology development can't become the only source of energy production, since the generation of electricity on them is not constant (in force of certain features of the technology of each method) (Rodionova, 2017).

3. Results

120 countries pursue a policy to promote renewable energy generation. In 2011 China leads worldlist of the countries with most renewable power generation capacity (International Renewable Energy Agency, 2016). In China hydropower generation also has rapidly increased. In 2012 began power generation on the world's largest hydropower station Three Gorges Dam that spans the Yangtze River. The total electric generating capacity of this station is 22,500 MW. In 2013 China joined International Renewable Energy Agency IRENA. China's manufacturers supply renewable power plants all over the world. In 2015 five Chinese companies, manufacturers of renewable power equipment are among Forbes annual ranking of 2 000 world's largest public companies. Therefore China's government and business are looking into development of alternative energy sources. Currently the Chinese government provides financial support for installation of solar panels on houses and the Chinese market for solar electricity is growing very rapidly. In 2015 China's solar power generation bypassed Germany's to become the largest in the world (Bretschger, 2017; Chodkowska-Miszczuk, 2017).

The USA is on the second place in the ranking of power generation capacity through alternative sources of energy. In the USA the relative share of wind power is especially high (Sovacool, 2011). The energy policy in the USA is primary defined by the political party which control White House and Congress at this moment and by industrial corporations. USA had not ratified the Kyoto Protocol treaty, but formally joined the Paris global climate agreement. A target of the Paris global climate agreement is an emissions reduction. In 2017 USA President Donald Trump had announced that USA is going to withdraw from the Paris Agreement. But the withdrawal process for any given country can only be completed three years after the agreement has come into force. This means the USA cannot officially leave the treaty until November 4, 2020. USA was the first who encouraged diversity of suppliers in the domestic market through supporting producers of alternative energy.

The expansion of renewable energy is one of the central pillars of Germany's energy policy. Germany's government wants to make the electricity supply more climate-friendly and with an increasing scarcity of resources, become less dependent on fossil fuels (Ringel, 2016). The renewable energy policy encompasses a wide range of targets. In 2006 the German government has presented the High-Tech Strategy for Germany, which is set to force support of certain industries - energy, health, biotechnology, nanotechnology etc. In 2010 and in 2014 the Federal Cabinet adopted a new German High-tech Strategy proposed by the Federal Ministry of Education and Research.

The alternative energy generation made necessary to construct new power lines from the north of Germany to the south. In 2009, the German Federal Parliament adopted «Energy Line Extension legislation» («Gesetz zum Ausbau von Energieleitungen»). The digital era recently began in the energy sector. All power flows data will be transferred into a digital form, and the remote control of power flows will be empowered. One of the greatest challenges for the so-called Energy Transition is synchronization of weather-dependent wind and solar power generation and consumption of energy. As part of this program, Germany is developing technologies for the accumulation of electricity.

There are many reasons to use the alternative energy in Germany. The country has the largest national economy in Europe. Therefore Germany has financial resources to improve renewable energy technologies and to implement alternative energy projects. Germany has well-developed infrastructure – positive reserve capacity in the power system allow to offset possible shortness of power supply. German federal government plays a crucial role in the German economy. In energy policy decision-making Germany widely use results of the scientific research.

But so far in Germany alternative energy is not competitive and can't effectively replace fossil fuels. Despite the promise of alternative energy sources Germany still remains heavily dependent on import of fossil fuels. 2017. Therefore Germany wants to build the natural gas pipeline North Stream 2 from Russia. Germany hopes that this pipeline will cut energy cost and lock in secure supplies (Aune, 2017).

Germany doesn't have possibility to exchange power generated from alternative energy between various areas. The weather in all regions of Germany is approximately the same. In order to use difference in weather conditions in neighboring countries, Germany is interested in developing alternative power generation there also. Although till now German experience in alternative energy generation could not be used fully by neighboring countries because of lack of financial resources there. For example within Visegrad region in the Czech Republic and Slovakia the production of energy from agricultural biogas grew the most, where the financial support was the highest (Chodkowska-Miszczuk. 2017).

Australia or South Africa are rich in energy sources. There exist significant policy barriers in inhibiting the transition from a mainly fossil-fuel-based energy-provision system to a multi-source (multi-owner) provision system. Energy monopolies oppose to adopt the legal framework on renewable energy and to incentivize the deployment of renewable energy (Byrnes, 2013; Forrest, 2013; Lombard, 2015).

4. Discussion

There are various mechanisms of alternative energy policy. Among them are: the formation of a new tariff policy in favor of the use of alternative energy sources, the use of insurance mechanisms, the establishment of a minimum level of energy costs produced with the use of alternative energy sources, the establishment of minimal share of renewable energy in gross final energy consumption (binding renewable energy targets), financial state support for building alternative energy power plants etc.

In each country there are reasons to use alternative energy. The USA support producers of alternative energy to encourage diversity of suppliers in the domestic market and to take care of the environment. Most often alternative energy policy is pursued in rich states of the USA, which economy is switched to the path of post-industrial development. China is leader's manufacturer's of renewable power plants all over the world. Therefore China's government and business are looking into development of alternative energy sources.

The question about benefits of alternative energy use is still in the controversial stage. There are many reasons the world is looking for alternative energy sources in an effort to reduce pollutants and greenhouse gases, to preserve many of the natural resources that are currently used as sources of energy. But alternative energy is not competitive and can not effectively replace fossil fuels. The recent decline in oil prices have lowered interest in alternative energy. renewable energy technologies are only viable through costly state subsidies.

Russia don't have such problems as Germany and do not need to reduce the fossil energy use due alternative energy. Russia is rich in energy resources. The Russian power system is based on the use of powerful power plants.

In the structure of primary energy consumption of Russia, natural gas is in the first place (more than 50%, in 2015), on the second - oil (more than 20%), on the third - coal (13%), on the fourth - nuclear energy (7%), and on the fifth - hydropower (6%). The share of alternative energy sources is still negligible (BP Statistical Review of World Energy, 2016). But it should be considered that in Russia natural gas is the main energy source used for energy production. Natural gas is cleaner and more efficient than other fossil fuels. Therefore modern Russia stand not for the challenge to solve problems with the delivery of energy sources and with pollution due energy production. There is currently no acute problem of transition to alternative energy sources. However, both in Russia and Europe it is necessary to care out the ecological cleanliness of the further production of electricity.

In 2005 the International Bank for Reconstruction and Development and the Government of Russian Federation signed an agreement providing finance assistance for the development of renewable energy in Russia. Russian energy policy entered a new development stage. In 2009 Russian parliament has adopted two laws: "The Energy Strategy of Russia for the Period up to 2030" and "The key elements of the Energy Policy concerning Energy Efficiency and Renewable Energy use up to 2020". The targets contained in this acts require to increase the share of alternative energy use in the Russian electricity generation from 1% to at least 4,5%. In 2013, the government passed a resolution "The mechanism for the promotion of Renewable Energy on the Wholesale Electricity and Capacity Market". It consist the rules of investor financial support for building new alternative energy power plants. The rules set the minimum price sale price at capacity market. Therefore the investor is guaranteed a return on investment. Russia has undertaken to build until 2024 wind farms with a total capacity of 3,6 GW. By forecast in 2030 the increase of installed renewable energy capacity must reach 10 GW. Russia under the Soviet Union had obtained the considerable experience in the use of alternative energy sources and it should be not be forgotten.

5. Conclusion

Globalization impact the world and national economy. In accordance with the provisions of the international agreements Russian government provide alternative energy policy. However, we believe that Russia reached on energy resources (oil, natural gas and coal) should provide energy policy in the interests of the inhabitants, ensure reliable power supply to consumers in the domestic market. The use of alternative energy sources and the development of related industries can help to solve the target of the welfare of Russian society.

Next years the structure of primary energy consumption will be dominated by fossil fuels. But alternative energy development projects can be implemented in the far-away Russian regions. It is very difficult to supply energy in some regions which do not have access to the integrated power system. Besides alternative energy use stimulate the development of Russia's rural areas.

Globalization demands implementation of international agreements. The task of introducing alternative energy sources is set in international agreements ratified by the Russian Federation.

And Russia intends to implement these decisions not only to introduce alternative energy sources, but also to protect the environment as a whole.

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MULTIVARIATE ANALYSIS OF ENTREPRENEURSHIP IN POLAND AT REGIONAL LEVEL

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Abstract. In the reality of global competition creating good conditions for entrepreneurship should be considered as one of the most important institutional growth factor. In the case of Central European countries that have the history of central planned economy and face the problem of improving their institutional order the problem of creating good conditions for business and entrepreneurship is of mayor importance. As a result, the main objective of the article is to conduct quantitative analysis of conditions and factors influencing entrepreneurship in Poland at regional level (NUTS 3 level). In the research the factors influencing entrepreneurship are treated as multivariate phenomena. As a result, a taxonomic approach was applied here. In order to quantify the conditions influencing entrepreneurship zero-unitarization method was used for obtaining a synthetic measure of development of the analyzed phenomenon. Based on the obtained measure a ranking of Polish NUTS 3 regions for the years 2010-2015 was obtained, which provides the information on the best regions for entrepreneurs and the worst once. The research confirmed significant disparities in regard to the conditions influencing entrepreneurship at regional level, which should be the object of interests of Polish authorities. The result of the research can be used in proposing guidelines for reforming regional policy in Poland.

Keywords: entrepreneurship, multivariate analysis, zero-unitarization method, regional analysis, Poland

JEL Classification: P25, C38

1. Introduction

In current international competitive environment dynamic growth of developed economies mostly relay on intangible resources such as level of entrepreneurship and quality of human capital (Balcerzak & Pietrzak, 2016a, 2017; Pietrzak & Balcerzak, 2016a). These factors determine supply of new highly innovative startups and influence effectiveness of small and medium enterprises that in the case of most of European economies have the biggest share in national employment and are responsible for significant percentage of national GDP (Kljucnikov & Belas, 2016; Zastempowski and Przybylska, 2016; Kljucnikov & Popesko, 2017; Rahman et al. 2016; Ivanova, 2017). As a result, stimulation of national entrepreneurship level and improvements of conditions for development of small and medium enterprises, especially the start-ups and entrepreneurs starting their activates, is defined as the basic role of government support and regional economic policy (Adamowicz & Machla, 2016; Siemieniuk, 2016). It is commonly accepted that good conditions for entrepreneurship make a factor that significantly stabilize national economies against the crisis and influence positively their socio-economic sustainability (Pietrzak & Balcerzak, 2016a).

Based on the importance of level of entrepreneurship for development of national economies the main objective of the research is to conduct quantitative analysis of conditions and factors influencing entrepreneurship in Poland. In current research a regional analytical perspective is taken (NUTS 3 level). In the article the determinants and factors influencing level of entrepreneurship are considered as multivariate phenomena. Thus, a multi-criteria approach (zero-unitarization method) was used in the analysis, which enabled to propose a ranking of regions for the years 2010-2015.

2. Zero-unitarization method

In the research zero-unitarzation method was applied in order to obtain a synthetic measure for multi-criteria phenomenon (Pietrzak, 2016; Balcerzak, 2016a; Balcerzak & Pietrzak, 2016b; Zelazny & Pietrucha, 2017). The method was chosen due to its simplicity and high applicability in the case of multivariate research (Kukuła & Bogocz, 2014). The variety of empirical applications of the method can be found based on the examples of research devoted to studding fiscal activities of the countries and regions (Balcerzak, 2016b; Sekuła & Smiechowicz, 2016), effectiveness of institutions (Balcerzak, 2009), health economics (Łyszczarz; 2016), level of socio-development at regional level (Bartkowiak-Bakun, 2017).

The zero-unitarzation method can be applied both in static and dynamic research. However, in the second case a constant reference point for the whole analytical period must be applied (Kukuła & Bogocz 2014). The set of potential diagnostic variables should be analyzed with respect to the taxonomic information effectiveness criteria. The variables should be characterized with low correlation, high space variation and information significance (see more Balcerzak, 2015; 2016c). Then, a set of diagnostic variables should be shared into two groups: stimulants and dis-stimulants. The stimulants are considered as variables that improve the situation of analyzed object. The dis-stimulants describe the aspects that hamper the position of the object (Hellwig, 1972). Based on the assumption of keeping constant reference point the stimulants are normalized with application of equation 1 and the dis-stimulants with equation 2.

$$N(x_{ijt}) = \frac{x_{ijt} - \min\limits_{it}\{x_{ijt}\}}{\max\limits_{it}\{x_{ijt}\} - \min\limits_{it}\{x_{ijt}\}} \qquad (i = 1, 2 \ldots n);\ (j = 1, 2 \ldots m);\ (t = 1, 2 \ldots l),\ N(x_{ijt}) \in [0, 1] \quad (1)$$

$$N(x_{ijt}) = \frac{\max\limits_{it}\{x_{ijt}\} - x_{ijt}}{\max\limits_{it}\{x_{ijt}\} - \min\limits_{it}\{x_{ijt}\}} \qquad (i = 1, 2 \ldots n);\ (j = 1, 2 \ldots m),\ (t = 1, 2 \ldots l),\ N(x_{ijt}) \in [0, 1] \quad (2)$$

After normalization procedure the synthetic measure (SMR_{it}) describing analyzed phenomenon can be obtained with application of equation 3.

$$SMR_{it} = \frac{1}{m}\sum_{j=1}^{m} z_{ijt} \quad (3)$$

$$(i = 1, 2 \ldots n);\ (j = 1, 2 \ldots m);\ (t = 1, 2 \ldots l);\ SMR_i \in [0, 1];\ z_{ij} \in [0, 1]$$

3. Empirical analysis of conditions for entrepreneurship in Polish NUTS 3 regions

Based on the aim of the article a regional analysis of the level of entrepreneurship in Polish NUTS 3 regions in the years 2010 and 2015 was conducted. In the research the diagnostic variables proposed by Central Statistical Office of Poland were used. In the empirical research the dynamic perspective described in previous section was applied. All the diagnostic variables used in the research were considered as stimulants. Thus, they were normalized with application of formula 1. The variables are presented in table 1. The choice of the diagnostic variables was mostly restricted with the data availability at the NUTS 3 level.

Table 1: Diagnostic variables

Variable	Description of the variable
X_1	Number of entities included in the REGON registration per 10 thousand inhabitants
X_2	Share of comercial law companies in the number of economic enteties
X_3	Share of companies with foreign capital in the total number of commercial law companies
X_4	Gross value of fixed assets in enterprises per capita
X_5	Capital expenditures in enterprises per capita

Source: own work.

The obtained ranking of the regions and the dynamics of the synthetic measure of development of conditions for entrepreneurship in the years 2010-2015 is given in table 2.

Table 2: Ranking of the regions in regard to conditions for entrepreneurship and dynamics of its measure in the years 2010-2015

NUTS 3 region	SMR_{ijt} in 2010	Rank in 2010	SMR_{ijt} in 2015	Rank in 2015	Dynamics in the years 2010-2015
CAPITAL CITY WARSZAWA	0,7899	1	0,9092	1	0,1193
CITY POZNAN	0,4685	2	0,5868	2	0,1183
CITY WROCŁAW	0,4216	3	0,5368	3	0,1152
TROJMIEJSKI	0,3933	5	0,4860	4	0,0927
WARSZAWSKI ZACHODNI	0,3965	4	0,4812	5	0,0847
CITY KRAKOW	0,3598	7	0,4793	6	0,1195
CITY SZCZECIN	0,3818	6	0,4331	7	0,0513
TYSKI	0,2814	13	0,3594	8	0,0781
KATOWICKI	0,2815	12	0,3580	9	0,0764
OPOLSKI	0,2647	17	0,3564	10	0,0917
GORZOWSKI	0,3483	8	0,3558	11	0,0075
LEGNICKO-GŁOGOWSKI	0,2541	19	0,3546	12	0,1005
CITY LODZ	0,2694	15	0,3470	13	0,0776
GLIWICKI	0,2499	20	0,3440	14	0,0941
POZNAŃSKI	0,2807	14	0,3432	15	0,0624
SZCZECINSKI	0,2966	9	0,3268	16	0,0302
JELENIOGORSKI	0,2873	11	0,3265	17	0,0392
WROCŁAWSKI	0,2887	10	0,3050	18	0,0162
ZIELONOGORSKI	0,2674	16	0,3003	19	0,0329

KOSZALINSKI	0,2625	18	0,2957	20	0,0332
PŁOCKI	0,1938	28	0,2797	21	0,0859
BIELSKI	0,2371	22	0,2694	22	0,0323
BYDGOSKO-TORUNSKI	0,2353	23	0,2622	23	0,0269
SOSNOWIECKI	0,1853	29	0,2590	24	0,0737
PIOTRKOWSKI	0,1974	25	0,2471	25	0,0497
SZCZECINECKO-PYRZYCKI	0,2374	21	0,2417	26	0,0043
SŁUPSKI	0,2013	24	0,2302	27	0,0288
WAŁBRZYSKI	0,1949	27	0,2145	28	0,0196
KONINSKI	0,1545	37	0,2143	29	0,0598
ŁODZKI	0,1798	30	0,2107	30	0,0309
LUBELSKI	0,1549	36	0,2104	31	0,0555
LESZCZYNSKI	0,1952	26	0,2094	32	0,0142
WARSZAWSKI WSCHODNI	0,1608	34	0,1950	33	0,0342
RZESZOWSKI	0,1121	49	0,1935	34	0,0813
RYBNICKI	0,1359	40	0,1900	35	0,0541
SWIECKI	0,1204	46	0,1871	36	0,0666
STAROGARDZKI	0,1619	33	0,1798	37	0,0180
BIAŁOSTOCKI	0,1207	45	0,1780	38	0,0573
CZĘSTOCHOWSKI	0,1657	32	0,1771	39	0,0113
OLSZTYNSKI	0,1402	39	0,1709	40	0,0307
GDANSKI	0,1572	35	0,1707	41	0,0135
NYSKI	0,1690	31	0,1658	42	-0,0032
RADOMSKI	0,1009	55	0,1650	43	0,0641
PRZEMYSKI	0,0855	59	0,1648	44	0,0793
PILSKI	0,1348	41	0,1648	45	0,0300
TARNOBRZESKI	0,1050	53	0,1644	46	0,0593
KALISKI	0,1248	44	0,1637	47	0,0390
KRAKOWSKI	0,1126	48	0,1573	48	0,0447
BYTOMSKI	0,1480	38	0,1496	49	0,0015
OSWIĘCIMSKI	0,1056	52	0,1490	50	0,0434
KIELECKI	0,1260	43	0,1478	51	0,0218
SKIERNIEWICKI	0,1116	50	0,1448	52	0,0332
ELBLĄSKI	0,1035	54	0,1378	53	0,0343
CHOJNICKI	0,1130	47	0,1354	54	0,0224
SUWALSKI	0,0648	64	0,1292	55	0,0644
BIALSKI	0,0780	61	0,1271	56	0,0490
INOWROCŁAWSKI	0,0941	56	0,1233	57	0,0293
WŁOCŁAWSKI	0,1299	42	0,1148	58	-0,0151
SIEDLECKI	0,0747	63	0,1146	59	0,0399
GRUDZIĄDZKI	0,1070	51	0,1120	60	0,0050
CIECHANOWSKI	0,0885	57	0,1092	61	0,0208
TARNOWSKI	0,0636	66	0,1055	62	0,0419

EŁCKI	0,0851	60	0,1045	63	0,0195
NOWOTARSKI	0,0871	58	0,0993	64	0,0122
SIERADZKI	0,0648	65	0,0953	65	0,0305
ŁOMZYNSKI	0,0436	71	0,0893	66	0,0457
KROSNIENSKI	0,0758	62	0,0840	67	0,0082
OSTROŁĘCKI	0,0560	68	0,0840	68	0,0280
PUŁAWSKI	0,0577	67	0,0833	69	0,0256
NOWOSĄDECKI	0,0451	70	0,0729	70	0,0278
SANDOMIERSKO-JĘDRZEJOWSKI	0,0529	69	0,0664	71	0,0135
CHEŁMSKO-ZAMOJSKI	0,0397	72	0,0628	72	0,0231

Source: own estimations.

The results presented in table 2 confirm significant disparities between the analyzed regions. It can be especially seen in regard to the difference in value of the synthetic measure of conditions for entrepreneurship obtained by the capital city Warsaw and the rest of the regions. The relatively big difference in the value of the measure can be even seen in the case of comparison of the capital city with the next five biggest NUTS 3 regions (biggest Polish cities) City Poznan, City Wrocław, Trojmiejski, City Krakow, City Szczecin. It can be considered as confirmation of unbalanced structure of Polish economy, which does not support regional sustainable growth. On the other hand, the dynamics of the obtained measure confirms positive tendencies, as only in the case of two regions negative change of the value of SMR_{ijt} could be found.

4. Conclusion

The objective of the article was to quantify the conditions for entrepreneurship in Polish NUTS 3 regions in the years 2010-2015. In the research multi-criteria approach was taken with zero-unitarization method. The applied method enabled to assess synthetic measure describing the conditions for entrepreneurship in the regions and to assess its dynamics in the analyzed period. The analysis confirmed significant disparities in regard to the conditions influencing entrepreneurship at NUTS 3 level, which should be considered as an important problem of Polish government. From the spatial perspective the results can be considered as confirmation of relatively unbalanced structure of the economy. It can be stated that without effective regional policy actions implemented by the government, in the future the situation can become an important obstacle for regional convergence process and economic growth of the whole economy.

The obtained results can be used for creating guidelines for regional development policy by Polish authorities both at national and regional level.

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HOW GLOBALISED ARE WE? COMPARISON OF GLOBALISATION IN THE CZECH REPUBLIC, SLOVAKIA AND SWEDEN

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Abstract. The aim of the paper is to characterize, compare, and evaluate the level of globalization in the Czech Republic, Slovakia, and Sweden. The countries are comparable as to their size, capabilities, international orientation, etc. Simultaneously, Sweden is a "globalized" benchmark, against which the other two countries can be contrasted. First, the paper gives an overview of the various globalization indices and rankings (such as the KOF Globalization Index) and discusses their characteristics, methodologies, strengths and weaknesses. Then, the level of globalization of the three countries is compared, based on the results of some chosen indices and rankings. Longer term trends and some unexpected results are observed, too. Finally, the paper discusses the results and concludes: What they reveal and what they rather "hide". What they say about the rankings and what they say about the countries. What their policy relevance is. If the level of globalization can be actually "measured" or "ranked", etc. In sum, the globalization indices and rankings are a useful tool for quantitative/empirical academic research, as well as for public policy and business analysis. They must be, however, complemented by qualitative analyses of globalization. Among their key weaknesses is a lack of statistical data for some countries and in particular for non-state actors.

Keywords: comparison, Czech Republic, globalization, Slovakia, Sweden

JEL Classification: F02, F50, F60

1. Introduction

Globalization is a multifaceted phenomenon and concept (Potrafke, 2015). Broadly, it can be defined as "a historical process, trend, or force, which encompasses various dimensions of human existence. Most authors mention the economic, political, social, and cultural dimensions of globalization" (Rolenc, 2016). In the 1990s, following the changes in the international environment, there was a surge both in globalization and the study of it. Due to the comprehensiveness of the process, it was analyzed both qualitatively and quantitatively. One of the quantitative methods, which developed especially from the 2000s, were indices and/or rankings, which attempted to "measure" globalization. Although the hype declined in recent years and we could even witness debates about the "end of globalization" (Rolenc, 2016), the indices/rankings remain an important tool employed in academic research, business analysis, mass and specialized media, and public policy (Martens et al., 2015).

This paper aims to characterize, compare, and evaluate the level of globalization in the Czech Republic, Slovakia, and Sweden. First, it gives an overview of the various globalization indices and rankings (such as the KOF Globalization Index) and discusses their characteristics, methodologies, strengths and weaknesses. Then, the level of globalization of the three countries is compared, based on the results of some chosen indices and rankings. Longer term trends and some unexpected results are observed, too. Finally, the paper discusses the results and concludes: What they reveal and what they rather "hide". What they say about the rankings and what they say about the countries. What their policy relevance is. If the level of globalization can be actually "measured" or "ranked", etc.

2. Methods: Measuring globalization and globalization indices/rankings

Globalization indices are understood differently – either as objective measurements (Dreher et al., 2010) or as subjective constructions (Caselli, 2008; Caselli 2012; Figge & Martens, 2014). The second position is supported by the fact that all of them face contentious methodological questions and choices (Martens et al., 2015) and limitations (Dorado-Moreno et al., 2016). Moreover, indices may have evaluative and policy consequences. A high ranking of a country can suggest positive quality, on the assumption that "globalization is a good thing". But some indices/variables are not necessarily positive, such as the ecological footprint of trade or the negative consequences of connectedness in general (Figge & Martens, 2014; Martens et al., 2015).

The indices can be distinguished on the basis of various characteristics. First, the focus of measurement (on activities or policies) or concepts to be measured. The multiple divergent definitions of globalization understand it for example as internationalization, liberalization, universalization and Westernization (Americanization, McDonaldization), or deterritorialization (Martens et al., 2015; Caselli, 2008).

Second, the dimensions of measurement: cultural, ecological, economic, political, and/or social. Obviously, most attention is usually given to economic indicators, while the indices remain underdeveloped on several crucial dimensions (Martens et al., 2015). To illustrate, the composite indices usually include the economic, political, and cultural dimension (Caselli, 2008), other include also technological and/or cultural aspects (Raab et al., 2008), or consider environmental factors (Figge & Martens, 2014). There are also indices focused solely on one dimension, such as culture (Kluver & Fu, 2008) or energy (Overland, 2016).

Third, the units of measurement: local, national, regional, and/or global. Most indices quantify/rank the globalization of countries (the country—nation—state—society nexus), which is due to the methodological territorialism, nationalism, or statism underlying the discipline of International Relations (Caselli, 2008). Another reason is the un/availability of data about units other than nation states[1] or the completeness, adequacy, and timeliness of necessary information (Caselli, 2008). But due to the very nature of the globalization process, a purely territorial approach is actually distorting. The indices should (and a minority of them do) analyze also units such as cities, regions, planetary realms, trans-state, supra-state, and non-state institutions, "deterritorialized" or "supra-territorial" flows, or global ecology. The non-geographical categories (could) include individuals (Caselli, 2013) and social groups, e.g. classes, ethnic groups, genders, professions, or age categories.

[1] As the indices are calculated on the statistical data of the various variables they include, it is illustrative to note the linguistic roots of the word "stat-istics" as an instrument of *state* administration.

Therefore, a multi-scalar and multi-sectoral approach to globalization (Figge & Martens, 2014) or complementary numerous standpoints to interpret globalization are necessary (Martens et al., 2015; Caselli, 2013). This is fulfilled only by *composite* indices (more about them Figge & Martens, 2014; criteria of good composite indices discussed in Dreher et al., 2010) or even by using multiple complementary globalization indices (Martens et al., 2015; Caselli, 2008; Caselli, 2013).

Table 1: Globalization indices/rankings and their various characteristics

Index/Ranking	**Source (Institution, Author/s)**	**Years covered**	**Dimensions (variables, indicators, weights)**	**Units (max.)**
A.T. Kearney/Foreign Policy Globalization Index		2001-2007	Political engagement, technological connectivity, personal contact, economic integration (4/12)	States (72)
CSGR Globalization Index	University of Warwick; Lockwood & Redoano, 2005	1982-2004	Economic, social, political (3/16)	States (189)
Cultural Globalization Index	Kluver & Fu, 2008	2004, 2008	Cinematic films, television programming, volume of imported print publications, penetration/availability of foreign satellite channels from cable television systems	States (69)
DHL Global Connectedness Index		2005-2016	Trade, capital, information, people	States (140)
Economic Freedom of the World Index	Various institutions, e.g. CATO, Fraser	1970/80-(1996)	Size of government, legal structure and security of property rights, access to sound money, freedom to trade internationally, regulation of credit, labor and business (5/42)	States (159)
G-Index	Randolph, 2001	2001	6	States (185)
Global Cities Index	A. T. Kearney	2008-	Business activity, human capital, information exchange, cultural experience, political engagement (5/27)	Cities (128)
GlobalIndex	Raab et al., 2008	1970-2002 (2008)	Economic, socio(technological), cultural, political (4/31)	States (97)
KOF Index of Globalization	ETH Zürich; Dreher, 2006; Dreher et al., 2008	1970-2014 (2006)	Economic, social, political (3/23)	States (207)
Maastricht Globalization Index	Maastricht University; Figge & Martens, 2014	2000, 2008, 2012	Political, economic, social & cultural, technological, environmental (5/11)	States (117)
New Globalization Index	Vujakovic, 2009	1995-2005 (2010)	Economic, political, social (3/21)	States (70)
OECD Economic Globalization Indicators		2005, 2010	Capital movements and foreign direct investments, international trade, the economic activity of multinational firms and the internationalization of technology; indicators linked to the current financial crisis, portfolio investments, environmental aspects and the emergence of global value chains	OECD members (35)
Person-Based Globalization Index	Caselli, 2013	-	6 suggested variables	Persons

UNIDO Connectedness Index		2011-2014	11 variables	States (140)
WEF Global Competitiveness Index		2008-	12 pillars (12/150+)	States (138)

Source: Author, based on the sources quoted in the table and in the text

Table 1 gives an overview of the various globalization indices and rankings, which appeared in the past years. It also illustrates the issues discussed above. The most known and prominent is the KOF Globalization Index developed by the ETH Zürich (2010; Dreher, 2006; Dreher et al., 2008). It covers the period of 1970–2014, the economic, social, and political dimensions of globalization represented by 23 variables, and ranks up to 207 states and territories. It has been analyzed by numerous authors (e.g. Caselli, 2013; Potrafke, 2015; Dorado-Moreno et al., 2016), as well as used in more than 100 empirical studies (e.g. in Enea & Palasca, 2014; Kollias & Paleologou, 2017; Lee & Chang, 2012). For a complete list of papers dealing/working with the KOF index, see http://globalization.kof.ethz.ch/papers/. Therefore, currently, only the KOF index guarantees systematicity and continuity of measuring globalization (Caselli, 2013). There also indices designed by global (economic, financial) institutions, such as the OECD, UNIDO, or WEF, or by TNCs, such as the A.T. Kearney or the DHL.

3. Results: Comparison of Globalization in the Czech Republic, Slovakia, and Sweden

The following paragraphs, tables, and figure illustrate – characterize, compare, and evaluate the level of globalization in the Czech Republic, Slovakia, and Sweden. The countries are comparable as to their size, capabilities, international orientation, etc. Simultaneously, Sweden is a “globalized” benchmark, against which the other two countries can be contrasted (Gray, 2017). The level of globalization is compared based on various globalization indices or rankings, which were available for all the three countries and most recent.

Table 2 works with the KOF index as the most comprehensive one, the GCI/DHL index which represents a TNC’s approach, A.T. Kearney’s Global Cities index which focuses on an alternative unit of analysis – cities, and the UNIDO index which is a mix of other indices and is published by a UN agency. The data are for 2014 or the years close to it, and/or for the most recent year.

Table 2: Rankings of the Czech Republic, Slovakia, and Sweden based on the chosen indices

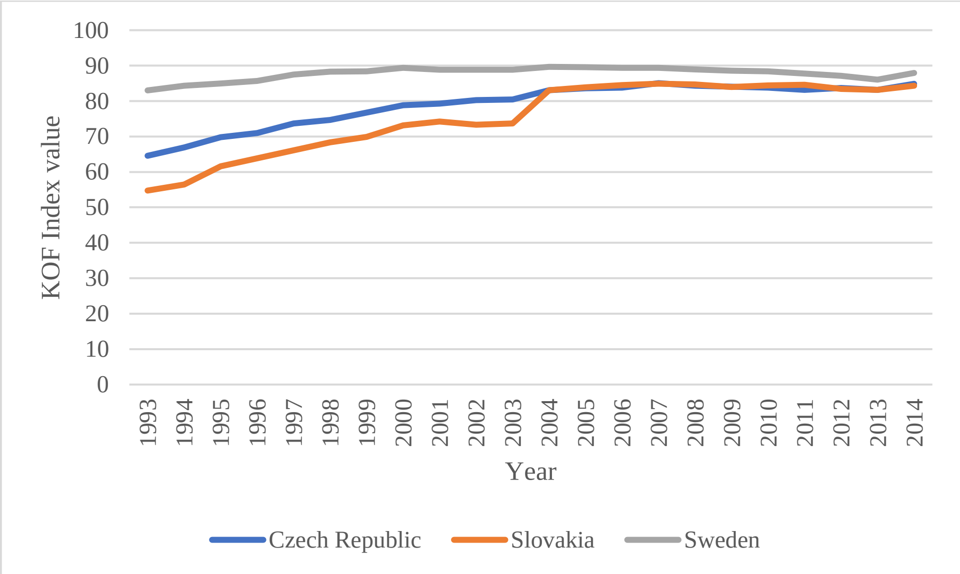
Index (Ranking)	**Czech Republic**	**Slovakia**	**Sweden**	*Data for Year(s)*
KOF 2017	15	18	7	*2014*
GCI/DHL 2016	29, 24	40, 45	10, 11	*2013, 2015*
Global Cities 2017	Prague 47 (45)	Bratislava NA	Stockholm 33 (39)	*2014 (2017)*
UNIDO 2014	19	48	2	*2014*

Source: KOF, ETH Zürich, 2010; DHL, 2017; A. T. Kearney, 2017; UNIDO, 2014

It is obvious that all three countries score very well. In the KOF ranking, all three are among the top 10 % of most globalized countries. In case of the GCI/DHL index, which measures global “connectedness” rather than globalization in general, Sweden is among the top 10 % but the Czech Republic and Slovakia only among the first 30 %. Even bigger differences are in case of the UNIDO ranking, where Sweden is 2nd in the world, the Czech Republic remains in the first third but Slovakia is already in the second third of all countries. The capitals do not score such good results. Stockholm is at the end of the first 30 %, Prague in the second third, and Bratislava was not included into the list of 128 ranked global cities.

The KOF index enables also to trace the development of the level of globalization of the three countries in the period 1993–2014, as shown by Figure 1. All three countries were improving approximately until the crisis year of 2008, then a slight decline followed, and all improved again in 2014. Both the Czech Republic's and Slovakia's index rose faster than Sweden's. Slovakia went through the most notable change and in 2004 caught up with the Czech Republic.

Figure 1: Development of the KOF Globalization Index for the Czech Republic, Slovakia, and Sweden in 1993–2014



Source: KOF, ETH Zürich, 2010

A different point of view can be obtained by comparing the three countries in the various globalization dimensions. In 2014, Slovakia was economically the most globalized country, the Czech Republic just behind but Sweden the worst. In the social realm, the situation reflects the general situation and trends discussed above. But there is a stark difference in terms of political globalization (measured by embassies in country, membership in international organizations, participation in U.N. Security Council missions, and international treaties), where Sweden is the 4th in the world, while the Czech Republic and Slovakia are much worse (while being still in the first 30 % worldwide). This pattern can be also observed in case of the various dimensions of the Global Connectedness Index by the DHL (2017).

Table 3: Rankings of the Czech Republic, Slovakia, and Sweden in the various dimensions of globalization

Dimension/Variable	**Czech Republic**	**Slovakia**	**Sweden**
KOF Economic	13	12	17
KOF Social	22	21	16
KOF Political	41	50	4
Cultural	23	NA	11
Incl. environmental	19	26	8

Source: KOF, ETH Zürich, 2010; Kluver & Fu, 2008; Figge & Martens, 2014

In terms of cultural globalization, both Sweden and the Czech Republic belong to the first third of countries (Slovakia was not included). The only index, which includes the environmental factor, is the Maastricht Globalization Index, where Sweden is placed in the world's top 10 % but the Czech Republic and Slovakia only in the first 30 %.

4. Discussion and conclusion

There are some lessons to be learned from the previous analysis. The process of globalization is multifaceted and uneven, which should be reflected by the indices trying to "measure" and rank it. It is actually doubtful if such a comprehensive social process, which includes so many variables and relationships, can be measured. But the numerous attempts to establish globalization indices/rankings since approximately the 2000s, presented here in Table 1, have proven to be legitimate tools along the qualitative and empirical analyses. The analysis of the position of the Czech Republic, Slovakia, and Sweden in the globalization processes (Table 2) reflects both the strengths and weaknesses of the indices/rankings. On the plus side, they can reveal longer term trends (Figure 1), as well as the unevenness of the countries' globalization, like in the cases of rather unexpected and/or differing results in the economic and political dimension (Table 3). On the other hand, they more or less only confirm what can be learned from the empirical/qualitative studies, which use either various statistical data on the chosen countries (by national statistical offices, OECD, etc.) or perform a content and/or textual analysis of key documents published by the current and previous government or other relevant administrative bodies of each country (such as foreign policy, foreign trade, or sustainable development strategies, government programs or speeches in global institutions). And sometimes the lack of data, like here in the case of Slovakia, is telling. Small states can be among the most globalized actors in international relations but sometimes they are too small to be included into the research.

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GLOBALIZATION TRENDS IN USE OF VIRTUAL VALUE CHAIN IN SELECTED COMPANIES

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Abstract. At present era of globalization, the area of value chains has been complemented by new approaches towards the value chains creation of so-called virtual value chains. By reason that companies in era of globalization compete in two worlds: a physical world where we can see and touch and a virtual world made of information. This virtual world provides an opportunity to penetrate into the world of E–commerce as a new centre of value creation. The new information marketspace differs significantly from the physical marketplace. When purchasing electronic services with the use of global marketplace in the form of a virtual sphere, there are services in the form of virtual information which are provided through information channels. Companies must therefore create value both in the physical world and in the virtual world. It should be borne in mind that the processes of value creation are not the same in both worlds. A proper understanding of both interacting processes that create an added value for a customer brings new conceptual and tactical challenges. Ultimately, however, companies have to do more than just create value in space; they also have to extract values from it. They can often do it by setting up space-based relationships with customers. Managers must be consciously focused on principles that govern the creation of values and the use of both value chains, individually and in combination. These two value-adding processes are fundamentally different.

Keywords: value chain, virtual value chain, physical value chain, globalization trends, era of globalization

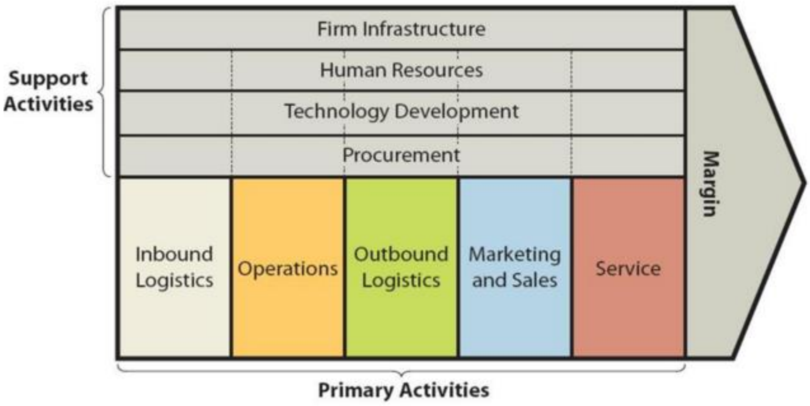
JEL Classification: M31, M2, O31

1. Introduction

Differentiation cannot be understood at the enterprise-wide level because differentiation stems from specific activities performed by an enterprise and from how these activities operate on the customer. Differentiation results from the value chain of the enterprise and the potential source of uniqueness can be conditioned by any value-creating activity. Differentiation may also stem from factors on the way between a service enterprise and a customer. A strong source of uniqueness of a service enterprise can be distribution channels, after-sales services, customer information, professional contacting staff, and a range of other factors. (Lesakova, 2014), (Madudova, 2016)

Porter (1992) suggests the use of the value chain (Figure 1) as one of the tools to achieve higher added value. The activities in the value chain are divided into two groups: basic activities (supply, sales, marketing and sales, services) and support activities (infrastructure, human resources management, technical development and procurement). Support activities are carried out during all basic activities and have an integrative function. We can further divide basic activities. For example, "marketing and sales" can be further decomposed into individual marketing mix tools, sales effort management, own sales, and more. (Porter, 1992), (Rostasova & Gasperova, 2017), (Shouping & Zhishen, 2009)

Figure 1: Value chain



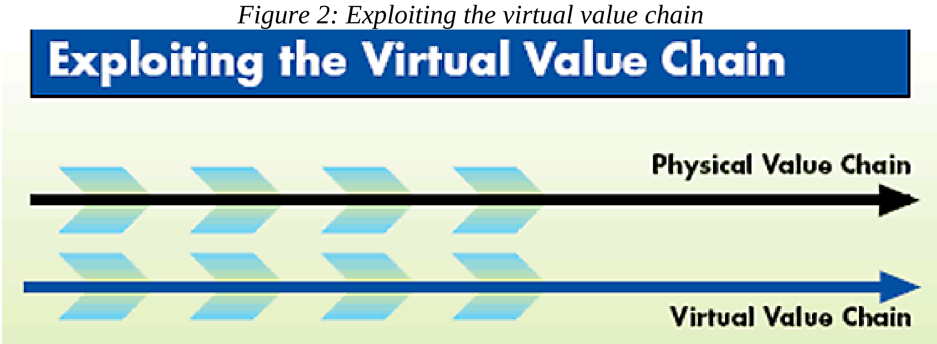
Source: (Payne, 1996)

This generic value chain can also be used by service companies, but it is recommended for service enterprises to use a specific value chain for each service sector. (Payne, 1996), (Corejova & Al Kassiri, 2016)

1.1 Virtual value chain

At present era of globalization, the area of value chains has been complemented by new approaches towards the value chains creation of so-called virtual value chains. By reason that companies in era of globalization compete in two worlds: a physical world where we can see and touch and a virtual world made of information. This virtual world provides an opportunity to penetrate into the world of E–commerce as a new centre of value creation. The new information marketspace differs significantly from the physical marketplace. When purchasing electronic services with the use of global marketplace in the form of a virtual sphere, there are services in the form of virtual information which are provided through information channels. (Rayport & Sviokla, 1995), (Sion et al. 2009), (Campbell, 1995), (Wang & Qin, 2007)

Figure 2: Exploiting the virtual value chain



Source: Exploiting the virtual value chain, [online] Available: https://hbr.org/1995/11/exploiting-the-virtual-value-chain

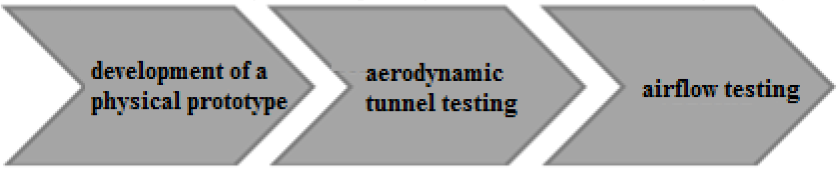
2. Case studies

2.1 Boeing

Boeing is the world's largest aviation manufacturer based in the United States of America. The company is also the second largest producer of weapons in the world and the largest US exporter.

Boeing's managers are making full use of innovations to increase customer value. A few years ago, they redesigned the engine housing for a new model of the 737 airplane. Previously, Boeing and other airplane manufacturers would design airframes by developing physical prototypes, testing them in wind tunnels to gauge the flow of air over their contours, and then repeating the process through multiple iterations.

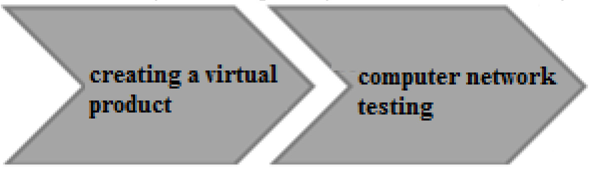
Figure 3: The use of selected part of traditional value chain of Boeing



Source: authors

When Boeing addressed the question of how to create a new engine to improve the performance of its existing 737 airframe design, it turned not to wind tunnels but to a synthetic environment—a mirror world made of information. Boeing engineers developed the prototype as a virtual product that incorporated relevant laws of physics and materials sciences and enabled the company to test an evolving computer-simulated model in a virtual wind tunnel.

Figure 4: The use of selected part of virtual value chain of Boeing



Source: authors

As a result, engineers could test many more designs at dramatically lower costs and with much greater speed. The outcome was a teardrop shape for the engine housing that stunned the aerospace world. Only a process that could endlessly test different possibilities at near-zero incremental cost per synthetic prototype could give rise to a product concept that was outside the bounds of conventional thinking. Boeing succeeded in shattering a dominant paradigm of engine design and delivered a product that easily outperformed the competition, a feat that had proved impossible in 20 years of wind-tunnel testing. (Boeing company, 2017), (Rayport & Sviokla, 1995)

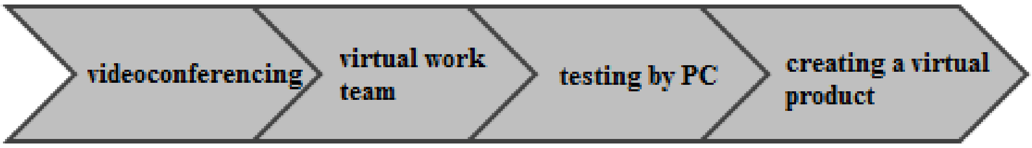
2.2 Ford

Ford Motor Company is an American multinational car manufacturing corporation. In 2004 Toyota outpaced Ford in total revenue. Ford introduced methods of mass production of vehicles and mass management of the industrial labor force by realizing the ideas of Eli Whitney, who developed one of the first assembly lines using universal components. Thanks to this, it was possible to put in operation very cheap, reproducible and reliable production. The use of a beltway for the movement of a wagon to workers was unique in this industry and quickly became a favorite production method. As soon as the job became simple and repetitive, it was possible to hire even inexperienced employees who could quickly learn simple tasks.

Once company have established the necessary infrastructure for visibility, they can do more than just monitor value-adding steps. They can begin to manage operations or even to implement value-adding steps in the marketspace—faster, better, with more flexibility, and at lower cost. When companies move activities from the place to the space, they begin to create a virtual value chain that parallels but improves on the physical value chain.

To gain leverage from its substantial investments in marketspace-enabling technology systems, Ford brought managerial talent from around the world together in the marketspace. Rather than creating national product teams or convening elaborate design summits, Ford established a virtual work team to develop the car. In this way, it extracted the best talent and the broadest vision it could muster.

Figure 5: The use of selected part of virtual value chain of Ford



Source: authors

In the virtual world, the design team could transcend the limitations of time and space that characterize management in the physical world. They built and tested prototypes in a simulated computer environment and shared the designs and data with colleagues over a computer network, 24 hours a day, around the world.

Nowadays, maintaining competitiveness is dependent on achieving higher performance for customers, while spending on research, development and manufacturing is the lowest. Traditionally, companies have gotten more for less by exploiting vast economies of scale in production while focusing on raising levels of quality. Japanese automakers such as Toyota have successfully pursued that strategy, delivering highly differentiated products at the lowest possible costs. (Ford company, 2017), (Rayport & Sviokla, 1995), (Corejova & Rostasova, 2015)

2.3 FedEx

FedEx offers a wide range of international shipping solutions, including express delivery, fast special services as well as economic delivery of shipments worldwide. For both exporters and importers, it provides a flexible portfolio of services, a continual overview of shipments status and reliability in fulfilling expectations of shipment. FedEx provides access to a growing global market through its supply chain, transport, business and information services. FedEx serves over 220 countries, with more than 630 aircraft and 47,000 vehicles in different parts of the world. FedEx employs more than 160,000 people worldwide, and each of them is ready to do the utmost to make the customer experience with their services always outstanding.

The value chain model treats information as a supporting element of the value-adding process, not as a source of value itself. For instance, managers often use information that they capture on inventory, production, or logistics to help monitor or control those processes, but they rarely use information itself to create new value for the customer. However, Federal Express Corporation recently did just that by allowing customers to track packages through the company's World Wide Web site on the Internet. Now customers can locate a package in transit by connecting on-line to the FedEx site and entering the airbill number. After the package has been delivered, they can even identify the name of the person who signed for it. Although FedEx provides this service for free, it has created added value for the customer and thus increased loyalty in a fiercely competitive market.

Figure 6: The use of selected part of virtual value chain of FedEx

Source: authors

FedEx has done exactly that in the marketspace by allowing individuals with access to the Internet to track packages through the company's site on the World Wide Web. Customers can also request software from FedEx that allows them not only to track their parcels but also to view at any time the entire history of their transactions with FedEx. The new economies of scale make it possible for FedEx to provide what are, in effect, ministore-fronts to each and every customer, whether millions of users request the service at any given moment or just one. (FedEx company, 2017), (Rayport & Sviokla, 1995), (Corejova & Rostasova, 2015)

3. Conclusion

Service businesses must therefore create value both in the physical world and in the virtual world. However, it must be borne in mind that the processes of value creation are not the same in both worlds. Understanding differences and consistency between added-value processes in the physical world and the information world will help to see clearer and more understandable strategic challenges for service companies in the current era [6]. The right understanding of the two interacting processes that add value to the customer brings new conceptual and tactical tasks. (Rostasova & Dudova, 2015), (Corejova et al., 2016), (Corejova & Al Kassiri, 2016)

Once businesses become experts to manage their value added activities within a parallel value chain, they are ready to develop these new relationships. Today, thousands of businesses with pages on the World Wide Web promote products or find customer comments. Some businesses go further and have a real automated interface with the customer, so they identify and meet customer desires at a lower cost. (Corejova & Al Kassiri, 2016)

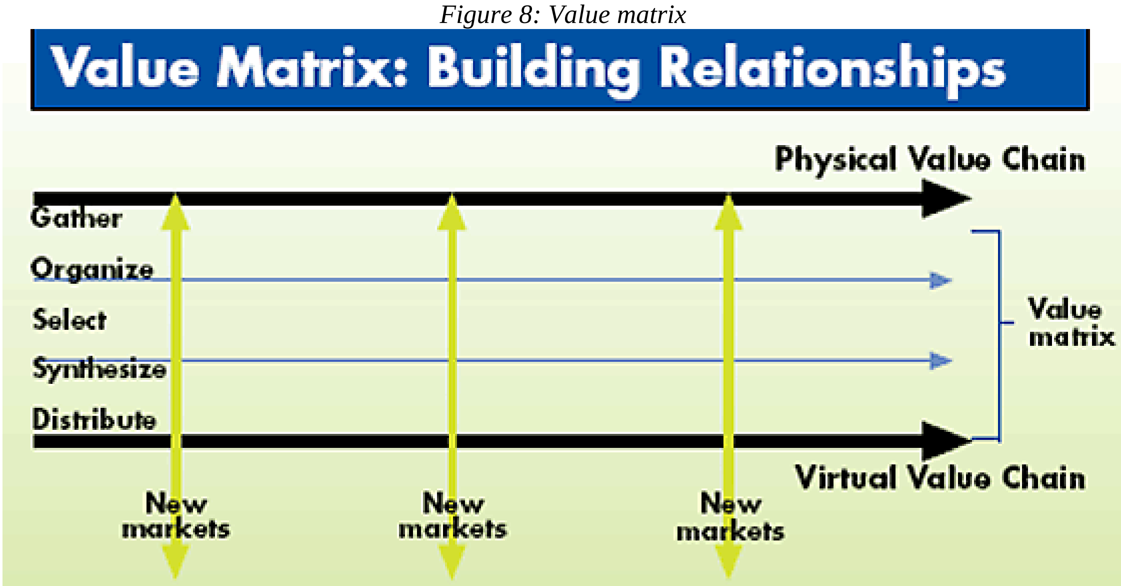
Managers must consciously focus on the principles that govern the creation of values and the use of both value-building chains, alone and in combination. [4] These two added-value processes are fundamentally different. The physical value chain is composed of a linear sequence of activities with defined input and output points. By contrast, the virtual value chain is nonlinear - there is a matrix of possible inputs and outputs that can be accessed and distributed through a wide variety of channels. (Corejova & Al Kassiri, 2016)

Figure 7: Building the virtual value chain

Source: Exploiting the virtual value chain, [online] Available: https://hbr.org/1995/11/exploiting-the-virtual-value-chain

Businesses create new markets and new relationships with existing markets by applying five generic value adding information world steps [5] to each activity of the virtual value chain. (Corejova & Al Kassiri, 2016)

Figure 8: Value matrix



Source: Exploiting the virtual value chain, [online] Available: https://hbr.org/1995/11/exploiting-the-virtual-value-chain

If companies want to succeed in this new economic environment, managers need to understand that the differences between creating and extracting market values in the virtual space must be effective and consistent. More specifically, corporate executives must adopt an updated set of core principles because there are many business principles in the virtual marketplace that are run by managers who are no longer in place.

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THE TOP INCOMES IN THE GLOBALIZED WORLD

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Abstract. The top incomes – also called the rich or the affluent – play very influential roles in society, e.g. they have political and cultural power, they are reference group for less affluent groups in society. The top incomes are key players in economy, because they usually receive as much income as the bottom 50% of the population. It is obvious that if those at the top have a larger share of national income, then the rest of the population must have a smaller share. This suggests that top income shares help us to find out about incomes of the rest of society. The aim of this paper is to compare the trends in top incomes shares all over the world based on data from selected countries. There are analysed income share of the top 10%. In the globalized world the trends in different countries should be very similar. There are also analysed the changes in inter-decile income share ratio, which allows to assess whether the differences between the richest and the poorest are increasing or decreasing. There will be also assessed the relationship between the Gini coefficient (the most popular measure of inequality) and income share of the top 10%. It can be expected that there is a strong positive relationship between the most popular measure of inequality and top income share.

Keywords: top income share, affluence, richness, globalization, income inequality

JEL Classification: D31, D63, I31

1. Introduction

The attention of scientists and policymakers is paid on poor people. The rich are relatively rarely analysed group. The poor and the rich may be considered one-dimensional (income or expenditure) or multidimensional (there are taken into account also different aspects of life, e.g. health, education). In this paper the attention is paid on the rich part of society achieving high incomes. The aim is to compare the trends in top incomes shares all over the world based on data from selected countries. There are analysed income share of the top 10%. It is hypothesized that the trends in different countries should be very similar in the globalized world. There are also analysed the changes in inter-decile income share ratio, which allows to assess whether the differences between the richest and the poorest are increasing or decreasing. There is also assessed the relationship between the Gini coefficient (the most popular measure of inequality) and income share of the top 10%. It can be expected that there is a strong positive relationship between the most popular measure of inequality and top income share.

The top incomes and the rich[1] are not the same group (Franzini et al., 2016). One of the argument is that the analysis of the top income shares focuses only on those who are at the top of the distribution (e.g. top 10%, 5%, 1%), without considering whether these individuals/households/families are truly rich. The analysis of the top incomes was conducted by Piketty (2005), Atkinson (2007), Leigh (2007), Leigh (2009), Alvaredo et al. (2010), Atkinson et al. (2011), and the rich by Medeiros (2006), Brzezinski (2010), Peichl et al. (2010), Medeiros & De Souza (2015), Franzini et al. (2016).

Using data from World Economy Inequality Database and the Luxembourg Income Study for eleven countries, Leigh (2009) noted that there is a strong positive correlation between top income shares and the main inequality indices. Analysis of income distribution in Polish big cities conducted by Sączewska-Piotrowska & Wolny-Dominiak (2017) also showed strong positive relationship between income share held by the highest 10% and Gini coefficient. Leigh (2009) suggest that such strong correlation may suggest the same factors affecting top income shares and Gini coefficient. Globalization is one of the most processes affecting income inequality and, based on above statement, top income shares. There are different approaches linking globalization to inequality, e.g. Wade (2001), Ravallion (2003), Wade (2004), Basu (2006), Dreher & Gaston (2008), Gasparini et al. (2011), Khondker (2017). Wade (2001) considers three main approaches. First, the neoclassical theory predicting convergence. Second, the endogenous theory predicts less convergence or divergence. Third, the dependency approach predicts that convergence is less likely and divergence more likely, because of differential benefits from economic integration and trade, restricted free market relations, and locked developing countries to produce certain commodities. Based on the conducted analysis Ravallion (2003) stated about inequality convergence: that the equal region became much more unequal, and the reverse. Gasparini et al. (2011) pointed that in Latin America in the beginning of the 21st century there took place inequality convergence (significant decrease in income inequality). This paper should provide the knowledge about changes in income inequality and top income shares in the last years (2002-2014) in the selected countries all over the world and also answer the question whether inequality convergence is still lasting in this region of the world.

2. Methods

There are used simple statistical methods: regression coefficients for linear trend were estimated and Pearson R-squared to access goodness-of-fit was calculated. There are also visualised the changes in income share held by highest 10%, inter-decile income share ratio (the share of income received by the top 10% divided by the share of income received by the bottom 10%), and Gini coefficient (it ranges from 0 (or 0%) to 1 (or 100%), with 0 representing perfect equality and 1 representing perfect inequality).

Data from World Bank (2017) are used. The choice of analysed countries (eighteen countries from Central and South America, Asia, and Europe) it is not accidental. There are chosen countries with relatively long time series ending in 2014. There are used no different databases, because each database is created using different methodology and for this reason the author decided not to mix the data from other databases (e.g. from Eurostat database).

[1] The rich are a subset of those who are affluent (Franzini et al., 2016). Commonly the terms: rich, affluent, top income are used interchangeably.

3. Results and discussion

Separated linear trend equations were fitted to time series data (income share of the top 10%, inter-decile income share ratio, Gini coefficient). The estimated regression coefficients (slope and intercept) as well as Pearson R-squared are shown in Table 1.

Table 1: Income share of the top 10% and inequality measures – regression coefficients for linear trend, 2002-2014

Country	Income share held by highest 10%			Inter-decile income share ratio			Gini coefficient		
	Slope	Intercept	R^2	Slope	Intercept	R^2	Slope	Intercept	R^2
Argentina	-0.827	40.116	0.935	-2.607	47.893	0.863	-0.992	53.824	0.949
Armenia	-0.420	29.830	0.468	-0.183	8.847	0.371	-0,398	35.080	0.409
Belarus	-0.036	22.821	0.080	-0.082	6.666	0.414	-0.179	29.143	0.337
Brazil	-0.474	46.782	0.959	-0.158	57.199	0.847	-0.559	58.791	0.974
Colombia	-0.300	46.049	0.650	-0.610	46.846	0.255	-0.252	56.918	0.517
Costa Rica	-0.070	38.123	0.061	-1.122	37.181	0.651	-0.097	49.865	0.153
El Salvador	-0.436	38.205	0.776	-2.697	43.810	0.561	-0.737	50.917	0.858
Georgia	0.069	29.891	0.157	0.077	14.974	0.079	0.117	39.728	0.266
Honduras	-0.382	46.131	0.323	-4.912	95.442	0.581	-0.532	59.781	0.517
Kazakhstan	-0.312	25.897	0.811	-0.281	8.265	0.869	-0.599	33.412	0.886
Kyrgyz Republic	-0.217	26.472	0.197	-0.175	8.135	0.268	-0.454	33.943	0.317
Moldova	-0.488	29.313	0.866	-0.364	10.704	0.814	-0.740	37.999	0.857
Panama	-0.307	42.992	0.782	-2.067	58.667	0.721	0.468	56.563	0.896
Paraguay	-0.460	44.336	0.494	-1.090	41.718	0.395	-0.496	55.461	0.562
Peru	-0.859	43.303	0.948	-1.509	39.195	0.878	-0.890	55.155	0.952
Poland	-0.144	27.309	0.830	-0.131	9.506	0.389	-0.240	35.333	0.812
Ukraine	-0.278	23.962	0.784	-0.184	6.777	0.833	-0.506	30.248	0.852
Uruguay	-0.423	36.898	0.610	-0.463	22.143	0.774	-0.483	48.517	0.686

Source: The author's work based on World Bank (2017).

In the most cases the slopes take negative values which means that between 2002 and 2014 income share of the top 10% and inequality measures decreased on average. In many cases R-squared take high values (close to 1) which means that in these cases large fraction of the variance of the data is explained by the fitted trend line. For all three measures no clear trend is visible in Belarus and in Georgia.

In each country relationship between income share of the top 10% and Gini coefficient; and relationship between inter-decile income share ratio and Gini coefficient were assessed (Table 2). In all countries there were very clear relationships. Only in Costa Rica and in Poland R-squared took values lower than 0.8.

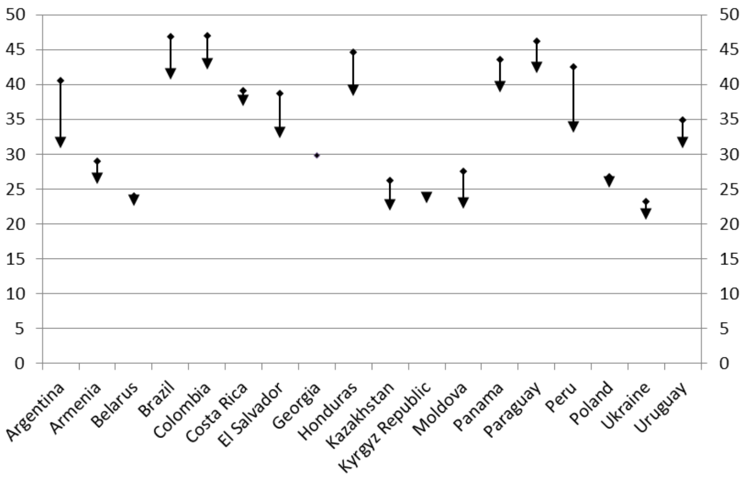
In further analysis the attention is paid on data from the first and from the last year of observation period, i.e. 2002 and 2014 (the values of measures for Kazakhstan for 2014 are estimated on the basis of linear trend). Between 2002 and 2014 income share of the top 10% decreased in almost all countries (Figure 1). The greatest fall took place in Argentina (from 40.51% to 30.75%) and Peru (from 42.51% to 33.00%). In Georgia the index was practically unchanged (29.88% in 2002 and 29.83% in 2014). Very small changes of the index took place in Belarus (fall about 1.5 p.p.), Kyrgyz Republic (fall about 1.0 p.p.) and Poland (fall about 1.5 p.p.). Three countries from South America: Brazil, Columbia and Paraguay was characterized by the highest value (above 40%) of Gini coefficient both in 2002 and 2014.

Table 2: Relationship between Gini coefficient and other inequality and top incomes measures, 2002-2014

Country	Relatopnship between income share of the top 10% and Gini coefficient	Relationship between inter-decile income share ratio and Gini coefficient
Argentina	0.997	0.981
Armenia	0.988	0.993
Belarus	0.916	0.992
Brazil	0.998	0.956
Colombia	0.977	0.870
Costa Rica	0.883	0.752
El Salvador	0.954	0.845
Georgia	0.923	0.902
Honduras	0.970	0.829
Kazakhstan	0.955	0.996
Kyrgyz Republic	0.985	0.989
Moldova	0.984	0.995
Panama	0.958	0.954
Paraguay	0.990	0.931
Peru	0.992	0.973
Poland	0.905	0.794
Ukraine	0.989	0.995
Uruguay	0.994	0.952

Source: The author's work based on World Bank (2017).

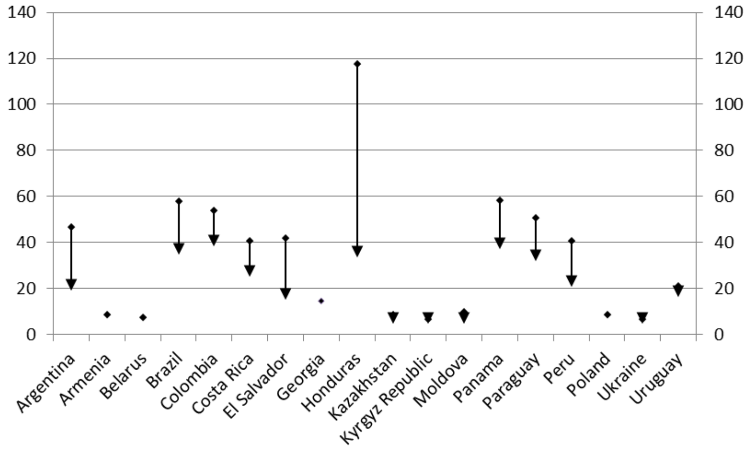
Figure 1: Changes in income share held by highest 10%, 2014 to 2002



Source: The author's work based on World Bank (2017).

The visible decrease in inter-decile income share ratio took place in most analysed countries (Figure 2). In 2014, compared to 2002, the most significant decrease occurred in Honduras (from 117.53% to 33.36%). It means that there was an decrease in differences between achieving the highest and the lowest income. Armenia, Belarus, Georgia and Poland were characterized by the lowest decreases in inter-decile income share ratio, but simultaneously these countries were characterized by relatively low values of analysed ratio both in 2002 and 2014.

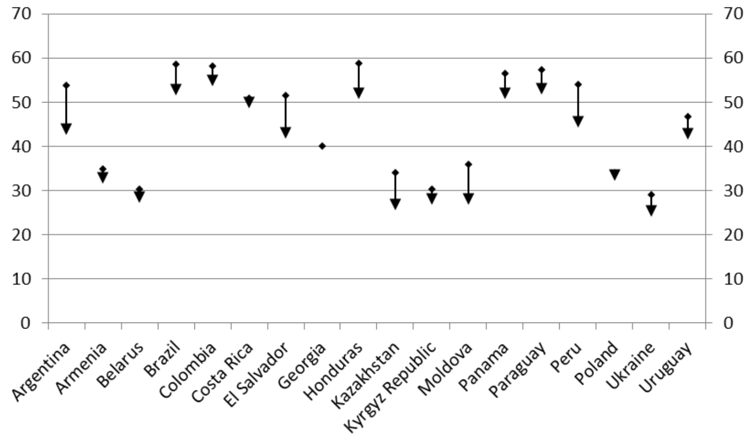
Figure 2: Changes in inter-decile income share ratio, 2014 to 2002



Source: The author's work based on World Bank (2017).

Between 2002 and 2014 the values of Gini coefficient decreased in almost all countries. The most visible decrease took place in Argentina (from 53.79% to 42.67%), Peru (from 54.04% to 44.14%) and El Salvador (from 51.54% to 41.84%). The highest value of Gini coefficient (above 50% both in 2002 and 2014) was visible in countries in South and Central America: Brazil, Colombia, Honduras, Panama and Paraguay.

Figure 3: Changes in Gini coefficient, 2014 to 2002



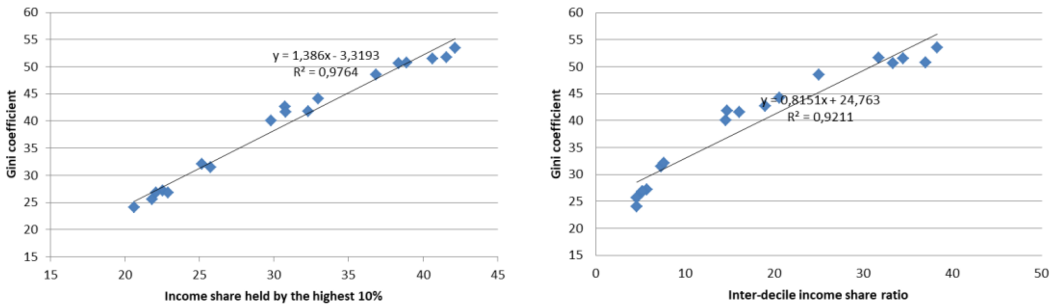
Source: The author's work based on World Bank (2017).

In the next step there were investigated the relationship between Gini coefficient and the income share held by the highest 10%; and the relationship between Gini coefficient and inter-decile income share ratio (the calculations were conducted for 2014). In both cases there was strong significant correlation between analysed variables (Figure 4a and Figure 4b).

There were also investigated the relationships between the changes in the values of measures between 2002 and 2014. There were found the significant relationships. Figure 5a plots the relationship between percent change in the income share of the top 10% and percentage change in the Gini coefficient. It is visible positive and significant relationship, which means that if the Gini coefficient increases, income share held by highest 10% will also increase. The relationship between percentage change in inter-decile income share ratio and percentage change in Gini coefficient is not so clear (Figure 5b). It is also positive correlation, i.e. more visible changes in Gini coefficient, more visible changes in inter-decile income share ratio.

Figure 4: Gini coefficient vs.

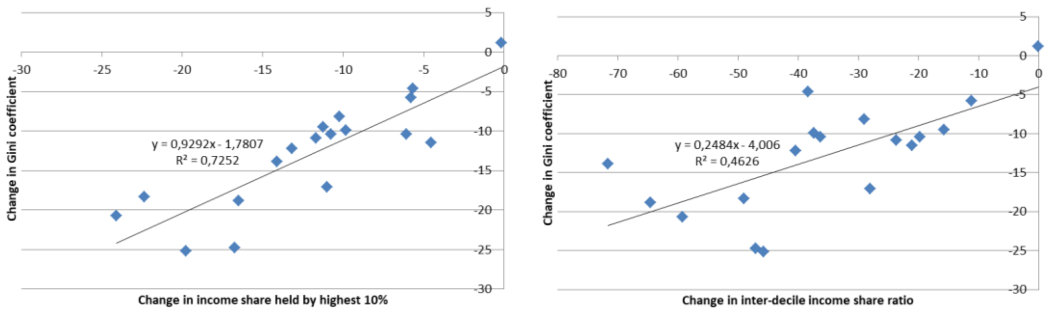
a) income share held by highest 10%, 2014 *b) inter-decile income share ratio, 2014*



Source: The author's work based on World Bank (2017).

Figure 5: Percentage change in the Gini coefficient vs.

a) percentage change in income share held by highest 10%, 2014 to 2002 *b) percentage change in inter-decile income share ratio, 2014 to 2002*



Source: The author's work based on World Bank (2017).

The obtained results are similar to results from the previous analyses. Significant decrease in income inequality in countries of the Latin America (noticed by Ravallion (2003)) is continued in the following years. The dynamics of change is not the same in all analysed countries – decreases are the most visible in South and Central America, the least visible in couple of former Soviet Republics. It should be noted that in the previous years the observed changes were sometimes multidimensional (different set of analysed countries), e.g. in OECD report (OECD, 2015) the authors pointed that the sharpest reductions of income inequality between the mid-90s and the late 2000s were in Turkey, Mexico and Chile and the largest increases were in Sweden, Denmark and Finland. However, the Nordic countries remained among the most egalitarian countries.

4. Conclusion

Simple statistical methods allowed to indicate a very clear relationship between known and often used inequality measure (Gini coefficient) and income share of the top 10%. Between 2002 and 2014 in most of the eighteen analysed countries from several continents income inequality and income share held by the highest 10% decreased. Similar changes in almost all countries suggest that countries experienced income inequality and top incomes convergence, but the countries can be divided into two groups: the members of the first group are countries from South and Central America, and the members of the second group – former Soviet Republics. The first group is characterized by significant improvement in income situation between 2002 and 2014, but this situation is still not good, because countries in this part of world started from high level of inequality and income share of the top 10%. The lowest income share held by the highest 10% is in former Soviet Republics (Belarus, Kazakhstan, Kyrgyz Republic, Moldova and Ukraine). These countries were also characterized by low Gini coefficient and by low inter-decile income share ratio. Between 2002 and 2014 the values of analysed measures decreased in these countries, but a decrease is less pronounced than in the first group. It should be also noted that in former Soviet Republics start was from low level of analysed measures. Similar situation is also in Poland (country from a former Eastern Bloc just like former Soviet Republics). Summarizing, the most changes between 2002 and 2014 was unidirectional (mentioned above convergence), but base situations in two groups of countries were very different and for this reason the differences in income inequality and income share of the top 10% still exist in the world.

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YOUTH INCOME DISTRIBUTION IN CONDITIONS OF GLOBALIZATION – EXPERIENCE OF EU-28

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Abstract. The objective of the paper is to investigate the income distribution in EU youth cohort in conditions of globalization with particular focus on labour market liberalization process in the EU-28 countries. The dynamic expansion of globalization process in the EU (mainly by the free movement of labour, goods, services, investments) over the last decades has promoted economic efficiency and so called employment flexibility (particularly among the youth population). In the employers' opinions, employment flexibility is a key to reduction of unemployment rate and a way towards stable work careers, especially among youth. The empirical surveys show that being part-time worker, in the selected EU-28 countries, is one of the most important factor preventing youth from subsequent unemployment and the risk-of-poverty in the conditions of globalization. In the year 2015, about 28% of European graduates were part-time workers because they were unable to find full-time work and above the 40% of them were employed as a temporary workers. The incidence of part-time employment, temporary employment and fixed-term contracts have been particularly widespread in selected countries after the accession to the European Union. To achieve the objective of the paper there will be compared basic income measure (median income) and poverty measures (at-risk-of-poverty rate, in work at-risk-of-poverty rate) of youth. There will be assess the relationship between calculated measures (mentioned above) and part-time employment, and relationship between these measures and temporary employment.

Keywords: globalization, income distribution of youth, income inequality, in-work at-risk-of-poverty, employment flexibility.

JEL Classification: D33, E24, E25, J13

1. Introduction

Preventing and counteracting poverty, as well as emergence of income inequalities in conditions of globalization is one of the pillars of Europe 2020 Strategy, and at the same time one of the goals of Sustainable Development Agenda 2030 adopted by the leaders of the United Nations (UN) member states in September 2015 (the so-called SDGs – Sustainable Development Goals). The catalogue of primary goals of the agenda includes the elimination of poverty in every form, elimination of hunger, providing well-being to all participants as well as decent work and economic growth (United Nations, 2015; Dornan, 2017).

Globalization is a complex phenomenon that implies both positive and negative consequences for the youth population. Because of liberalization of trade, flow of capital and labour, as well as high technology diffusion in many developing countries of the European

Union (EU), new labour places are created for young people (including low productive, and highly productive ones). Creation of net labour places contributes to reduction of the rate of people at risk of poverty (primarily the unemployed) and at the same time it can contribute to reduction of the scale of differences in income earned by young people. The process of liberalization of relations between employers and young employees (implementation of the model of flexible labour market among others), that is an immanent feature of the globalization phenomenon can contribute to increase in the rate of young people at risk of poverty and growth of income inequalities.

Labour market is one of the fundamental channels through which globalization affects the situation of youth. Distribution of incomes obtained by young people is strongly determined by the forms of their employment in economies of individual countries. Rise of precarious and non-standard employment (mainly temporary and part-time employment) and polarization of incomes between a minority of knowledge workers and a majority of service and industrial workers are substantial determinants of the youth cohort situation (Labonte et al., 2015; Burton et al., 2014; Petreski et al., 2017; Levin et al., 2011.). Income inequalities affect the spectrum of interventions and public programs that could effectively promote social mobility among young people from low socio-economic background. This may represent a broadly approached change in the status of social stratification (Yoo & Lim, 2009). Social mobility is a concept that includes the likelihood of moving up or down in the income distribution, which is specifically labelled as economic mobility, but may also include changes in position in other distributions as well, like educational attainment, occupational status, and health (Kearney & Levine, 2014; Burton et al., 2014). Data show that the larger the gap between the minimum and medium level of income in empirical distribution, the more willing the young people obtaining low income are, to drop out of education at school (Song et al., 2015; Kearney & Levine, 2014; Hjalmarsson & Mood, 2015; Hallerod & Westberg, 2006).

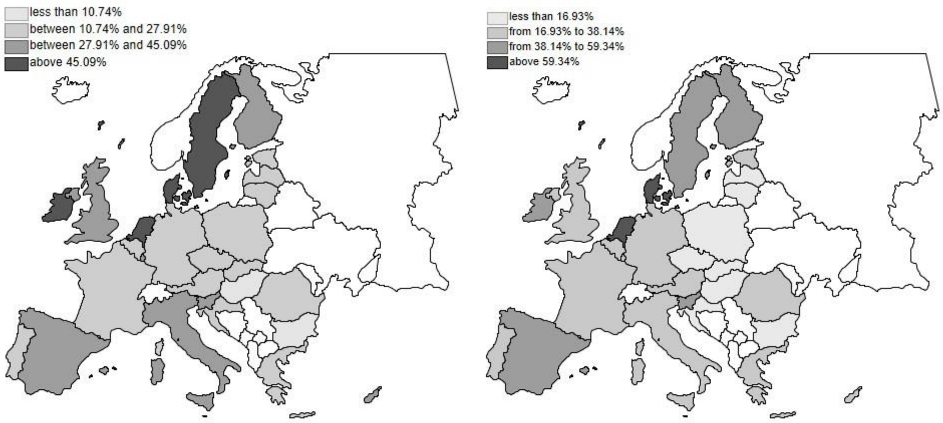
Globalization process dynamics determines changes in the distribution of incomes obtained by young people through the channel of capital flow (particularly in FDI – Foreign Direct Investments). There are empirical works confirming that changes in the ownership structure of the enterprises that result from foreign investments may cause salary reduction (Brown, 2007). Decrease in salaries after acquisition by a foreign company is one of the factors that may weaken the employees' sense of security in conditions of globalization. Capital mobility can cause increase in flexibility of demand on labour, at simultaneous increase of insecurity of employment and/or income achieved from work. Empirical analysis conducted for British economy in the 1990s shows that increased activity in the sphere of foreign direct investments (FDI) is positively correlated with employment insecurity perceived by employees (Brown 2007). According to research results obtained for other economies (e.g. the USA, Indonesia), security and stability of employment in enterprises that are the property of foreign capital is relatively smaller in comparison with domestic companies (Brown, 2007; Bernard & Jensen, 2007). In this research, employment insecurity results from the fact that foreign companies are more frequently closed down, and move to other countries (offshoring, offshore outsourcing, etc.).

A larger gap in income distribution among young people measured by the difference between the lower limit, and the average level can lead to growing sense of economic marginalization among young people. Consequently, young people whose incomes are located in lower part of empirical distribution, do not see any sense in investing in their own human capital. In one of scientific works the phenomenon is described as "economic despair" (Kearney & Levine, 2014).

The objective of the paper is to investigate the income distribution in UE youth cohort in conditions of globalization with particular focus on labour market liberalization process in the EU-28 countries. To achieve the objective of the paper, basic income measure (median income) and poverty measures (at-risk-of-poverty rate, in work at-risk-of-poverty rate) of youth are compared. The relationship between calculated measures (mentioned above) and part-time employment, as well as the relationship between these measures and temporary employment are assessed.

Figure 1: Flexible forms of employment among young people, age from 15 to 24, 2015

a) part-time employment as percentage of the total employment *b) young temporary employees as percentage of the total number of employees*



Source: own work based on data from Eurostat (2017a).

Countries of the Northern and Southern Europe are characterized by the highest percentage of youth part-time employment and two countries of the East-Central Europe (Hungary and Bulgaria) by the lowest percentage of this type of employment. Most of the EU countries is characterized by the lower than the mean percentage of part-time employment (Figure 1a). Many East-Central Europe countries are characterized by the lowest percentage of young temporary employees. In the case of temporary employment (similar to part-time employment) countries of the Northern and Southern Europe are characterized by the high percentage of this type of employment. The vast majority of member countries is characterized by the lower than the mean percentage of temporary employment (Figure 1b).

2. Methods

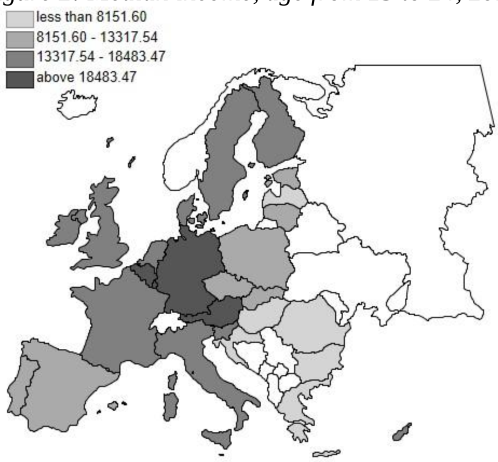
In analysis of youth (age from 15 to 24) income distribution the attention was paid on median income (in PPS) and on the bottom end of distribution, i.e. on the poor youth. The poverty was measured by at-risk-of-poverty rate (ARPR) and in-work at-risk-of-poverty rate (in-work ARPR). The ARPR refers to the percentage of people in the total population with an equivalised disposable income below at-risk-of-poverty threshold, which is set at 60 % of the national median equivalised disposable income. In-work ARPR refers to the percentage of people in the total population who declared to be at work who are at-risk-of-poverty (Eurostat, 2017b). To investigate the relationship between flexible forms of employment and youth income distribution the Pearson correlation coefficient was used. *K*-means clustering was used to divide the EU countries into *k* clusters in terms of employment flexibility and income distribution. In clustering the standardized values of variables were used. Look at the analysis of variance allowed to choose variables being the major criteria deciding about belonging the EU member states to the particular clusters.

In analysis widely available database of Eurostat (2017a) was used. The complete data for all EU countries was available from 2010 and for this reason the comparisons refer to 2010. Lack of access to data on income inequality of youth in EU countries (e.g. Gini coefficient, income quintile share ratio) did not allow for a wider analysis of youth income distribution.

3. Results and discussion

Median income of youth is differentiated in EU countries. There are two distinct groups of bordering countries: the first group (Croatia, Hungary, Romania, Bulgaria and Greece) is characterized by the lowest median income in EU, and the second group (Belgium, Germany and Austria) is characterized by the highest median (Figure 2). There is no clear spatial pattern in at-risk-of-poverty rate and in-work at-risk-of-poverty rate. The highest ARPR and in-work ARPR were in Romania (37.3% and 35.6%, respectively), Spain (33.9% and 24.6%) and Greece (30.1% and 19.1%), the lowest – in Czech Republic (12.3% and 1.8%).

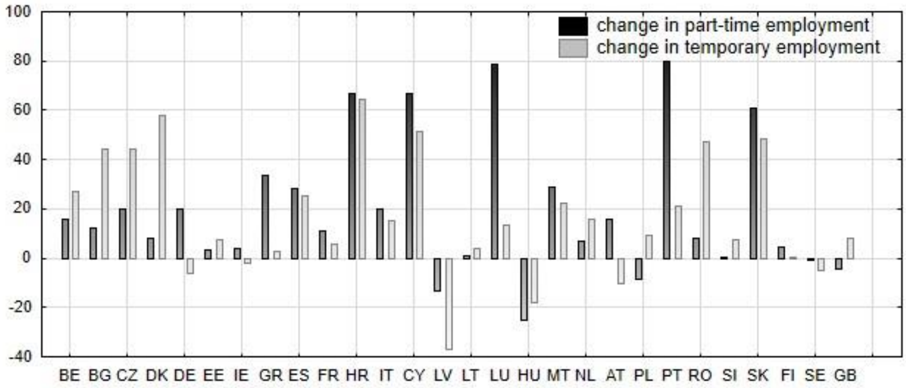
Figure 2: Median income, age from 15 to 24, 2015



Source: own work based on data from Eurostat (2017a).

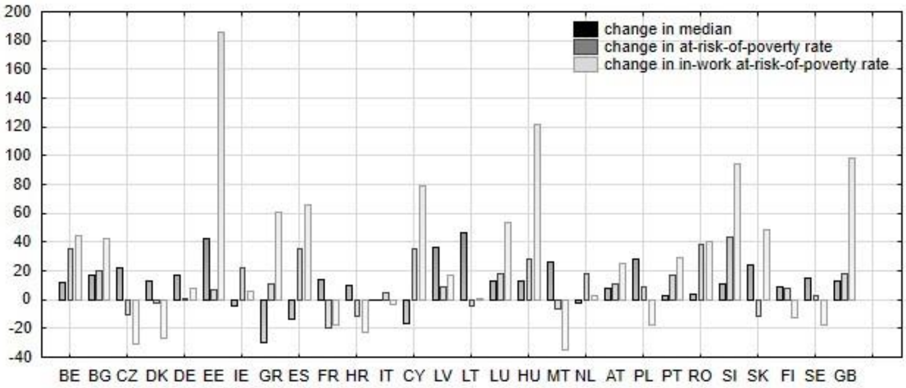
In the next step there were compared changes in flexible forms of employment and income distribution of youth. From 2010 to 2015 in most EU countries the percentages of part-time and temporary employment of youth definitely increased. These percentages decreased only in Latvia and Hungary (Figure 3). The authors of the report about employment and social development (European Commission, 2015) suggest that the increasing part-time work is not only the result of individuals' choice for more flexible arrangements that allow for a better reconciliation between work and private life. Involuntary part-time employment can have implications for income and potentially increasing the risk of poverty or social exclusion. The authors of other report (European Commission, 2016) emphasize that part-time employment typically rises during recessions and the high proportion of part-time workers is caused by the lack of full-time job. In our analysis, the changes in median income between 2010 and 2015 indicated an improvement in the financial situation of young people, but changes in poverty measures (an increase in poverty rates in most EU countries) indicated a worsening of financial situation (Figure 4). The most negative changes were visible in Greece, Spain and Cyprus (a decrease in median income and an increase in poverty rates). Additionally, it should be noted that the during past thirty years the financial situation of youth has changed – young people has replaced the elderly as the group most at risk of poverty (OECD, 2017).

Figure 3: Changes in percentages of part-time employment and temporary employment, age from 15 to 24, 2010-2015



Source: own work based on data from Eurostat (2017a).

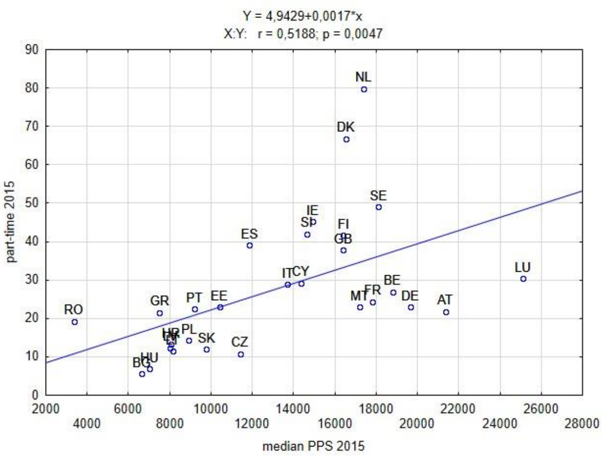
Figure 4: Changes in income distribution and poverty measures, age from 15 to 24, 2010-2015



Source: own work based on data from Eurostat (2017a).

There were examined relationships between flexible employment and youth distribution. The only statistically significant relationship (p=0.05) occurs between part-time employment and median income (Figure 5). The relationship is positive which means the higher part-time employment percentage, the higher median income.

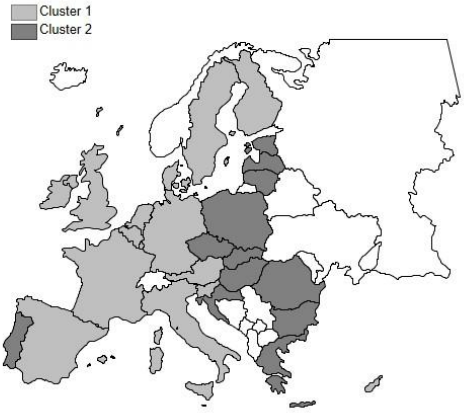
Figure 5: Part-time employment vs. median income, age from 15 to 24, 2015



Source: own work based on data from Eurostat (2017a).

To widen youth distribution study *k*-means clustering there was used. Five variables were included in the study: part-time employment, temporary employment, median income, at-risk-of-poverty rate, in-work at-risk-of-poverty rate. Figure 6 shows *k*-means clustering results.

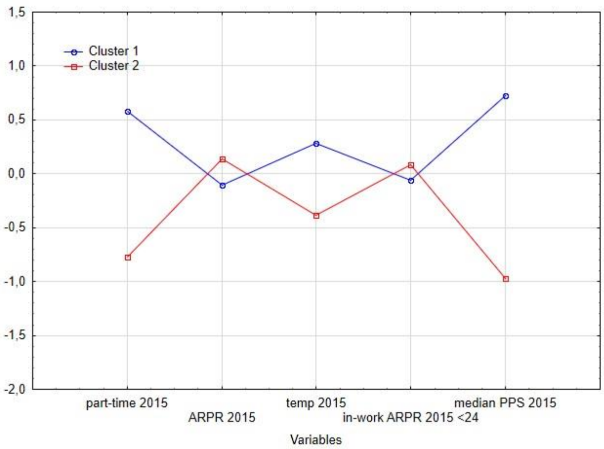
Figure 6: Spatial differentiation of employment flexibility and income distribution of youth, 2015



Source: own work based on data from Eurostat (2017a).

It is a clear division into two clusters – western and eastern. The exceptions are Portugal (a member of cluster 2 grouping countries from eastern part of Europe) and Cyprus (a member of cluster 1 grouping countries from western part). Judging from the magnitude (and significance levels) of the *F* values, variables median income (F=71.58, p=0.000) and part-time employment (F=22.65, p=0.000) are the major criteria for assigning countries to clusters. Looking at the plot of means of each cluster (Figure 7) it is found that the countries in the cluster 1 are characterized by higher percentage of employment flexibility of youth (part-time and temporary employment) and simultaneously by better financial situation (higher median income and lower poverty rates) than the cluster 2.

Figure 7: Plot of means of each cluster



Source: own work based on data from Eurostat (2017a).

4. Conclusion

There is a relatively large variation in the employment of young people by the type of employment in the European Union. Between 2010 and 2015, as a result of increase in the average percentage of youth employed under temporary contracts, the standard deviation also increased, which in turn did not change the relative variability of this feature in the EU-28 (the coefficient of variation, both in 2010 and 2015, amounted to over 47%). These percentages decreased only in Latvia and Hungary. The correlation between the median income of the youth and the adopted poverty rates is ambiguous. In the consequence, there is no clear spatial pattern in at-risk-of-poverty rate and in-work at-risk-of-poverty rate. The highest ARPR and in-work ARPR were in Romania (37.3% and 35.6%, respectively), Spain (33.9% and 24.6%) and Greece (30.1% and 19.1%), the lowest – in Czech Republic (12.3% and 1.8%). Two EU member states of mentioned above, are characterised by the lowest median income in the EU i.e. Romania and Greece. The second group of states (Belgium, Germany and Austria) is characterized by the highest median. We found the statistically significant, positive relationship (p=0.05) between part-time employment and youth median income but we also found that increase in youth median income between 2010 and 2015 is associated to an increase in poverty rates in most EU countries. That indicates a worsening of financial situation of working young people. In the consequence, we cannot state the part-time employment is one of the way to counteract poverty among young people.

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MULTIDIMENSIONAL POVERTY MEASUREMENT FOR REGIONS OF THE RUSSIAN FEDERATION IN CONTEXT OF GLOBALIZATION

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Abstract. Modern globalized world is characterized by the significant economic and social inequality where household real welfare can't be measured by using only income because of its concealment and availability of income in kind. As a result of the research authors came to the conclusion that the main parameter that can significantly reflect the real welfare in current international circumstances should be consumption expenditures, including the cost of food, produced and consumed in the household. Thus, using final consumption expenditure as a welfare index, multidimensional models for the household poverty measurement in the Russian Federation regions are created. Data on consumption expenditures are taken from the Household Budget Survey conducted by the Federal Statistics Service in all regions of the Russian Federation. The survey covers 51322 private households throughout the Russian Federation, with the exception of the Chechen Republic, and is regionally representative. As a result of correlation and regression analysis factors that influence the rate of household consumption expenditure in the modern globalized world are identified for all regions of the Russian Federation. It is proved that the fact of living in rural area and household enlargement have negative impact on its final consumption expenditure in most regions of the Russian Federation. The proposed regional multidimensional models for poverty measurement give an opportunity to the federal and regional authorities being under globalization challenge to form and implement effective anti-poverty policy and target it on most vulnerable households.

Keywords: poverty, multidimensional model, household, globalization, Russian Federation

JEL Classification: I32, P46.

1. Introduction

At the beginning authors decided to propose model for estimating household income with a goal to adjust poverty level in Russia in context of globalization. Nevertheless, widespread concealment of income for tax evasion and delay in payment of wages within significant economic and social inequality in modern globalized world made implementation of planned approach task with deliberately unreliable results. Then authors began to look for method that would allow to make adjustment of officially declared income. That method would use set of parameters that can be easily measured and more socially controlled than income.

During research authors came to conclusion that main characteristic which can significantly reflect real financial situation of family in current international circumstances (delays in payment of wages, availability of income in kind) should be not income, but expenditures, including cost of food, produced and consumed in household. Thus, with this approach, authors created multidimensional models for measuring households' poverty in the Russian Federation regions using final consumption expenditure as a welfare index.

Sufficient number of papers is devoted to study of inequality and poverty measurement in different regions and construction of models for household multidimensional poverty estimation. In one research authors set out a systemic account of intertemporal changes in multidimensional poverty using the Alkire Foster Adjusted Headcount Ratio and its consistent sub-indices. The analysis of changes in multidimensional poverty draws on the global Multidimensional Poverty Index (MPI) and related destitution measure in 34 countries and 338 sub-national regions, covering 2.5 billion people, for which there is a recent MPI estimation and comparable Demographic and Health Survey (DHS) dataset across time (Alkire et al., 2017). Another paper proposes an alternative to aggregation of poverty component indicators based on simple concepts of partial order theory and illustrates the pros and cons of this approach taking as case study a multidimensional measure of poverty comprising three components - absolute poverty, relative poverty and income - computed for the European Union regions (Annoni et al., 2015). Two alternative methods for measuring multidimensional poverty: latent class analysis and "fuzzy set" approach are compared in evaluation of poverty in Spain (Perez-Mayo, 2007). Anderson using sample weighted multidimensional extensions to existing stochastic dominance, inequality and polarization comparison techniques suggests that multidimensional techniques lead to substantially different conclusions from those drawn from the use of unidimensional measures and that sample weighting also has a profound effect on the empirical outcomes (Anderson, 2008).

Indonesian version of the multidimensional poverty index is constructed by augmenting the existing consumption poverty measure with information on health and education from the National Socio-economic Survey (Susenas) for 2003-2013 (Hanandita & Tampubolon, 2015). For India multidimensional poverty is measured in the dimensions of health, education, living standard and household environment using eight indicators and Alkire-Foster methodology for 82 natural regions in India (Dehury & Mohanty, 2015). In another research multidimensional poverty for four provinces of Pakistan using Pakistan social and living standard measurement survey dataset for years 2005-2006 by applying Alkire and Foster methodology was estimated. Nine dimensions were selected for this study: housing, electricity, water, asset, sanitation, education, expenditure, empowerment and land (Awan et al., 2015). Authors in study about poverty in rural Bangladesh attempts to develop a simple tool to measure its multidimensionality which includes inadequate fulfilment of basic needs, such as food, clothing, shelter, health, education, and social involvement (Bhuiya, 2007). Empirical application of the changes in chronic poverty in Argentina is made using a Shapley decomposition for the years 2004-2012 using the Permanent Household Survey (Garcia-Diaz & Prudencio, 2016). D'Ambrosio, Deutsch and Silber made empirical analysis of multidimensional approaches to poverty measurement in Belgium, France, Germany, Italy and Spain, based on the European panel (D'Ambrosio et al., 2011). Another paper applies the Alkire and Foster index of multidimensional poverty to German data modifying it to guarantee that individuals, who are extremely poor in only few dimensions, are not omitted by the index (Nowak & Scheicher, 2016). Pasha analyses the consequences of an alternative weighting scheme for the regional perspectives Multidimensional Poverty Index (MPI), using a data-driven approach, as opposed to the currently employed equal weighting scheme (Pasha, 2017). Results of multidimensional poverty' research in Russia suggest to construct multidimensional index understanding material well-being as generic notion that covers number of different domains, such as income security, basic needs, durables, housing and subjective material well-being (Popova & Pishniak, 2016). Nevertheless, issues of multidimensional poverty measurement in Russia on regional level remain poorly understood.

So, first hypothesis – same factors influence rate of household consumption expenditure for all regions of the Russian Federation. Second hypothesis – fact of living in rural area has negative impact on its final consumption expenditure in most of the Russian Federation regions. Third hypothesis – fact of increasing number of household members has negative impact on its final consumption expenditure in most of the regions of the Russian Federation.

2. Methods

Standard multiple regression equations are used to build a multidimensional model of poverty measurement. Dependent variable *Y* is household final consumption expenditure (*C*), which is used by the World Bank and Eurostat. It is market value of all goods and services, including durable goods (for example, cars, washing machines, and home computers) purchased by households. It excludes cost of buying housing, but includes rent for housing. It also includes government payments and fees to obtain permits and licenses. Household final consumption expenditure is calculated as sum of various consumables using following Eq. 1:

$$C = Cf + Cp + Cs + Co \tag{1}$$

Cf consumption costs on household needs (e.g., food, clothing, rent, personal services);

Cp money equivalent for consumption of products produced by the household itself;

Cs payments for state-provided services, licenses and permits;

Co other consumption costs, including rent for housing and income in kind of employees.

Data on consumer spending are taken from the Household Budget Survey for 2013, conducted by the Federal Service for State Statistics of the Russian Federation. [4] The Household Budget Survey (HBS) is an integral part of the overall plan for statistical activities in Russia. It is carried out by state statistics bodies on a permanent basis in all regions of the Russian Federation. The survey covers private households throughout the Russian Federation (RF), with the exception of the Chechen Republic, and is regionally representative. From the HBS sample for 2013, all represented there households were taken for the study (51322 units).

At the first stage of regression model construction, correlation analysis is performed to determine relationship between *Y* and variables listed in Table 1.

Table 1: Variables X and their description

Variable	Description	Variable	Description
X_1	equalized income of household	X_{17}	presence of working washing machine
X_2	accommodation in rural area	X_{18}	presence of working microwave oven
X_3	amount of household members	X_{19}	presence of working dishwasher
X_4	amount of children in household	X_{20}	presence of working vacuum cleaner
X_5	amount of men over 60 years	X_{21}	presence of working sewing machine
X_6	amount of women over 55 years	X_{22}	presence of working air conditioner

X_7	amount of household' pensioners	X_{23}	presence of personal computer
X_8	presence of working color TV	X_{24}	presence of handheld computer
X_9	presence of working VCR	X_{25}	availability of working mobile phone
X_{10}	presence of working dvd player	X_{26}	presence of working bicycle
X_{11}	presence of video camera	X_{27}	presence of working motorcycle
X_{12}	presence of working radio	X_{28}	presence of working car
X_{13}	presence of music system	X_{29}	presence of working truck
X_{14}	presence of working tape recorder	X_{30}	availability of working motor boat
X_{15}	presence of working refrigerator	X_{31}	presence of elevator
X_{16}	availability of working freezer	-	-

Source: Constructed by authors

Parameters *X* with significant correlation coefficients are used as independent variables in multiple regression equation, which is multidimensional model of household poverty measurement. Equalized household income (X_1) for all Russian regions is calculated using equivalence scales estimated in previous research (Sadyrtdinov & Beglova, 2016).

3. Main results and discussion

In Table 2 variables *X* that showed significant correlation coefficient with dependent variable *Y* are presented. Research is made in all regions of the Russian Federation.

Table 2: Variables X with significant t-value for regions of the Russian Federation

Regions of the Russian Federation	Variables *X* with sig. t-value
Orlovskaya oblast, Magadanskaya oblast, Stavropolskiy kray	X_1, X_3, X_{24}
Sverdlovskaya oblast, Kirovskaya oblast, Tambovskaya oblast	X_1, X_3, X_{31}
Chuvashskaya Respublika, Smolenskaya oblast	$X_1, X_2, X_3, X_{13}, X_{18}$
Penzenskaya oblast, Novosibirskaya oblast, Zabaykalskiy kray	X_1, X_2, X_3, X_{18}
Kabardino-Balkarskaya Respublika, Orenburgskaya oblast	$X_1, X_2, X_3, X_{11}, X_{18}, X_{22}$
Arkhangelskaya oblast, Volgogradskaya oblast, Nizhegorodskaya oblast, Saint-Petersburg, Tulskaya oblast, Yaroslavskaya oblast, Moscow, Tomskaya oblast, Krasnoyarskiy kray, Kurskaya oblast, Omskaya oblast, Permskiy kray, Tyumenskaya oblast, Respublika Bashkortostan, Respublika Altay, Respublika Komi, Amurskaya oblast, Ivanovskaya oblast, Respublika Ingushetiya, Respublika Kalmykiya, Kaluzhskaya oblast, Murmanskaya oblast, Respublika Kareliya, Leningradskaya oblast, Kemerovskaya oblast, Respublika Severnaya Osetiya-Alaniya, Respublika Buryatiya, Respublika Adygeya, Samarskaya oblast, Belgorodskaya oblast	X_1, X_3
Astrakhanskaya oblast, Vladimirskaya oblast, Chukotskiy avtonomnyy okrug, Vologodskaya oblast, Voronezhskaya oblast, Tverskaya oblast, Khabarovskiy kray, Kamchatskiy kray, Ryazanskaya oblast, Rostovskaya oblast, Ulyanovskaya oblast, Respublika Mordoviya, Respublika Sakha (Yakutiya), Bryanskaya oblast, Kurganskaya oblast, Respublika Mariy El, Sakhalinskaya oblast, Respublika Tyva, Lipetskaya oblast, Irkutskaya oblast, Moskovskaya oblast, Respublika Tatarstan	X_1, X_2, X_3

Novgorodskaya oblast, Karachayevo-Cherkesskaya Respublika, Pskovskaya oblast	$X_1, X_2, X_3, X_{18}, X_{24}$
Respublika Khakasiya, Respublika Dagestan, Yevreyskaya avtonomnaya oblast	X_1, X_2, X_3, X_{22}
Saratovskaya oblast, Primorskiy kray, Kaliningradskaya oblast, Krasnodarskiy kray, Udmurtskaya Respublika, Altayskiy kray	X_1, X_2, X_3, X_{31}
Kostromskaya oblast	X_1, X_{19}
Chelyabinskaya oblast	X_1, X_{16}, X_{22}

Source: Constructed by authors from HBS data for 2013 year

In all regions significant correlation was found between household final consumption expenditure (*Y*) and per capita income of the household (X_1). Also, for the majority of Russian regions, a significant correlation between variables *Y* and X_2, *Y* and X_3 was shown. Variable X_4 also showed a significant correlation in most of regions of the Russian Federation, but was excluded due to multicollinearity with variable X_3. Other regressors showed a low correlation with *Y*. As a result of regression analysis, coefficients for *X* were obtained in all Russian regions. They are presented in Table 3.

Table 3: Results of regression analysis for models of poverty assessment in the Russian Federation regions

Regions of the Russian Federation	Coefficient value for *X*
Orlovskaya oblast, Magadanskaya oblast, Stavropolskiy kray	0.8 to 1.6 for X_1 -2762.2 to -5754.9 for X_3 4634.6 to 15331.2 for X_{24}
Sverdlovskaya oblast, Kirovskaya oblast, Tambovskaya oblast	0.1 to 1.1 for X_1 -2925.4 to -5192.6 for X_3 1042.8 to 12164.3 for X_{31}
Chuvashskaya Respublika, Smolenskaya oblast	0.6 to 0.9 for X_1 -1938.7 to -4481.2 for X_2 -2355.5 to -3147.2 for X_3 4599.2 to 5371.4 for X_{13} 2625.9 to 3576.0 for X_{18}
Penzenskaya oblast, Novosibirskaya oblast, Zabaykalskiy kray	0.7 to 1 for X_1 -2791.8 to -4626.1 for X_2 -5043.8 to -6511.9 for X_3 284.7 to 1097.7 for X_{18}
Kabardino-Balkarskaya Respublika, Orenburgskaya oblast	0.6 for X_1 -868.4 to -2246.1 for X_2 -4649.2 to -5182.6 for X_3 2095.1 to 10179.2 for X_{11} 2028.2 to 3870.9 for X_{18} 519.7 to 3206.4 for X_{22}
Arkhangelskaya oblast, Volgogradskaya oblast, Nizhegorodskaya oblast, Saint-Petersburg, Tulskaya oblast, Yaroslavskaya oblast, Moscow, Tomskaya oblast, Krasnoyarskiy kray, Kurskaya oblast,	0.1 to 2.2 for X_1 -1723.2 to -8676.1 for X_3

Omskaya oblast, Permskiy kray, Tyumenskaya oblast, Respublika Bashkortostan, Respublika Altay, Respublika Komi, Amurskaya oblast, Ivanovskaya oblast, Respublika Ingushetiya, Respublika Kalmykiya, Kaluzhskaya oblast, Murmanskaya oblast, Respublika Kareliya, Leningradskaya oblast, Kemerovskaya oblast, Respublika Severnaya Osetiya-Alaniya, Respublika Buryatiya, Respublika Adygeya, Samarskaya oblast, Belgorodskaya oblast	
Astrakhanskaya oblast, Vladimirskaya oblast, Chukotskiy avtonomnyy okrug, Vologodskaya oblast, Voronezhskaya oblast, Tverskaya oblast, Khabarovskiy kray, Kamchatskiy kray, Ryazanskaya oblast, Rostovskaya oblast, Ulyanovskaya oblast, Respublika Mordoviya, Respublika Sakha (Yakutiya), Bryanskaya oblast, Kurganskaya oblast, Respublika Mariy El, Sakhalinskaya oblast, Respublika Tyva, Lipetskaya oblast, Irkutskaya oblast, Moskovskaya oblast, Respublika Tatarstan	0.3 to 1.9 for X_1 -298.7 to -15951.0 for X_2 -2688 to -9662 for X_3
Novgorodskaya oblast, Karachayevo-Cherkesskaya Respublika, Pskovskaya oblast	0.5 to 1.1 for X_1 -1545.7 to -3107.4 for X_2 -3474.1 to -8517.7 for X_3 2497.7 to 6239.2 for X_{18} 179.4 to 10293.4 for X_{24}
Respublika Khakasiya, Respublika Dagestan, Yevreyskaya avtonomnaya oblast	0.9 to 1.2 for X_1 -389.8 to -3981.7 for X_2 -1855.6 to -6612.5 for X_3 167.2 to 84642.9 for X_{22}
Saratovskaya oblast, Primorskiy kray, Kaliningradskaya oblast, Krasnodarskiy kray, Udmurtskaya Respublika, Altayskiy kray	0.4 to 1.5 for X_1 -1727.3 to -8928.5 for X_2 -3330.4 to -6797.3 for X_3 811.4 to 10277.9 for X_{31}
Kostromskaya oblast	1.2 for X_1 30430.6 for X_{19}
Chelyabinskaya oblast	1.1 for X_1 19237.5 for X_{16} 51318.1 for X_{22}

Source: Constructed by authors from HBS data for 2013 year

Obtained coefficient of determination in regression equations varies from 0.2 to 0.8. At the same time, for most regions of the Russian Federation this coefficient is at least 0.6, that shows the high quality of model. As it can be seen from Table 3, for all Russian regions signs of coefficients for variables X_2 and X_3 in regression models are negative. It shows that living in rural settlement and increasing number of household members adversely affect parameter of household final consumption expenditure as welfare indicator, and possession of certain property assets increases it. Within framework of paper it is not possible to present multidimensional models for all regions of the Russian Federation. As an example, multidimensional model of poverty measurement for the Moskovskaya oblast with a coefficient of determination of 0.84 is presented in Eq. 2:

$$C = 10059.8 + 1.9 * X_1 - 428.2 * X_2 - 3029.7 * X_3 \quad (2)$$

where

C household final consumption expenditure;

X_1 per capita income of the household;

X_2 accommodation in a rural settlement;

X_3 number of household members.

Model shows that increase in equivalent income of household by 1 Russian ruble (RUB) leads to increase in its final consumption expenditure by 1.9 RUB. Fact of living in rural area in the Moskovskaya oblast reduces household final consumption expenditure by 428.2 RUB, and appearance of additional household member reduces these expenses by 3029.7 RUB. Described multidimensional model complements household welfare estimate, based solely on its income, with additional parameters that affect welfare reduction. Therefore, such model of poverty measurement developed by authors can be introduced by state authorities for implementing targeted antipoverty programs.

4. Conclusion

Based on the study, following conclusions are drawn. First, there are parameters that have significant impact on household consumption expenditures in addition to income and can be used by authorities to identify vulnerable groups of households that are not officially considered poor, but in fact they are. These parameters differ for different regions of the Russian Federation, as it can be seen in Table 2. So, first hypothesis is not confirmed. Secondly, fact of living in rural area and increasing number of household members have significant negative impact on its final consumption expenditure in most of regions of the Russian Federation. So, second and third hypotheses are confirmed. Third, proposed regional models for poverty measurement, using additional factors besides income, enable regional authorities to formulate and implement effective anti-poverty policy.

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INVOLVED OR UNAWARE? CITIZEN COMMITMENT TO THE CONCEPT OF SMART CITY: A CASE STUDY WITH SPANISH CITIZENS

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Abstract. Nowadays cities have to confront inevitably the consequences of globalization. Due to the significant impact they have on the development level of a country, these major population centres, are now competing with each other, sometimes at international levels, to attract investments and knowledge workers at the time they are facing social challenges. As a result, many governments in cities are currently initiating Smart City (SC) projects with the aim of addressing the rapid urbanization's issues, but with little agreement on what the SC concept actually represents and the way in which it should be implemented. In this context, citizens, who are supposed to be key players in this global change process, remain at times reluctant, at times foreign to it. This research paper analyses citizens' knowledge on the concept of SC and the four basic elements of what it is composed. In order to address this purpose, a self-administered questionnaire was conducted with a sample of individuals in Northwest Spain. Findings support this previous premise: citizens show a lack of awareness of the concept and the role of its main dimensions, apart from a poor involvement in public SC projects. Lastly, a final discussion is carried out gathering some interest considerations.

Keywords: smart cities, citizens, citizen awareness, citizen participation

JEL Classification: M31, M38, M10

1. Introduction

Cities have traditionally been known as promoters of economic activity and social innovation since ancient times. However, their relevance and development have accelerated over the last few decades.

In 2007, as a direct consequence of the urbanization that has taken place for last sixty years, for the first time in human history, the global urban population exceed the population of rural dwellers and the world became predominantly urban. In 1950, 70% of world population lived in rural areas while the remaining 30% lived in urban areas. In 2015, 54% of world population was urban and it is expected 60% to be reached in 2020, which is more than 5,000 million urbanites (United Nations, 2014). In this line, future projections indicate that this demographic trend of migration from rural areas to cities will consolidate in coming years.

This dramatic movement of population entails a series of issues widely known, such as challenges in social organization and territory management, which coalesce around poverty expansion, social stress, or urban pollution, as well as environmental degradation and natural resources shortage. That point is especially clear in major population centres, where higher concentration of inhabitants aggravates the incidence of these problems.

In parallel, the urbanisation of the world occurs at a very near time to the explosion of digital revolution. This is just the beginning of what some have labelled a 'new industrial revolution' which goes hand in hand with a double paradigm that involves the immaterial and the networks, and culminates in the democratization of information (Castells, 2001).

However, this does not necessarily imply a more equal access to information. Conversely, it has been found that these networks conform nodes closely linked to an unbalanced development of cities worldwide. The inequality of urban development happens as direct consequence of mismatches between territories and talent, international investments, transborder flows, or financial exchanges.

The impact of digital revolution on a rapidly urbanizing world explains the emergency of the concept 'smart city' –SC- (Rathore et al., 2016). At the confluence of these two trends of change, a new citizenship emerges with a new shape of living the city and integrating in its social and economic processes.

2. The Concept of Smart City and the Citizen

In recent years, the concept of SC has gained increasing attention in urban planning (Mosannenzadeh & Vettorato, 2014). Many governments in cities are currently initiating SC projects with the aim of addressing the rapid urbanisation's issues, but with little agreement, in general, on what the SC concept actually represents and the way in which it should be implemented in practice.

Conferences, forums –both public and private-, and corporations bring together diverse experts and offer solutions subsumed under the roof 'smart'. The term has practically unlimited flexibility, since it is capable of binding a great variety of objectives, tools and procedures. Cities call themselves 'smart' and also those companies dedicated to provide urban solutions. All in the city is, or seems to be, 'smart'. This plethora is of such intensity that the concept has trivialized and started annoying, and even causing rejection on the part of certain urban players. Without undervaluing the importance of these reactions, strong arguments allow us to reaffirm the central idea that behind the term 'smart', and further to labels and fads, there is a reality of high economic and social impact that is here to stay.

Although there is not an agreed definition of the term SC, most authors mention the application of information and communication technologies (ICTs) as basic foundation and transversal facilitator of public services, sustainability and efficiency (Neirotti et al., 2014). Particularly, a SC is conceived as a socially, environmentally and economically sustainable city that apply ICTs in order to supply an infrastructure that ensures sustainable development and greater efficiency in the use of available resources, together with more active citizen participation and, at the end, a significant increase of citizens' quality of life (European Parliament, 2014; Hayat, 2016). Therefore, in SCs, ICTs translate into better public services for citizens, better use of resources and less impact on the environment (European Commission, 2015).

However & Neirotti et al. (2014) point that ICT-based solutions can be considered as just one of the various approaches to urban planning and living that have the aim of improving the social, environmental and economic sustainability of a city. That is, 'smart' initiatives do not only entail technology investments, but also changes in human capital and living practices and conditions. This is also in line with Caragliu et al. (2011) assertion that SCs depend not only on the endowment of hard infrastructure (physical capital), but also on the availability and quality of knowledge communication (intellectual capital) and social infrastructure (social capital). Similarly, et al. (2014) affirm that ICTs is not a sufficient condition for a city to become smart, and that citizen engagement and governance represent two key success factors along with other enablers. Beyond such a consideration, Table 1 displays some examples of definitions of SCs:

Table 1: Definitions of SC

Authors	Definition
Giffinger et al. (2007)	A SC is a well performing city built on the 'smart' combination of endowments and activities of self-decisive, independent, and aware citizens.
Caragliu et al. (2011)	When investments in human and social capital and traditional (transport) and modern (ICT) communication infrastructure fuel sustainable economic growth and a high quality of life, with a wise management of natural resources, through participatory governance.
Lee et al. (2014)	A SC aims to resolve various urban problems (public service unavailability or shortages, traffic, over-development, pressure on land, environmental or sanitation shortcomings and other forms of inequality) through ICT-based technology connected up as an urban infrastructure
European Commission (2015)	A place where the traditional networks and services are made more efficient with the use of digital and telecommunication technologies, for the benefit of its inhabitants and businesses
Hayat (2016)	A SC is an innovative city that uses ICTs coupled with intelligent sensors and other means to improve quality of life, efficiency of urban operation & services, and competitiveness.

Source: Authors

As evidenced, there is no broad consensus on what should be available in a city to be considered as 'smart' (Angelidou, 2014; Albino et al., 2015). Nevertheless, four key common elements come up between the definitions contemplated (Seisdedos et al., 2015):

a) Holistic perspective: The field of action of a SC is not limited to one sector. SC actions are present in all city areas, and its management is coordinated transversally.
b) Enhancement of the quality of life: Being 'smart' is a means to achieve better public services, a more competitive productive sector, and a sustainable living space.
c) Implementation of new technologies usage: The use of technology makes it possible to collect a great deal of data, process them, and share them in real time in the form of relevant information to generate added value.
d) A new model of relations: The SC eases a bidirectional flow of information, from administration to citizenship and vice versa, encouraging the citizen participation and generating a collaborative society.

From this conceptualization of SCs and their impact on citizen welfare, it is understood that services provided by either local administrations or public-private consortia should be repackaged in a collaborative, sustainable and creative way, thus making the most of any opportunity and potential for socioeconomic development and quality of life improvement. Likewise, citizens are fundamental actors in the smart growth of cities, given their role as main users and requestors of urban services and their increasing participation in the management of the city (Leydesdorff & Deakin, 2009; Walravens, 2015; Klimovsky et al., 2016; Niederer & Priester, 2016; Scholl & AlAwadhi, 2016). However, citizens do not seem to play a really relevant role in SCs design, which remains in the hands of politicians, municipal technicians and managers of urban services firms (Thomas et al., 2016).

Related to the previous, citizens might not have a proper knowledge and understanding of SCs-related concepts and variables and their consequences in daily and future living. For instance, a recent study carried out in Spain concludes that only 60% of citizens affirm that they know what a smart city is (Vázquez-Burguete et al., 2016). Following this line, the present study is intended to: first, analyse the knowledge and involvement of a group of citizens with the concept of SC, and second, measure the extent to which that group is aware of the linkage between those four key elements explained above and the SC projects.

3. Method

In order to address the purpose previously pointed, it was conducted a survey study with a total sample of 408 young university urban citizens aged between 18 and 26 (63.2% women and 36.8% men) by applying convenience sampling during January and February of 2016 in the city of León (northwest Spain).

The questionnaire was composed of two main sections. The first section gathered information about their knowledge regarding the concept of SC and their commitment to it. In this sense, participants gave their position on four questions (yes/no/don’t know questions): first, whether they knew what a SC is, second, whether their city of residence was ‘smart’, following, whether living in a SC was important for them, and finally, whether they considered that citizens’ quality of life was better in a SC.

In turn, the second section was integrated by four items concerning the four key elements that SC projects performance signifies -described above-. For each item, participants reported their level of agreement on a five-point Likert scale from 1 (*none*) to 5 (*a lot*) depending on their degree of consideration that those elements meet with SC projects performance (Table 2).

Table 2: Basics of SCs

Item 1. Presence and usage of Information and Communication Technologies (ICT) and digital services as a basis for the sustainable development of the city
Item 2. Existence of a bidirectional channel “citizen-authorities” to allow the transmission of a high amount of real-time information
Item 3. Inclusion of every aspect of the city (economy, environment, governance, mobility, citizens and living conditions) in any initiative undertaken
Item 4. Creation and execution of plans aimed to improve the efficiency, equity, sustainability and quality of life in the city

Source: Authors

Once data were collected and processed, it was conducted a univariate analysis with the first section and a Student T-test for an unpaired sample with the second section using the software SPSS version 24.0.0.

4. Results

4.1 Knowledge and involvement with the 'SC' concept

In reference to the level of knowledge residents showed regarding the concept of smart city, findings are illustrated in Table 3. About 61% of participants showed awareness of the concept 'SC'. This proportion represents a majority of respondents but it remains far from the entire sample. Surprisingly, the percentage of women who did not know the concept was well above the men's percentage (29.37% compared to 9.52%), which means that 'SC' is a term more common among men than women.

With respect to the question 'Is your city a smart city?' (Table 3), only 2.2% of respondents characterized their home city as smart as opposed to 58.1% who specified the contrary. Additionally, 39.7% of respondents pointed to ignore completely this aspect, fact which is more common between women (48.8%) than men (24.0%).

Table 3: Knowledge and involvement with the 'SC' concept

Question	Gender	Yes (n/%)	No (n/%)	Don't know (n/%)	Total (n/%)
Do you know what a SC is?	Men	105 (27.77%)	36 (9.52%)	-	141 (37.30%)
	Women	126 (33.34%)	111 (29.37%)	-	237 (62.70%)
	Total	231 (61.11%)	147 (38.89%)	-	378 [a]
Is your city a SC?	Men	3 (2.0%)	111 (74.0%)	36 (24.0%)	150 (36.76%)
	Women	6 (2.3%)	126 (48.8%)	126 (48.8%)	258 (63.24%)
	Total	9 (2.2%)	237 (58.1%)	162 (39.7%)	408 [b]
Is it important for you to live in a SC?	Men	60 (40.0%)	57 (38.0%)	33 (22.0%)	150 (36.76%)
	Women	60 (23.3%)	51 (19.8%)	147 (57.0%)	258 (63.24%)
	Total	120 (29.4%)	108 (26.5%)	180 (44.1%)	408 [c]
Is citizens' quality of life better in a SC?	Men	72 (48.0%)	9 (6.0%)	69 (46.0%)	150 (36.76%)
	Women	87 (33.7%)	12 (4.7%)	159 (61.6%)	258 (63.24%)
	Total	159 (39.0%)	21 (5.1%)	228 (55.9%)	408 [d]

[a] $p < .00$ (Pearson chi-squared = 16.882); [b] $p < .00$ (Pearson chi-squared = 25.121); [c] $p < .00$ (Pearson chi-squared = 47.256); [d] $p < .01$ (Pearson chi-squared = 9.443)
Source: Authors

Nearly 30% of participants said that it was important for them to live in a SC (Table 3), closely followed by those that asserted the opposite (26.5%). In any case, those people who did not know whether living in SC was important or not reached 44.1% (81.6% of them were women and 18.3% men).

In the same line, the percentage of people who referred not to know if the citizens' quality of life is better in a SC amounted to almost 56% (69.7% women and 30.3% men), 39.0% of respondents answered affirmatively, and solely 5.1% negatively (Table 3).

4.2 Awareness of the four basics of 'SC' concept

Likewise, the Student T-test was used to estimate if there were statistically significant differences between mean scores of men and women with respect to each one of the four basic aspects to which the concept SC refers.

In general, as can be noted in Table 4, respondents reported a moderate-downward awareness of them. On a scale of 1 to 5, general mean punctuations ranged from 2.53 (new model of relations) to 3.05 (quality of life).

Table 4: Awareness of the four basics of 'SC' concept

Item	Men	Women	Total	*t*	*n*
ICTs usage	$\mu_m = 2.38$	$\mu_w = 2.78$	$\mu_T = 2.63$	-4.261*	406
New model of relations	$\mu_m = 2.38$	$\mu_w = 2.61$	$\mu_T = 2.53$	-2.408*	403
Holistic perspective	$\mu_m = 2.60$	$\mu_w = 2.98$	$\mu_T = 2.84$	-3.844*	406
Quality of life	$\mu_m = 2.84$	$\mu_w = 3.18$	$\mu_T = 3.05$	-3.362*	403

* $p < .05$
Source: Authors

Moreover, this statistical method disclosed significant mean differences between men and women scores for the four aspects. In this sense, mean scores of women, ranging from 2.61 to 3.18, were significantly higher than men's, from 2.38 to 2.84, for all cases.

According to responses of participants, the use of ICTs and the construction of a new model of relations are the aspects least representative of a SC, while the idea of enhancement of the quality of life and the holistic perspective are the most connected with it (always at moderate levels, as mentioned before).

5. Discussion

It is beyond any doubt that nowadays cities have a significant impact on the development of a country. Additionally, with globalization and the resulting intense urbanization, cities have adopted an even more substantive and relevant role. As direct consequence of these issues, cities, aimed at building a sustainable space, have to face great challenges and investment, such as renewable energy sources, efficient use of water and electricity, fast, reliable and affordable public transportation, resources to support green technology transfer, and others.

SC concept has much to do, then, with quality of life in cities and with those who reside in them. But however, whereas many governments around the globe have initiated SC projects in order to transform their urban framework, residents are largely absent from most of these programs, and/or uninvolved with (Thomas et al., 2016). The empirical approach of this paper is clear evidence thereof.

Despite the fact that more than 60% of respondents pointed to know what SC concept means, about 44% did not know whether living in SC was important for them or not, and the great majority of them (almost 56%) referred not to know if the citizens' quality of life is better in a SC. This fact leads us to the following consideration.

With respect to the comparison between men's and women's responses in relation to the four basics of SCs, it was observed a clear and recurrent pattern according to which women's mean scores were higher than men's for all cases. These results reflect, aside from an evident misinformation and poor involvement with SC concept (just keep in mind the timid means scores), a high degree of social desirability (Thompson & Phua, 2005) which is more obvious, in this study, in case of women.

These exploratory results, far from being conclusive, suggest that there is an overall lack of knowledge by citizens on what a SC project actually represents, and the real role they have to perform in it. This research aims not to give a harsh criticism but to call upon the authorities to pay attention to the active promotion of SCs projects by encouraging the participation of citizens (Shepard &Simeti, 2013; Belanche et al., 2016).

Finally, it is necessary to point that this succinct study presents some limitations that open new lines of further research. The convenience sampling, the small age range, and the limited geographical scope are some of these aspects that, if controlled and expanded, would endow future studies with greater validity and generalizability of results.

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THE IMPACT OF TOURISM ON GLOBALIZATION

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Abstract. The article is dedicated to tourism and its impact on globalization. In the introduction, the attention is paid to the definition of tourism, its advantages and disadvantages. Tourism is an important sector in terms of employment and it keeps the economy and trade in moving shape. It is an area that is based on intensive cooperation of all participating businesses. We further describe the individual forms of tourism, such as: recreational, cultural, Spa, sports, business and eco-tourism. Each author describes its specific division. However, the above forms of tourism should meet the individual needs of the target audience. The paper also focuses on globalization and its economic change and sustainable development. Further, we also describe the positive and negative aspects of globalization. Globalization gives an impulse to new trends in tourism market which are evident in customer needs and buying behavior. At the end, we briefly summarize the above facts. The objective of this paper is to point out the timeliness of the topic, and to emphasize the importance and impact of globalization itself is being solved in the field of tourism. The paper is a part of research project VEGA 1/0640/15 named: „Phygital Concept and Its Use in Sustainable Integrated Environmental Management of Businesses“

Keywords: customer, globalization, tourism

JEL Classification: M3

1. Introduction

1.1 Definition of marketing in tourism

Marketing has a wide range of applications and uses worldwide. One of the possibilities is application in tourism industry. Under marketing in tourism, we can understand the market-oriented tourism policy of the market and the market at the same time its influence. (Linetal, 2017; Peyroles, 2017; Kramsch, 2014, Janoskova & Krizanova, 2017|)

Tourism Marketing is a systematic and coordinated focus of enterprise policy of tourism enterprises as well as private and national tourism policies at local, regional, national and international levels to best meet the needs of a particular group of consumers to achieve a reasonable profit. (Ferner, 1993; Li et al., 2017; Kirschnerova & Tomova, 2015)

Human civilization has been associated with traveling since time immemorial. The strong motive of traveling is appealing a thirst for something unknown, culturally, religiously and ethnically different. There is a sense of excitement and desire to experience something new.

This will lay the foundations and existence of tourism. In 1976, the English comba*ny for tourism, defined as follows: ,,the activity of a person travelling for a transitional period to a place which is located outside of its normal environment of life (residence) and work and for a shorter period, the main purpose of the journey at the place visited being other than the exercise of gainful employment. It contains any activity of any significance. (Borovsky et al., 2008; Gossling, 2017; Wang et al., 2016)

Travelling is one of the major phenomena of 21st century. (Brida et al,, 2016) At the same time, one of the largest employment sectors. Tourism keeps the world economy moving. It is part of the international trade and is the largest source of income. In addition to the economic benefits of tourism and community, social and educational attributes, it helps families to spend time together, contributes to specific situations while friendships, allows people to explore and to learn history, gastronomy, customs and traditions of other cultures. (TASR, 2010)

It is focused to meet the specific needs of the participant. They make it possible to determine the overall essence of tourism and thus better meet the need and the target of the visitor. Individual forms are constantly evolving with market development, demand and technical options of supply. These forms include recreation, tourism, sport, cultural, rural agritourism, urban, spa and health, business, youth and environmental.(Gucik, 2004)

Recreational tourism is the most widespread form in the tourism industry. They are used by participants to re-engage new physical and mental strength. It represents an active or passive rest in a pleasant natural environment. It may be a variety of recreational activities from romantic walks through sports activities to stays in the countryside.

Recreational tourism can be performed for individuals or families. There is an increasing demand for stays for families with children.

Therefore, travel agencies are trying to offer hotels with various sports, dance and entertainment activities for families with children. It is necessary to also mention thematic tourism which enjoys a great popularity today. It offers an unforgettable and unique experience from amusement parks, the fairytale park, Disneyland, Asterix park or Maerchen park.

For sports lovers is the ideal **sports tourism**. It represents staying which relates to performing of sport activities. During the summer season, swimming, scuba diving and exploring the underwater world, tennis and golf are popular. In the winter, it is mainly skiing or snowboarding. An indispensable part of the sports tourism is also adventure tourism. It is recommended for those who like to enjoy extreme and adrenaline sports eg. rafting, rock climbing or paragliding.

Another form is **cultural tourism**. It can be understood as satisfaction of spiritual needs associated with education, recreation and entertainment. People who enjoy this kind of tours like to travel to countries with an ancient civilization and rich history. These countries offer the opportunity to discover archaeological sites, memorials or visit museum and galleries. It is an education and instructive form of travel. People with religious background prefer to visit traditional world religious sites such as the known pilgrimage sites of Lourdes, the Vatican and Israel. Education plays an important role in cultural tourism. (Docquier & Rapoport, 2012; Garrod, 2014)

Rural tourism represents a stay in a natural picturesque rural environment. This unique form of tourism offers in addition to the fresh air, pure nature and traditional local cuisine. Its essence is the return of man to nature itself. Farm tourism is also part of rural tourism. Agritourism offers a farm holiday with the possibility of horseback riding, watching local life or folk festivities. Over the past decade, it has increased the importance of the eco agro tourism. It is linked to the development of organic farms.

Another form represents **urban tourism**. It offers a stay in the city, it is often a big city or metropolis. In addition, we can discover its beauties and historical monuments, we can observe the contemporary life in them as well. Every European capital city or bigger city tries to attract thousands of tourists each year. These cities need to pay attention to their services such as accommodation, restaurants, transportation, marketing and overall site availability. It is important for them their attractiveness, excursions and safety. The aim of this type of tourism is experience.

As society increasingly recognizes the importance and indispensability of the health, the interest in **spa tourism** has been increasing. It offers various health-prevention and curative activities under the supervision of professional medical staff. Based on the changing market conditions, it also regulates its offer. In the foreground, it is health tourism. It includes a variety of health, fitness, beauty stays. There has been a great travel boom on the market and are simply desirable.

Business tourism includes business meetings, congresses, trade fairs and exhibitions. In the literature, we can also meet with the name of Congress tourism. Managers and marketers are often involved in various business meetings and trips during their career.

The seminars and training are when the number of participants is 50. If the number of members is up to 300, it is a conference or Symposium.

If the number is more than 300 people, we are talking about Congress. Congresses are national and international. Their objective is to gather and exchange information and expertise to expand your horizons in the subject.

These types of tours are not commonly offered by travel agency; however, a detailed inquiry is from the participant. Conference tourism is one of the most effective forms of tourism.

Another form of tourism is **youth**. Young people enjoy traveling. They have greater opportunities to travel and getting to know new cultures and regions as had our parents or grandparents in the past. We can choose from a wide range of different language excursions or work stays that relate to traveling in the local area. Traveling is an independent, freedom and desire to meet new people and make new friendships on the international level. (Horner & Swarbrooke, 2003|

The last of the forms, we are dealing with is **eco-tourism**. The philosophy of eco-tourism is the protection of the natural heritage and culture. It is the opposite of massive traveling. The attention is paid by the people who are not indifferent to the future and direction of the environment. They prefer activities that are environmentally friendly, minimizing waste or usage of ecological energy solution. This form of tourism is the hope and the future of travel.

Here you can find a summary of ranking which is covering cities from the point of international tourist arrivals. In 2015 arrivals in global urban centers was growing, it means that has economic impact and importance to tourism.

Figure 1: Ranking of top 10 city destinations

RANK	**CITY**	**COUNTRY**	**REGION**	**INTERNATIONAL ARRIVALS (‘000S)**		**% INCREASE 2014/2015**
				2014	**2015**	
1	Hong Kong	Hong Kong, China	Asia Pacific	27,770.50	26,686.00	-3.9

2	Bangkok	Thailand	Asia Pacific	17,031.70	18,734.90	10
3	London	UK	Western Europe	17,404.00	18,580.00	6.8
4	Singapore	Singapore	Asia Pacific	16,795.60	16,869.40	0.4
5	Paris	France	Western Europe	15,058.10	15,023.00	-0.2
6	Macau	Macau	Asia Pacific	14,566.00	14,308.50	-1.8
7	Dubai	United Arab Emirates	Middle East and Africa	13,200.00	14,260.00	8
8	Istanbul	Turkey	Western Europe	11,843.00	12,414.60	4.8
9	New York City	US	North America	12,230.00	12,300.00	0.6
10	Kuala Lumpur	Malaysia	Asia Pacific	11,629.60	12,153.00	4.5

Source: Euromonitor International

2. Pros and cons of tourism

Theourx said: I don't look down on tourism. I live in Hawaii where we have 7 million visitors a year. If they weren't there, there would be no economy. So I understand why a tourist economy is necessary. (Goodman, 2016)

Pros

- It provides money to economy. It can be considered as one of the main advantage and challenge of tourism. Therefore, it has a strong advertising and marketing activities. It plays an important role in national income.
- It produces job opportunities in hotels, bars and restaurants. therefore, it can bring employment to people. Tourism can be a source of finance for local infrastructure, education system and medical services.
- Tourists or visitors can endorse international links. It will bring more business for a locality and build it in term of medium or long perspective.

Cons

- Negative impact on environmental in term of pollution, petrol accident and forest fires. Tourist attractions can be destroyed by wearing and using it.
- Sometimes we are victims when tourists are unable to respect traditions, culture and local norms. Their behavior is inappropriately.
- Tourism offers seasonal jobs without extra benefits.
- In 3rd developing countries, local hotels are owned by foreign investors. Those investors have main profit, with little or no benefit to this locality. (Goodman, 2016)

2.1 Sustainable development in tourism

Tourism that takes full account of its current and future economic, social and environmental impacts, addressing the needs of visitors, the industry, the environment and host communities (Goodman, 2016)

Development of global tourism is based on agreement with international corporations. Those companies will play an important role in advertising and entire promotion system. They try to improve current offer and bring added value.

According to this action, they can achieve so-called added value. We can consider that large tourism complex and chain can afford different kind of services for various segments and provide competitive advantages.

Figure 2: Tourism vs. globalization

TOURISM	GLOBALISATION
• **Movement of the population trend – tourists, employment in the tourism industry**	• Movement of the population - migrations
• **Movement of ideas – new cultural values, business in tourism**	• Movement of ideas – new technologies
• **Movement of capital – innovation in the tourism indsutry, foreign investments**	• Movement of capital – accelerated movement
• **The need to expand new technologies – open breakthrough**	• Slow new technologies
• **The ancient civilisations- limitations of certain social groups**	• Time-space compression
• **Strong growth in the past 100 years**	• Time-space compression
• **Travelling for everyone, development of global tourism culture**	• Global tourism culture
• **Tourism needs local culture or image – differences between destinations**	• Global culture

Source: (Kearney, 2004)

Sustainable development is linked with the environment and its protection. It can be said that we can achieve sustainable development via many other activities such as social and economic activities. The aim of sustainable development and its implementation in action is protection of cultural heritage.

Sustainable tourism should:

- Optimal usage of environmental resources that will provide key elements in tourism development, maintaining and supporting natural heritage.
- Respect of socio-cultural authenticity, protect living heritage and their traditional values, this will gain intercultural understanding and its tolerance.
- Provide viable, long-term economic operations, socio-economic benefits, employment in a good shape and stability, income-earning challenges and opportunities.

Tourism is a phenomenon that has been growing during a development of the human society. It influences economy, ecology, culture and other activity. Sustainable development in tourism is a basic overview that help to explain economic, environmental and social aspects within tourism. The idea of sustainable development contains that natural, cultural and any other resources will be saved for the future.

2.2 Pros and cons of globalization

Pros

- It brings the awareness, openness among the people and its nations and traditions. It helps them to manage it.
- It also provides poor countries, through infusions of foreign capital and technology, with the chance to develop economically and by spreading prosperity, creates the conditions

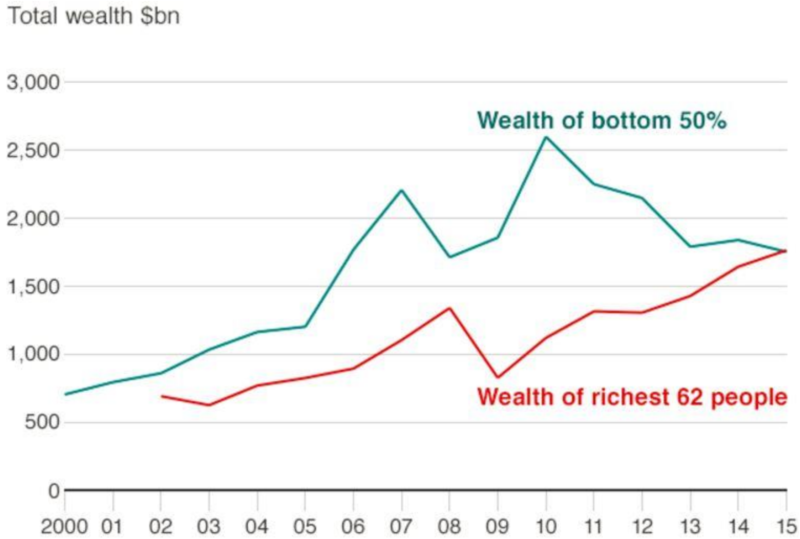
in which democracy and respect for human rights may flourish. This is an ethereal goal which hasn't been achieved in most countries. (Collings, 2015)

- Market can be considered as a global place which can offer the same goods. This will depend on customer's choice, preference and current expectations.
- Freedom in movement. People could travel and work anywhere.

Cons

- Globalization is responsible for leading deeper gap within wealth distribution. Competition might be erased by free trade.

Figure 3: The 62% richest people in the world are worth more than the poorest 50%



Source: Oxfam/Forbes

- Traditions are dismissed, Western world domination and promotions which bring a certain of uniformity.
- Small companies and middle class can be destroyed by globalization. However, they can follow the trends. There is challenge with creating a new one. On the other hand, there is a negative promotion of international corporations. They are accused of the following: unfair working conditions, social injustice or ecological damages.
- Workers in developed countries like the US face pay-cut demands from employers who threaten to export jobs. This has created a culture of fear for many middle class workers who have little leverage in this global game. (Collings, 2015)

3. Conclusion

Globalization can be considered as the movement of goods, values and ideas across the world. Globalization in tourism is an essential field. It has its political, economic and social aspect. Process of globalization has already influenced each part of world economy. This also includes tourism as a crucial and developing industry. According to rapid growth of tourism which represent a certain threat toward the environment, social and international relations. The impact or influence of globalization on tourism can be accessed from different kind of points. There are the following five examples such as: mobility, the latest population and demographic trends, terrorism, both safety and security, new destination and places.

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AVAILABILITY OF FOODSTUFFS INTENDED FOR SPECIAL NUTRITION WITH FOCUS ON GLUTEN-FREE PRODUCTS AS A PART OF GLOBAL HEALTH SITUATION

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Abstract. At present, there is a significant increase in the number of people - customers who are forced to consume food for special nutrition due to various health reasons. There is a variety of food allergies or diseases requiring adherence to a specific diet regime. An important group is formed by people with gluten intolerance. Epidemiological studies conducted over the last decade have revealed the fact that celiac disease is one of the world's most widespread life-long illnesses. It is therefore possible to say that in the case of food allergies this is a global problem (globalization). Although drugs are being tested to supplement or even completely replace the gluten-free diet, to effectively deal with celiac disease is currently possible only by adhering to a gluten-free diet. These consumers must therefore look for foods that meet their health requirements in their composition. Distribution of food for gluten-free diet is subject to a number of different constraints. In general, groceries intended for special nutrition in the retail network of stores are difficult to access and expensive compared to conventional foods. The aim of the paper is to show the current level of gluten-free food. It also compares the availability of gluten-free food in the retail network compared to 2012 and 2016. Information about the assortment of offered gluten-free foods, including price levels were determined through field surveys in five selected types of retail outlets (hypermarket, supermarket, superretum, shop with service, e-commerce) in the whole country.

Keywords: retail, food, distribution, customer, diet

JEL Classification: I12, F14, P46

1. Introduction

Celiac disease is a systemic autoimmune disorder caused by an immune response to the presence of gluten in the diet (Jafari et al., 2017). This life-long autoimmune disease affects individuals who produce larger amounts of antibodies against the enzymes and proteins which are found in gluten, as stated by Klener et al. (2006). This involves chronic inflammation of the mucous membrane in the small intestine and the disappearance (atrophy) of the intestinal villi which absorb nutrients into the blood during the process of digestion. As has been reported (Briani et al., 2008), the illness leads to inflammation, the atrophy of the intestinal villi and hyperplasia in the small intestine. The changes in the small intestine's lining caused by celiac disease impair the ability to absorb nutrients from food, which may lead to serious consequences for the patient's health. The destruction of the intestinal villi results in the interruption of the absorption of all nutrients, minerals, vitamins and water (Slamenikova, 2012).

As well as the gastrointestinal tract, celiac disease may also affect other systems in the body and cause additional health complications, including reduced growth, osteoporosis and anemia due to a lack of iron (Moreno, 2014). Celiac disease is also associated with various extraordinary intestinal complications, including skin diseases, anemia, endocrine disorders and neurological deficits. Patients with celiac disease are also at a much increased risk of suffering fractures (Zanchetta et al., 2015). Celiac disease can also be associated with increased infertility and other autoimmune diseases, including malignant illnesses (especially lymphomas). (Green & Jabri, 2003) This involves a disorder which has genetic, environmental and immunological elements (Alaedini & Green, 2005).

The prevalence of celiac disease has been estimated at 1% worldwide (Salazar et al., 2017). It is therefore possible to say that this involves a global problem which needs to be addressed. The significance of celiac disease is also apparent from the fact that the group of gluten intolerant people in the population is growing. Despite the fact that various potential treatments have been trialed (Watkins & Zawahir, 2017), the only currently effective treatment of celiac disease involves strict adherence to a gluten-free diet. The health problems usually quickly recede once the patient starts this diet (Jericho et al., 2017). The strict adherence to a gluten-free diet represents the only method of preventing the occurrence of the short and long-term effects of celiac disease (Dowd & Jung, 2017).

The adherence to such a gluten-free diet may, of course, be difficult and costly (Freeman, 2017). Despite the fact that the range of gluten-free products available in retail networks has continued to expand, the accessibility and price of gluten-free foodstuffs continue to present a significantly limiting factor. The limited access to gluten-free foodstuffs is especially apparent in the case of individuals with low incomes and individuals who are not able to easily travel in order to purchase these products (Burden et al., 2015). Therefore, support for families with children who have been diagnosed with celiac disease, for example, is highly significant (Tighe et al., 2017). In some countries (Great Britain), the high costs associated with a gluten-free diet are partially offset with the purchase of suitable products on the basis of a prescription (Muhammad et al., 2017). As well as difficulties involved in finding a suitable sales outlet, some customers have also reported difficulties when identifying foodstuffs which are suitable for people with celiac disease (Rashid et al., 2005).

The range of suitable foodstuffs on offer at retail outlets for consumers with a gluten-free diet has been ascertained in the form of a field survey which was undertaken during the period from October to November, 2016. The aim of the survey was to map the range of gluten-free foodstuffs sold at selected retail outlets and at the same time to also map the weight and the prices of selected gluten-free foodstuffs. A total of 412 different types of retail outlets located all over the Czech Republic were visited during the survey. The outlets were chosen at random without any differentiation of the proprietors. Gluten-free foodstuffs were found at small superreta (self-service shops with a sales area of up to 400 $m^{2)}$, supermarkets and hypermarkets, as well as at shops with service (mixed goods or specialized shops).

Every monitored outlet was:

a) mapped and the range of gluten-free products was recorded in the set categories of goods (fresh baked goods, long-life baked goods, flour, pasta, confectionery, crackers and savory products, smoked foods, instant products, canned products and drinks),
b) checked to determine, if the range of goods at the outlet was shelved separately from the other products,

c) five randomly selected gluten-free foodstuffs were checked for the presence of gluten on the basis of the information on the product's ingredients,
d) the weight and prices of five randomly selected gluten-free products were mapped and recorded, along with information about the manufacturer and the product's origin.

The data acquired from the conducted survey was evaluated using the Microsoft Excel 10 program in the form of descriptive statistics and it was processed in graphs.

2. The trade in gluten-free foodstuffs

After 2003, when the monopoly on the distribution of subsidized gluten-free products ended, the range of such foods on offer in the retail network expanded significantly. At present, gluten-free ingredients and products are available in the market at different types of retail outlets which differ greatly in price and quality.

2.1 The range of gluten-free foodstuffs offered at retail outlets

From the point of view of the breadth and depth of the range of gluten-free foodstuffs on offer, there are generally large differences between the individual shops. This also applies in the case of the monitored selected types of outlets (Table 1). Some individual categories of gluten-free goods were not available at all at some shops. This mainly involved superreta and some small shops with service. On the other hand, it was discovered that large-format shops such as supermarkets have a relatively large range of this specific type of foodstuffs. The best offers were found at hypermarkets where the large sales area means that there is sufficient space to offer special types of foodstuffs.

Table 1 The breadth of the range of gluten-free food at selected types of retail units (the average number of entries in the given category of goods)

	SUPERRETUM	SUPERMARKET	HYPERMARKET	SHOP WITH SERVICE
fresh baked goods	1.19	2.07	3.88	2.65
long-life baked goods	2.82	6.09	13.81	6.56
Flour	1.76	3.37	16.10	5.23
Pasta	2.09	4.82	12.66	6.75
Confectionery	8.64	13.80	31.83	14.43
crackers and savory products	4.13	6.31	11.39	5.09
smoked foods	3.47	17.59	29.07	4.45
instant products	3.86	5.47	14.17	7.09
canned products	3.00	7.13	12.65	3.84
Beverages	3.77	11.18	40.66	5.38
dairy products	3.04	8.49	20.50	9.05

Source: Authors.

In comparison with the other types of retail outlets, hypermarkets offer the largest average number of items in all the monitored categories. Shops with service finished second as a very well stocked type of retail unit where the range of gluten-free foodstuffs was relatively well represented. This is especially due to the fact that specialized shops focusing on sales of foodstuffs for special nutrition have been included in this category.

It can therefore be said that all of the types of shops offer at least some gluten-free products in each category. On the other hand, the depth of the product range with regard to the specially prepared products without any gluten required by the sufferers of celiac disease which do not involve so-called naturally gluten-free foodstuffs is very small in a number of cases. The offer is especially very limited in the case of fresh baked goods, which sufferers of celiac disease have long perceived as being insufficient.

One of the monitored criteria also involved the question as to whether the range of gluten-free foodstuffs was shelved separately from other products in the shop. The separate presentation of the products designated for special nutrition facilitates the customer's orientation within the shop and simplifies the purchases. Supermarkets, which in the vast majority of cases have separate areas designated for gluten-free products, ranked best in this comparison. The majorityof the shops place any special nutrition products on separate shelves/shelf areas (61.17%). Dedicated separate areas are mainly unavailable in those shops which have a small sales area due to their limited size. Some product categories cannot be shelved separately from the other products due to their nature. An example of this is smoked foods – counter sales. On the other hand, any sold unpackaged foodstuffs (typically, fresh baked goods) must be kept separate from other products due to the possible contamination of the gluten-free baked goods with gluten.

The range of the gluten-free products at the individual types of shops was also compared from the point of view of the ratio of Czech and international products. In product categories such as smoked foods or instant meals, gluten-free products of domestic origin are in clear predominance at all of the types of shops. The situation is very similar in the case of flour. A relatively surprising finding involved the fact that the complete opposite applied in the category of baked goods, which should mainly be supplied by local producers. With the exception of shops with service, foreign suppliers are dominant in the case of bread and fresh baked goods. There is significant room in this area for Czech manufacturers to expand their product ranges.

2.2 The price levels of the gluten-free foods offered in retail shops

A further section of the survey mapped the differences in the prices for gluten-free products in the selected categories of goods at the individual types of outlets (Table 2).

Table 2: The prices of the selected categories of gluten-free products at the individual types of shops (price per 1 kg)

	SUPERRETUM	SUPERMARKET	HYPERMARKET	SHOP WITH SERVICE
bread	270.56	258.10	262.22	228.86
fresh baked goods	284.79	358.36	337.89	296.74
biscuits	396.73	421.01	366.74	401.24
flour	140.40	111.42	91.17	146.77
instant products	390.73	282.24	340.18	332.67
smoked foods	268.51	229.61	224.30	227.74

Source: Authors.

There are significant differences between the individual types of shops in the prices for the given types of products calculated as the price per kilo. The grey areas in Table 2 designate the lowest prices among the monitored types of shops. Hypermarkets were found to have the most items with the lowest price for one kilo of the product. A generally lower price level is typical for this type of shop and the same is also true of gluten-free products. However, hypermarkets are not always accessible to everybody due to their being located in the vicinity of larger towns and cities and it is therefore not possible to unequivocally recommend purchasing gluten-free foods from this type of shop.

In some categories, such as fresh baked goods or instant food, the differences in the prices for the individual types of shops are relatively large (73.57 crowns per kilogram or 108.49 crowns per kilogram). However, the price differences are the lowest in the categories of bread and biscuits, (41.70 crowns per kilogram or 54.27 crowns per kilogram).

A number of factors influence the final product price for the end consumer. These include the given vendor’s costs, including the purchase price from the supplier, the sales strategy, the degree of interest among customers and others.

A further point of interest involved a comparison of twenty randomly chosen products in the flour category, which is the gluten-free food with the greatest sales volume (sufferers of celiac disease often prefer home baking due to the high price of the final product - fresh baked goods). Ten gluten-free products from various producers in the Czech Republic and ten similar products imported from abroad were compared. This comparison was based on the findings ascertained in supermarkets. The given price was converted into the price for one kilogram in order to enable an effective comparison of the individual products. The difference in the price of gluten-free flour was not that great when comparing Czech and international producers (5.39 crowns in favour of the domestic manufacturers).

As well as the comparison between the individual types of shop, a comparison was also undertaken of the prices of randomly selected gluten-free foodstuffs and “regular” foodstuffs containing gluten (Table 3).

Table 3 A comparison of gluten-free food prices and the prices for foodstuffs containing gluten (the price for 100g)

2016	Bread	Pasta	Flour	Bread baking mixtures	Biscuits
the gluten-free variant	81.93	36.51	36.84	46.48	106.16
with gluten	18.25	22.55	8.74	18.99	54.9
the difference in CZK	*63.68*	*13.96*	*28.1*	*27.49*	*51.26*
the difference in %	*77.72*	*38.24*	*76.28*	*59.14*	*48.29*
2012	Toast bread	Pizza	Flour	Pasta	Biscuits
the gluten-free variant	140.415	287.40	65.00	70.00	340.00
with gluten	54.80	185.18	12.90	37.80	119.00
the difference in CZK	*85.62*	*102.23*	*52.10*	*32.20*	*221.00*
the difference in %	*60.97*	*35.57*	*80.15*	*46.00*	*65.00*

Source: Authors.

The average price of the gluten-free food was found to be many times higher than the price of the food with gluten in all 103 evaluated products. The most significant difference was recorded in the category of bread and biscuits. It can therefore be unequivocally stated that a gluten-free diet is several times more financially demanding than a regular diet.

This significant difference can have a negative impact on the diets of people with celiac disease. Patients in difficult economic situations may have to deliberately avoid some types of foodstuffs due to the high price of gluten-free foods and they may even have to give preference to, for example, foodstuffs which naturally contain gluten, because they are much cheaper to purchase. This may have a negative influence on the variety of food and the adherence to the correct diet.

3. Conclusion

On the basis of the results of the survey conducted at various retail outlets, it can be said that gluten-free foods are usually included among the products on offer at most shops and that this is the case even though these products do not represent a significant share of the goods on sale. It is possible to confirm a certain dependency between the type of shop and the individual monitored aspects. It generally applies that the smaller the sales outlet (with the exception of specialized shops), the smaller the range of gluten-free products on offer. It is also possible to find large differences in some of the prices at the individual sales outlets. The price comparison between gluten-free products and products with gluten was also negative in all the monitored categories of goods.

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VALUE CREATION MECHANISM OF A SMALL TECHNOLOGY-BASED FIRM IN A CONTEXT OF GLOBALIZATION

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Abstract. Ability to create value may be considered a basis for a company`s survival in a context of globalization and intensifying global competition. Small technology-based firms are especially vulnerable in that struggle because they are characterised by more volatile environment, higher risks and growth potential and therefore require a special approach. The article describes the path that value of the company follow from fundamental factors to market quotes. Authors argue that the main fundamental strategic factor of value creation is capability for innovation, which is affected by access to new technology, reproducible competitive advantages, dynamic entrepreneurship and developed market for complimentary products according to an interpretation of M. Porter`s Diamond concept. Authors suggest the system of indicators (value drivers) that takes into account future growth opportunities and factors topical for technology-based firms. It is shown that such indicators directly affect company`s intrinsic value and as a result its market value. Authors argue that an analytical scheme suggested in the article may be used in strategic decision-making for financing decisions including IPO, internal control system and system of motivation of managers.

Keywords: globalization, value creation, small technology-based firms.

JEL Classification: F63, G32, L21, O32

1. Introduction

According to the Shareholder Value Concept, the main purpose of any private firm is value creation for its shareholders, which in turn positively affects welfare of all stakeholders of the company. For small and medium technology-based companies especially now in the context of globalization and intensifying international competition the problem of application of value-based management is becoming especially topical. Such companies face specific difficulties: high degree of uncertainty and risk, uniqueness of a product and rapidly changing strategic environment. For such companies the problem of value creation consists of two main components: how to create value and how to measure it.

The purpose of this research is to describe characteristics of value creation mechanism of small and medium technology-based firms in the context of globalization, and to develop a system of indicators, allowing to evaluate such companies through the prism of value creation.

2. Methods

Description of analytical scheme of value creation of a small technology-based company is based on the example of Company A which operates in Russian pharmaceutical industry (name has been changed for confidentiality reasons).

3. Theoretical background and Discussion

Global cooperative relations of Russia despite of their weakening due to sanctions remain relatively stable in the area of small business (Korostyshevskaya & Urazgaliev, 2016). Support of small and medium technology-based firms is extremely important in order to overcome the crisis (Gregova & Dengov, 2016). The main approaches for business valuation are market-based and income-based approaches, some authors especially stress the significance of the discounted cash flow method, which requires some strong assumptions for a future period. (Berzakova & Bartosova, 2016) They should be clear and reliable because the value of a small technology-based company is determined mostly by its future growth opportunities rather than by its current financial results. It could be proved by the fact that companies in more technologically intense sectors (software, electronics, biotechnology and electronics) tend to have higher P/E coefficient (Damodaran, 2017). According to recent researches, in order to successfully create value a company should be ready for major changes, demonstrate great commitment to the process of value creation (Haspeslagh, 2001) and provide sufficient quality of management (Naouar, 2016). Ability to analyze factors affecting company`s value and to efficiently evaluate the outcome of investment decisions in conditions of uncertainty are the most important components of high-quality decision-making process. Thus, technology-based firms need analytical instruments for value measurement reflecting their specifics.

The influence of globalization becomes more and more important factor to consider for management teams of small technology-based firms. For instance, after the crisis of 2008 firms in IT industry began to follow the strategy of development of product innovations and internationalization of their activity. Such companies tend to expand their operations to the international market (Colombo et al., 2016) and innovation process is more intense in countries, which have greater internal cultural and research potential and more active spillover of knowledge. (Garrone et al., 2014). Therefore, valuation of the company as well as its intangible assets should be taken into consideration in a context of globalization and increasing role of knowledge for generation of both technological and institutional innovations (Corejova & Al Kassiri, 2016).

Corporate strategy aimed for value creation focus on long-term planning (Naouar, 2016), harmonization of corporate governance by interlinked strategic goals, higher extent of employees' involvement (Dolan & El Alaoui, 2010).

According to Copeland et al. the value of a company passes four main stages: fundamental factors of value creation form a basis of competitive advantage; value drivers – financial and non-financial indicators which determine the value of a company, intrinsic value, market value of the company (Copeland et al., 2000). This research will focus on the first two stages of value creation.

The Diamond Concept by Porter determines four basic components of a competitive advantage: firm structure and rivalry, demand conditions, related and supporting industries, factor conditions (Porter, 1990). As for technology-based firms, we may argue that basic factor of their competitive advantage is innovation capability, which may be divided into four elements based on the Diamond Concept.

Dynamic entrepreneurship is necessary for survival in high-tech industries because it includes different methods and techniques as well as entrepreneurial talent, system of motivation and corporate architecture, which allow a company to efficiently allocate its resources and use market opportunities.

Access to new technology is viable for technology-based firms because technology is a basis of competition in high-tech industries. Technology could be obtained from different sources: R&D cooperation, internal R&D facility, licensing or outsourcing. Access to new technology makes it possible to create new products or modify existing ones.

Developed market for complementary products is also important factor of company`s innovation capability as it determines the size of potential market. For instance, development of medical services in oncology influence a demand for new cancer drugs.

Finally, **factor conditions** are internally generated factors of competitive advantage, which allow company to compete successfully in technologically intense market. Such factors include specific resources, equipment, qualified personnel etc. and distinct a company from its competitors (Porter, 1990).

Fundamental factors of value creation lead to achieving quantitative indicators in different spheres of activity, which will be further referred to as value drivers. These indicators may serve different purposes such as key performance indicators for management and source of information for shareholders, which allow checking whether investment decisions lead to growth of the value of a company. In a context of globalization, the risk of hostile takeovers is increasing and the role of early warning system becomes more significant (Kral & Bartosova, 2016). Besides other purposes, such system should provide an opportunity to control the value of a company by determining the key factors affecting it.

There are different approaches to determination of value drivers. One of the models was suggested by S. Valdaytsev and consists of five financial indicators which finally lead to return on equity (ROE) as the main indicator of a company`s activity (Valdaytsev S. V., 2008, P.348). This approach supposes that return on equity represents expectation of shareholders of the company and may be a measure for value, which they get from the company as their investment. A. Rappaport suggests other model of value drivers. He argues that free cash flow (FCF) which is considered the main indicator of value creation is composed of turnover growth, operating margin, capital expenditure, working capital change, the effective tax rate, cost of capital, and competitive advantage period (Rappaport, 1998).

Models mentioned above as well as their variations have certain limitations when applying them to fast-growing technology-based firms. For instance, ROE indicator may be used for short-term planning and may give a reliable estimate for the value of a company for a particular year but not in a long-term period where it is difficult to make a precise forecast of the target value of this indicator. Therefore, it is less suitable for long-term considerations. The same issue relates to the free cash flow model. Current FCF which Rappaport`s model is based on does not represent future growth opportunities which are a major source of company`s value as it was argued before. Thus, existing models of value drivers need to be adjusted when used by small technology-based companies.

4. Measurement of value of a small technology-based firm

According to recent concepts of business valuation a company`s value consists of two main elements: the present value of current projects of a company and the present value of future growth opportunities (see Formula 1):

$$PV = PV_e + PV_{FGO} \tag{1}$$

where:

PV_e the present value of existing projects of the company

PV_{FGO} the present value of future growth opportunities (Jaegle, 1999)

For small and medium technology-based firm influence of future growth opportunities may be determinant, which explains high P/E ratios of small technology-based firms. Hence, it is possible to come up with the authors` approach to value drivers, which contains elements of Valdaytsev`s and Rappaport`s models and some specific factors aiming to take into account the characteristics of small technology-based companies and future growth opportunities. It is possible to divide all the value drivers into three categories related to different functional strategies – production, marketing and finance (Table 1). These indicators affect different elements of the value of a company calculated using the classical discounted cash flow model.

Weighted average cost of capital (WACC) is the first financial indicator to be considered. A company normally tries to minimize this indicator due to inverse relation between WACC and the value of a business according to the DCF model. Analysis of industry-based financial data shows that small technology-based company tend to have higher WACC due to higher industry risk expressed by beta coefficient and higher non-systematic risk expressed by various risk premiums (Damodaran, 2017) related to higher uncertainty and lower information transparency. One may assume that after obtaining stronger market position cost of debt will reduce due to lowering credit risk therefore reducing WACC.

Liquidity and gearing indicators are the next important category of value drivers as they describe the financial position of the company and ability to attract funds for future projects. Current ratio or current assets divided by current liabilities of the company could be used as a basic liquidity indicator. Gearing ratio represents a debt burden of a company and is calculated as long-term debt divided by equity. According to researches conducted by different authors (Damodaran, 2009; Fernandez, 2002) 30-50% could be considered as an optimal diapason for share of debt which means 0.42 -1 for optimal gearing ratio.

Profitability ratios represents a company`s ability to generate cash flows and usually are calculated as EBITDA divided by other essential indicator of company`s activity. Intangible assets may become such an indicator for technology-based companies. Research of Hong Kong stock exchange that the share of intangible assets reflects financial outcome for technology-based companies (Li, & Wang, 2014). Therefore, intangible assets profitability may be used as a value driver for such firms (see Formula 2).

$$IA\,Profitability = \frac{EBITDA}{IA_t + IA_{t-1}} \tag{2}$$

where:

IA_t carrying value of intangible assets at the end of the period

IA_{t-1} carrying value of intangible assets at the beginning of the period

Next category of value drivers represent characteristics related to production of finished goods or services. For a technology-based company technology is a critical element of a production process and therefore this element requires special evaluation techniques. Capacity ratio for research and development personnel could be considered one of the indicators reflecting effectiveness of an R&D process (see Formula 3).

$$R\&D\ Capacity\ ratio = \frac{budgeted\ hours\ of\ R\&D\ personnel}{actual\ hours\ of\ R\&D\ personnel} \tag{3}$$

Normally the value of this indicator will be close to one. The value lower than one means that overload of R&D personnel, higher value means inefficient use of R&D personnel.

Probability of successful development of a new product represents company`s ability to generate new products which will generate cash flow in the future and improve future growth opportunities. If company is involved in several stages of R&D this indicator may be calculated as multiplication of probabilities of successful completion of at each stage of development a company takes part in (see Formula 4):

$$P = p_1 * p_2 * \dots * p_n \tag{4}$$

where:

P probability of successful completion of a product,

p_1, p_2, p_n probability of successful completion of a particular stage of R&D

Marketing value drivers represent the outcome of company`s activity and the ability to generate cash flows. Competitive advantage period suggested by A. Rappaport may be interpreted for small technology-based firms as maximum of two numbers: projected length of product lifecycle and term of validity of a patent it is based on. Indicators that take into account the market position of the company are consumer satisfaction index (CSI) and market share. CSI calculation consists of several stages: determination of indicators relevant for buying decision, their prioritization and calculation of level of consumer`s satisfaction based on such indicators in comparison to "ideal model" or a closest competitor (Molchanov & Polyakova, 2012). Finally, market share reflects client base and ability to spread it.

All indicators mentioned above tend to influence long-term ability of a technology-based company to generate cash flow and therefore to form intrinsic value of a company.

Finally, after a company has performed an IPO and went public intrinsic value begins to affect market quotes of company`s shares. At this point, an influence of external factors such as dynamics of the World`s main stocks indices, M&A activity and reaction of the market on different events becomes more intense and forms new major area of consideration.

5. Results: Analysis of a value creation process of Russian pharmaceutical company

Company A is a Russian pharmaceutical company specializing in production of anti-viral drugs. This company is actively involved in development of new drugs and methods of production of pharmaceutical ingredients. During an IPO on the Russian stock exchange the Company attracted around 500 mln roubles for its projects including development of a new oncological drug which is co-financed by Rosnano JSC and other investors of the company.

The company could be considered a technology-based: high-tech industry, high share of R&D expenditure in total (48% in 2013), access to technology through own research department, existence of complementary market (medical services), access to shareholder funds, qualified R&D personnel and availability of friendly benchmarking with its shareholders which are mostly large pharmaceutical companies (including one US company).

Table 1 contains information regarding Company A`s value drivers and recommendations to the management which may try to rise company`s value by improving these indicators.

Table 1: Analysis of Company A`s value drivers

Type	Indicator	Value	Assumptions	Findings, recommendations
Finance	WACC	21,2%	CAPM model, tax shield is 20%	High cost of equity, mostly due to market conditions. Moving to less risk markets may reduce WACC.
	Current ratio	5,32	Current assets/current liabilities, financial statements (FS) of the company for 2014	High liquidity. May consider increasing debt as cost of debt is lower than cost of equity
	D/E	0,24%	Long term debt/equity	Lack of long-term debt. May consider issue of long-term bonds
	Intangible assets profitability	-68%	Operating profit/intangible assets	Need for sales increase
Production	Share of R&D in expenditure	48%	Percentage of R&D in total expenses	Consider focusing efforts on the most prospective researches
	Probability of successful R&D	83%	Number of research projects not rejected during the year	Consider focusing efforts on the most prospective researches
	R&D labour capacity ratio	53%	Actual hours/budgeted hours regarding R&D employees	Low level of R&D capacity. Reconsider budget
Marketing	Competitive advantage period	100 months	Average useful life from the date of put in use	The company need to register new patents to maintain this indicator
	Market share	0,04%	Company sales/industry sales for 2014	Low market share, narrow niche
	Competitiveness of the company	No data	CSI of the company/CSI of the largest competitor (Novartis)	Consumer satisfaction index (CSI) based on set of parameters is compared to the largest competitor

Source: internal information

6. Conclusion

This research considered the problem of value creation of small technology-based companies. It was shown that the key fundamental factor of value creation for such companies is an ability to innovate, which consists of access to new technology, factor conditions, market for complementary goods and dynamic entrepreneurship.

It was argued that the value of a technology-based company is affected by certain indicators (value drivers) and therefore controlling these indicators is vital for constant increase of the value. Such companies need to be treated differently due to specific factors regarding their strategy and sources of value because major part of their value may be related to future growth opportunities rather than current results. Authors then suggest the system of value drivers that may be used for purposes of value control and comparison of small technology-based firms.

Finally, suggested approach was tested using the example of the Company A that operates in Russian pharmaceutical industry. Value drivers were calculated, main obstacles for value creation were identified and recommendations to the management of the company concerning the ways to enhance the value of the company were given at the end of the research.

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MODERN GLOBAL TRENDS IN CORPORATE FINANCIAL POLICY

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Abstract. The article reviews the current global and national trends shaping the financial policy of corporations, as well as methodological approaches to implement and main methods of assessing the effectiveness of corporate financial policy. The authors showed the results of their research. The main problems of governance are contingent on internal and external conditions in which companies operate. Important conclusions can be drawn after the study of financial and economic activities of individual industries and sectors of the Russian economy. A significant role was played by an overview of global trends in the financial management policies of large international corporations. The article shows the interrelation of sustainable development, sustainable growth and corporate financial policy. Coherence of objectives and effective results can be obtained using a common financial and organizational control mechanism. The article describes the elements of the financial mechanism, which is currently used by large corporations in the real sector of the Russian economy. The subjects of financial management often has difficulty making decisions in adverse financial conditions (significant systematic risks). In terms of Finance is inflation, high cost of raising capital for investment in real and financial assets, low return on equity. The article discusses the main directions, types of financial policy, methods of diagnostics of efficiency of financial policy of the Corporation. A set of indicators of interest to various stakeholders. The assessment made in the comparison of each Corporation in the sector with the average values and shows the range of deviation. The authors continue research in the direction of the empiricists and the formation of industry standards. We recommend you to use benchmarking. A retrospective time horizon of the analysis is 10 years.

Keywords: corporate financial policy, sustainable business growth, evaluation of efficiency of financial policy of the Corporation, the steps of forming the financial policy of the Corporation

JEL Classification: G30, G32, G35, L00, L53.

1. Introduction

The financial policy of the corporation, according to the authors, is a system of measures in the field of financial management in accordance with the goals, objectives, interests of the corporation. The financial policy is expressed in relation to subjects of financial management to the composition, content of objects and forms of policy. At the target level, shareholders are the main subject of financial policy of the corporation, shareholders and managers are involved in the development of strategies for policy forms, all corporate employees are involved in the implementation of the strategy and implementation of the company's financial policy tactics.

The financial policy of the corporation, in our opinion, combines several forms: investment policy, policy of formation of sources of financing, policy of working capital management, dividend policy, depreciation policy, accounting policy, tax policy (Satsuk & Koneva, 2016). Orientation to the integrity, systematic use and coordination of all forms of financial policy is a necessary condition for its effectiveness. Financial policy is closely connected with marketing policy, production policy, personnel policy, innovative corporate policy. Objects of financial policy - capital, cash flows, assets, financial relations arising in the process of financial management with other counterparties, with other organizations, as well as within the business entity - the corporation. The financial policy includes three interrelated levels: the concept, the financial mechanism of formation and implementation, the implementation of practical actions aimed at achieving the set (Tatarintseva, 2017; Lin et al., 2017).

The content of trends in financial policy includes, among other things, the types of corporate strategies identified through monitoring, the observed stable strategic mix of policy forms, the observed conceptual orientations and the financial mechanism for individual forms of financial policy that can be determined, including on the basis of a set of financial indicators, the values of which show the extent to which the main goal of the financial policy of the corporation has been achieved. The study of trends is aimed at making conclusions about the course of economic processes from the point of view of financial policy in the future, serves as a tool for adjusting and forecasting financial indicators. To reveal the key trends in the financial policies of large corporations, a rather general methodological step-by-step approach to its monitoring is proposed (Eprintseva & Tatarintseva, 2014; Peyroles, 2017; Kramch, 2014).

First, the main course of financial policy is revealed in terms of the degree of rationality in choosing the type of corporate strategy. The growth strategy is not the only type of corporate strategy, however it usually dominates in large corporations and, in turn, is divided into three main types: intensive growth, growth of integration, growth of diversification. In the practice of financial activities, types of strategies are often combined.

Secondly, on the basis of monitoring, it is recommended to disclose the proportions of the strategic goal of the corporation in financial policy in order to once again comment on its optimality for the selected version of the sets of financial indicators in each particular case. To achieve the main objective in the financial policy is a constant search for a balance between the objectives of maximizing profits and maintaining financial stability.

Thirdly, it is rational to implement financial monitoring of private strategies of certain forms of financial policy of a corporation with various tasks, for example, to assess the degree of compatibility with the position of risks. Fourth, it is reasonable to analyze the tactical results of financial policy on the basis of calculations in the short and medium-term (2-3 years) solvency of the corporation.

The results of the monitoring make it possible to make corrections in the strategy and tactics of financial policy, serve as one of the feedback methods for assessing the concept, financial mechanism and practical actions for the development and implementation of the financial policy of the corporation. Monitoring performs at least three purposes, including: - Identifies the state, the changes that have occurred, critical parameters of the external financial environment of the corporation, in relation to which it is necessary to develop the direction of management actions for the future; - discloses the current internal financial environment of the corporation and its changes in the dynamics of the property status, financial condition, financial performance, explaining the main successes and failures of the strategy and tactics of the financial policy of the corporation; - establishes the degree of correspondence and discrepancies in the financial policy of the corporation with the adopted forecast and plans for the sustainable development of the corporation in the unity of its social, environmental and economic aspects.

2. Contents and results of separate stages of monitoring the financial policies of corporations (groups of companies)

At the first stage of monitoring, based on the processing of available public information, assessments of the current situation of a number of industries and corporations at the beginning of 2017, the type of corporate strategy was identified. The evidence base of identification in the text is not given, the conclusions are presented in Table 1(Eprintseva & Tatarintseva, 2014; Satsuk & Tatarintseva, 2015; Docquier & Rapoport, 2012)

Table 1. Identification of the type of corporate growth strategy as of 1.01. 2017

Name of the industry, economic sector, group of companies, corporation		Type of growth stratégy		
Industry, economic sector	Group of companies, corporation	Intensive	Integration	Diversifi cation
Telecommunica tion industry	PJSC "VimpelCom", PJSC "MTS", PJSC "Megafon" PJSC "Tele-2"	+	+	
Oil and gas sector of economy	PJSC Lukoil, PJSC Novatek, PJSC Gazpromneft, PJSC NK Rosneft, Surgutneftegaz, PJSC Tatneft, and others.	+	+	+
Sector of information technology	National Computer Corporation (NCC), JSC Intus, PJSC "Information Telecommunication Technologies" (Inteltech), "Cosmos Web" LLC,	+		
Pharmaceutical branch	JSC Pharmstandard, PJSC Valenta-Pharm, PJSC Otisipharm, Veropharm JSC	+		
Air transport industry	Aeroflot, PJSC U-Tair, PJSC Ural Airlines, PJSC Rossiya X5 Retail Group, Magnit -groups of companies, Auchan Retail Russia	+		
Retail (group of companies)	X5 Retail Group, Magnit -groups of companies, Auchan Retail Russia, Dixy, Lenta, MetroCash & Carry, etc.	+	+	
Metallurgy	Evraz, UC Rusal, Norilsk Nickel, NLMK, Severstal, Mechel and other	+	+	
Construction (group of companies)	LSR Group, Setl Group Holding, PIK Group ", Stroysektor Group" Basic Element ", GC" Morton "and others	+		

Source: compiled by the authors

Despite strong market positions, most corporations adhere to the principles of intensive growth, the current external financial environment does not facilitate the integration of growth. Going beyond the industry requires significant investment, but such solutions do not correspond to the state of the external financial environment in Russia. The second stage of monitoring is trying to determine the preferences of corporations in one of two strategic goals of financial policy: maximizing profits or maintaining financial stability. The strategic orientation of profit maximization takes into account the dynamics of the volume of profit, income, assets, and so on. In the theory of financial management, stable payments to owners are guaranteed. The position of maintaining stability in the broadest sense of the word should demonstrate a reasonable level of independence, ensuring an optimal capital structure from the point of view of the corporation, as well as high investment attractiveness. The result of monitoring objects and forms of financial policy is a set of diagnoses for the study of diagnostic objects obtained at the time intervals under consideration, during which the state of the object does not change strategically. At the third stage, monitoring is carried out in terms of the degree of comparability of financial strategies of individual forms of financial policy (Makarova, 2010). The fourth stage of monitoring allows us to take into account the tactical financial indicators of corporate financial policy and determine the attitude of corporations to managing liquidity and the financial cycle. In conclusion, it is important to evaluate the results of corporate standards for the main purpose of the public corporation, to form conclusions and recommendations (Lupinos, 2017).

The results of monitoring to determine trends in financial policy in accordance with the proposed approach to one of the options for a reduced set of financial indicators are shown in Tables 2-4 for a limited number of corporations. In general conclusions, an opinion is expressed on the dynamics of the financial policies of corporations and industries of the Russian Federation.

Table 2. Monitoring of financial sustainability indicators by group of companies

Name of the corporation (group of companies	*Debt /ERAS	Coefficient of autonomy , 31.12 IFRS		**Debt-to-equity ratio , IFRS**		(NET DEBT/EBITDA), IFRS		
	2016	2015	2016	2015	2016	2015	2016	6 мес.2017
Gazprom	0,33	0,64	0,67	0,36	0,31	1,11	1,46	1,29
Rosneft	5,49	0,28	0,17	1,36	3,03	1,10	1,50	1,70
LKOH	0,46	0,64	0,64	0,33	0,30	0,74	0,65	*Nd*
Gazpromneft	3,17	0,50	0,56	0,99	0,76	1,90	1,60	1,37
MTC	12,88	0,258	0,264	2,88	2,78	8,58	7,71	*Nd*
Megafon	2,10	0,31	0,268	2,17	2,72	1,5	1,7	*Nd*
Rostelecom	1,09	0,45	0,447	1,20	1,23	1,70	1,50	1,30
Magnit	0,99	0,40	0,43	1,44	1,32	0,92	1,03	*Nd*
Norilsk Nickel	3,26	0,17	0,23	4,90	3,22	1,00	1,20	1,50
Severstal	2,08	0,25	0,30	1,58	1,13	0,45	0,40	*Nd*
Aeroflot	1,21	0,01	0,13	74,0	6,33	3,4	1,40	0,70
Uralkali	2,89	0,168	0,267	4,95	2,74	2,8	4,70	*Nd*

Nd - insufficient data for calculations
Source: calculated by the authors according to Interfax - Disclosure Server http://www.e-disclosure.ru

Table 3. Indicators of the strategic focus on maximizing profits in the financial policies of the corporation, IFRS

Название корпорации	Changes (+, -), %				ROA, %, (on net profit)		ROE,%		Market capitalization / equity, in time
	EBITDA		Revenues						
	2015 /2014	2016 /2015	2015/ 2014	2016 /2015	2015	2016	2015	2016	2016
Gazprom	-4,50	-29,9	10,9	1,09	5,00	6,00	7,00	9,00	0,35
Rosneft	17,8	25,0	-6,0	-3,10	4,00	8,00	10,00	22,80	2,77
LKOH	-9,00	-10,5	-29,2	-9,10	16,0	9,00	24,83	14,20	2,20
Gazpromneft	18,1	12,7	+4,23	5,29	4,67	8,22	9,30	14,52	2,91
Surgutneftegas	32,91	7,30	12,57	7,30	19,1	-1,4	3-,4	-1,8	0,33
MTC	8,7	0,09	+4,9	2,10	8,58	7,71	19,14	16,50	14,67
Megafon	-4,2	-11,00	-0,04	1,00	8,30	5,50	23,4	19,6	2,40
Rostelecom	-4,2	-3,9	-4,4	0,30	4,9	2,1	15,6	5,7	0,79
Magnit	19,4	-9,55	+24,50	2,30	14,6	11,8	35,80	22,70	16,31
Norilsk Nickel	11,33	4,06	+13,1	8,40	2025	15,7	92,6	60,0	7,07
Severstal	-61,5	-42,5	-23,00	1,40	8,61	18,2	29,82	63,32	5,35
Aeroflot	245,3	33,45	+29,80	19,4	0,10	14,2	32,00	88,20	2, 12
Uralkali	20,76	-33,1	-5,40	-20,0	4,4	21,0	-22,2	581,0	2,89

Source: calculated by the authors according to Interfax - Disclosure Server http://www.e-disclosure.ru

Table 4. Results of monitoring of a number of target indicators of corporations

Company name	The price of an ordinary share is the closing of the trading session of the Moscow Stock Exchange (19h00 min.) - rubles				Market capitalization, mln. USA 30.12. Recalculation in US dollars is made at the rate set by the CBR at the end of the year		Change in market capitalization,% (+ or)	
	30.12.			21.07				
	2014	2015	2016	2017	2015	2016	2015/ 2014	2016/ 2015
Gazprom	130,31	136,09	154,55	118,95	44257,9	59932	-20	+35,4
Rosneft	195,8	253,25	402,8	317,4	37249,2	69907	+1,2	+87,7
LKOH	2225	2345,9	3449	2842	27456,6	48076	-18,1	+75,1
Surgutneftegas	29,495	44,225	32,07	28,40	16745,5	18217	+10,7	+8,8
Gazpromneft	136,37	135,21	206,5	197,15	9995,9	16888	-15,8	+68,9
Tatneft	228,5	317,6	427,0	385,1	9548,2	15123	+6,2	58,4
Novatek	434,0	591,0	791,9	617,1	24805,4	39220	+5,4	+58,1

MTC	179,75	210,0	259,0	240,35	5979,8	8472	-5,2	+41,7
VimpelCom					5762,1	6763	-21,5	+17,4
Megafon	820,0	850,0	576,0	552,1	7273,6	5913	-21,5	-18,7
Rostelecom	87,01	90,55	84,00	66,20	3223,6	3559	-20,6	+10,4
Pharmstandard	915,0	1080,0	1037,0	-	560,6		-8,8	-
Otisipharm	230,0	230,0	180,0	165,0	453,9	43	-30,7	-5,2
Protek	31,1	61,1	99,4	101,4	435,4	866	+15,9	+99,0
Magnit	9701,0	11228	11000	9404,0	14435,9	17005	-12,8	+17,8
Tape LTD	364,0	498,0	492,0	358,0	3284,5	3990	+12,9	+21,5
MVideo	123,4	268,5	387,5	418,10	646,3	1138	-64,8	+76,1
Dixie Group	359,7	303,0	280	220,5	523,4	575	-35,0	+9,8
X5RitailGroup	14,002	20,171	31,48	35,5	5024,1	8813	-51,6	+71,2
Norilsk Nickel	10061,6	8762,6	9833,7	8390,0	19917,5	26201	-13,2	+13,5
Mechel	24,71	64,9	181,25	144,95	370,9	1249	2 p.	+2,36
Severstal	501,9	609,5	942,2	817,00	7028,9	12827	-5,1	+82,48
Aeroflot	32,23	56,1	152,85	208,85	854,9	2801	+36,1	+2,27
UTair	8,55	11,15	11,2	7,85	103,5	621	-	+6
Avtovaz	8,41	9,41	9,66	9,120	234,8	291	-14,1	+23,7
Kamaz	26,15	35,55	48,95	51,4	343,5	579	+4,7	+68,5
Uralkali	128,4	177,0	165,0	131,45	7174,9	7996	+5,7	+11,4
Fosagro	1655,0	2821,0	2599,0	2390,0	5017,9	-	+31,6	-
LSR	458,0	673,0	952,0	789,5	955,0	1629	+14,9	+70,6
Mostotrest	66,8	77,0	91,2	107,2	289,9	426	-10,3	+42,4
FGC UES	0,046	0,059	0,203	0,168	1027,2	4247	+3,0	+3,1
Rusgidro	0,541	0,679	0,926	0,804	3537,1	5872	-2,0	+66
Mail.Ru.Group	17,889	21,75	18,328	25,665	4693,0	4039	+37,7	-13,9
Yandex N.V.	1025,0	1147,0	1247,0	1585,0	4356,7	6478	-9,5	+48,7

Sources: calculated by the authors using materials from Internetsites - 1. RIA-Novosti: https://ria.ru/infografika/20160127/1365416420.html 2. Expert: http://expert.ru/ratings/rejting-krupnejshih-kompanij-rossii-2015-po-ob_emu-realizatsii-produktsii/ 3. RBC : http://www.rbc.ru/rbc500

Significant graduation of the level of capitalization of industries, the rating shows the following results: 1) extraction and processing of oil and gas, 2) metallurgy, 3) trades, 4) telecommunications, 5) chemistry and petrochemistry, 6) machine-building enterprises, 7) electric power companies.

3. Conclusion

Summarizing the results of monitoring, it is important to note that financial policy differs in industry, trade, agriculture, transport organizations, the consumer market, including consumer services, provision of housing and public services to the population. It is also necessary to distinguish three types of financial policy: conservative, moderate and aggressive. Each of these policies is designed to provide different rates of financial and economic growth and is based on determining the rational combination for the corporation of the level of profitability with the level of risk (Lupinos, 2017; Dorofeeva, 2017; Makarov, 2008). Corporate growth is often a more accurate and reliable evaluation criterion than traditional priorities, such as maximizing profits, increasing the market value of a corporation, which can be explained as follows: - expansion of markets puts the corporation in the most stable and secure position in comparison with competitors; - the corporation gets an excellent opportunity to influence decisions in certain areas of business; - implementation of the diversification strategy implies expansion of product range, market geography, etc. [8,9]. Financial analysts and investors assess the corporation in terms of profit and growth, highlighting the most successful in terms of sales, profitability, market value and growth rates of these indicators. Steady growth leads to a comprehensive achievement of corporate goals - increasing profits, paying dividends to shareholders, increasing the exchange value of securities and a number of other positive trends. The results of monitoring the rates of sustained growth are taken into account in the formation and adjustment of financial policies (Tatarintseva, 2016)

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FACTORS INFLUENCING TALENT IDENTIFICATION AND RECRUITMENT IN GLOBAL ENTERPRISES

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Abstract. Global company with integrated talent management should meet higher requirements for international competitiveness and better economic results. Talent management in global environment integrates strategy of the company, HR strategy, identification and recruitment, assessment, development, and retaining talents into complex process. The objective of this research survey was to explore the current state of applying the concept of talent management in the phases of talent identification and recruitment in companies operating in Slovakia. Paper is focused on the factors of talent identification and recruitment in Slovak organisations. Size of the company, ownership, foreign capital, economic situation, and existence of the HR department were selected as a researched factors influencing identification and recruitment in talent management process. A scaled questionnaire used in previous researches was applied as a tool for data collection in 381 companies operating business in Slovakia. The questionnaire was distributed online through Google documents system. Questionnaire reliability was verified by Cronbach´s alpha and reached the level 0.799. To verify the existence of statistically significant differences between individual groups of respondents the Kruskal-Wallis test and Mann-Whitney U test were used. We found that existence of HR department is the most important factor of the talent identification and recruitment process in global enterprises, followed by foreign capital, and size of the company.

Keywords: identification, talent, ownership, process, recruitment

JEL Classification: M10, M12, M54

1. Introduction

Human resources are the most important sources in each company. Company with high quality potential employees has higher competitive ability for the future than companies without talented individuals. People are decisive element leading to the competitive advantage on the market. Talent management is the way how to improve stuff quality in organisations. The talent management process consists of several integrated parts including identification and recruitment of the talents. Recruitment of talents with high development potential can help to increase productivity and reach better economic results. In this paper, we would like to clarify some relationships between identification and recruitment of talents and selected determinants such a size of the company, ownership, foreign capital, economic situation, and existence of HR department.

1.1 Talent identification and recruitment as a part of talent management process

There are lot of talent definition. Term talent is viewed as a skill and ability of humans, but also as a specific person. This paper is focused on persons who are talented individuals. So we will use the term talent as a specific person with specific skills abilities in some areas (Silzer & Dower, 2010). Talents are individuals who demonstrate high potential and key people with high performance (Society for Human Resources Management, 2007). Definition of the talent must be customized to the context of the organization.

Talent management represents strategic issue for managers in all companies, mostly in global business (Krishnan & Scullion, 2017; Mellahi & Collings, 2010; Boudreau & Ramstad, 2005; Ready & Conger, 2007). According to Armstrong (2006) talent management should not only focus on the high-flyer, but it should concern all the assiduous and efficient workers. Talent management should be defined as a systematic and dynamic process of discovering, developing and sustaining talent (Egerova et al. 2015). Fegley (2006) and Mercer (2005) consider talent management as an integrated set of HR practices or functions, such as recruitment, selection, development and performance appraisal aimed at increasing the capacity of organization. Talent management focuses on the appropriate selection of people, selection of job positions to which talents are to be placed, motivation of talents to perform their best for company, and development of talent potential (Egerova, 2015).

Some researches were provided on the association between talent management and superior performance and showed the impact of talent management on company's performance (Bjorkman et al., 2007). Investigation about effectiveness of talent management strategies has been provide by Bethke-Langenegger et al. (2011). They found that the talent management focusing on retaining and developing talents has a statistically significant positive impact on human resource outcomes such as job satisfaction, motivation, commitment and trust in leaders. Moreover, talent management practices with a strong focus on corporate strategy have a statistically higher significant impact on organisational outcomes such as company attractiveness, the achievement of business goals, customer satisfaction and, above all, corporate profit, more so than any other areas that talent management focuses upon. Size of the enterprise as an important factor influencing human resources management is investigating in more scientific paper by Holatova et al. (2014) and Brezinova (2014).

Workers should be hiring and promoted based on talent (Goldlucke, 2017). But it is hard to discover real talent. It requires to certain knowledge of the managers (Chabault et al., 2012). Talent identification is the process of identifying talented individuals and accelerating its progress. Key position identification is one of the first activities in the talent management implementation. It have strategic impact to get competitive advantage of the organization because identifying, attracting and acquiring, recruiting, and selecting people with high potential plays important role for further development in each company. According to Towers (2005) there are some factors considered as recruitment drivers: competitive base pay, work/life balance, carrier advancement opportunities, competitive benefits, challenging work, salary increase linked to the individual performance, learning and development opportunities, competitive retirement benefits, the calibre of co-workers and the reputation of the organization as a good employer.

Strategic talent management as set of activities and processes that involve the systematic identification of key positions which differentially contribute to the organisation's sustainable competitive advantage, the development of a talent pool of high potential and high performing incumbents to fill these roles, and the development of a differentiated human resource architecture to facilitate filling these positions with competent incumbents and to ensure their continued commitment to the organisation (Collings & Mellahi, 2009).

2. Data and Methods

Research design, data obtained in the research and methods used in this paper are described in this section. Selective survey (through scaled questionnaire) was used as a method for data collection. This questionnaire was set up with the consortium of scientific researchers and modified for our research conditions (Egerova et al., 2013). It contains 11 items directly aimed to the process of identification and recruitment of talented individuals in the companies. Other classification items such a size of the company, economic situation, foreign capital, and existing of HR department in the company were added to the questionnaire. Here is the list of the items with marks used in this paper.

Table 1: List of the items and their marks

MARK	ITEM
I 1	All positions in our company have been divided into key and peripheral positions.
I 2	Our workers' competences are adapted to their position requirements.
I 3	We are currently identifying talents among all the workers employed in our company.
I 4	We are currently identifying positions we need to recruit candidates for from the external environment.
I 5	We apply a plan of attracting talents from the external environment.
I 6	Our worker recruitment system makes it possible to acquire people of the highest development potential.
I 7	We know quite a lot about talents our employees have.
I 8	Talented people are willing to get employed by our company.
I 9	We know what talents we are going to need in the future.
I 10	We know how many talented people we are going to need in the future.
I 11	We perform some special activities designed to attract talents.

Source: own processing according to questionnaire

The items of the questionnaire were scaled according to Likert from 1 to 5, where 1 means absolute disagreement of the respondent, 5 means absolute consensus and figure 3 expressed irresolute attitude of the respondent. We added also figure 0 enabled the respondent not to comment on a given item. The questionnaire was distributed online through Google documents system.

We verified reliability of the questionnaire by means of Cronbach´s alpha. According to Nunnaly & Bernstein (1994) the evaluation of scales is based on examining the correlations between the individual items or measurements in relation to the variability of the items. The values of Cronbach´s alpha higher than 0.7 shows on sufficient scale consistence. Cronbach´s alpha reached level 0.799 for these items of the questionnaire.

Non-parametric statistical methods were used to verify the existence of significant differences between the individual groups of respondents. According to Munk (2013) the aim of the test is to find whether the differences of the medians found in the sample of the individual groups are statistically significant (there is a relationship between the variables) or whether these are coincidental (there is no relationship between the variables).We tested it on the 5% level of significance. If the p-value is lower than 0.05 statistically significant difference exist in tested group. Kruskal-Wallis test and Mann-Whitney U test were used in statistical software

SPSS for calculations. The objective of this research survey was to explore the current state of applying the concept of talent management in the phases of talent identification and recruitment in companies operating global business in Slovakia. In order to achieve this objective the following research questions were developed:

- What factors influence the talent identification and recruitment in the concept of talent management in organizations most significantly?
- Does the existence of the HR department in the organization cause differences in the process of talent identification and recruitment?
- Does foreign capital cause differences in applying process of identification and recruitment in talent management in the organization?
- Is process of talent identification and recruitment different in large companies compared to small ones?

3. Results and Discussion

Our paper is focused on several important factors influencing the phase of identification and recruitment of the talents in the integrated talent management process. We have selected following determinants: size of the company (small, medium, large), ownership, existence of foreign capital in the enterprise, economic situation and existence of human resources department (or any unit dealing with HR) in the enterprise. Data collection was accomplished in the period from June 2013 to December 2016. There are 381 companies included into this research. All of them are operating business in Slovakia. Following tables represents distribution of research sample according to size, ownership, foreign capital, economic situation, and existence of HR department. The research sample consists of 381 companies. From this number there are 181 small enterprises (47.5%), 113 medium sized enterprises (29.7%), and 85 large enterprises (22.3%) included in this research sample according to factor so called size of the enterprise. In this research sample, private sector dominates by 347 companies (91.1%) and state companies are represented with 33 organisations (8.7%). More than a half of the searched organizations (57.7%) operates without the participation of foreign capital and 41.7% represents companies where foreign capital plays an important role (table 4). The proportion of the sample is well-balanced according to this factor what creates good conditions for finding out the influence of foreign capital on the identification talents and recruitment in the talent management process. 343 companies (90%) of the research sample demonstrated better economic situation or without change in last year. Only 37 (9.7%) enterprises declared worse economic situation. More than 62% (237 companies) respondents confirmed the existence of HR department or any unit dealing with HR established in the organizational structure of the company. 37.5% (143 companies) represents enterprises without any HR unit in the organization. We examined the influence of the selected factors on the items connected with talents identification and recruitment based on the questionnaire. Size of the company was examined as a first factor. According to our calculations there exist statistically significant differences in items 4, 5, 9, 10, and 11 (table 2). In the item 4, respondents presented differences in the process of position identification to recruit candidates from external environment. We consider that the process of position identification is on higher level in large global companies due to higher strategic orientation on external environment. It is also highly connected with the results in item 5 where we identified statistically significant differences in plans of attracting talented individuals from external environment used in companies. We assume that there is higher orientation on external talents in larger global companies and many activities in HR area are oriented to project the future connected with the quality and adequate number of talents needed for company in next years (statistically significant differences in items 9 and 10). In item 11 we found difference in activities providing to attract talents. We consider that there are better conditions in larger enterprises to attract talents.

Table 2: Verification of the differences - size of the enterprise

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
Chi-Square	,477	,656	5,313	9,584	11,748	2,574	,643	,148	8,079	7,676	12,431
p value	,788	,720	,070	,008	,003	,276	,725	,929	,018	,022	,002

Source: own processing

Regarding to second factor (ownership) we founded 4 statistically significant differences in items 1, 3, 7, and 8 (table 3). All these items are focused into internal environment of the company. We consider that there is difference in these items because enterprises with state ownership are mostly oriented to the internal capacities and resources. They try to identify talents among all the employees in the enterprise and they do not look for talents outside of the company. People in state organizations are well monitored and managers know quite a lot about talents inside the company. On the other side, private companies are more focused on internal environment including human resources, capabilities, and talents and would like to improve them from outside of the company.

Table 3: Verification of the differences - ownership

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
Mann-Whitney U	4431,5	5356,5	3525,0	5150,0	5050,0	5322,5	3898,5	3618,0	4624,5	4733,5	4382,0
p value	,043	,832	,032	,880	,967	,923	,015	,003	,755	,874	,609

Source: own processing

Foreign capital is the second most important factor influencing identification and recruitment of the talents. We identified 7 statistically significant differences in answers of respondents according to this determinant. Regarding to this factor we can see differences (table 4) in items 1, 4, 5, 6, 8, 10, and 11. Foreign capital allocated in the company is important determinant influencing external orientation in human resources management. Positions in the company are divided into key and peripheral, and people for positions needed in the future are identified and recruited from external environment. We assume that planning of human resources is on higher level in international companies with foreign capital and plan of attracting talents is implemented in management of companies. Recruitment in these companies is strongly focused on people of the highest development potential.

Table 4: Verification of the differences – foreign capital

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
Mann-Whitney U	14682,5	15567,5	13772,0	13688,5	11581,0	14400,0	14980,0	13712,5	14220,0	12656,5	10631,5
p value	,040	,171	,090	,044	,001	,036	,123	,009	,154	,012	,000

Source: own processing

Economic situation of the company influences the process of the recruitment in the organizations as well. We found statistically significant differences in items 6, 7, and 8 (table 5). We consider that companies with better economic situation have more money to spend them for hiring people of the highest development potential. Company with better economic situation is more attractive for people to be employed and it is the reason why talents are willing to get employed by the company with better economic results. There is also possibility to retain talented people due to higher salaries.

Table 5: Verification of the differences – economic situation

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
Chi-Square	3,252	4,628	5,836	2,843	3,839	13,714	10,496	11,582	4,897	2,284	1,619
p value	,197	,099	,054	,241	,147	,001	,005	,003	,086	,319	,445

Source: own processing

The existence of HR department seems to be the most important factor influencing the process of talent identification and recruitment. We found 9 statistically significant differences. We can conclude that companies with any unit aimed to HR have all processes dealing with HR on higher level because there are lot of HR specialists grouped into department or any other unit. Level of HR management is much higher in such companies with HR department. Positions in these companies are divided into key and peripheral, workers' competences are adapted to their position requirements, talents are identifying inside and also outside of the company, and plans of attracting talents are implemented. There is also higher possibility to monitor needs for key positions and project the number of talents in the future, and perform some special activities to attract talented individuals. In small companies where HR department does not exist, usually there is only one person who deal with HR but must fill also other functions in the company what have negative impact on the level of talent identification and recruitment.

Table 6: Verification of the differences – existence of HR department

	I1	I2	I3	I4	I5	I6	I7	I8	I9	I10	I11
Mann-Whitney U	13012,0	13728,0	11294,5	12186,0	10455,5	12292,5	15241,0	14321,0	11949,0	11187,5	10499,0
p value	,002	,009	,000	,001	,000	,000	,386	,175	,000	,000	,000

Source: own processing

4. Conclusion

In our paper, we examined relationships among selected determinants (size of the enterprise, ownership, foreign capital, economic situation, and existence of HR unit) and process of talent identification and recruitment represented by some special activities (11 items). This research contains results of the survey on the 381 companies operating business in Slovakia. We can conclude existence of HR department as the most important factor of the talent identification and recruitment process followed by foreign capital, and size of the company (table 7).

Table 7: Number of statistically significant differences according to selected factors

	size of company	ownership	foreign capital	economic situation	HR department
number of statistically significant differences	5	4	7	3	9

Source: own processing

From our results, we can conclude some following findings about talent identification and recruitment. Large companies has stronger orientation on external talents and perform some special activities to acquire them then small enterprises. They are also oriented more to the future because they project quality and number of talents needed in next years. State organisation identify talents mostly inside of the company and monitor them more than in private companies. Planning of human resources is on higher level in companies with foreign capital because plans are used also in the process of attracting people. Recruitment of these companies is strongly focused on talented individuals with highest development potential. Companies with better economic situation are more attractive for talented individuals and talents want to work for them. These companies have more money to attract talented people, recruit and retain them. Level of identification and recruitment of the talents is much higher in companies where HR department exist in organizational structure. Companies with HR unit can identify key positions and key employees, plans of attracting talents are implemented, and there are more possibilities to perform special activities to attract talent with highest development potential.

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GLOBAL FRANCHISING - ACCOUNTING AND MANAGERIAL FOCUS

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Abstract. Global business operations reflecting a franchise nature represent fast-growing franchise industry which is a consequence of the globalisation. The objective of the presented scientific paper is to focus on the accounting standards dealing with revenue recognition for special sales transactions, such as royalties and franchising, and its analysis and comparing accounting treatment from global accounting perspective (the IFRS, US GAAP, Slovak accounting Act). Franchising operations are unique, contracts vary, containing the variety of conditions that must be met when franchisor and franchisee enter into the contract. The article emphasizes new revenue recognition for franchising operations applying global accounting standards. Revenue from contracts with customers - IFRS 15 (for European/ global companies, approved by the IASB), and ASC 606, of the US GAAP (elaborated by the FASB in the USA) will be effective since 2018. New standards jointly worked out, are very demanding and requiring judgement in many situations, but it should reduce the revenue manipulation in the financial statements worldwide. Finally, the scientific paper focuses on investigating global franchising also from a managerial perspective, it highlights what areas of franchising would be suitable also for small businesses worldwide or e.g. in Slovakia and how it can affect regional development.

Keywords: franchise, franchisor, performance obligation, ASC 606, IFRS 15

JEL Classification: M41, M48, H21, H26

1. Introduction

A fast-growing global franchise industry represents a form of business expansion worldwide with a global franchisor possessing the know-how and experience. Franchisees from domestic or foreign territories are searching for the project, which they believe in, to be profitable. Franchise businesses are found in a typical shopping mall, or in other several industries e.g. motels, hotels, fast foods, auto-rentals, fitness studios, recently also social franchise programs or highway franchising under build-operate-transfer scheme. Know-how is a critical component of franchising. Franchisors and their employees transfer know-how to their franchisees. The quality of business relationship created in the franchise between the franchisor and individual franchisees has an impact on the franchisees' satisfaction with their investment decision and on the decision to continue in franchise entrepreneurialship. The strength of the mutual franchise relationship consists in the franchisor's commitment to the success of the franchisee, which will result in reciprocal collaboration of the franchisee to fulfil the franchisor's strategic plans. A satisfied franchisee advises others to join the business. The quality of the business relationship is affected for instance by the trust in the franchisor, being a key factor, and by the effective communication with franchisees. If the trust in the franchisor is high and his communication with franchisees is on a high level, it creates favourable, performance supportive atmosphere, moreover, if goals are achieved franchisees should be satisfied in this relationship. (Adeiza et al., 2017). Both parties show mutual respect, the initiative lies on the franchisor who should maintain a close personal relationship if the business is small, or the respectful one in a giant franchise business.

The objective of this article is to focus on global standards: IFRS 15 and ASC 606 (US GAAP) and to examine them focusing on franchising operations. The IASB (IFRS creator) and FASB (US GAAP creator) have been jointly elaborating a new revenue recognition standard - IFRS 15 and ASC 606 (more detailed), although there were some minor differences identified, their application since January 1st, 2018, will verify their quality and shortcomings. The recognition and measurement process of basic accounting elements is crucial (Kosovska, Varyova, 2016). Slovak methodology for revenues recognition should be enriched due to the variety of new selling transactions (instalment sales, franchising, etc.). Slovak accounting recognizes revenues when they were earned although not paid yet, but it leads to recognising items produced, but not sold yet. It may impact financial ratios where net sales enter the formulas.

2. Franchise in the most recent research

Lately, franchising has been explored from the variety of perspectives (e.g. managerial implica-tions, franchising motivation or franchising implementation, social franchising leading to social results in addition to financial gain, financing, accounting or taxation planning). "Social franchising is defined as a related mechanism for linking private providers to offer and market socially desirable goods" (Bennet et al., 2017). Interesting findings were added by researchers who clarified that "franchisees seem to value the mechanisms used in their network, which include formalised processes such as operations manual, online tools, initial and ongoing training and social mechanisms (discovery sessions, meetings and committees). The effectiveness of on-field consultants was questioned, which might be useful for managerial implications." (Perigot et al., 2017) What affected franchising implementation was examined by Moon's research team. Their results showed a negative impact of the formal education levels of top managers, and a positive influence on restaurant franchising observed by the tenure of top management team members (Moon et al., 2017). Financing a franchise restaurant industry was a focus for researchers Park and Jang who examined whether franchise capital can be considered a substitute for, or a complement to debt, their study highlighted that franchising capital resulted in functioning as a substitute to the long term debt, unlike in short-term debt case, where the franchise capital functioned as the complement to the short term debt (Park & Jang, 2017), supporting the conclusion that franchising may be a form of financing in a long term time horizon. To start business as a franchise may be less complicated unlike a startup business, requiring innovative approach, but both type of entrepreneurialship are nourished with the capital. As researchers Dengov and Gregova (2015) state "even the best business idea will remain only on the paper if there is no capital to support its business implementation. The nature of franchising operations causes the problem in identifying the moment of recognition and measurement of franchise revenue in accounting area. In taxation the sales revenue from products are taxed in the state where the products were sold. Researchers Sheffler and Zausig (2017) pointed out that franchising enables to avoid increasing taxation in the state of source. They highlighted specific allocation rules for sales (Art.38 of the Draft Directive on a CCCTB), obtained from products with a high profit margin, leading to the sales not exclusively allocated to the states where the final customer is located. The right of taxation in the state of a source can be further reduced by tax planning. Within CCCTB one instrument to reduce the right of taxation in the state of the source is to extend the value-added chain by outsourcing the distribution function to an external contracting partner that acts as a franchisee."(Sheffler & Zausig, 2017)

3. Franchising - a new investment target to support regional development

Mc Donald is the most well-known franchise provider in a gastronomic sector (3rd position in 500 best European franchises). The best performing (1st) is 7-Eleven (Convenience stores), followed by Subway franchise company. The European franchise market was conquered by American franchising companies in the "best 500". The only one European franchise among ten best is Dutch Spar (9th), then Japanese franchise Kumon (home-schooling- 4th), the others are famous fast food American franchises (KFC, Pizza Hut, Burger King, Domino's Pizza, Dunkin' Donuts). Four franchises, those of the oldest and 100 best performing franchises are from the 19th century, Clarks (retail-70th) from 1825, Marston's Pub (65th) from 1890, both from England, Czech franchise Bata from 1894 (25th) and Austrian Swarowski (45th) from 1895. The oldest one from Luxembourg –Villery and Boch from 1748 is still operating successfully on 128th position. Historical performances of world franchises are a proof that especially in economies where SMEs prevail, franchising can be a way of enterprising, franchise opportunities are summoned in table 1 as an inspiration from the USA. Financial risks of SMEs cannot be ignored (Michalikova-Frajtova & Spuchakova, 2015), as the SMEs are usually not stable companies and with a high risk of survival. (Dengov & Kliestik, 2015). Franchise is suitable for potential entrepreneurs lacking big ideas, but prefer being of their own boss and making money. Franchises are categorized as 1) economy franchise opportunities with average start cost up to $150,000; 2) coach opportunities: start costs from $150,000-$500,000; 3) first class $500,000 and up.

Table 1: The best Franchises to Buy in Economic Franchise Opportunities Category.

FRANCHISE NAME	**Operations** **Lowest investment Level < $150,000** **Economy-franchise opportunities**	**Avg.Init.Investment** **5-yr growth rate** **∑number of units**
Right at Home	Offers in-home care for seniors, disabled	$104,900 /**13%** / 433
Weed Man -US, Canada, UK	Provides lawn-care service	$76,983 /**9%** / 177
Mathnasium Learning Centers	Offers customized math tutoring services	$114,180 /**23%** / 624
Molly Maid	Offers house cleaning services	$108,545 /**2%** / 470
Express Employ. Professionals	Provides staffing services	$130,000 /**5%** / 706
Maid Pro	Delivers home cleaning services	$56,110 /**10%** /195
Comfort Keepers	Offers in-home care and home safety technology for seniors and other adults	$111,285 **/4%** / 669
JusT Between Friends	Organizes children's & maternity events	$33,068 **/7%** / 154
BrightStar Care	Provides in home and senior care	$133,254 /**14%** / 293
Seniors Helping Seniors (S)	Non-medical, in home services done by S	$114,088 /**28%** / 278

Source: (Feldman, 2016)

Table 1 shows the 10 best franchises for investing in 2016, the area of enterprising, average in-vestment needed, 5-year growth [in %], the number of functioning franchisee's units in the USA.

4. Substance of Franchise Operations in Global Arena

A standard practise was to recognize the entire franchise fee at the date of sale, although the fee could have been received later or gradually collected over a longer period. Later franchisors recorded initial fees as revenue only at their "substantial performance" of services obliged to perform and at the time of reasonable assurance of the fee collection. Substantial performance occurs when franchisors a) has no remaining obligation to refund any cash received, b) cannot avoid paying any note, c) performed all the initial services under the contract (Kieso et al., 2011).

Table 2: Problems with Identifying of a Critical Point of Revenue Recognition

FRANCHISOR	YEAR OF SALE	FUTURE YEARS	WARNING SIGN
Revenue recognized	Entire revenue recognized ???	None of revenues ?????	**Revenue in the 1st year overstated by how much**??
Franchisor's Performance	Services performed or partially performed	Many services yet to be performed	
Collection of the entire fee	Uncertainty regarding fee collection exists		Probability of uncollectible receivables exists

Source: processed by the author

A franchise accounting was formed by the FASB to eliminate the abuses in revenue recognition that existed and to standardize the accounting and reporting practices in the franchise industry. There are four types of franchising arrangements: 1. manufacturer – retailer, 2. manufacturer – wholesaler, 3. service sponsor – retailer and 4. wholesaler – retailer. The service-retailer arrangement is growing the most rapidly, e.g. food drives-ins, restaurants (Pizza Hut, Denny's), softice creams/frozen yoghurts (TCBY, Dairy Queen), motels (Holiday Inn, Marriott, Best Western, car-rentals (Avis, Hertz, Budget) and others (7-eleven stores, Servpro, Supercuts). Franchises and licenses are contract–related intangible assets, so are e.g. broadcast rights, construction permits, service or supply contracts. A franchise contract closed between a franchisee and a franchisor enables the franchisee to acquire the rights to operate franchise business i.e. the franchisee generates benefits from the franchisor's idea or his product. Frequently licenced intellectual property is a) software, technology, b) patents, copyrights, trademarks, c) franchise, d) motion pictures, music, other forms of media and entertainment.

Table 3: Revenues earned by the franchisor

<table>
<tr><th>Franchisor' benefits</th><th colspan="2">Franchisor's Revenues obtained</th><th>Consideration</th></tr>
<tr><td rowspan="2">1. an initial franchise fee</td><td colspan="2">from the sale of</td><td rowspan="2">Fixed</td></tr>
<tr><td>a) initial franchise</td><td>b) linked assets and services</td></tr>
<tr><td rowspan="2">2. ongoing franchise fees</td><td colspan="2">from ongoing fees</td><td rowspan="2">Variable</td></tr>
<tr><td colspan="2">based on the operations of franchised businesses</td></tr>
</table>

Source: processed by the author

Initial franchise fee is payment for establishing the franchise relationship and providing some initial services. The franchisor (granting the rights under the franchise) usually performs for the franchisee (operating the franchise business) a variety of the services starting with a) assisting in site location (the analysis of the site and lease term negotiation); b) assessing future income; c) supervising construction activity (from getting the finances for building construction, for designing it, to supervising the contractor during the construction); d) help with acquiring equipment and fixtures; e) bookkeeping and consultancy (legislations for running the franchisee's business- accounting, tax and other local regulation); f) training of employees/management; g) performing quality control, h) advertising and business promotion. Franchisee is protected by the contract, because a franchise contract enables refunds to the franchisee if the franchisor has not fulfilled any conditions incorporated in the contract. Franchisor's future costs of obligations and services rendered by him can decrease the franchise fee profit significantly.

4.1 Legislation - IFRS 15 & ASC 606 – Revenue from Contracts with Customers

The key principle of IFRS 15 (also ASC 606) for an entrepreneurial entity is to recognise revenue at the point when promised goods or services are transferred to customers worthwhile as much as the consideration, to which the company expects to be entitled in exchange for those goods or services. ASC 606 explicitly states that a company analyses the nature of its promise in granting a licence to determine satisfaction of the performance obligation in time or over time, that leads to revenue recognition (attention required for a single performance obligation that includes a licence and other goods or services). The key standard applies a five-step model covering the execution of the following (table 4): a) identification of the contract(s) with a customer, b) identification of the performance obligations (further abbreviated "POs"**)** in the contract, c) the transaction price determination, d) allocation of the transaction price to performance obligations in the contract, e) revenue recognition when (or as) the entity satisfies a performance obligation (IFRS 15, 2016).

Table 4: Contract with a customer under Principle-based IFRS 15 and ASC 606

A CONTRACT (CT) WITH A CUSTOMER (IFRS 15.9) FULFILLING FOLLOWING 5 CONDITIONS:				
1. CT approved by the parties to the CT	2.Each party's rights can be identified related to the goods or services to be transferred	3. CT payment terms identified for the goods/services to be transferred	4. The CT has commercial substance	5. It is probable that the consideration for the entity for the goods or services will be collected.

Source: processed by the author based on the source (IFRS 15, 2016)

The 5-step revenue recognition model is required for a business operation. Apart from promising to grant a licence to the customer (1st PO), the customer is also promised other goods or services transferred to him (2nd PO). The promise (performance obligation) is explicitly incorporated in the contract or implied from the customary business practices or other business policies developed by a franchisor (e.g. analysing the customer's preferences, implementing product innovations, pricing strategies, promotion campaign and activity to support the franchise name being operationally efficient). IFRS 15 defines POs as promises in a contract with a customer to transfer to the customer:

a) a good or service (or a bundle of goods or services) that is distinct; or
b) a series of distinct goods or services that are substantially the same and that have the same pattern of transfer to the customer" (IFRS 15, appendix).

A business entity identifies all POs in the contract and evaluates the goods and services promised to determine whether they are distinct (i.e. whether the customer can benefit from each promise on their own or together with other readily available resources).

Revenue recognition (IFRS 15, B.63) defines: a franchisor shall recognize revenue for a sales-based or usage based royalty promised in exchange for a licence of intellectual property (franchise licence) only when a) the subsequent sale or usage occurs; and b) the performance obligation has been satisfied (or partially satisfied) to which some or all of the sales based or usage-based royalty has been allocated. **Satisfaction of performance obligation** (IFRS 15.31): A franchise entity (franchisor) shall recognise revenue when and as it satisfies a performance by transferring a promised good or service (i.e. asset) to a franchisee (customer). An asset (franchise licence) is transferred when and as the franchisee obtains a control of that asset. (IFRS 15, 2016).

4.2 Franchise rights complying with IFRS 15

Licence (franchise as well) legally allows the customer to use an entity's intellectual property. The customer is a franchisee and the business entity (a licence provider) is a franchisor.

1st step – the contract with the customer identified: in the case of franchising, the business entity (franchisor) is willing to enter into a contract with another customers i.e. franchisees companies, thus, franchise rights will be transferred to the franchisees for an agreed consideration.

2nd step – separate POs are identified as the franchisor makes two promises:

a) to grant a franchise licence that enables customers (franchisees) to use business entity's trade name and sell its products for the period of 10 years
b) to transfer an equipment worth \$200,000 (fixed amount) for operating a franchise store.

obligations of the contract

The franchisor (business entity) receives: a) the compensation "sales–based royalty" of 4% of monthly sales earned by its customers (franchisees) in exchange for granting the franchise licence, b) the fixed amount for the equipment is \$200,000 due (payable) at the equipment's delivery. Conclusion: POs are distinct.

3rd step – determination of the transaction price (further TP): TP is the amount of consideration to which franchisor is entitled to, including a fixed consideration, any estimated variable component, the effect of a significant financing component (i.e. time value of money), the fair value of any non-cash consideration. The variable consideration may be allocated to the transaction price entirely or partially applying IFRS 15, §85.

TP = fixed consideration (\$200,000) + variable consideration (4% of franchisee's sales)

4th step – allocation of transaction price to the PO worth 200,000€ is a stand-alone price of the equipment (a part of the contract price) representing the amount of liability arising at asset's deli-very. The franchisor regularly licences franchises and its compensation is the variable conside-ration of 4% of franchisees' sales and therefore an entire allocation of variable consideration to the PO for granting the franchise licence is fully justified.

5th step – revenue is recognised, as POs are satisfied: After transferring the equipment (PO n.2) revenue is recognised at a point in time, time of delivery and transfer of the control over the asset to the franchisee. PO n.1 is satisfied, i.e. franchise revenue is recognised over time when franchisees make a sale.

5. Accounting Treatment of Franchise Licence - New Methodology Applied

Determining a critical point for the revenue recognition is crucial in franchise accounting. The franchisor Pizza Ciao Inc. considers two scenarios: a) Pizza Ciao Inc. charges an initial fixed amount, franchise fee of \$100,000 for the right to operate as a franchisee of Pizza Ciao Inc on Jan.1, 20xx. Out of this amount \$20,000 is payable when the franchisee signs the contract, and remaining balance of \$80,000 is payable in 5 annual payments of \$16,000 each, that means transaction contains substantial financial component (5year-time). In return for the initial franchi-se fee, the franchisor Pizza Ciao assists: locating the site, negotiating the site's lease or purchase, supervising the construction activity, bookkeeping services. The loan can be obtained at 7%. (franchisee's credit score). The PVA[n=5, i=7]= $65,603.16. The discount $14,396.84 represent the interest revenue accrued by the franchisor over the payment period applying IFRS 9. b) On Jan1, 20xx, Pizza Ciao Inc. enters into a non-cancellable contract to grant a franchise licence that enables franchisees to use business' trade name and sell its products for the period of 10 years, the company will receive a compensation of 4% of monthly sales earned by its franchisees, estimated $4,000 per month of sales-based royalties, in exchange for granting the franchise licence. The first sales are expected when the restaurants will open in March, 20xx. The contract requires the customer to pay $1,000 in advance on 31.01.20xx, but paid 01.03.20xx.

Assumptions: all performance obligations are distinct, satisfaction of performance obligation occurs during the year (in a. scenario) or when franchise sales are made (in b. scenario). The accounting entries that Pizza Ciao Inc. would record under two scenarios are presented below.

Table 5: Accounting Treatment of Franchise Operations at Franchisor's Journal

1.SCENARIO: initial fees - refundable - collection of the Note/Rec highly probable - substantial future services remain to be performed by Pizza Ciao			**2.SCENARIO:** non-cancellable contract - (sales-based royalty) - $4,000 per month, **31/1/20xx**- the Pizza recognizes receivables – unconditional right to $1,000**. 1/3/20xx** - cash received		
Jan. 31, 20xx	Dr	Cr	**JAN. 31, 20XX**	Dr	Cr
Cash	$20,000		Acc Receivable	$1,000	
Note Rec	60,000		Contract Liability		$1,000
Discount on Note/Rec		$14,396.84	*Performance obligation recognized*		
Contract Liability		65,603.16	**MARCH 1, 20XX**		
Partial payment for the franchise licence plus the note acceptance for the reminding amount			Cash	$1,000	
			Acc Receivable		$1,000
			$1,000 cash collected from the customer		
REVENUE RECOGNIZED					
DURING THE YEAR AT A POINT IN TIME:			**OVER TIME:**		
Contract Liability			**MARCH 31, 20XX**		
Contract Revenue	65,603.16	**65,603.16**	Acc Receivable	$4,000	
Performance obligation satisfied			Contract Liability		$4,000
			Sale of the goods and services		
Dec.31, 20xx,			Contract Liability	$5,000	
Cash	16,000		**Revenue**		**$5,000**
Interest Revenue		**4,592.22**	Cash	$4,000	
Note Receivable		11,407.78	Acc Receivable		$4,000
1st payment of $16,000 received			*sales-based royalty and 1,000 initial fee (non-cancellable contract, plus cash collection*		

Source: processed by the author

Slovak accounting has no detail methodology for franchise transactions. IFRS 15 and ASC 606 (more detailed) are very similar. They support deferring revenues when situations are not clear by forcing the accountants to exercise 5-step model and control fulfilling requirements. Discrepancy found out related to the licence: when the license is not the predominant item in a single PO, this may result in a US GAAP preparer considering the nature of its promise in granting a license in a greater number of circumstances than an IFRS preparer. The determination of whether a license is the predominant component may be obvious in some cases, but not in others. Therefore, businesses may need to exercise significant judgement and assess qualitative and quantitative factors. ASC 606 and IFRS 15 revenue recognitions rules effective for the public companies since Jan.1st 2018, for private companies since Jan.1st 2019 will be a real test of their quality.

6. Conclusion

Accountants should be ethical and objective, considering all possible circumstances as their judgement matters in the process of fair and truthful financial reporting. The new standard could affect the amount and timing of revenues, KPI measures, debt covenants ratios, indirectly contract negotiations, business activities and budgets. Especially industries which so far, under US GAAP, were applying the industry specific guidance will be influenced the most, e.g. Aerospace &Defence, Entertainment &Media, Pharmaceuticals &Life Science, Automotive, Communications, Engineering &Construction and Technology industries. (IFRS, 2016). Because Slovak environment lacks typical Slovak franchising companies, there is a room for the research how this could be supported by municipal governments, investments needed are not financially unreachable, services e.g. home care, lawn care, tutoring services, cleaning services, etc. are also demanded in Slovakia and their growth is expected. It could contribute for decreasing regional disparities in developing economies. Slovak regional disparities are a most remarkable, looking at the Slovak GDP per capita, the difference in Slovakia for this indicator shows even the biggest discrepancy in the world (Delaneuville, 2017), (Stachova & Suplata, 2013). From managerial perspective franchise owners need to focus on assessing five criteria essential for making a proper decision on investing into a franchise: 1. system sustainability, 2. system demand, 3. franchisor support, 4. franchisor stability, 5. value for investment to achieve a positive threshold for successful franchise performance contributing to regional development worldwide.

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IMPLEMENTATION OF COACHING CULTURE IN ORGANISATIONS

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Abstract. This paper deals with the implementation of coaching culture in organization as a tool of modern management. A coaching culture represents a change of management that supports the use of human talent and potential. Its further benefits are increasing performance while creating more peaceful workplace relationships with greater confidence and responsibility. When coaching culture is implemented, it is important to continuously develop the skills of workers and constantly promote development opportunities, coaching supervision and quality assessment processes. Coaching is a way to more effectively manage people at all levels of the business. The basis for a sustainable coaching strategy and culture are firm foundation. The paper also presents the proposal where the assumptions and the implementation process of coaching culture into the organization are stated. A very important factor is the thorough preparation for change. Top management is undergoing intensive training based on practical exercises and training. Workshops include the individual coaching, team coaching, and support through peer coaching supervision and mentoring, to help managers acquire and improve their skills. The result is a firm belief of function of management style by coaching and it is therefore appropriate to implement a coaching culture to a whole organization. This process is carried out through the project of creating a coaching culture at different levels of the organization. Finally, the benefits of introducing a coaching culture in a global organization are described.

Keywords: coaching culture, strategy, peer coaching, global organization, human resource development

JEL Classification: J24, O15, I25

1. Introduction

1.1 The organizational garden

A company is a well-defined system with its physical, technical and cultural features. In a company we have three main dimensions - organisational, team and individual – and it is important to consider them all. Life within an organisation, no matter what kind of company or which industry, is normally animated by reaching objectives, managing resources, implementing processes and procedures, dealing with changes and overcoming challenges. Then we face the dimension of teamwork and cross functional collaboration, where alignment, clear rules, cultural attitudes, interpersonal relationships and cooperation are the critical success factors. Effective teamwork and collaboration are key enablers to organisational effectiveness and business success. (Pimpinelli, 2017; Stofkova et al., 2015)

Coaching extends across various cultures at the global, regional, national, organizational and individual level and is a worldwide phenomenon today. There is debate over how far coaching can be applicable to all cultures and to what extent different cultures require different coaching definitions (Bresser, 2013, A), (Bresser, 2013, B), (Passmore, 2009), (Rosinski, 2003)

The first step is clarifying what you want to achieve by coaching in so called "organizational garden". Beforehand, identify what "coaching trees" you already have in your garden and what purpose these fulfil. "Coaching gardeners" are usually individuals with profound coaching training carried on by nationally or internationally certified lecturer – coaches.

Starting point is the organisational garden that is shown in Table 1.

Table 1: The organisational garden

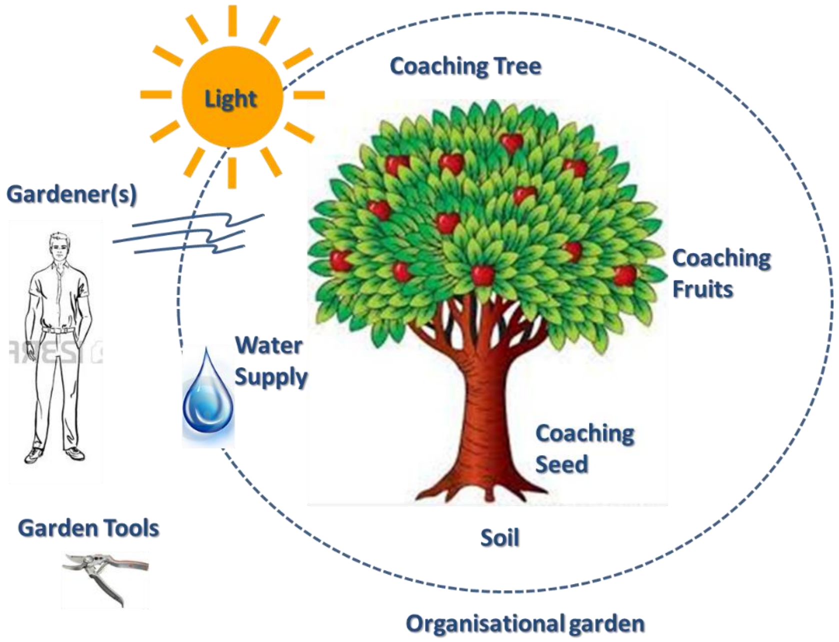
Creating organizational garden	**Explanation**
Why grow coaching?	The coaches have a coherent and proven coaching concept which they utilise in assignments
Who are the coaching gardeners?	The coaches invest in their own personal development on a continuous basis. In organizational gardens there are different types and hierarchies of gardeners.
What number and kind of coaching trees to plant where? (how many managers, at what positions, and what kind of training they receive)	The coaches do keep their knowledge and performance up to date. The types of coaching trees or seeds to choose from mainly by their size, level of robustness and durability, speed and cycles of growth, quality, quantity, impact on the environment, etc.
How to cultivate your coaching trees?	The coach has supervision.
Harvest (and harness) your fruits properly?	The coach works at various levels.
Prepare for the next cycle of growth?	There are organisations that are satisfied with a reference list, but many choose to speak directly to the reference organisations before entering into a contract.
Review the gardening process and learn continuously.	The coach belongs to a well-respected coaching organization and adhere to its ethical and professional standards.

Source: (self-processed, source by Bresser, 2013, A)

Coaching gardening is a cyclical learning process. With increasing experience, it is enhanced coaching capability and get a more and more refined sense for what is actually needed to make organizational garden thrive in terms of coaching. Coaching growth and maintenance framework is shown in Figure 1.

Constantly review and evaluate gardening process accordingly, draw appropriate conclusions and learn for the future. Foster knowledge sharing across the garden and help build a common coaching gardening in organization. Co-create and be part of external and internal coaching gardener networks or communities.

Figure 1: Coaching growth and maintenance framework



Source: (self-processed, source by Bresser, 2013, A)

2. Implementation of coaching culture in organization

Historically, coaching has been viewed as a tool for individuals to develop leadership strengths while minimizing weaknesses. Recently, a trend emerged that broadens the use of coaching within organizations. Today, coaching skills and coaching-related behaviours are commonly used to develop participants´ strengths and enhance their ability to lead and guide interactions with employees, peers, and superiors. (Pullen & Crane, 2011)

If the organization decides to create organizational coaching culture, the following steps can be taken:

In organization, it is needed to create understanding what is coaching. In practice, this means that the key leaders of the organization will be involved in development programs. For example, if employees are coached, they are also enabled to develop their coaching competencies. It creates space for the personal experience of all coached workers. Consequently, the same coaching model will be included not only in the staff development system but also in everyday management systems.

The next step is to apply coaching systematically. The ideal solution is to move from external individual or team coaching for top managers to developing their coaching skills. Then gradually add talent coaching or project teams, educate key workers in coaching skills and facilitation. It is important to open a discussion on the meaning, goals, and reasons for coaching in the organization. It is appropriate to use any tools and methods that encourage the widest possible range of people to address their organization's everyday problems. Facilitation, round tables support the creation of interest communities in the workplace, application of coaching skills in diverse forms of people development and solution of their work problems.

It is necessary to link coaching to business strategy. The coaching process not only helps to set SMARTER goals but looks for ways to do apply them. By the coaching process it is possible to specifically evaluate the achieved results. Management through accepted results and accepted goals can thus become an agreed organization strategy.

The next step is the complete transparency of coaching concept. Employees in all departments should know not only what coaching is, but also what has been achieved through coaching. The recorded changes become visible. There are supported and appreciated rating processes, for example with 360-degree feedback, etc. Applied development and education are not for education but for ultimate benefit. At each step, it is necessary to realize that coaching (in the broadest sense) is a tool for achieving goals.

We can integrate coaching into strategy, processes, with an emphasis on improving employee performance. Coaching then becomes a natural part of how you do what you do, part of how you do your business. Being coached (or mentored) is not a punishment, but a daily routine.

The result of such a process is that employees are willing to share their experience and knowledge, take responsibility for themselves and their teams, give and receive feedback, and ultimately grow personally. Coaching success factors framework is shown in Figure 2.

Figure 2: Coaching success factors framework

Source: (Bresser, 2013, A)

3. Case study – Coaching capacity

The personal vision statement provides an artefact to be referenced and revised throughout other discoveries in the coaching process (Passarelli, 2015). Coaching capacity building framework is shown in Figure 3.

Figure 3: Coaching capacity building framework

Source: (self-processed, source by Bresser, 2013, A)

Key principles of coaching capacity building are:

- **cyclical growth** – the high scalability of coaching initiatives to allow for optimal cyclical growth of coaching capacity and revisit, review, refine and adjust concept as appropriate,
- **scalability** – the scalability and adjustability of coaching programmes allow for flexibility in perfectly tailoring and designing coaching initiative,
- **the coaching capacity triangle** – (capability, clarity, capacity) the specific needs of organization, people receptiveness and dynamic appropriateness of company,
- **the 10 key success factors** – see Figure 2,
- **the coaching value chain –** the core value-adding process from input to output.

Top management is undergoing intensive training based on practical exercises and training. Workshops include:

- the individual coaching,
- team coaching and
- support through peer coaching supervision and mentoring, to help managers acquire and improve their skills.

The result is a firm belief of function of management style by coaching and it is therefore appropriate to implement a coaching culture to a whole organization.

3.1 Benefits of coaching culture

The benefits of introducing a coaching culture in a global organization are:

- positive impact that creating a coaching culture has on the strategic objectives of organizations, leads to improved business results. (Hawkins, 2014), (Britton, 2015), (Hagen & Peterson, 2015), (Rousseau, et al., 2013).

- introducing coaching competencies into an organization is a powerful strategy to create an adaptive workplace culture committed to the ongoing process of development and learning. (Bachkirova, 2016), (Kim, & Noh, 2016), (Lin, et al., 2016), (Wang, et al., 2016). (Nadeem, et al., 2013).
- companies that have developed a coaching culture report significantly reduced staff turnover, increased productivity, and greater employee happiness and satisfaction at work.
- a coaching culture promotes more open communication, builds trust and respect, and improves working relationships. By firmly embedding coaching into the culture of an organization, individuals are able to recognize their role in facilitating the development of others, therefore strengthening the coaching culture and bringing about significant operational improvements. (Eldridge & Dembowski, 2004)
- Sherman and Freas state that while the results from creating a coaching culture may not be directly measurable in terms of dollars, they have yet to know a company that cannot benefit form a greater level of openness, and a more conscious focus for their people. (Sherman & Freas, 2004)

4. Conclusion

Implementation of the steps above is a process to achieve a complete coaching culture establishment. It takes more than a week or month to develop it. The organization creates strong infrastructure and many coaching activities and approaches, but has to pay attention to all levels of employees. Once the coaching process is implemented, it is important for skills to evolve continuously, coaching relationships to deepen and to support their continued development capabilities, through coaching supervision, and quality evaluation processes. This framework provides a map of coaching strategy in organizations and steps in creating a coaching culture. Very important is that the map is not a territory, and the process is never linear. Neither element remains in a calm and constant state when the next step is taken, but it must be taken care of and adapted to the rapidly changing environment.

Organisations that are committed to creating a coaching culture go one step further, and integrate coaching modules into their leadership development programmes. External executive coaches analyse the curriculum for leadership development and work with HR, the training division and other trainers to ensure a well-integrated approach so that the leaders of an organisation are able to adapt a coaching mind-set.

In addition, some members of the organisation may become fully qualified coaches themselves. However, roles and responsibilities of internal and external coaches need to be clearly defined. In our experience, the top-executive team remains best served by external coaches. And after the top managers receive proper coaching skills training, they can develop the same skill set in subordinates along with using the coaching leadership towards them. With implemented coaching culture, the coaching processes, and approaches are used on everyday basis, in every problem solving, project or planning meeting. The whole atmosphere of the workplace becomes more cooperative, supportive, more caring and responsible, most importantly goal and result oriented. The coaching culture provides a balanced concept for performance and good employees' relations based on trust, seeking development and accomplishments. The coaching culture garden and its elements can only prosper if supported by management, and HR department, that's why these need the most attention in the beginning.

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GLOBALIZATION AND TAX COMPETITION

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Abstract. In the past, it was not easy and sometimes not possible to move the company's headquarters to another country, so there was only tax optimization in the field of tax costs that reduced tax rates to a minimum. In doing so, she used all law-enabled or law-abiding practices. The process of globalization has caused considerable, almost uncontrolled capital movements. The size of the tax burden today is a significant factor in investor decision-making about the allocation of its investments. Companies can move their tax bases to countries with a more favorable tax policy. National efforts to attract as much investment as possible to their country have ultimately led to tax competition. National governments are faced with the choice of responding to tax competition. Either by reducing their taxes to tax competition, they can either engage or, on the contrary, try to limit it through harmonization processes. High capital mobility creates headache countries who afraid of potential race to the bottom in corporate taxes. The main objective of the article is to identify the risks and benefits of tax competition, to analysis on the existence of corporate tax competition across the European Union member states.

Keywords: tax competition, corporate income taxation, tax rates, comparison

JEL Classification: H25

1. Introduction

Důsledkem celosvětové globalizace se kapitál v posledních desetiletích stal velmi mobilním. V rámci Evropské unie k tomu dopomohl vznik jednotného trhu, zavedení jednotné měny a v neposlední řadě se zvýšila dostupnost cenových informací, zejména v oblasti kapitálových trhů. V soudobé globalizaci nejsou již tak ekonomické vztahy stabilně vymezeny rámcem národních států jako dříve. V ekonomické globalizaci se začaly vlády států podřizovat zájmům globálních korporací. V současné době nemůže žádný stát rozhodovat o svých daních bez ohledu na mezinárodní podmínky. Suša (2010) uvádí, že jedním z efektů globální moci ve vztahu státu a globálních korporací je skutečnost, že vyhýbání se progresivnímu zdanění ze strany těch největších ziskových korporací v podmínkách eskalace globální soutěže a úsilí o konkurenceschopnost napomáhá erozi sociálních politik v podobě podfinancování infrastruktury veřejných statků nezbytných pro udržitelnou sociální reprodukci společnosti. Globalizace a míra otevřenosti ekonomiky způsobuje, že jednotlivé státy mezi sebou soutěží v podobě daňových úlev výměnou za alokaci investic a kapitálu a vytváří tak mezi státy daňovou konkurenci. Lze tedy říci, že daňová konkurence vzniká v prostředí, kde je možné přesouvat základ daně do jiných zemí. Především se týká daní s vysoce mobilními základy, jako jsou příjmy z finančního kapitálu. Vlivem globalizace na zdanění kapitálu se zabývá Adam et al. (2013). Autoři nenalézají negativní dopad globalizace na zdanění kapitálu. Cílem článku je upozornit na problematiku daňové konkurence a odpovědět na otázku, zda mezi státy Evropské unie probíhá daňová konkurence v oblasti korporátního zdanění.

2. Význam daňové konkurence

Podle Myškové et al., (2013) mají investice pro ekonomiku řadu pozitivních efektů. Teorie daňové konkurence se zpravidla soustřeďuje na zdanění kapitálu, který se oproti ostatním výrobním faktorům vyznačuje vysokou mezinárodní mobilitou a jako takový je citlivější na změny ve zdanění.

V ekonomické teorii existují dva směry k daňové konkurenci. První směr hodnotí daňovou konkurenci pozitivně. Základem je Tieboutova práce z roku 1956, v níž autor argumentuje ve prospěch volného pohybu výrobních zdrojů a nezávislých hospodářsko – politických činností národních vlád. Tato teorie tvrdí, že by mělo být pouze na jednotlivcích, jakou kombinaci daňových odvodů a benefitů z provize veřejných statků zvolí, a mělo by jim být umožněno tuto preferenci uskutečnit přesunem svých aktivit do preferovaných jurisdikcí. Tento přístup vede k efektivnějšímu využívání veřejných prostředků a omezení neproduktivních aktivit. K obhájcům daňové konkurence, která je chápána jako prostředek k omezení rozhazovačné vlády patří například Brennan & Buchanan (1977), Janeba & Schjelderup (2002).

Proti tomuto směru existuje Oatesova literatura daňové konkurence, která zdůrazňuje negativní efekty plynoucí z daňové konkurence. Podle tohoto přístupu, pokles daňových příjmů vede k poskytování veřejných statků pod společensky optimální úroveň. Autor uvádí, že pokud vlády snižují daně, aby získaly lepší postavení na mezinárodním trhu, žádný dodatečný efekt nepocítí. Naopak výsledkem může být tendence k méně efektivní úrovni výstupu místních služeb. Mezi zastánci toho směru patří např. Wilson (1986), Peters (1999).

Argumenty zastánců daňové konkurence vychází z liberálních koncepcí. Poplatníci, kteří mají svobodu volby, si logicky vybírají nejpříhodnější podmínky pro podnikání. Vliv daňové zátěže na přesuny kapitálu identifikoval už Adam Smith. Adam Smith na daňovou konkurenci nahlížel jako na určitou možnost udržet si zdanitelné základy v zemi, proto doporučoval, aby bylo vysoké zdanění odstraněno, neboť stát s vysokými daněmi byl dle něj jen příčinou odchodu firem ze země. Elkins (2016) uvádí, že omezení daňové konkurence zvýší ve světě nerovnoměrné rozdělení bohatství.

Szarowská (2009) uvádí, že nízké daně vedle stimulace přílivu kapitálu mají vliv i na vytváření úspor, které je možné přeměnit na investice a podpořit tak ekonomický růst.

Heinemann et al. (2010) uvádí, že pokud jedna země sníží daně pod úroveň sousední země, ostatní země budou reagovat strategicky obdobným způsobem, aby zabránily odlivu kapitálu ze země.

Autoři Vermeend et al. (2008) uvádí, že nebude-li na straně investorů převládat ochota snižovat jejich daňové zatížení, pak nebude daňová konkurence plně využita. Podle autorů daňová konkurence není samozřejmostí a podle nich funguje pouze v případě, pokud jsou investoři a korporace ochotni reagovat na změny mezinárodního zdanění. Jestliže budou pro korporace a investory v umístění jejich kapitálu hrát roli i jiné faktory, jako např. velikost trhu, dopravní vzdálenosti, kvalifikovanost pracovní síly, soupeření státu o mobilní faktory pouhým snižováním daňových sazeb nebude zcela efektivní. Huňady & Orivská (2014) uvádí, že na výši sazby daně z kapitálu má rovněž vliv veřejné výdaje, úroveň korupce v zemi, otevřenost ekonomiky a veřejný dluh.

Daňové konkurence však podle kritiků vede k závodu ve snižování daňových sazeb tzv. („race to the bottom“). Vlády se snaží přilákat mobilní daňovou základnu snižováním svých daní. Pokud se takto budou chovat všechny země, výsledkem bude nulová daňová sazba. Touto problematikou se zabývá např. Devereuux et al. (2002). Plumper et al. (2009) uvádí, že přes existenci daňové konkurence, vlády nezruší daň z mobilního kapitálu. Podle Brock & Pfluger (2006) je „race to the bottom“ iluzí, protože konkurence mezi daňovými systémy a jimi poskytovanými veřejnými statky přináší všem zúčastněným benefity jako jakýkoliv jiný trh. Brockmann et al. (2016), uvádí, že tlak na snižování daní je špatná věc, protože pokles daňových příjmů povede k omezování vládních aktivit.

Přestože na téma daňová konkurence bylo vypracováno mnoho studií, neexistuje podle Eroglu (2015) jednotný názor na to, zda je daňová konkurence prospěšná či nikoliv.

3. Metodika

Pokud si položíme otázku, zda tu daňová konkurence je, či není, narazíme na metodologický problém v podobě nalezení indikátoru dopadů daňové konkurence. Obecně literatura nabízí několik přístupů. Často používaná daňová kóta, která podává ex post přehled o daňových příjmech v poměru k HDP, však nezohledňuje daňovou sazbu, která je významným signálem pro poplatníka. Mezi další způsoby měření daňové zátěže se požívají daňové sazby. Literatura rozeznává statutární (nominální) a efektivní daňové sazby. Statutární daňová sazba podává oproti efektivní daňové sazbě omezenou informaci o tom, jaká je skutečná úroveň zdanění. Efektivní daňová sazba obsahuje vedle informace o statutární daňové sazbě také informaci o daňových zákonech v oblasti zdanění korporací, jako jsou různé odpočty, výjimky, uplatňování daňové ztráty, daňové prázdniny apod. Může se tedy stát, že dvě země se stejnou statutární sazbou mají skutečné zdanění poměrné odlišné. Z důvodu nedostatku dat o efektivní sazbě u zkoumaných států, byly použity pro vyhodnocení hypotézy statutární daňové sazby v jednotlivých státech.

Daňová teorie, říká, že s poklesem daňových sazeb dochází k výpadku daňových příjmů. Z tohoto důvodu byl vývoj nominálních sazeb doplněn o daňové příjmy ze zisku korporací v jednotlivých státech. Vývoj nominálních sazeb a daňových příjmů ze zisků korporací je sledován za období 1995 – 2015. Členské země jsou dále rozděleny do kategorie „E 17“ do které jsou zahrnuty staré členské státy Evropské unie a kategorie „E 11“ ve které jsou zahrnuty nové členské země Evropské unie.

4. Výsledky

Následující tabulka zobrazuje vývoj nominálních daňových sazeb korporací v jednotlivých státech EU. Jednotlivé údaje v tabulce jsou v procentech.

Table 1: Vývoj nominálních daňových sazeb v procentech

Země	1995	2000	2005	2010	2015	Změna 2015-1995
Rakousko	34	34	25	25	25	-9,0
Belgie	40,2	40,2	34	34	34	-6,2
Kypr	25	29	10	10	12,5	-12,5
Česká republika	41	31	26	19	19	-22,0

Dánsko	34	32	28	25	23,5	-10,5
Estonsko	26	26	24	21	20	-6,0
Finsko	25	29	26	26	20	-5,0
Francie	36,7	37,8	35	34,4	34,4	-2,3
Německo	56,8	51,6	38,7	30,2	30,2	-26,6
Řecko	40	40	32	24	29	-11,0
Maďarsko	19,6	19,6	17,5	20,6	20,6	1,0
Irsko	40	24	12,5	12,5	12,5	-27,5
Itálie	52,2	41,3	37,3	31,4	31,4	-20,8
Lotyšsko	25	25	15	15	15	-10,0
Litva	29	24	15	15	15	-14,0
Luxembursko	40,9	37,5	30,4	28,6	29,2	-11,7
Malta	35	35	35	35	35	0,0
Nizozemí	35	35	31,5	25,5	25	-10,0
Polsko	40	30	19	19	19	-21,0
Portugalsko	39,6	35,2	27,5	29	29,5	-10,1
Slovensko	40	29	19	19	22	-18,0
Slovinsko	25	25	25	20	17	-8,0
Španělsko	35	35	35	30	28	-7,0
Švédsko	28	28	28	26,3	22	-6,0
Velká Británie	33	30	30	28	20	-13,0
Bulharsko	40	32,5	15	10	10	-30,0
Chorvatsko	25	35	20	20	20	-5,0
Rumunsko	38	25	16	16	16	-22,0
Průměr EU 17	**37,1**	**35,0**	**29,2**	**26,8**	**26,0**	**-11,1**
Průměr EU 11	**31,7**	**27,5**	**19,2**	**17,7**	**17,6**	**-14,1**
Průměr EU	**35,0**	**32,0**	**25,3**	**23,2**	**22,7**	**-12,3**

Source: vlastní zpracování, zdroj dat: Taxation Trends in the EU

Z tabulky je zřejmé, že k poklesu statutárních korporačních daňových sazeb došlo ve sledovaném období u všech členských zemí. Výrazný pokles se týká zejména období let 1995 – 2010, kdy došlo v průměru k poklesu o 11,8 procentních bodů. V následujícím období se již jedná pouze o pokles o 0,5 procentního bodu. Pokud se podíváme na vývoj sazeb mezi novými a starými členskými státy, tak rozdíl v sazbách mezi těmito státy se ve sledovaném období nepatrně zvýšil. Zatímco v roce 1995 byl rozdíl sazeb daně mezi původními a novými státy 5,4 procentního bodu, v roce 2015 se tento rozdíl zvýšil o 8,4 procentního bodu.

Následující tabulka zobrazuje vývoj inkasa daně ze zisku korporací v jednotlivých zemích EU.

Table 2: Vývoj inkasa daně ze zisku korporacích v mld. EUR

Země	1995	2000	2005	2010	2015	Změna 2015 - 1995
Rakousko	2,0	3,9	5,1	5,0	6,8	331%
Belgie	4,9	8,1	9,8	9,2	13,8	282%
Kypr	-	0,3	0,4	0,7	0,7	221%
Česká republika	2,6	3,0	5,3	5,0	6,4	241%
Dánsko	3,2	4,9	6,1	4,5	6,8	213%
Estonsko	0,1	0,1	0,2	0,2	0,4	633%
Finsko	2,8	5,8	5,2	4,6	4,5	163%
Francie	21,7	39,8	43,0	39,9	49,2	226%
Německo	19,2	37,1	40,0	38,4	52,9	276%
Řecko	1,3	5,6	6,5	5,7	3,3	268%
Maďarsko	0,3	0,9	1,5	1,0	1,8	507%
Irsko	1,5	3,9	5,5	3,9	6,9	471%
Itálie	13,7	26,6	30,4	34,8	32,9	241%
Lotyšsko	0,1	0,1	0,3	0,3	0,4	574%
Litva	-	-	-	0,3	0,6	208%
Luxembursko	1,0	1,5	1,7	2,3	2,3	231%
Malta		0,1	0,2	0,4	0,6	404%
Nizozemí	10,0	16,7	17,1	14,5	18,4	185%
Polsko	2,2	4,2	4,9	6,6	7,7	356%
Portugalsko	2,0	4,7	4,1	4,9	5,6	278%
Slovensko	1,2	0,8	1,3	1,7	2,8	237%
Slovinsko	0,1	0,2	0,8	0,7	0,6	1052%
Španělsko	7,8	19,6	35,5	19,4	26,5	339%
Švédsko	4,0	7,6	9,5	11,1	12,5	315%
Velká Británie	15,7	34,3	41,9	46,4	47,9	306%
Bulharsko	-	0,4	0,4	0,7	1,0	255%
Chorvatsko	-	0,5	0,8	0,8	0,8	164%
Rumunsko	-	1,0	1,8	2,3	3,8	368%
Průměr EU 17	-	-	-	-	-	**279%**
Průměr EU 11	-	-	-	-	-	**418%**
Průmer EU	-	-	-	-	-	**334%**

Source: vlastní zpracování, zdroj dat: Taxation Trends in the EU a statistika OECD

Vzhledem k nedostupnosti dat u některých států je v posledním sloupci uveden vždy rozdíl posledního roku a prvního roku, za něž je údaj dostupný. Z tabulky je zřejmé, že i přes pokles nominálních sazeb daně z korporací, inkaso této daně ve všech sledovaných zemích za sledované období rostlo. Z hlediska dynamiky je tento růst v nových členských státech výraznější.

5. Diskuze

Z výsledných tabulek je zřejmé, že sazba daně příjmů korporátního sektoru ve sledovaném období výrazně poklesly, ačkoliv vyhlídka sazeb padajících k nule („race to the bottom“) vypadá zatím vzdáleně. Z čeho lze usuzovat, že určitá daňová konkurence mezi státy EU existuje. Celkové daňové výnosy oproti teoretickým předpokladům rostou. Čím můžeme vysvětlit tak protichůdné tendence?

a) Snížení sazby doprovází rozšíření daňového základu. Současný trend v daňových systémech je omezování výjimek, což může mít za následek rozšiřování daňového základu a ten pak působí proti poklesu skutečné míry zdanění.
b) Daňová sazba a daňové výnosy jsou nezávislé proměnné a na obě veličiny vnější faktory. Může se jednat např. o přesun příjmů z individuálního podnikání do sektoru korporativního.
c) Nižší korporátní daně podpořily investice a tím se zvýšila produktivita a následně zisky.
d) Velikost míry zdanění nemusí být jediným determinantem o rozhodování firem o umístění investice. O umístění investic bude rozhodovat i řada jiných faktorů.

6. Conclusion

Především mezi politiky vzbuzuje daňová konkurence obavy. Z výsledků vyplývá, že dosud se její negativní důsledky neprojevují, přestože se to může při prvním pohledu na vývoj nominálních daňových sazeb zdát. Přes nižší zdanění korporátních zisků v nových členských zemích EU, které někdy bývá interpretováno, jak hrozba starým členským států, nedochází v původních zemích EU k poklesu daňových příjmů. Daňová konkurence s sebou přináší tlak na vyšší efektivitu daňových systémů, neboť vede k zjednodušování daňových zákonů. Snahou v Evropské unie je definovat, harmonizovat jednotný daňový základ korporací. Literatura právě koordinaci, harmonizaci uvádí jako nástroj proti škodlivé daňové konkurenci. Pokud by se podařilo plně harmonizovat daňový základ korporací v Evropské unii, potom by se nominální sazby staly zároveň sazbami efektivními. Je zřejmé, že o umístění investic a při rozhodování o přesunech kapitálu mezi zeměmi hraje úlohu řada i jiných faktorů než pouze míra zdanění zisků korporací. Obecně zjednodušení daňových systémů povede k snížení administrativní náročnosti a ulehčení při rozhodování korporací o tom, kam korporace umístí kapitál, investici.

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NATIONAL SECURITY IN THE CONTEXT OF THE GLOBAL ECONOMY

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Abstract: The aim of the paper is to apply the interdisciplinary approach of economics, sociology, politics and globalists to characterize the current issue of economic contexts in securing national security in the context of the global economy, where finance, trade, science, research, technology and more and more people flow freely in the international environment. Parallel to these flows is the potential security risks that currently include international terrorism, organized crime, hybrid and cyber threats, illegal migration waves. The nature of these threats is based on the reality of the contemporary nature of the risky society and relates to the interconnected economic and social aspects. For the above reasons, the contribution is geared towards mapping the economic context while ensuring security within the Euro-Atlantic area. It deals with the global economy, its subjects and processes that have a major impact on developments in national and alliance security. The main part focuses on the role of the Alliance Security System within the global economy and the economic events arising from Alliance creation. Here, processes of a particular procedural, institutional and military nature are analyzed that fundamentally affect the functioning of multilateral security organizations on the European continent and which form an integral part of the Euro-Atlantic security system. At the end of the paper is an attempt to predict possible forms, trends and mutual coexistence of individual multilateral security organizations within the Euro-Atlantic area and the related effects of globalization on national security interests.

Keywords: globalization, world economy, security risks, security alliances

JEL Classification: A14, B41, C15

1. Introduction

In a globally interconnected economy, the security threat does not have the exact (national) address of the originator. State borders have become insignificant differentiations, just as military doctrines of space and time. Almost anything can be used as a weapon, as evidenced by the reality of September 11, 2001, when civilian aircraft were used for a terrorist attack, and international terrorism has since become a global human problem with all the social and economic consequences. Especially in the security field, there seems to be nothing impossible or unthinkable today. This is precisely what the risks of Industry 4.0 technologies (or, respectively, the 4th Industrial Revolutions, Companies 4.0 ...) contribute to.

The industrial type of the present company has thus gradually gained another "risky" attribute, not only because of the economic risks, but also from ecological, war and criminal ones. They are also linked to the manifestation of migratory waves from 2015 and the problems of "fallen states" in the regions of the Middle East and North Africa. This is the prospect of not dying the economy with a bad social system, a loss of security due to armed conflicts through civil wars, terrorist activities, and so on.

2. Methods

World Economy entities are also institutions and communities in which individual countries enter and renounce their national identities, even in some cases do not only promote purely economic interests, but the primary objective is to monitor political or security interests (a typical example of NATO, the European Union, the United Nations nations).

For the above reasons, analytical and comparative methods predominate in processing. These are applied to the development of security risks within the global economy from the end of the Cold War to the present (with a view to Industry Technologies 4.0). At the same time, the reality of security risks development is compared with selected theoretical concepts from the second half of the 20th century. In this context, the dynamics of threat development in the global dimension.

3. Research results

3.1 Global Security - Theory and Reality

The global socio-economic system is a factor in its functioning. The main ones influencing its functional structure are undoubtedly economic processes. These are the processes of globalization and polycentrism. The general problem with the characterization of these processes is the fact that these processes are partly objective and thus affect the world economy with its individual subjects. At the same time, individual socio-economic entities, based on the level of knowledge of these processes, are trying to implement standards into the system of the world economy, which have to influence economic processes - either to support them or to hinder them. It is not easy to date the theories of global security. Significantly interdisciplinary approach is accompanied by applications of mathematical methods. These are in some cases debatable, especially by the rivalry of the social and mathematical branches of economic theory. (Cichocki & Unbehaven, 1993).

The combination of methods and types of forecasts of the world economic and social system at different times has created a thought flow of global security. In the course of time, this stream can be differentiated into periods of supportive mathematical methods and modeling by simulations (the second half of the 1940s and 1950s), the phases of global forecasting (since the 1960s) and the theory of five sectoral security (military, economic, social, political and environmental) under the Copenhagen School (from the turn of the 1980s and the 1990s). (Wawrosz &Valencik,2014)

In 1944, the discipline of Applied Mathematics of Game Theory emerged (by presenting the book Theory of Games and Economic Behavior by John von Neumann and Oskar Morgenstern). It deals with decision-making in a conflict situation where the environment can react to our decision in some way, do some counter-measures, which can completely change our situation. Since its inception, game theory has been applied in an interdisciplinary approach not only in economics but in many areas of human activity in political science (political coalition, integration grouping and disintegration tendencies, security alliances), sociology (sociology of politics, elite theory), criminology, polemology, globalist. This created the prerequisites for applying mathematical methods for predicting security in the national and global dimensions. (Bertozzi & Johnson, 2016).

3.2 Conflict on method and consensus in security theory

According to supporters of the social branch of economic science, mathematical rivals (as a result of the application of exact methods) are trying to " to de-politicize " them when the adjective "political" is omitted in the economy. As a result, economic concepts can be characterized by a considerable degree of instability, so they can function effectively under the conditions under which they are defined. Extensive changes that are related to the eternal effort of mankind can not analyze economics and create appropriate forecasts because it ceases to be "political". This reality can be proved by the fact that in the social sciences (without the approach of exact methods) the causal relationship of phenomena is quite clear, but the present is blind to them. For example, it is quite clear that the development of financial derivatives had to lead to a crisis, but nobody saw it at that time, as it is quite clear that nationhood and arms at the beginning of the 20th century had to lead to the world war, but nobody saw it at that time either. So if people think economists are going to say when the crisis comes, it's like asking philosophers, sociologists, political scientists to say when an armed warfare, a terrorist act, and so on. (Dzbankova & Sirucek, 2013)

A certain consensus of mathematical and social branches, especially in economic and other social sciences, is system dynamics. It was founded in the 1950s by Jay Wright Forrester, focused on systems and their behavior over time. Since then, its development has been marked by considerable acceleration, since it is an oriented discipline. It helps to better understand the surrounding systems, especially those with a high degree of detailed and dynamic complexity, including any economic (micro, macro), social institutions and systems from family, through various forms of organization institutions, etc.), to units of the type of states, international groupings, alliances or the global economy. For this reason, Forrest's model was applied in the analyzes and prognoses of the below mentioned Club of Rome. An important pioneer in the application of system dynamics in the application to the environment in the global dimension was Donella Meadows. Thanks to this success, she continued her scientific research, and in 1972 her scientific team, with the financial support of the Roman Club, developed a computer model of system dynamics of the main demographic and economic indicators under the name World 3. (Meadows,1987)

3.3 Staging of global forecasting

Since the 1960s, the stage of global forecasting dates back to the start of global prospects for the future. These horizons can be differentiated in three basic time horizons: 1st horizon - the turn of the 60s and 70s of the 20th century, the 2nd horizon - the turn of the 70s and 80s of the 20th century, and the 3rd horizon - the mid 90s 20th. century. (Setek, 2015)

The first horizon dates back to the study of H. Kahn Year 2000 - Thought Framework for Thirty Years (1967), the theoretical concept of which is adopted by the oldest futurological organization - the World Federation of Studies on the Future. The Kahn concept has developed the World Federation's optimistic prognosis for the future without significant qualitative changes, with the world population overwhelmed by political and economic stability despite its considerable fear of a thermonuclear conflict. On the other hand, on the initiative of influential western European politicians and scientists, the well-known well-known Roman Club is founded in 1968, and the concepts of Anna and Paul Ehrlich (Mankind, Resources and the Environment) are on the American continent. The response came to the work of the Limits Growth (1972) by Meadows. Their work published the results of a computer-simulated development of the human population and the use of natural resources by the year 2100. It is clear from the work that during the 21st century a brutal population collapse will occur as a result of pollution, depletion of the fertility of tradable soils and unavailability of energy resources (especially fossil fuels). The report warned alarmingly that economic growth should be stopped and that the world faces the depletion of oil by 1992. In 1974, the Roman Club published the publication "Mankind at turning point". In this publication, the first page literally says "Earth has cancer and cancer is humanity." This is what Paul Ehrlich is reacting to in Population Bomb (1976), on page 152, "We have to stop our efforts to heal the symptoms and to get rid of cancer, and this operation will probably require many brutal and heartless decisions." (Ehrlich, 1976).

The above-mentioned prognostic concepts of the first generation predict that global population growth and consumption, together with its incited invasion of natural resources and physical environments, lead to human decay, resulting in a sudden decline in population and a poor standard of living for those who survive. (Beck, 2011).

The second horizon of global forecasts from the turn of the 1970s and 1980s begins with the establishment of the Interfutures institution under the patronage of the Organization for Economic Cooperation and Development and the Brandt Commission on the North and South dispute. In this prognostic generation, the contrast between the catastrophic future and the self-sufficiency of companies is left behind. This was due to the fact that the chosen time horizon - the turn of the millennium - is too close, and during the first ten years of the third millennium there are no unresolved problems. (Beck, 2011).

The third forecast horizon of the early 1990s is largely based on simulation modeling and exact mathematical and statistical instrumentaria. The proof of the application of these methods are prognostic studies such as: Globus 2000, Comprehensive Economic Perspective to 2000, Our Common Future (an international team led by Norwegian Premier H. G. Brudtland). In the first half of the 1990s a new concept emerged in the security debate - human security. This term has become a kind of slogan or spell that is used by a number of United Nations agencies, some national development agencies, international and local non-governmental organizations, and last but not least, many researchers in the field of international relations. Among the most significant authors of this horizon are the pairs of I. Carsson and S. Ramphal, who developed the publication "Our Common Neighborhood" for the period 1992-1995, where the strategic objective of the solution is to adequately settle the transnational structures in the face of the future development of most global problems, the peace and the future of man due to the changing hierarchy of the values of human society. (Beck, 2011).

3.4 Contribution of Copenhagen School - Enhanced Security Concept

During the 1970s, oil shocks took place in the world economy. Since then, not only oil has been part of the energy security theme. Over time, energy security has begun to apply to other energy commodities (natural gas, coal resources, electricity ...). In addition to these commodities, the energy security area has begun to focus on world markets, decision-making processes and infrastructure (pipelines, gas pipelines, transmission and distribution networks...) related to this theme. The real development of energy security has taken place only in relation to environmental safety. The isolation of energy security and its closer linking to the economic and military dimension is in place only in the 1990s, against the backdrop of rising consumption of raw materials due to the industrialization of Asian countries and the rise in prices of energy raw materials that have threatened the prosperity of advanced Western countries. (Krc, 2008)

In 1985, the Copenhagen Institute for Peace Research (Copenhagen School) was founded. It is therefore obvious (according to intent) that the inspiration of its origin was the concepts of global forecasting from the 1960s and the reality of the impacts of oil shocks and the subsequent energy security phenomenon from the 1970s. Methodologically, this school is based on three theoretical approaches - structural realism, English school and social constructivism. Her spiritual father, British political scientist Barry Buzan, has fundamentally influenced the reform of the then concept of security analysis. The essence of the reform was to extend and deepen the "new" threats and "new" objects, while introducing a completely new look at the security dynamics gained by securitization. This concept was first formulated in 1995 by the Danish politologist Ole Waeveer in "On Security. (Hoffman & Shelby, 2017)

At the turn of the 1980s and 1990s, global interconnection, globalization and hence greater interdependence - the interdependence of individual regions in the world - took place. This interdepence has manifested itself in the concept of common security, which should guarantee a certain cooperation of the states and overcoming the security dilemma. After the end of the Cold War, the debate over the new concept of security began to emerge, where the most influential bearers became representatives of the Copenhagen school. The central subject of their discussion was the variety of questions such as whether and how to deepen the concept of international security without compromising the conceptual cohesion, and to expand the focus of the analytical framework on non-traditional types of military threats, while preserving the logic of a meaningful concept. The Copenhagen School, on the basis of the study of the world, has argued that it is necessary to extend the concept of security because traditional military security becomes less important and the new security agenda will address economic, environmental and social issues. (Krc, 2008)

Copenhagen School officials are thus in the history of security studies advocates of a wider concept of security that involves other non-military sectors. It includes five security sectors: the military, economic, social, political and environmental sectors. Threat perception within the sector began to grow in the second half of the Cold War (in parallel with the first oil shock) and currently is a generally accepted fact such that an object (in international relations are mostly talking about countries) can certainly threaten in other ways than just just physical (military) aggression. A typical example is the disruption of strategic energy supplies, cyber attack, hybrid threat, terrorist act. However, it is important for all sectors to be linked to the safety analysis so that research can be carried out so that it is possible to find a common element of the solution.(Krc & Urban, 2010)

3.5 Analysis of global security risks after the end of the Cold War

The futuristic, prognostic and security studies of the second half of the 20th century have confirmed that the future of global human problems at the beginning of the new millennium will reflect the areas of social, economic, ethno-humanitarian and cultural aspects of the development of human civilization. In this context, a number of issues such as:

a) Could theoretical concepts be useful for early warning?
b) Has safety and intelligence analysts not been? (Setek, 2015)

The answer to the above questions is not quite easy. On the one hand, fears have been raised about the growing contradictions between the Consummate type of the Western World Company and the world of predominant poverty. This exposes and deepens the contradiction between the types of "consume" and "poverty", which is a potential risk for the ideology of terrorism. On the other hand, none of the theoretical concepts of futurology, globalization and Copenhagen did create a hypothesis in the end of the last millennium, and then a prognosis that international terrorism (after the events of September 11, 2001) would become a global problem for humanity. Nor was there any mention of the security risks of migratory waves (also linked to the activities of organized crime and international terrorism) resulting in the deepest humanitarian crisis since the end of the Second World War.

In the case of armed war conflicts (as the greatest risk of the bipolar world) at the end of the 20th century, we are experiencing a truly new, unclearly defined and definitively unsettled social phenomenon characterized by the following factors:

a) war conflicts have begun to move from the international to the national,
b) most wars take place on the territory of the collapsed state, in a situation of struggle against all,
c) in addition to government troops, various irregular groups, most commonly defined ethnically or religiously,
d) the trend of "privatization" of military violence is confirmed by the growing participation of international mercenaries of various brands - from professional freelance warriors through adventurers without cause to religious fanatics.(Setek, 2015)

Such new types of security risks affect the economic bases of national and global security. The economic system returns and implements resource-generating methods such as robbery, trafficking, smuggling of embargoed commodities, extortion, disruption of humanitarian aid, and investment in post-conflict remediation. In this way, it forms a "new type of globalized informal economy where the external flows of humanitarian and foreign payments in particular are integrated into the local and regional economy." On this economic basis, there is a "new dark type of social relations where the economy is deeply connected with violence".

The aforementioned political and economic changes brought a variety of scattered risks and threats to the global economy, directly in the European area (South East Europe) or its immediate vicinity - North Africa, Asia's crisis areas. All these regions have become a source of direct risks to the global economy - international terrorism, ethnic cleansing, proliferation of weapons of mass destruction, or indirect risks - organized crime, narcotics trade, economic collapse (fallen states), large-scale migratory waves. (Moore & Recker, 2016) For this reason, it has become a duty and the right of every democratic state to ensure the security of its sovereignty, territorial integrity and citizens. (Park & Bali, 2017)

Given the complexity of the emerging strategic environment, there was no one universal institution, organization, method or method capable of solving independently the whole range of emerging security risks. The Euro-Atlantic security system has begun to include multilateral military, political, economic and security organizations - NATO, the European Union, the Western European Union (its activities ended in 2010), the Organization for Security and Cooperation in Europe. These organizations were characterized by a number of dynamic processes and sought the optimal form of both the organizations themselves and their mutual coexistence and cooperation in three levels:

a) internal transformation of individual multilateral security organizations, reform of their institutional bodies of structures, functions and tools,
b) external transformation characterized by the process of dissemination of individual organizations and the creation of various support and assistance structures - the Partnership for Peace, the Euro-Atlantic Partnership Council, the Associated Partnership in the Western European Union, the Association Agreement between the European Union and other Candidates for Membership,
c) fulfillment of specific tasks in international missions deployed in crisis regions. (Setek, 2015)

Based on an analysis of the effectiveness of security organizations and economic efficiency in engaging in crisis areas of armed conflict in the world, from the end of the Cold War to the present, NATO (Balkan Peninsula Crisis, Operation Permanent Freedom Against International Terrorism) appears to be the most unreliable guarantee for ensuring stable security in the world. (Krc, 2016)

3.6 Analysis of the new stage of the emergence of security risks

More than 20 years after the end of the Cold War (between 2010 and 2015), further potential risks arise in the global dimension. These are the impacts of the activities of organized crime components within migration waves and the orientation towards Industry 4.0.

The fastest growing sector of organized crime on a global scale has become smuggling since 2015 as a result of migratory waves from the "fallen" states of the Middle East and North Africa to Europe. Only in the year 2015 the number of migrants exceeded one million and, according to Europol, 90% of migrant smugglers used it. Revenues from criminal structures from this illegal activity are estimated at around six billion euros. From the economic point of view, illegal trafficking in human beings in the context of the migration crisis leads to damage to the economic interests of Western society.(Setek & Petrach, 2016) In this context, there may be concealed hidden subsidies to this sphere of illegal business. The hypothesis is based on the reality that the majority of migrants do not have the appropriate financial means to reimburse the services of criminal structures to ensure their transfer to the European region. (Miller & Caplan, 2016) The portion of "set prices" for these services is thus subsidized by an "invisible - unknown" entity, which would benefit economically and politically from harming the economic and political interests of Western democratic society.

The main pillars for the transition to Industry 4.0 are digitization and information technology. They become the strategic means of all sectors of the economy, state and non-state administration, the armed forces and state security forces. This is also related to the identification of new threats, not only for national economies, transnational subjects but also for the whole global space. The cybernetic world means serious vulnerability to increasingly interdependent communities. Many security analysts, theorists and prognosticists are trying to characterize newly arrived fusion forms of risk combining the characteristics of different types of military and non-military, combat and non-combat activities. Individual challenges that have been presented in the past by separate philosophies of conventional enemy warfare, terrorists, or rebels converge into the supposed conflict with someone who uses all possible forms of violent activity, probably simultaneously. This creates an unusual dilemma for current security analysts and planners who suddenly did not know whether to abandon the idea of preparing for war on state actors with conventional capabilities, or to reorient themselves to more likely scenarios of clash with a non-state opponent who uses asymmetric activity and "irregular fight tactics ". In this context, it is recommended that the Copenhagen school's theoretical flow be expanded to the concept of security by another sector (sixth), which would be cybernetic (information) security.

4. Conclusion

As a result of the accelerated dynamic development of a company, security threats have an unknown size magnitude. It is certain that some of the speeches are completely extinct, others are emerging, developing, and even some other completely unknown ones may arise. It is clear that societal, technical and marginal sciences are being built especially on the reduction of threats. It is clear that no risk and its all-round effects can not be completely eliminated, but perhaps its maximum reduction with minimal negative impacts on the national and global economic system. The economic dimension of the issue is also evidence of how effective it is.

It is therefore advisable to theoreticians on security issues in the national and global dimension to monitor its interdependence with economic aspects on the one hand. At the same time, it also respects political responsibility and ethical principles when dealing with public resources to ensure effective security on the other.

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IMPACT OF GLOBAL CLIMATE CHANGE ON THE STRUCTURE OF FRUIT MARKET IN THE CZECH REPUBLIC

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Abstract. Global climate change is causing warming of Central Europe, resulting in changes in the variety of crops. This situation has had an impact on the international fruit trade. Growing of certain kinds of crops has moved northward. On the other hand, in the Czech Republic, for example, some subtropical crops can now be grown successfully. The aim of this paper is to describe the impact of global climate change on the structure of fruit market in the Czech Republic, focusing on apples as the major crop of Czech orchards. In the Czech Republic, apples are the most popular kind of fruit and the main source of vitamins for consumers. Nowadays, apples make up about 80% of the Czech fruit production. Apples grown in the Czech Republic are perfectly adapted to the local temperate climate, which has sufficient precipitation, and therefore they ripen under optimum conditions. The method of elaboration of this paper is based on the description of the composition of the fruit crops grown in the Czech Republic. The analysis monitors the developments in the harvests of the major crop (apples) between 2006 and 2014. Imports of apples and changes in the structure of fruit crops grown in the Czech Republic are studied in terms of global warming in the form of comparative analysis. Using a particular example, the study examines the difference between the quality of imported fruit and the domestic crops in terms of chemical residue content, in particular concerning pesticides.

Keywords: global climate change, crops, international change, fruit market, apples

JEL Classification: Q02, F61, Q54

1. Introduction

Agriculture has been considered one of the most susceptible sectors to the adverse influence of climate change. It is evident that climate change bears a direct effect on agricultural output (Masud et al., 2017). In other words, agriculture is inherently sensitive to climatic change (Banna et al., 2016; Edame et al., 2011; IPCC, 2007). The challenges faced by agricultural sectors in the 21st century necessitate the integration of economic, social and environmental pillars of sustainable development to meet the wants of the present without trading off the living standards of future generations (Fischer et al., 2002)

Climate change affects agricultural crop productivity by altering temperature and water availability at critical stages of crop growth. It further increases both soil erosion and infertility (Arbuckle et al., 2013). Due to agriculture's high sensitivity to climate induced water stress, these projections imply that there will be severe intensification of declines in agricultural productivity, resulting in increases in poverty levels and food insecurity, particularly among smallholder farmers (Arbuckle et al., 2013; Sultan, 2012; Nyakudya & Stroosnijder, 2011). Given the predictions that the effects of climate change are going to worsen in future vis a vis the need to feed a burgeoning population, there is need for natural and human systems to adapt across geographical, time and ecological scales to safeguard the already fragile food security situation (Arbuckle et al., 2013; Niles et al., 2013).

Studies note that further warming is unavoidable even if carbon dioxide emissions were to cease henceforth (Ramirez-Villegas et al., 2013; Peters et al., 2013; Sultan, 2012). The only binding international agreement to reduce emissions under the United Nations Framework Convention on Climate Change (UNFCCC) is the Kyoto Protocol, which entered into force in 2005 and will end in 2020 (Albiac et al., 2017).

As recently reaffirmed by the Intergovernmental Panel on Climate Change (IPCC), human interference with the climate system is occurring (IPCC, 2013) and climate change poses risks and/or benefits for human and natural systems (IPCC, 2014). Climate change can represent both a risk and an opportunity for organizations (Gasbarro et al., 2017). Business exposure to such risks and opportunities may represent a driver for coping with climate change (Kolk & Pinkse, 2004), because, often, the identification of climate-related risks and opportunities is considered one of the first steps for designing and implementing climate-related strategies (Weinhofer & Busch, 2013). Simply, we can say that the risk expresses a situation when the subject decides on the base of information about the probability distribution of the possible outcomes, which are available (Sredl 2010).

The aim of this paper is to describe the impact of global climate change on the structure of fruit market in the Czech Republic, focusing on apples as the major crop of Czech orchards.

2. Methods

The method of elaboration of this paper is based on the description of the composition of the fruit crops grown in the Czech Republic. The analysis monitors the developments in the harvests of the major crop (apples) between 2006 and 2014. Imports of apples and changes in the structure of fruit crops grown in the Czech Republic are studied in terms of global warming in the form of comparative analysis. Using a particular example, the study examines the difference between the quality of imported fruit and the domestic crops in terms of chemical residue content, in particular concerning pesticides.

From the perspective of economic theory, it can be stated that the market structure of the fruit-growing sector corresponds mainly to the monopolistic type of competition. "The main symptom of monopolistic competition is product differentiation" (Maksimov et al., 2016). This creates very strong competition among small and medium-sized manufacturers in the industry.

3. Results

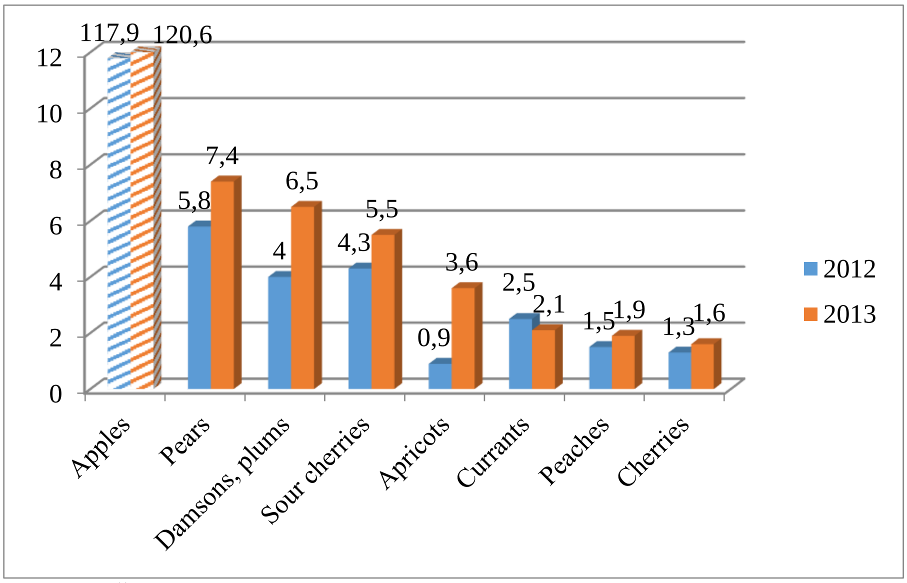
3.1 Globalization of the fruit market

The Czech Republic imports fruit and vegetables from abroad for billions of crowns; whereas previously Czech fruit and vegetables were exported, now the situation is quite the opposite. In 2012, 22.5 billion crowns worth of fruit, vegetables and nuts were imported, including those traditionally grown in the Czech Republic. Domestic growers are in decline, being unable to compete with heavily subsidized products from abroad. According to the Ministry of Agriculture, in 2011, nearly two-thirds of the vegetables and about a quarter of the temperate-zone fruit that were imported could have been grown in the Czech Republic. In 2012, fruit and nuts were imported mostly from the Iberian Peninsula, while Italy was the second largest source of imported fruit. The Fruit-Growers Union of the Czech Republic estimates that the Czech Republic is 40% self-sufficient in temperate-zone fresh fruit. For example, in pears the country's self-sufficiency is only one fifth. It is a sad state of affairs for a kind of fruit that is traditional in the Czech Republic. However, a similar situation is also found with plums, peaches and apricots. Fruit consumption in the Czech Republic has been rising for a long time. In 1962, Czechs consumed an average of 33 kilograms of fruit each. In 2015, the consumption of fruit per person had reached 82.4 kilograms. However, during the economic crisis, the consumption of fruit has fallen as a result of people trying to save money. From the peak of 90.4 kilograms per person per year in 2009, consumption fell by thirteen percent over two years, to 79.6 kilograms per person in 2011. The biggest decline was in apple consumption. Market position has been lost mainly by domestic producers, as imports of apples to the Czech Republic in 2012 rose to a record high. Apples account for about 30 percent of the fresh fruit consumed (Fruit-Growers Union of the Czech Republic, 2015; CSO, 2017). The largest European producer of apples is Poland. Czech orchard farmers complain that the Polish competition is heavily subsidised by their government, so their position on the European market is much stronger.

3.2 Fruit harvest in the Czech Republic

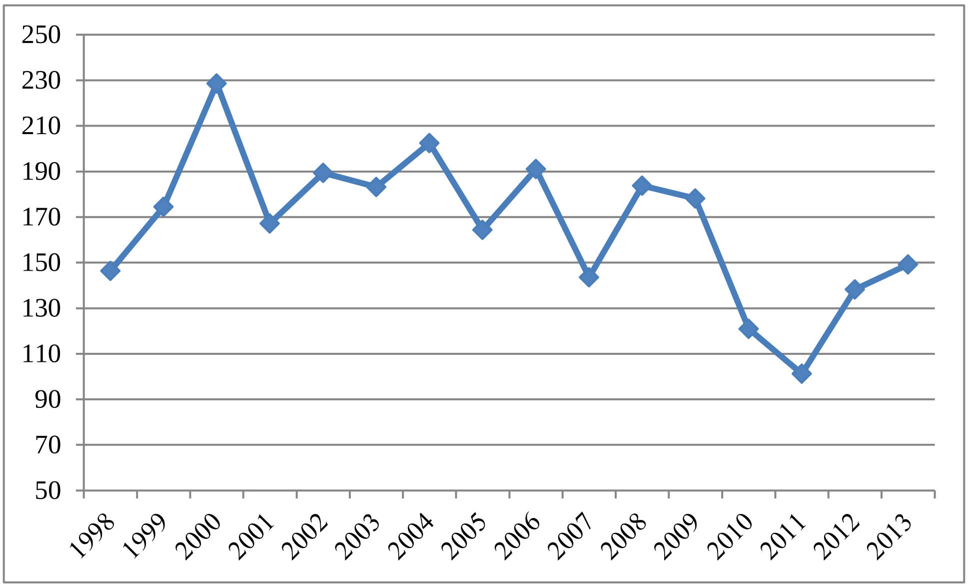
The fruit harvest slightly exceeded 149,000 tonnes in 2013, which represents an 8% year-on-year increase. The current harvest is about one-fifth lower than it was about 10 years ago - at that time, around 190,000 tonnes of fruit were harvested. The weaker harvests of recent years have been caused by frequent extreme weather fluctuation. In 2011, for example, crops were decimated by spring frosts and the harvest fell to a historical low of 101,000 tonnes. According to the The Fruit-Growers Union of the Czech Republic (2015), the average yearly harvest of fruit in the Czech Republic in the years 2009 - 2013 amounted to approximately 145,000 tonnes.

Figure 1: Fruit harvest in the Czech Republic in 2012 and 2013 (in thousands of tonnes)



Source: Ovocnářská unie ČR, 2015, own processing

Figure 2: Fruit harvest in the Czech Republic from 1998 - 2013 (in thousands of tonnes)



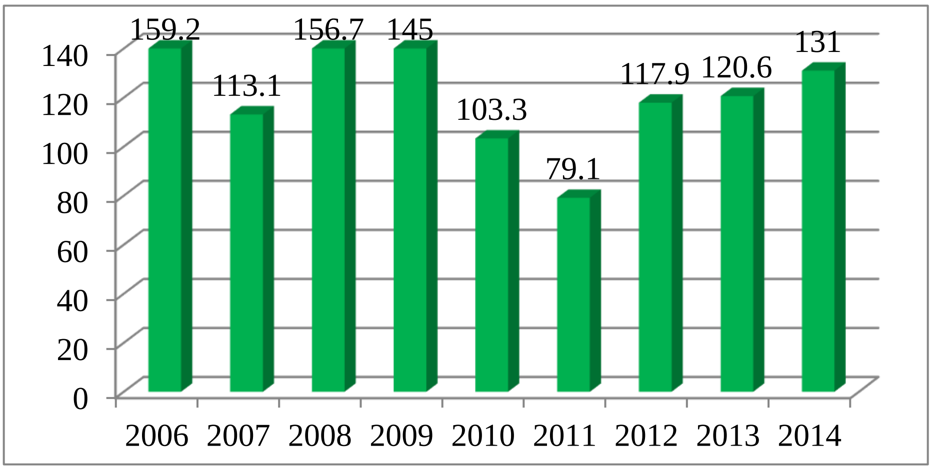
Source: Ovocnarska unie CR, 2015, own processing

3.3 Production of apples in the Czech Republic

Apples are grown across almost the whole of the Czech Republic, mostly in north and central Bohemia and south Moravia. They are cultivated apple varieties which most likely came from somewhere in the Caucasus or Iran. In Central Europe, apple cultivation started around 100 BCE; in the Czech territory, in the 9th century at the latest. The heyday of fruit cultivation came during the reign of Charles IV. Nowadays, apples make up about 80% of the Czech fruit production (see Figure 1).

Over 300,000 tonnes of apples are consumed in the Czech Republic annually, of which over one half is imported. On average, 21 kg of apples or produce made from them are consumed per person annually in the Czech Republic (CSO, 2017).

Figure 3: Apple production in the Czech Republic (in thousand tonnes)



Source: Ovocnarska unie CR, 2015, own processing

There are around 35,000 varieties of apples in the world. They are the third most common fruit globally, after citruses and bananas. Every year, tens of millions of tonnes are harvested.

In the Czech Republic, apples are grown on 10,000 ha of orchards (Ovocnářská unie, 2015). The most popular variety is Golden Delicious, closely followed by Idared, Jonagold, Rubín, Gala and Spartan. The typical Czech varieties, such as Topaz, Goldstar, Šampion and Bohemia, also contribute to the annual apple harvest in the Czech Republic, which in 2014 reached 131,000 tonnes (see Figure 3).

The specific aroma of any fruit and the particular level of contained substances are the result of the combination of climate conditions, time of harvest and, of course, variety. Apples grown in the Czech Republic are perfectly adapted to the local temperate climate, which has sufficient precipitation, and therefore they ripen under optimum conditions.

According to the findings of the Czech Union of Allotment and Leisure Gardeners, imported fruit usually contains far more chemical residues. In the Czech Republic, an apple tree is treated by spraying three times a year at the most. In the spring, it is sprayed against overwintering pests, and subsequently against fungal diseases and before the harvest against sooty blotch, a fungal disease causing black blotches on the skin. Fruit-growers also plant resistant varieties which do not need to be treated much with chemicals. The apples imported to the Czech Republic are sprayed usually ten to fifteen times a year (Ovocnarska unie CR, 2015).

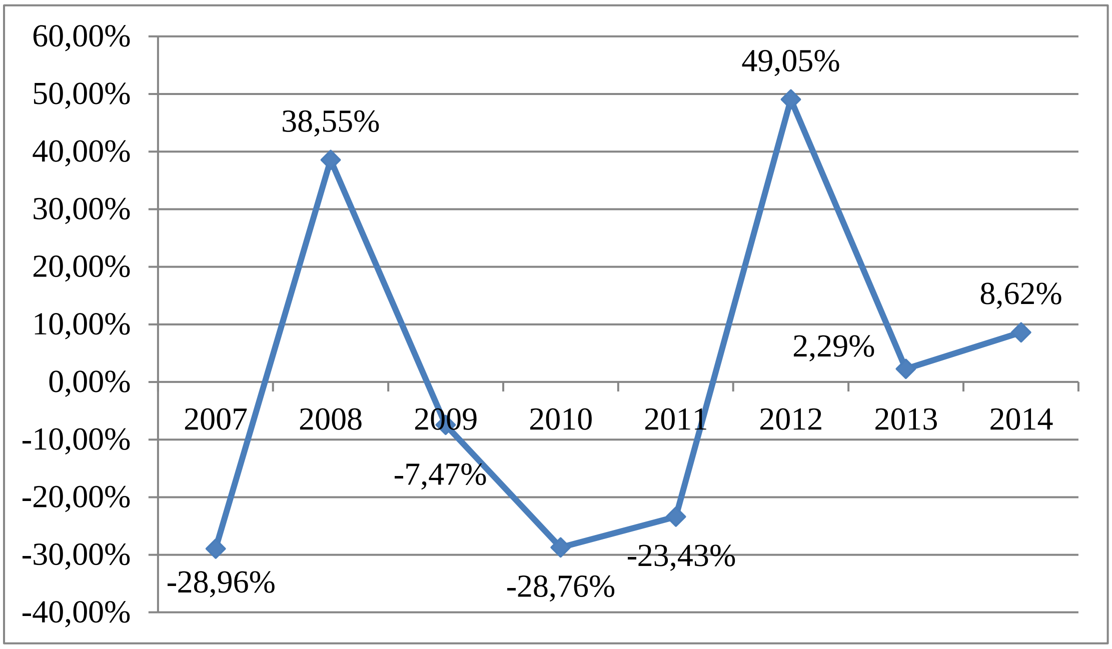
4. Discussion

The analysis of the impacts of global climate change on fruit growing in the Czech Republic is based on the comparison of the production of the most famous growing crop, apples, in the period 2007 - 2016. A comparison of year-on-year changes in apple production was performed, and this was then expressed as a percentage.

The following were therefore examined separately:

- the impact of climate warming, an increase in the average annual temperature, on long-term changes in fruit production,
- the effect of significant changes in the weather (fluctuations) in a given year (frost, drought, rain, etc.) on annual fruit production.

Figure 4: Annual changes in apple production in the Czech Republic (in %)



Source: Ovocnarska unie CR, 2015, own processing

Comparing the development of the production volume between the individual years, it was found that apple cultivation in the Czech Republic showed a fairly constant level of output. It is essentially a crop of the temperate climate zone, whose production and yields are negatively affected by the ongoing warming of the planet, but are not significantly affected by fluctuations in temperatures in individual years. In particular it is due to the late blossoming of apple trees and the height of the trunk and tree branches.

Night frosts damaged seedlings in the spring of 2017, but it was not just the fault of the weather. April frosts have always come, but crops and fruit did not suffer as much in the past as they have in recent years. Now growers must also deal with extremely warm early months of the year, which, combined with the subsequent fall in temperatures to below zero, has a devastating impact on the harvest.

Fruit-growers maintain that two hours at temperatures below five degrees represents the limit that fruit and vegetable blossoms can tolerate when they are still in the bud phase. However, it depends on many circumstances: the strength of the wind, the pressure. Generally, it is assumed that the blossoms can survive minus two degrees for two hours, but that cannot be said with certainty. If there is already a frost of minus two degrees at nine o'clock in the evening, it is clear that even the apple blossoms will not last.

In the past, we have experienced minus ten degrees on April 10 in the Czech Republic and about one percent of the buds were frozen, which did not affect overall production. Frosts have always been here. But now the weather is very unbalanced. March 2017 was perhaps the warmest month in two hundred years, and on the first of April temperatures rose to 30 degrees. This presents a huge problem for vegetation. Plants suddenly passed from winter to summer and began to develop intensively. Then, after two weeks, February weather came all at once. Blossoms that are outdoors want warmth, and trees cannot cope with this coldness (Broz, 2017).

5. Conclusion

Serious consequences of global climate change are apparent even now, and their intensity will increase with the warming of the planet. In 2014, Czech fruit growers reduced the area of their orchards by 11% to 15,000 hectares, the largest decline in the past 20 years. The largest decline, by nearly a third to 407 hectares, was in peach orchards; apple orchards shrank by 12% (The Fruit-Growers Union of the Czech Republic, 2015). The reason for cutting down the orchards is the poor economic performance of Czech fruit growing in recent years. The situation of fruit growers has significantly worsened recently, with the introduction of a Russian embargo on imports of fruit from the European Union in 2014, since when fruit prices have fallen sharply. In particular, old and obsolete plantings have been destroyed, but not replaced with new plantings. A number of farms have not invested in orchards in recent years, and now they have stopped growing fruit completely. EU funds could support the prevention of the reduction in orchards.

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SERVICE-ORIENTED ARCHITECTURE – NEW FEATURES OF INFORMATION SYSTEMS FOR SMALL BUSINESS IN CONDITIONS OF GLOBALIZATION

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Abstract. Globalization of the economy leads to globalization in the information sphere. Information globalization triggers the need for integration of business processes and the related information flows in certain company and between different enterprises involved in the same value chain. As a result the need for enterprises to integrate heterogeneous applications and systems grows. Service-oriented architecture (SOA) considered as a set of interacting Web services is able to ensure the information system flexibility, reduce software development, maintenance and upgrades costs, and thereby increase responsiveness of the system to changing business requirements. The paper discusses principles and methods for SOA design for small and middle enterprises (SME) considering the logic structure of business processes as a basis of coordinated service interactions. Taking into account the business requirements the problem of assessing the quality of web services for optimal choice and integration in structure is solved. In service-oriented design web-services have a direct impact on the possibility of development, adaptation and modernization of the information system. A set-theoretical approach, fuzzy logic and expert methods were used for evaluation and selection of web services. The developed procedures allow the user to select from a set of available services, the services with the required functionality that also satisfy non-functional requirements such as performance, reliability, security, response time etc. The proposed approach helps SME's to strengthen competitiveness through reducing the time-to-market and provides the necessary flexibility, according to changes in business environment.

Keywords: Small and medium-sized enterprises (SMEs), management information system, service-oriented architecture, web service, quality evaluation methods

JEL Classification: M15, L86, F61

1. Introduction

Globalization of the economy leads to the information globalization. The need for integration of business processes and their information flows in certain company is growing. With respect to globalization small and medium-sized enterprises are forced to react quickly to a changing environment and adapt their business processes. In order to achieve the required flexibility enterprises must integrate heterogeneous applications and systems in order to support the effective business process management (Seta & Arman, 2014).

Service-oriented architecture (SOA) is a growing trend in the development of information systems. Service-oriented architecture provides business with components and services as functional units of information system which can be loosely coupled and which can communicate using standardized protocols (Stal, 2002). SOA approach offers great benefits to SMEs including business process flexibility, improved time to market, reduced total cost of ownership, and business risk (Ray & Ray, 2006). In recent times Web services are increasingly used for composite applications in service oriented architectures. Web service technology is identified as a key driver for SMEs to gain operational and strategic benefit from net-sourced information systems (Vidgen et al., 2004). This software architecture is represented as a set of interrelated services and building blocks that collectively support an organization's goals and business processes (Papazoglou & Georgakopoulos, 2003).

Properties of the composite application directly depend on the quality characteristics of web services that are integrated into the system. Thus, the selection of appropriate and reliable services is of great importance. The services claimed by the provider, can be used by one or more clients. On the other hand, each customer can choose one particular service from the many available services.

Increasing number of Web services on the Internet requires effective criteria and selection methods that will allow users to make the best choice (Zheng et al., 2011). A typical procedure for selecting appropriate services from a set of alternatives for subsequent integration into the information system is based on requirements that describe the quality of service (QoS) (Zeng et al., 2004). When modelling an information system with SOA architecture user performs a selection of appropriate service from a set of available comparable services with QoS non-functional requirements such as performance, reliability, security, response time etc. (Menasce, 2002; Ouzzani & Bouguettaya, 2004; Rosario et al., 2008).

Many non-functional properties of services such as response time, are stochastic in nature. Dynamic environment of service deployment due to varying network conditions, latencies and server overload can lead to deviation of values of non-functional service quality indicators (Hwang et al., 2007). Some services in the particular envocation may require significantly more execution time, which in turn will increase the Total Cost of Ownership.

A number of methods based on QoS characteristics for appropriate services selection from a set of candidates with similar functions were developed. Most of these methods dedicated to the analysis of non-functional characteristics of web services as the main factors influencing the service selection decision. Zheng, Zhao, Yang and Bouguettaya offered a systematic approach for calculating the QoS for composite services with complex structures, taking into account the probability and conditions of each execution (Zheng et al., 2013). Maximilien and Singh presented a dynamic service selection approach via an agent framework coupled with the QoS ontology (Maximilien & Singh, 2004). With this approach, participants can collaborate to determine the quality and reliability of service to each other. The work in (Ardagna & Pernici, 2007) presented an optimization approach for the composition of Web services using dynamic service selection through adaptive reoptimization under variable QoS characteristics of Web services. Here the problem of web services selection is formalized as a problem of integer linear programming. Recently, evolutionary algorithms were proposed to tackle the web service selection problem. So the work in (Klein et al., 2014) presented self-adaptive genetic algorithm, which is used to determine the quality of Web service, and in (Zhang et al., 2010) for these purposes has been proposed the ant colony algorithm.

However, the functional aspects also have a significant impact. In addition, performance characteristics, which are determined directly during exploitation of information system may also have an impact on the effectiveness of service-oriented architecture. In (Zheng et al., 2011) a collaborative filtering approach have been proposed for predicting QoS values of Web services and making Web service recommendation by taking advantages of past usage experiences of service users.

The aim of this work is to develop a modeling method for evaluating the web service quality with the integrated quality index for subsequent service selection and composition in SOA. It is assumed that the model should take into account both functional and non-functional requirements, as well as the SOA system functioning indicators. The problem of web service selection is formulated as the problem of choice with fuzzy preferences. This approach can serve as a basis for the further development of decision-making software that supports automatic modeling of SOA systems.

2. Methods

The web service selection methods often use a measure of quality of service (QoS) (Menasce, 2002). This measure includes such characteristics as reliability, security, trust and execution cost, and is mainly related to non-functional characteristics of services. Non-functional requirements also include such quality characteristics as performance and response time. However, consumers are equally interested in the best possible performance of services, based on both functional and non-functional characteristics for the successful deployment and operation of service-oriented architecture.

Evaluation of functional characteristics when selecting web services is more complex procedure than procedures for evaluation of non-functional requirements. Functional requirements in many cases are presented in a simplified form, and there is a need for a subjective user satisfaction assessment of service quality and compliance assessment with the requirements. In the management of service-oriented system functional characteristics of web-services have a direct impact on the possibility of development, adaptation and modernization of the information system. In general it is quite difficult to find quantitative indicators of the functional requirements. So an approach to web service conformity assessment based on the domain ontology with required structure of business processes has been developed (Maximilien & Singh, 2004).

Evaluation of the effectiveness of the system based on the selected structure can be obtained only after the application is deployed and will be away for some time. These circumstances raise the need for formulation of the web services selection problem as decision making under uncertainty enabled by fuzzy logic techniques. We propose the use of a fuzzy preference relations approach and linguistic assessment variables for integral web service quality evaluation. The quality of service is formalized as follows:

$$FMG = \langle G,L,P,A \rangle \qquad (1)$$

where G is a graph, where each vertex $F_j\left(j=0,...,N_D\right)$ is associated with linguistic variable $x_j^i \in L_j$, that describes a specific service quality indicator; $L=\left\{L_j\left(j=0,...,N_D\right)\right\}$ is a set of linguistic values that $x_j^i \in L_j$ takes; P is a fuzzy preference relation; *A* is an aggregation operator.

When using ternary fuzzy classifier on the scale [0,1] values Lj should be as follows:

{ Low level (L), Middle level (M), High level (H)}.

Fuzzy preference relations are defined as follows:

$$P = \{F_i(\varphi)F_j \mid \varphi \in (\succ, \approx)\} \tag{2}$$

where $\succ$ denotes strict preferences, $\approx$ denotes indifference.

To obtain an integrated linguistic assessment of the web service quality we use aggregation operator for every non-terminal vertex of the graph. The aggregator uses the assessment of the quality indicators represented as child nodes in the tree. The ordered weighted averaging operator (Yager's OWA operator) (Yager, 1988) and Fishburn coefficients (Adelson & Fishburn, 1971), as associated collection of weights, are used for aggregation. The Fishburn coefficients are defined as follows: $p_i = r_i \Big/ \sum_{j=1}^{N} r_j$, where $i = \overline{1, N}$ and N is a number of child vertices of the graph involved in information aggregation; r_i is defined on the basis of preference relations.

If for each indicator ($F_{k.1} \ldots F_{k.N}$) on the selected graph level k linguistic values $L = (L_{k.1} \ldots L_{k.N})$ and weighting coefficients $p_k = (p_{k.1}, \ldots, p_{k.N})$ are determined, then aggregation operator represents the linguistic assessment of the membership function, determined for 01-classifier:

$$\mu_k(x) = \sum_{i=1}^{N} \mu_{k,i}(x) p_i, \ i = \overline{1,3} \tag{3}$$

The evaluation of trapezoidal membership function $\mu_k(x)$ can be done as operation with vertices of graph as functions $\mu_{k.i}(x)$. Function $\mu_k(x)$ is used to assess linguistic value of F_k - indicator. For ternary fuzzy 01-classifier it is necessary to define minimum distance between $\mu_k(x)$ and $\mu_i(x), i = \overline{1,3}$. on the basis of minimum distance ρ_{ki} between a fuzzy set defined by the membership function $\mu_k(x)$, and each of fuzzy sets corresponding to membership functions $\mu_i(x), i = \overline{1,3}$.

To estimate distance between fuzzy set A and set B absolute or relative Hamming distance as well as squared Euclidean distance can be used. For indicator F_k that is defined by trapezoidal membership function with parameters $a_L^k, a_1^k, a_2^k, a_R^k$ and membership functions $\mu_i(x), i = \overline{1,3}$ that are also trapezoidal with parameters ($b_L^i, b_1^i, b_2^i, b_R^i,$), the distance between fuzzy sets is calculated as follows:

$$\rho_{ki} = \max\left\{\left|a_L^k - b_L^i\right|, \left|a_1^k - b_1^i\right|, \left|a_2^k - b_2^i\right|, \left|a_R^k - b_R^i\right|\right\} \tag{4}$$

The matching value F_k of a specific linguistic level of the ternary scale on 01-classifier is defined as $\min(p_{ki})$.

The procedure of factors aggregation is to be performed for each not-end vertices down up to obtain linguistic value of web service quality. The formation of the integral quality index F0 for graph G is the aggregation of factors for each of the non-terminal graph vertices from the leaves to the top. The algorithm for integrated quality assessment of web services is as follows.

a) Form a graph G of the web service quality indicators with vertices Fj (j = 0, ..., N_D).

b) Form a system of preference relations $P = \{F_i\,(\varphi)\,F_j \mid \varphi \in (\succ, \approx)\}$ between graph vertices on the basis of expert assessments.
c) For each of the end vertices in the graph form a set of linguistic values of factor levels .
d) For non-end vertices in the graph apply the aggregation operator to compute their linguistic values.

As a result, we obtain a linguistic evaluation for the root vertex of the graph, which characterizes the integral quality of the web service, and for intermediate non-end vertices – the quality of service concerning certain group of indicators, for example its functionality.

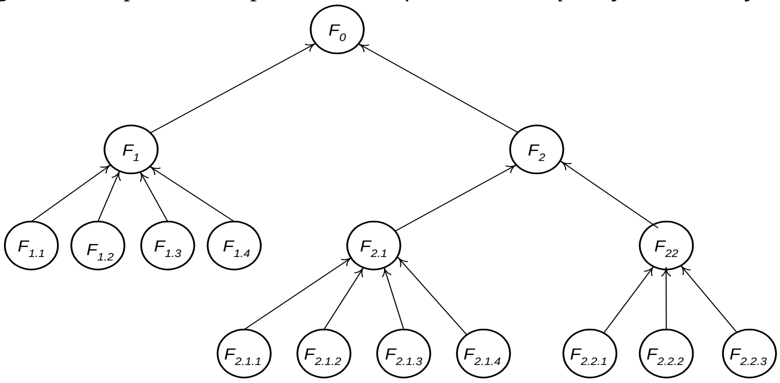
3. Results

The following example illustrates the proposed fuzzy linguistic method for assessment of the web service quality. Here we consider the following indicator system to measure a web service quality.

$$F_0\{\ F_1\{\ F_{1.1}, F_{1.2}, F_{1.3}\}, F_2\{\ F_{2.1}\{\ F_{2.1.1}, F_{2.1.2}, F_{2.1.3}, F_{2.1.4}\}, F_{2.2}\{\ F_{2.2.1}, F_{2.2.2}, F_{2.3.3}\}\}\}, \qquad (5)$$

where F0 is the integral web service quality indicator; F1 – indicator of the functional characteristics; F1.1 – accuracy, as a measure of matching similarities between the service response and required result; F1.2 – robustness, the sustainability of the service to incorrect input data, or incorrect invocation sequence; F1.3 – interoperability, the ability of the service to provide seamless and automatic connections to another software application; F1.4 – availability, the ability of a service to perform a required function within a specified period of time; F2 – indicator of non-functional characteristics; F2.1 – indicators of operating performance; F2.1.1 – performance of the service; F2.1.2 – reliability of a web service, the probability of successful execution of the business process using the service. This includes the probability of failure (percentage of failures in the execution of the service methods); the average time between failures; recovery time after failure, etc. ; F2.1.3 – scalability, the ability of the service to increase its productivity if necessary; F2.1.4 – security, that includes user authentication, message integrity and confidentiality; F2.2 – web service user satisfaction indicators. This implies service efficiency assessment in terms of business; F2.2.1 – cost of invocation and using of web service; F2.2.2 – reputation of the service as a measure of the reliability of the supplier. This implies evaluation of the service by consumers; F2.2.3 – quality of service experience as an actual measure of user's experience with provider in terms of delivered quality. This includes availability of technical support for web services and flexibility of integration. Figure 1 shows a graph-based representation of web service quality indicator system.

Figure 1: Graph-based representation of web service quality indicator system



Source: authors' contributions

For a given system experts were asked to provide preference rankings of web service quality indicators. As a result we have obtained the following system of preferences:

$P = \{ F_1 \succ F_2;\ \ F_{1.1} \succ F_{1.2} \approx F_{1.3} \approx F_{1.4};\ \ F_{2.1} \succ F_{2.2};$

$F_{2.1.1} \approx F_{2.1.2} \approx F_{2.1.4} \succ F_{2.1.3};\ \ F_{2.2.1} \succ F_{2.2.2} \approx F_{2.2.3} \}.$

For the studied factors experts have formed linguistic values of factor levels that define quality of web service:

$F_{1.1}$ – H; $F_{1.2}$ – H; $F_{1.3}$ – M; $F_{1.4}$ – M ; $F_{2.1.1}$ – H; $F_{2.1.2}$ – M; $F_{2.1.3}$ – L; $F_{2.1.4}$ – L; $F_{2.2.1}$ – H;

$F_{2.2.2}$ – L; $F_{2.2.3}$ – L.

The results of fuzzy modeling are shown in table 1. It can be seen that the integral web service quality indicator and indicator of the functional characteristics can be assessed as "H - high", and the level of some non-functional indicators as "M - middle". Thus, the analysis of web service quality shows an insufficient level of non-functional service characteristics.

Table 1: The results of modeling

Name of indicator	The level of indicator	Trapezoidal number			
F_0	H	0.70	0.80	0.85	1.00
F_1	H	0.77	0.82	0.88	1.00
F_2	M	0.25	0.45	0.55	0.75
$F_{2.1}$	M	0.26	0.45	0.56	0.76
$F_{2.2}$	M	0.25	0.45	0.55	0.75

Source: authors' contributions.

4. Conclusion

The goal of this study was to define principles for developing SOA architecture for small and middle enterprises (SME). The problem of assessing the quality of web services for optimal selection and system integration by taking into account the business requirements was presented.

We have shown that web services quality assessment for their subsequent integration in service oriented information system should be based on the integrated quality index. This integrated quality index includes a set of indicators related to non-functional and functional requirements as well as web services user satisfaction indicators for evaluation of web service performance.

In our research we have studied the use of the fuzzy logic method to obtain an integrated assessment of the web service quality in the conditions of incomplete information. The proposed fuzzy model and algorithm of integrated estimation of web services quality provide the effective decision-support mechanisms for construction of SOA-based systems for small and middle enterprises.

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THE FORMATION OF NATIONAL TECHNOLOGICAL INITIATIVE AS THE FOUNDATION OF GLOBAL ECONOMIC DEVELOPMENT OF RUSSIAN FEDERATION

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Abstract. Russia puts ahead ambitious but achievable goals of long-term economic development – ensuring the high level of population welfare, strengthening the geopolitical role of the country as one of the global leaders defining the world political agenda. The only possible path to meeting these goals is the transition of the economy to the innovative society-oriented model of development. This problem setting means, in its own turn, the necessity to form the national technological initiative based upon the national technological foundation. About this situation, the government sets a global goal, the development of national technological base capable of development and production of competitive science-intensive products on the world market to solve priority tasks in the field of socio-economic development and national security of Russia.

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Keywords: national technological initiative, national technological base, economic development

JEL Classification: O10, O30, O33

1. Introduction

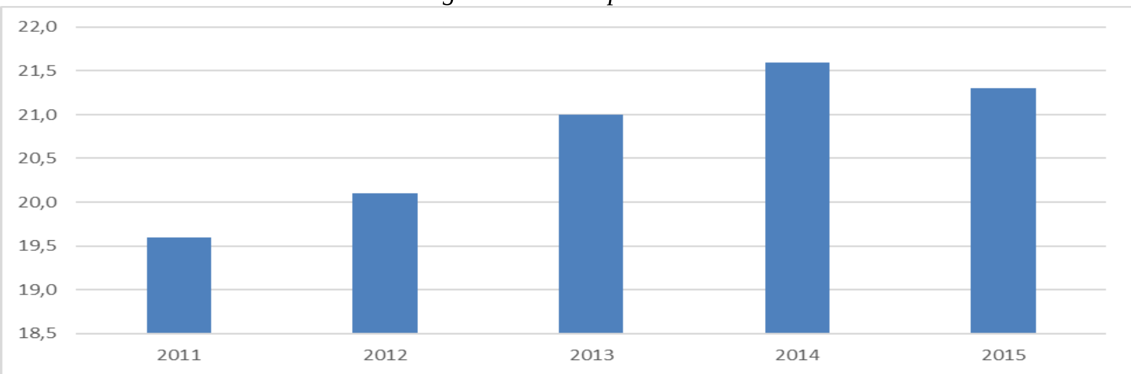
The forming of the technological base appears to us as a relevant process, the result of which being the construction of the innovative architecture of high-tech business, based upon the approaches, values and pilot projects, relying upon which the state, the society and the business would build the system of socio-economic development of the economy. In the public opinion, there should be formed the ideological image of the technological base that corresponds to the socio-cultural conditions and defines the value of the high-tech sphere for the society and the attractiveness of participating in its development (West & Bogers, 2014; Stanko et al., 2017; Harrisson et al., 2012; London et al., 2010; Adolfson et al.,2007; Fricke, 2017; Namwoon et al.,2012).

The key values of the technological base development are: the project groups (Decision of the Prime Minister of the Russian Federation, 2017); the dominance on high-tech markets; the personnel; the high-tech assets; the marketing support. In the sphere forming the substantially new technological base the amount of serious processes carried out within the boundaries of self-organization of both the business and th*e scientific society is quite small, which can be illustrated by the data presented on the Federal Service of Public Statistics website.[1].

2. Results

The character of the Russian economy development is the reflection of the declining development potential, which is confirmed by high load of productive assets, the absence of wide investments and the low level of unemployment. Additionally, the prolonging growth of the production expenses related to the tariff policy of infrastructural monopolies, and the growth of salaries advancing faster than the labor productivity, complicate the situation even further. The proportion of added value for high-tech and research-intensive types of activity in the gross domestic product of Russian Federation is shown on Figure 1.

Figure 1 – The proportion of added value of high-tech and research-intensive activities in Russian Federation gross domestic product



Source: Authors.

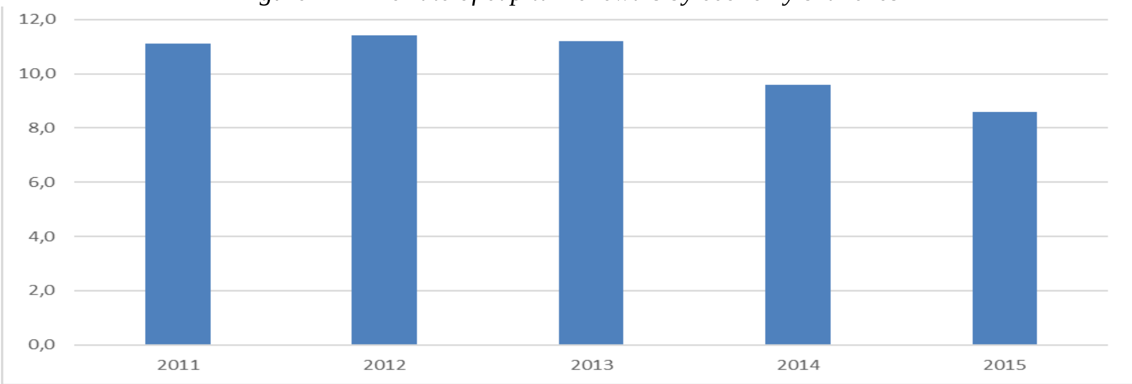
The main factors defining the Russian economy development over the last two years, were the reduction of external demand and the prices on main Russian raw material goods that form the basis of its export potential; the weakening of the internal demand as the effect of economy income decline and the expenditures growth; the narrowing of scale of the import, which form more than a third of the internal market; the reduction of national and foreign investments into fixed capital (Stroeva et al., 2015).

The rate of fixed assets renewals by economy sectors, including high-tech degrees, enables to evaluate the level of the development and renovation of material and technological base of a sector (Fig. 2 and 3)

The high degree of physical and moral wear of the fixed assets, the unfavorable age structure of the park of vehicles and equipment are both hard limitations of the economic growth. Given the long tendency of the gross accumulation in the fixed assets, within the GDP there occurred the impairment of the normal fixed assets reproduction cycle. With the current amount of accumulation in the fixed capital in the GDP, the investment activity has only been limited to the support of the accumulated potential functions (Shibeika, & Harty, 2015).

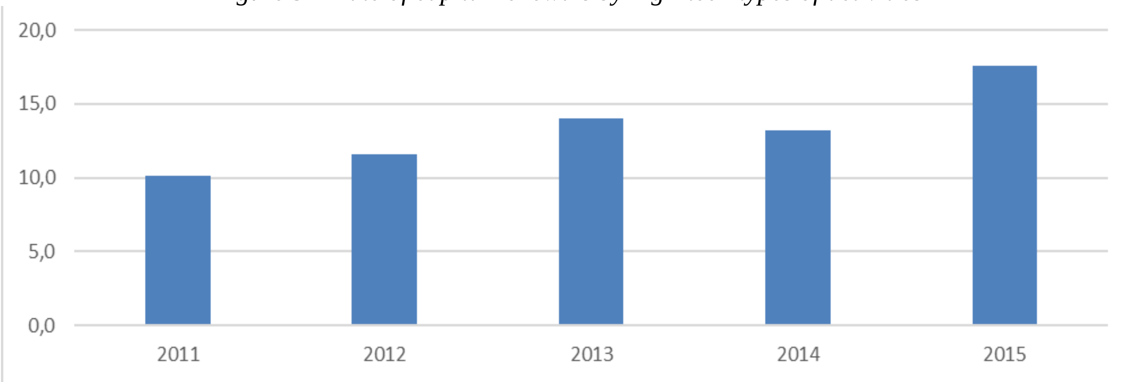
[1] Federal Service of Public Statistics // http://www.gks.ru/

Figure 2 – The rate of capital renewals by economy branches



Source: Authors.

Figure 3 – Rate of capital renewals by high-tech types of activities



Source: Authors.

Considering the differences in prices, the cost of annual supply of new machinery, vehicles and equipment only partially compensates their annual wear. Moreover, it is clearly lacking for the overcoming of the observed long-term tendency in equipment and machinery aging.

The comparison of production dynamics and the characteristics of the labor force and the assets use indicates, that, given the existing decline of technical and economic characteristics of production system in the industry, a certain "exchange" of the factors has occurred. The high degree of manual labor and labor endowment by outdated equipment allowed, to a certain extent, to compensate the lacking of investment resources, but, at the same time, caused technological stagnation of the production.

The change in structural characteristics of the fixed capital use and reproduction was followed by the decline in the ratio of fixed assets yield and the growth of the fixed assets endowment. For different types of economic activities and for separate years, the ratio between the labor force and the assets use characteristics alternated substantially, caused by both the structural and the conjunctural factors (Moss, 2005).

The main factors defining the Russian economy over the past two years, were the decline in the external demand and the prices of main Russian raw material goods, composing the basis of the export potential; the weakening of the internal demand caused by the drop of economic income and the increase in expenditures; the narrowing of the scale of import, which forms more than a third of the internal market; the decline in national and foreign investments in the fixed capital.

A positive tendency of the last 5 years was the change in fixed assets proportion by their types with the overtaking growth of fixed assets in the processing productions compared to the excavation and mining operations and the production and distribution of electricity, gas and water. The highest proportion in the fixed assets of the economy of Russia is the capital assets of transport and communication (27,1%), the transactions with mortgage, rent and corresponding services (24,8%), the excavation (10,6%). In the processing productions, 8.5% of the economy fixed assets were involved. The lack of fixed assets implementation to provide their renewal is evidenced by the ratios of fixed assets supply and wear.

The degree of capital assets wear by economy branches and by high-tech activities is shown on Fig. 4.

Figure 4 – The rate of fixed assets wear by economy branches and by high-tech types of activity

Source: Authors.

The main factors determining the development of the Russian economy over the past two years were: the reduction in external demand and prices for the Russian raw goods making a basis of export potential; weak domestic demand associated with the decline in incomes of the economy and rising costs; the narrowing of the scope of import that form more than one third of domestic market resources; reduction in domestic and foreign investment in fixed capital (Table 1).

Table 1. The dynamics of the main factors of economy development in 2011-2015, % to previous year

Indicators	2011	2012	2013	2014	2015
GDP	104,3	103,5	101,3	100,7	96,3
Internal demand, including:	108,8	105,5	100,5	101,3	89,7
final consumption of the households	106,8	107,4	103,7	101,7	89,9
investments in fixed assets	110,8	106,8	100,8	97,3	91,6

Source: (Sibirskaya et al., 2015).

Over the period of 2011-2015, there was ongoing the gradual decline in economic growth rates, the disproportions within the sphere of production and consumption were increasing, the investment activity of the manufacturers was declining, the misbalance of the technical and technological characteristics of fixed assets and the investments in fixed assets was strengthening for base types of economic activities. The development based on the extensive use of the main factors reduced the competitiveness of the Russian economy and the dynamics of its development. The growth in fixed capital investments observed prior to the 2nd half of 2012, did not entail the boost in yield per unit of invested funds and labor.

The situation became more complex after the 2nd half of 2014, as the result of the forming of substantially new political and economical factors. The change of the world market conjuncture with the contemporary introduction of sanctions and countermeasures has had significant influence on the key parameters of the economy functioning. In the III-rd and the

IV-th quarters of 2014 there started the falling of the ruble exchange rate and the acceleration of inflation with the shortening of the external demand amounts. The internal demand in the IV-th quarter of 2014 was formed under the mutual influences of the rush consumer demand initiated by the growing inflation expectations of the population, and the collapsing of investment demand as the result of the credit resources going up in price caused by the dynamic growth of the rate of refinancing over the year, from 5,5% (as of 03.02.2014) to 17% (as of 16.12.2014).

The fall of investments in the fixed capital has caused the contemporary reduction of demand for the national and the imported capital goods, and increased the development of the negative tendencies on the internal market. Additional complications rose from the introduced restrictions on the supply of separate types of technological equipment essential to the realization of investment plans of the excavation and processing productions and infrastructural projects.

The drop of economic growth rates entailed the shortening of materialized inventories of the circulating assets. The proportion of the gross accumulation in the fixed assets increased to earlier years, but the proportion of investments in the fixed capital in the GDP remained on the average level of 2013-2014 of about 18,1%. A distinctive feature of the Russian investment model is the significant amounts of savings, a major part of which is not transformed into the fixed capital investments. This low level of the gross national savings and the gross accumulation into the fixed assets investments is a chronic occurrence of the Russian economy functioning over a significantly long period.

3. Discussion

Given the observed situation, the state puts up a global aim of developing the national technological basis that would be capable of providing the design and the manufacturing of competitive research-intensive production, to solve the priority tasks in the area of social and economic development and the national security of Russia.

The main complexity of the national technological base formation lies in the need of the simultaneous resolution of short- and middle-term problems, and the long-term goals of social and economic development of the state and the technological projects. Having analyzed the Strategy of Russian Federation development for 2020 (National priorities of scientific and technological development of Russia, 2017), the Concept of long-term socio-economic development of Russian Federation (The concept of long-term socio-economic development of the Russian Federation for the period until 2020, 2017), the branch strategies and programs, and the key hypotheses of National technological initiative, we can consider a more detailed list of national priorities (directly or indirectly influencing the development of the national technological base) by the terms, in the Table 2.

The results of the national priorities realization must be described from the viewpoint of the realization of strategic goals of socio-economic development; the degrees of parrying the revealed long-term systematic challenges; the changes in Russia positioning within the world science and technology space; the change of the level of competitiveness on the internal and external markets, and the efficiency and the level of technological development of manufacturing; the change in Russia positioning on the existing and forecasted markets (Strategies for the innovative development of the Russian Federation for the period until 2020, 2017).

From the above-described, we shall understand as the national technological base the totality of technologies, main scientific and production complexes and intellectual potential of the production personnel that wields, advances and carries out the said technologies in the priority areas of science, tech and industry, that ensure the vital functions and security of the country.

Table 2 – National priorities having direct or indirect influences on the national technological base

	National priorities	Influence degree
Nearest zone realization priorities		
1	Defense and security	*Direct*
2	Technological improvement of equipment	*Direct*
3	Technological improvement of healthcare, including medical equipment and pharmaceutics	*Direct*
4	Ecology and rational environment use	*Direct*
Middle-term priorities of technological modernization of economy		
1	Ensuring the efficient functioning and development of oil and gas complex	*Direct*
2	Energy and resource saving, energy-efficient consumption	*Direct*
3	Development of transport infrastructure	*Direct*
4	Technological modernization of AIC	*Direct*
Priorities in the sphere of forming the fundamentally new technological base and acnieving the technological leadership in long-term perspective		
1	Aeronet	*Direct*
2	Marinet	*Direct*
3	Autonet	*Direct*
4	Neuronet	*Direct*
5	Energynet	*Direct*
6	Foodnet	*Direct*
7	Healthnet	*Indirect*
8	Safenet	*Direct*
9	Finnet	*Direct*
10	Medianet	*Indirect*
11	Staff	*Direct*

Source: Authors.

The possession of spearhead technologies is the most important factor of the national economy development, and the ensuring of national security of any country. The supremacy of a country in the technological sphere ensures its priority positions on the world markets, and contemporarily boosts its defensive potential, allowing to compensate, from high tech, the dictated by economic needs necessary quantitative curtailments of the resources and powers of armed struggle (The Government of the Russian Federation the decision of November 8, 2001 N 779 On the approval of the federal target program "National technological base" for 2002-2006, 2017).

In other words, our state has to solve, in both middle- and long-term perspective, the following tasks of forming the national technological base with the accounting of priorities: the creation of the leading technological base of high-tech branches of the real economy sector; the informatization of the society, the advance of telecommunication means; the growth of life quality and ensuring the national healthcare; securing the safety of complex technical systems functioning; the creation of transport infrastructure of the future; ensuring the environmental cleanliness of the productions and the comfort of the habitat environment; advancing the personnel training in the interest of economy development; forming the united areas and resources, portals; creating the communicational services for national technological base; developing the crowd-tech processes that also perform the marketing functions.

Presently, Russia has neither the possibility nor the necessity to create all technology by own force. It is necessary to implement the technological advances of other developed country, integrate into the international technological space on the rights of equal partnership, that is offer own technological achievements and, at the same time, find own technological niche. Doing so requires the possession of high national tech level. The national technology level, however, presently somewhat allows to find a worthy spot in the world process of technological advance.

4. Conclusion

The successful solution of raising the national industry as the main factor of stable country economy growth requires the up-to-date dynamically developing technological base, that is capable of creating and producing competitive science consuming production, that would, over time, take the leading positions in the economic development of our country and become the main federal budget supply source.

Therefore, the process of forming the national technological base must carry out in the unity and connection, by objective economic laws; the intervention in its content and development must be well-weighed and literate; influenced by the factors and conditions that must be accounted for when making economic decisions; yield to scientific knowledge and study, and, consequently, be manageable in the interest of achieving the nearest and more distant goals of the society and the state development; disallow the gaps in the process of unthoughtful reformation; be aimed at socio-economic development of our country.

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GLOBAL INNOVATION MODERNIZATION HIGH-TECH SECTORS OF THE RUSSIAN ECONOMY

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Abstract. Transition of Russian economy to innovative way of development in the context of globalization is the need to maintain stable economic growth in the long term. In scientific literature there are many publications devoted to modernization of the economy and the problems of building an effective national innovation system. However, the analysis of opinions of leading scientists and politicians testifies to the lack of a clear understanding, first, what is modernization and how it differs from innovation development, and secondly, more important for the Russian economy modernization and innovative development, and, thirdly, what of these directions is below. - a system of current realities. The transition of Russian economy to an innovative path of development in the conditions of globalization it is necessary to maintain stable economic growth in the long term. However, the analysis of opinions of leading scientists and politicians first shows a lack of common understanding of concepts such as modernization and how it differs from innovation development, and secondly, what is more important for the Russian economy to modernize and innovation development, and third, which of these areas best suits a given reality. Modernization and innovative development have several differences. Modernization in the broad sense should be organizational-economic, aimed at the innovative development of technology-intensive enterprises.

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Keywords: modernization, science-intensive industries.

JEL Classification: O10, O30, O33

1. Introduction

Statistics of innovations in the Russian Federation is an important information element of monitoring of the country’s economic development, which allows studying the demand and offer for the results of innovative activity and conducting evaluation of the production and scientific potential of the economy, distribution of financing, and other factors, necessary for development of innovative activity in Russia. The concept of creation of production of the high-tech sphere creates a possibility for accelerating the development of any economy and forms competitiveness (Abdeljawad et al.,2013; Anderson & Hsiao, 1981; Kharlamova, 2015; Grondys, 2015; Öztekin & Flannery, 2012; Park et al.,2013). The main elements of such type of production include products with a high level of intellectual labor cist and science-drive technologies (Piaw & Jais, 2012; Rajan & Zingales, 2012; Shyam-Sunder & Myers, 1999; Ting & Lean, 2011).

The authors analyze the modern state and perspective of development of high-tech companies and organizations of innovational business (Tong et al., 2005; Tongkong, 2012; Welch, 2004) , which allows preserve its decisive role in solving the strategic tasks of development of Russia.Nowadays high-tech companies operating in science-intensive industries undergo technological modernization through re-equipment of existing production facilities, while at the same time innovation activity starts. The interconnection and subordination of the innovation and the modernization processes requires linking through management mechanisms aimed at the innovative development of high-tech and science-intensive industries based on the use of their own scientific, technical and innovative potential.

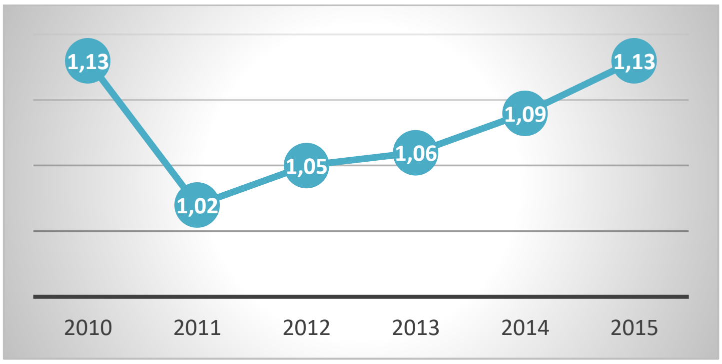
Innovational processes in the Russian economy are not intensive. The share of innovations-active companies of the industry (9.3%) is much lower than in the developed European countries. The share of innovational products (8.4%) is also much smaller than in the developed countries. At the same time, it should be noted that innovational processes in the Russian economy are unstable, as termination of innovational activity at one or several large companies may lead to a large reduction of innovational indicators at the level of the region or the country.

Innovative modernization of science-intensive industries and high-tech companies – is a systematic process of technical, technological, organizational and economical renovation in these spheres of economy. It is driven by infrastructure change of science-intensive industries, development of efficient mechanisms of partnership between government and business as well as change of technological foundation based on innovations and emergence of intra- and interindustry innovative connections in specific areas of science-intensive companies.

Characteristic features of innovative modernization of science-intensive industries and high-tech companies are: fundamental transition from local technical modernization (i.e. design improvement of equipment or its part) to the change in technological, organizational and economical foundations; expansion of modernization spheres and holistic approach to it; serving as a condition of sustainable socio-economic development of a country, providing its scientific and technological security and contributing to the improvement of living standards of the population.

Figure 1 shows domestic expenditures on research and development as a percentage of Gross Domestic Product on total Russia level. Share of domestic expenditures on research and development in priority areas of science and technology in total domestic expenditures on research and development is shown on Figure 2.

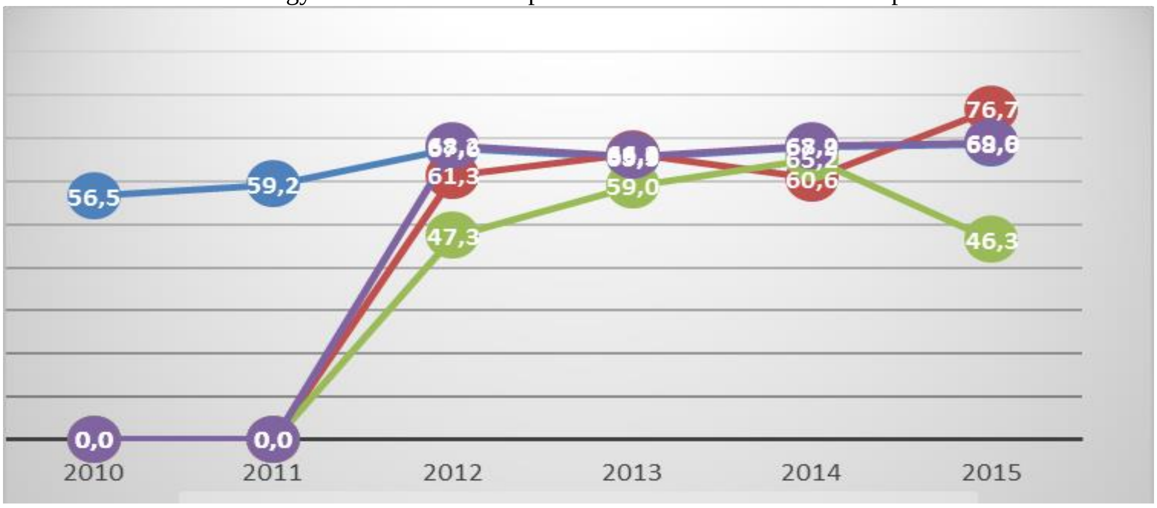
Figure 1. Domestic expenditures on research and development as a percentage of Gross Domestic Product on total Russia level.



Source: (Eurostat, 2015).

Innovative modernization of science-intensive industries and high-tech companies is designed to ensure interconnection between scenario-based forecasting of Russia economy development, strategic priorities, strategic and program-based planning, reproduction of resource, competitiveness of innovative products, technical, technological and institutional support.

Figure 2. Share of domestic expenditures on research and development in priority areas of science and technology in total domestic expenditures on research and development.



Source: (Eurostat, 2015).

2. Results

Characteristics of development scenarios of science-intensive industries:

- the scenario of catching-up development does not meet the task of an innovative breakthrough and the increasing growth rates of Russia's economic and social development based on it;
- the scenario of scattered national innovation system has a pronounced raw material orientation;
- the scenario of creating an innovation environment does not provide effective mechanisms of government and business partnership;

The scenario of local technological leadership is a projection of active innovation macroeconomic scenario and is aimed at using technological potential of Russian economy by initiating a series of breakthrough innovative projects in those science-intensive spheres where there is significant background and competitive advantages.

Science-intensive industries use the following organizational forms presented in Table 1 for driving innovation activities. Table 1 shows that state corporations as a prevailing organizational form if not always effective.

In this sense occurs necessity of science-intensive state corporations’ reorganization into joint-stock companies, that will increase top managers’ responsibility, and use of the holding structure management mechanisms. This approach will maintain parity between state and private sectors; reduce bureaucracy and corruption levels while increasing professionalism; improve transparency of the use of all types of resources, including financial.

Foreign experience also brings evidence that such organizational transformation leads not only to effective production in science-intensive industries and creation of high-technologies, but also to their better market commercialization.

Table 1. Characteristics of the innovative activity organization forms in Russian science-intensive spheres of economy.

Organizational Form	Advantage	Disadvantage
State corporations	Control of important activity areas by state Significant investment opportunities Reliable sources of investment financing Development if innovative potential Competitiveness of industries Country security (Sen & Bhattacharya, 2001)	Problematic regulatory basis (OECD, 2009; Klein & Dawar, 2004). Poor quality of investment strategies Presence of cross-financing Aging of personnel Low competition environment Dependence on country economy efficiency (Zauskova et al., 2013)
Territorial distributed complexes (Sibirskaya et al., 2015)	Concentration of capital and resources Competitiveness based on combination of all resources One level of reporting and taxation	Full responsibility of partners Risks of dependence from partners Limited scope of business
Corporations (joint-stock companies)	The maximum generalization and mobilization of the capital Legal independence from owners'(shareholders') risks and their limited liability Unlimited business scope, economies of scale, synergy effect (DDI, 2015). Possibility of multilevel management organization, active market positioning, diversification of activities (Bloudek et al., 2013)	High registration and reorganization costs Separation of interests of management and owners Threat of monopolization, bureaucratization of management Legal restrictions and other forms of control Double taxation, requirements for detailed reporting and openness of information

Source: (Eurostat, 2015).

3. Discussion

Importance and certain priority of innovative modernization of science-intensive industries over other variants of progressive economy development are determined by modern society laws of scientific and technological process (National Priorities of scientific and technological development of Russia, 2017). Based on the research of trends in the development of domestic and foreign science-intensive industries, author has formulated necessary prerequisites for implementation of innovative modernization of science-intensive industries. Innovative modernization should be implemented in accordance with long-term programs, plans, strategies of the development of all science-intensive industries and be based on main postulates of Russia Socio-Economic Development Strategy until 2020 (Concept of Russian Federation long-terms socio-economic development until 2020, 2017) and Russia Innovative Breakthrough Strategy until 2050.

4. Conclusion

Innovative modernization in fact is a progressive process of qualitative improvement of productive forces through implementation of all types of innovations (product, technological, organizational). Innovative modernization of high-tech and science-intensive industries is a practical embodiment of the development of innovation economy type, tendencies of which are: science, education and production integration strengthening due to the fact that processes of innovative development cause increase in volumes and intensity of relationships between these spheres; change in the nature of investments (acquisitions of innovations) and structure of their sources (venture capital, leasing transactions, license agreements, etc.); Strengthening of development interdependencies between economic systems at various levels.

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CLUSTERING OF COMPANIES IN BANKRUPTCY PREDICTION MODELS ACCORDING TO INTERNATIONAL CLASSIFICATION OF ECONOMIC ACTIVITIES

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Abstract. For all companies, it is important to address not only the current, but also the future situation. Any information that helps to identify potential threats in advance is helpful. Therefore, it is necessary to predict their future financial situation in a certain way. On the basis of the information obtained from this prediction, the company can plan its further activities and decide to expand or narrow it down. For the efficient development and evaluation of company's financial analysis, availability of high-quality, up-to-date information is required. The sources of this information are primarily the financial statements of the company, balance sheet and income statement. The results of the company's financial analysis serve the management for decisions about further development of the company. On the other hand, the results of predictive models serve the company to analyze its inclusion into a group of prosperous or non-prosperous ones and to detect its main weaknesses. Practice has shown that it is appropriate to create bankruptcy prediction models specifically for individual sectors of economic activities of companies. In the paper we focus on the financial ratios of companies, globally used in bankruptcy prediction models and by using cluster analysis we create groups of business activities that are so similar in their characteristics that can be analyzed together. Sectors of economic activities are used according to the international NACE classification. The results of our analysis are those NACE categories that are as similar as possible so that predictive models could be created for them.

Keywords: bankruptcy prediction models, failure prediction, cluster analysis, financial ratios

JEL Classification: C38, G33

1. Introduction

As the companies in the market are forced to address not only the present but, above all, the future, it is necessary to predict their future financial situation in a certain way. On the basis of the information obtained, the company can plan its further business activities and decide about the extension or narrowing of their business activity. A properly developed financial analysis of a company provides insight into its strengths, but also weaknesses and their causes and allows company to take appropriate measures to eliminate them. Its objective assessment enables company to quickly orient in a globalizing market to ensure its competitiveness. For effective development and evaluation of financial analysis of a company, it is necessary to have high-quality and up-to-date information about the company's business. The source of this information is primarily the main financial statements of the company, i.e. balance sheet and income statement. The results of the company's financial analysis serve the financial management of the company for decisions about the further development of the company and its business activities. The prediction results of the prediction models show the company whether it is in a group of prosperous or in a group of non-prosperous companies and then allow management to identify its main weaknesses. (Kliestikova et al., 2017)

There are many subjects interested in the financial situation of the company. Financial analysis is important for managers, investors, banks, business partners, competitors, employees, or the state and its authorities and other users. Each of these groups has its own specific interests. (Mitman, 2016) Bankruptcy or business failure can have a negative impact not only on the company itself but also on the global economy. Prediction of bankruptcy is therefore an important issue that many financial institutions deals with. The goal is to predict the likelihood that a company can go bankrupt. Companies must use effective prediction models to make the right choices and avoid possible financial distress. (Liang et al, 2016)

The aim of prediction models is the answer to the important question whether the company is threatened by bankruptcy at some time in the future (bankruptcy models). Another option is the inclusion of a company into a category of companies threatened by bankruptcy or financially sound companies (credit models). The basis of bankruptcy models and credit models are the existing differences in the financial situation of the bankruptcy companies in the time before the bankruptcy and the financial situation of the prosperous companies. (Pilch, 2006)

The construction of prediction models is in the focus of economists and scientists during the last years worldwide. Since the time of Beaver and Altman who are considered to be the founders of this issue, a large number of prediction models have been constructed. (Misankova, 2016) Currently, there exists hundreds of prediction models developed at a particular time and in conditions of particular economies. Many of them have been created for companies in a particular sector of national economy. For example, in New Zeland Chung, Tan, Holdsworth (2008) have created classification model for companies in the field of finance industry. Lin (2015) have created a model for industrial companies in UK. In Iran, Shams et al. (2011) have developed a model for securities and exchange organization. Back et al. have created a model for business companies in Finland. In Argentina the model by Sandin and Porporato (2008) was for business companies. In Poland, Mączyńska (2004) have created model for stock exchange listed companies. Lemonakis et al. (2015) focused on prediction of financial distress for firms in the case of Greek fish-farming industry. In 2017, Altman et al. (2017) use the original Z-Score model developed by Altman in 1983 for non-financial companies across all industrial sectors, from 31 European and three non-European countries using different modifications of the original model.

In Slovakia, prediction models are: Chrastinova model created for agricultural companies, Gurčík model also intended for agricultural companies and model by Binkert and Zallay for business companies. (Durica & Adamko, 2016; Rose, 2016; Zogning, 2017; Kliestik & Dengov, 2015) In recent years, Hurtosova model have been created in 2009 and Gulka model in 2016 for business companies.

The construction of bankruptcy models is mostly based on financial ratios obtained from balance sheet and income statement. (Adamko, 2016) The results of several studies have shown that the precision of the predictions of specific prediction model is significantly affected if the model is used in another industry, in another business environment or at a different time from the data from which it was derived. The cause of these differences may be differences in the structure of values in the financial statements of companies in different countries. Differences in the structure of financial statements increase due to differences in macroeconomic indicators, especially in interest rates, taxes, wages, and others (Fink, 2000). Practical use of prediction models over the years has shown that it is preferable to create a prediction models for specific sectors of the economy. Prediction derived from models derived for specific sectors may be more precise than that from the general models. Because of the specific characteristics of individual sectors of the economy, it is very difficult to create a universal model valid for all areas. Therefore, the authors' efforts have focused on models that arise from the specific requirements of particular areas (Zalai et al., 2006). This is why we are in this paper focused on detecting similarities and differences of financial ratios of companies in various sectors of the national economy. On the basis of the identified similarities, we can create groups, or clusters, of those sectors of the national economy, in which companies have so sufficiently similar characteristics of financial ratios that we can analyze them together. And conversely, we can identify those groups of industries that are so different in their characteristics, that it is better to create specific prediction models for them.

2. Methodology and data

In our analysis we used real data about Slovak companies. The financial ratios for Slovak companies were calculated according to the company's financial statements: balance sheet and profit and loss statement. These statements come from the Financial Statements registry of the Ministry of Finance of the Slovak Republic. We used the financial statements from the year 2016. We have chosen to calculate the following, most commonly used ratios. (Valaskova & Kramarova, 2016)

Table 1. Financial ratios calculated for Slovak companies

Label	Category	Name
R1	rentability	net return on assets (ROA EAT)
R2		gross return on assets (ROA EBT)
R3		net return on total incomes
L1	liquidity	cash ratio
L2		quick ratio
L3		current ratio
L4		net working capital ratio
Z1	debt and capital structure	coverage ratio of total assets by retained earnings
Z2		total debts ratio
Z3		current debts ratio
Z4		loan to assets ration
Z5		equity to assets ration
A1	activity	total incomes to assets ratio
A2		total incomes to current assets ratio

Source: self-processed

Companies in the database were classified according to their scope of activities into basic groups. We used the NACE code categorization. The following table shows the number of companies in each NACE category. Classification codes in the table corresponds to the globally used Statistical Classification of Economic Activities. (European Commission, 2010) In total we used 42 114 Slovak companies.

Table 2. Frequencies of companies in categories of NACE

NACE				
			Frequency	Percent
Valid	1	A - Agriculture, forestry and fishing	1641	3,9
	2	B - Mining and quarrying	95	,2
	3	C - Manufacturing	5161	12,3
	4	D - Electricity, gas, steam and air conditioning supply	393	,9
	5	E - Water supply; sewerage; waste managment and remediation activities	344	,8
	6	F - Construction	4554	10,8
	7	G - Wholesale and retail trade; repair of motor vehicles and motorcycles	11417	27,1
	8	H - Transporting and storage	2373	5,6
	9	I - Accommodation and food service activities	1350	3,2
	10	J - Information and communication	2091	5,0
	11	K - Financial and insurance activities	340	,8
	12	L - Real estate activities	2208	5,2
	13	M - Professional, scientific and technical activities	5003	11,9
	14	N - Administrative and support service activities	2092	5,0
	15	O - Public administration and defence; compulsory social security	57	,1
	16	P - Education	328	,8
	17	Q - Human health and social work activities	1692	4,0
	18	R - Arts, entertainment and recreation	491	1,2
	19	S - Other services activities	475	1,1
	20	T - Activities of households as employers; undifferentiated goods - and services - producing activities of housel	0	,0
	21	U - Activities of extraterritorial organisations and bodies	9	,0
		Total	42114	100,0

Source: self-processed

Consequently, we have calculated their basic statistical characteristics for each NACE code category: minimum, maximum, mean, median and standard deviation. Based on these characteristics, we analyze the sectors of the national economy and look for groups of activities that are so similar that it will be possible to analyze companies in such a group together. The goal is to find clusters of categories of economic activity in which companies have the most similar characteristics of individual financial ratios.

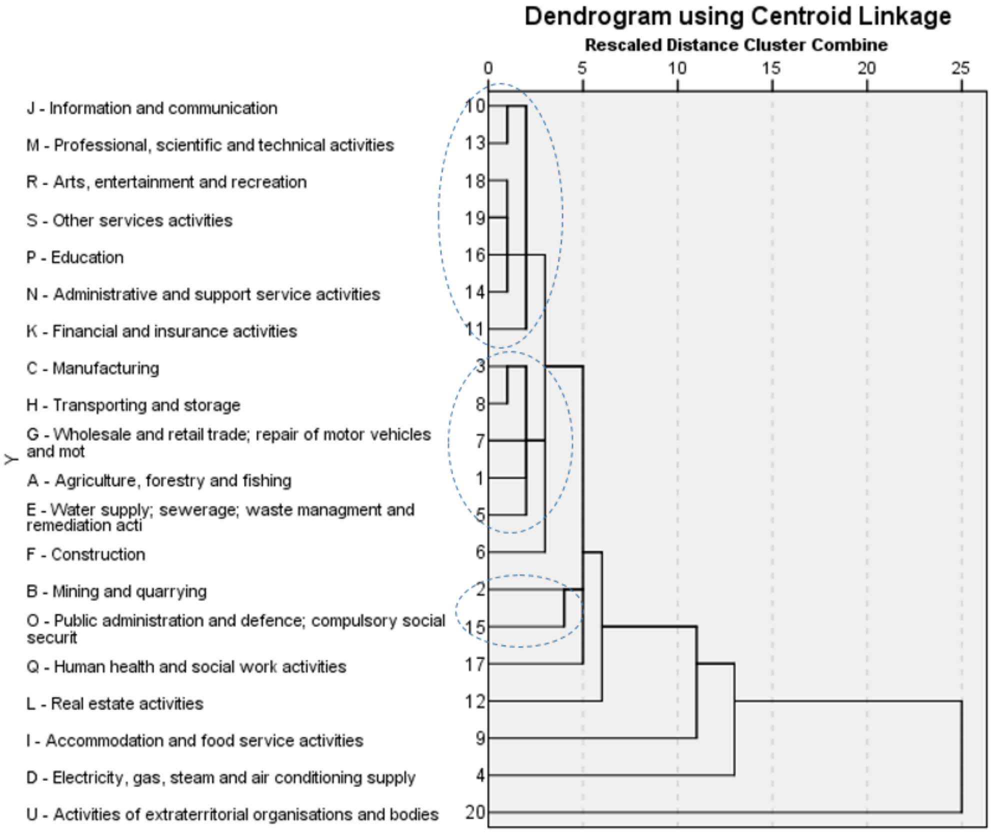
Categories included in one cluster will be as similar as possible, and category in different clusters will be as different as possible. The aim of this research is to find out for which categories of economic activity it would be possible to create bankruptcy prediction models together, on the basis of real data on Slovak companies. As mentioned above, it is useful to create such prediction models separately for each sector.

Groups, or clusters, of individual categories of economic activity are created based on cluster analysis. First, we use a hierarchical cluster analysis to determine the optimal number of groups. Clustering is based on centroids, with variable values being standardized to their z-scores. Distances are measured by squared Euclidean distance. The optimal number of clusters can be determined based on the dendrogram and also on the simplicity of application of the result of this analysis.

3. Results

The following figure represents dendrogram of hierarchical cluster analysis. On the right in the picture, all categories of business activities are merged into one cluster. On the left in the dendrogram, each category of enterprise activity is in a particular cluster. In the picture from left to right, we can observe how categories are gradually merging into clusters based on the similarity of their characteristics.

Figure 1: Dendrogram of hierarchical cluster analysis for NACE categoriees



Source: self-processed

Usually it is hard to say, which number of clusters is appropriate. It depends often on practical interpretation and usability of the results. There is not just one right solution. Our goal is not to clearly identify the correct number of clusters in which we classify individual categories of economic activity. Rather, it is for us important to observe which categories of business activities are joined together into the clusters. This means that companies belonging to these NACE categories have very similar characteristics of their financial ratios. In other words, for these categories can be derived joint bankruptcy prediction models. It is also interesting to see which categories of business activities are still in a particular cluster, so they are not merged with any other category. This implies that such an object of business activity is so different from others that it is appropriate to derive specific bankruptcy prediction model for it.

4. Discussion

In particular, looking at the Figure 1, activities of companies that have not been merged with others, this is mainly category D and U. Companies performing these categories of economic activity have so different characteristics of financial ratios that, if we would like to focus on them, it would be appropriate to create specific bankruptcy prediction models for them. Similarly, there are categories L, I, and Q that have been assigned to the cluster with other up to the last steps of the hierarchical analysis. As a specific category we can consider also category F, which is one of the most numerous categories in the database. Categories B and O can be considered together. Similarly, categories J and M and also C and H. In some cases, we would not expect similarities, and in practice, if we wanted to focus on these activities of companies, we would create specific prediction models for companies that perform a given activity. Some categories are represented in the database in a small number, so these results may also arise based on the characteristics calculated from a small sample. Categories R, S, P, N belong to one cluster. For these, the similarities in the financial indicators of the companies performing the activities are more predictable. If we want to merge as many categories as possible into one group for which there are similarities in company's financial ratios, we would suggest using the three main clusters that are visible on the left side of the dendrogram. Other categories we propose to analyze each separately.

5. Conclusion

To predict the financial difficulties of companies, there are currently a large number of models that have been created on the basis of real data about companies in a particular country. Often these models are derived for companies operating in a particular industry because experience has shown that in certain conditions can be among firms so big differences that the universal model would not work sufficiently correct. In the article, we therefore focused on the analysis of financial ratios of Slovak companies and on the basis of their basic characteristics, we tried to find those sectors of their economic activities in which the characteristics are so similar that the prediction models could be created together for these sectors. In this analysis, we used the globally used NACE codes of economic activities of companies. Based on the obtained dendrogram we can see which categories are so different from the others, that it would be appropriate to derive the prediction model for them separately. And, on the other hand, we can see which ones could be merged when creating a model, because characteristics of the financial ratios of the companies are sufficiently similar in them.

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WHAT TYPE OF CAPITALISM DOES THE SHARING ECONOMY PROMOTE? AN ARGUMENT BASED ON THE ROMANIAN EXPERIENCE

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Abstract. Globalization and digitization spurred the emergence of a technology-based, peer-to-peer, collaborative economy. Also labelled as the sharing economy, this rising reality is redefining the key characteristics of the basic institutions of capitalism. Long-established categories of property rights are changing, disrupting the conventional varieties of economic systems. Increased ability of owners to share, rent, barter and swap property calls into question the conventional distinction between personal consumption property and commercial property. Traditional employment is being replaced with new forms of collaborative, on-demand occupations. Workers become independent contractors not covered by the social safety net and unaffected by minim wage laws. Barriers to entry into a large array of occupations have been drastically lowered. The power of trade unions is diminishing as habitual trade union membership declines. The state's capacity to impose regulation is also decreasing, as the new platforms are able to escape the customary regulation framework. These developments have raised questions related to the type of capitalism that the sharing economy is promoting. This paper investigates the relation between the sharing economy and capitalism. Based on the varieties-of-capitalism perspective developed by Peter A. Hall and David Soskice and the property-rights approach put forward by Svetozar Pejovich, our paper investigates the features of this novel type of economy arising from peer-to-peer relations in connection to the long-established institutions of capitalism. Latest developments of the Romanian case are analyzed in more detail to help form an in-depth image of the arising new form of capitalism.

Keywords: sharing economy, capitalism, institutions, property rights

JEL Classification: E02, P10, P16

1. Introduction

In its broadest sense, the concept of sharing economy refers to an array of activities facilitated by digital platforms that allow consumers a peer-to-peer access to specific goods and services. It comprises both for-profit and not-for-profit activities that aim at bringing into the economic circuit some underutilized resources – hence the largely utilized denominator of these activities as sharing. Also dubbed as “collaborative consumption”, “peer-to-peer economy”, or “peer-production economy”, this type of economy is undergoing increasing popularity and rapid growth. Vaughan (2016) assessed that platforms in five key sectors of the collaborative economy – accommodation, transportation, on-demand household services, on-demand professional services and collaborative finance – generated revenues of nearly €4bn in Europe in 2015 and facilitated around €28bn of transactions.

A “sharing revolution” (Munger, 2016) seems to be taking place before our eyes. But the sharing nature of the activities specific to the sharing economy is being disputed. Belk (2014) distinguishes between genuine and pseudo sharing. Pseudo sharing may be identified where the profit motive and expectations of reciprocity are present and the feelings of community are absent. Therefore, there is a danger of regarding as sharing some activities that are better seen as old-style economic activities (or pseudo-sharing – a “wolf-in-sheep’s-clothing phenomenon” (Belk, 2014). Koopman at al. (2015) argue that any kind of marketplace that puts together networks of individuals in order to produce and consume goods and services qualifies as sharing economy. The former under-utilization (or even non-utilization) nature of the resources put to productive use through digital platforms is a commonly recognized feature of the sharing economy, as is the mutual benefit of the parties involved (like in all other cases of voluntary exchange).

The arising sharing economy creates opportunities that would otherwise remain unfructified. Parallels between globalization and the sharing economy have been drawn, the same critics and objections being applied to both phenomena (Szetela & Mentel, 2016). Like in the case of globalization, the challenges that the rise of the sharing economy poses to regulation (especially the state regulation) are a main concern for industries involved and analysts. The process of self-regulation that the new industries have the interest of devising and would eventually adopt in response to consumers' concerns has not yet been discussed. However, we may identify a significant difference between the two prominent developments: while the globalization has been a consequence of purposeful, debated, nationally and internationally negotiated policies, the sharing economy has developed spontaneously, with no dedicated legal base and in many cases against the objectives of regulators.

Ownership drastically changes in the sharing economy. People choose to own rather than rent some goods because of high transaction costs of renting (Munger, 2016). The sharing economy facilitated by online transaction platforms radically changes the incentives and constraints that people are presented with when deciding whether to own or rent. Decreased transaction costs make renting cheaper, which in turn has the advantage of promoting specialization, exchange and a monetized economy. The cyber culture facilitates this process, promoting common ownership over individual ownership, participation over containment (Richardson, 2015).

Due to these developments, a new economic system is taking shape. An “alternative capitalist system” (Dyal-Chand, 2015) is being born – one that requires an adaptation of the indispensable regulatory framework to new conditions. A “crowd-based capitalism” (Sundararajan, 2016) is forming – one in which decentralized networks are able to compete with centralized institutions. Given these claims to novelty, a set of questions arises that aim to establish the place of the allegedly new form of economy in the traditional frame of comparative economic systems. What is the relation of this nascent reality to the long-established institutions of capitalism, like clearly defined and enforceable private property rights and the freedom of contract? How is the conventional distinction between personal consumption property and commercial property going to be made? How are the interests of consumers going to be defended and legally enforced in this new environment? How are employee health and safety going to be promoted and what role should be reserved for trade unions? What type of regulations should we expect politicians in a liberal democracy to enact? Based on the answers to this type of questions, a wide-ranging enquiry may now be launched: what type of capitalism should we expect as a result of these developments?

In this article we take a varieties of capitalism approach to investigate problems of this sort. The market practices and institutional change that the advent of the sharing economy brings about is likely to enforce one particular variety of capitalism. In addition, since we argue that in the sharing economy the features of the very basic institutions of capitalism are called into question, the comparative economic systems perspective shall be employed to characterize the resulting system.

2. New clothes, old style: capitalism and the sharing economy

The sharing economy and capitalism have been portrayed at the same time as mutually excluding and reinforcing each other, simultaneously as friends and foes. This mixed bag points to the need to describe capitalism as a diverse, heterogeneous and dynamic reality rather than as a homogenous, one-size-fits-all system. The on-going digitization of the economy furthers this requirement, as it may spur the emergence of novel and diverse business practices, institutions and cultures.

One point to begin the investigation into this intricate relation is to analyze how actors refer to the new reality in their discourse. Martin (2016) identifies a number of specific framings that actors employ when referring to the sharing economy. Some lines of argumentation one may find when looking at the way people regard the sharing economy seem to put this new reality in line with old capitalist institutions. In addition, as the author shows, the concept of sharing economy that initially seemed to be framed in terms critical to "the excesses of capitalism" such as hyper-consumption and unsustainable economy has been reframed in terms of economic opportunity. This also suggests that some actors tend to see the emerging reality as reinforcing old-fashion capitalist institutions.

Schor (2015) sees the consumption sharing as a new model of cooperation, in stark contrast with the traditional, capitalist mode of production. In its original meaning, the sharing economy developed because some resources – such as information, ecological assets, and social relations – are not well managed via private property and profit maximization. The solution is an economy that puts these novel and essential resources at productive use via fair allocations, collaboration, and democratic governance: new resources must be allocated through new, innovative methods.

Dyal-Chand (2015) argues that the sharing economy is an alternative capitalist system. In this nascent form of capitalism, basic terms such as market, business and entrepreneurship gain new meaning. The sharing economy does not break the rules of the market behaviour – as policymakers wrongfully think; hierarchies and formal contracts become obsolete. The regulatory failure of the economy is a consequence of the conceptual failure, therefore a new regulatory approach is needed, more so since "[the r]egulation of the sharing economy is inevitable".

Mirroring the academic debate, the popular press paints a strikingly mixed-up picture of the sharing economy in relation to capitalism. Morozov (2013) argues that the sharing in the sharing economy is not altruistic, the global economy is not reoriented towards a better quality of life (at least not purposefully), that workers' rights are undermined since employees turn into entrepreneurs and trade unions become irrelevant. Hence, the author's verdict: "[The sharing economy] is neoliberalism on steroids" (*idem.*). Zhuo (2015) arrives at opposite conclusions:

under the new circumstances, companies become more competitive and compete for best employees, empowering the workforce; non-core activities will increasingly be outsourced. Hence, the sharing economy is the future of market capitalism.

Hall and Soskice (2001) extensively argue that there is not only one type of capitalism. They antithetically analyse the ideal cases of Germany and the United States to show that institutions of capitalism can successfully be put in place differently in different contexts. The liberal market economy (i.e., the American-style capitalism) is characterised by competitive relations between businesses, with wages determined at firms' level, the role of the state being limited to providing a general legal and institutional framework for the competition between individual businesses to generate wealth. This type is to be distinguished from its opposite, the coordinated market economy (i.e., the German-style capitalism), in which networks of businesses collaborate to create institutional infrastructure and to build long-term trust relationship, the negotiation of wages is centralized at sectoral and national levels and the role of the state extends to encourage collaboration among firms.

The framework devised by Hall and Soskice may provide a background for the analysis of the way that institutional change influences the nature of capitalism. Hall & Thelen (2009) extended the variety of capitalism perspective to accommodate institutional change, arguing that institutional stability depends on the highly political process of mobilization that must resolve informational and distributional issues. Dyal-Chand (2015) employed the variety of capitalism approach to analyze the way that peer-to-peer consumption influences capitalism, showing that the sharing economy is a nascent form of a coordinated market economy. While it is true that the regulatory framework that politicians are likely to put in place for a rising peer-to-peer economy is a key variable for the type of capitalism that emerges, this conclusion is faced with a series of difficulties when taking into account some macro features of the sharing economy. For one thing, the business models specific to the sharing economy emerged and spread spontaneously, oftentimes in a legislative vacuum and remained unregulated for some time. The state seems to have taken a position vis-à-vis the operators in the sharing economy similar to the one found in the American laissez-faire capitalism. Secondly, the sharing economy did not develop institutions that enhance cooperation at the expense of competition. Sharing in the sharing economy is mainly for-profit sharing (or pseudo-sharing in Belk's terminology) and the data sharing that firms make is nothing more than a profit-enhancing activity, with no strong, state-mandated supervisory body able to oversee and amend it to the benefit of all players. Thirdly, as Zwick (2017) points out, individual contractual relations tend to gain ground over those that are centrally determined (at state or industry level), a fact that further works in favour of the American-style capitalism.

Hall and Soskice advance a classification of economic systems *within* the capitalist mode of production. However, the emergence of a peer-to-peer, collaborative consumption prompted some observers of the phenomenon (e.g., Schor, 2015) to identify this new mode of production with non-capitalist principles, such as cooperation and the creation of diffused value. In this new type of economy people are encouraged to switch their behaviour from consumerism – thought of as a defining trait of capitalism – to responsible and sustainable consumption. Similarly, the institution of ownership seems to become obsolete in the peer-to-peer economy, since access to resources is promoted without the need for users to become owners. Pejovich (1990) lists the right of ownership in productive assets among the basic institutions of capitalism. The emergence of the sharing economy may trigger a reconceptualisation of property rights with consequences for the definition of the alternative economic systems. Therefore, the perspective set forth by Pejovich may shed light on the type of economic system that the emergence of the sharing economy generates given the associated dynamic of property rights.

We argue that the sharing economy is old-style capitalism in new clothes. Resources remain scarce and assigning property rights is needed to ration their use. Private property rights in productive resources are not endangered and require just as much legal protection. The nascent economy in not in fact based on altruistic share, but on market exchanges made possible by new technologies. Since transaction costs have long been identified as limiting efficient market outcomes, a reduction in transaction costs may lead to increased market efficiency. The key feature of the sharing revolution is its reliance on digital technology and the internet, tools that have the potential to drastically reduce transactions costs in certain industries. While concerns related to public safety are justified, new business models do not pose greater risks to consumers than old ones. Employment becomes more fluid and comes from more sources. Individual workers are given new tools to do their job thus becoming empowered. New technologies can contribute to rising standards of living only to the degree that entrepreneurs are allowed to adopt new business models and propose them to consumers. Capitalism is becoming more laissez faire.

3. The Romanian case: opening up new possibilities

The last twenty-seven years witnessed great transformations for Romanian society and economy, as the failed centralized mode of production gave way to an increasingly market-oriented, private-enterprise economy. The main factors of influence that shaped Romanian capitalism have been the Europeanization process as well as institutional globalization – in which the Bretton Woods organizations played a leading role (Cernat, 2006). The combined outcome of these processes have been a partial success, politicians maintaining clientelistic ties with the remaining state-owned enterprises, at some point the resulting economic system being characterized as "cocktail capitalism" (Cernat, 2006). The adopted growth model has been called into question, since it resulted in high external deficits, resource allocation biased toward non-tradable sectors and high external private indebtedness (Dăianu & Murgescu, 2013), weaknesses that become apparent with the debut of the 2008 global crisis.

The information technology sector has been one of the main drives for economic growth over the last decade, so the IT-intensive sharing economy has solid grounds for development. Ride-sharing and car-sharing services were the first to emerge as operators in the local sharing economy. There have been identified two waves in the development of ride-sharing and car-sharing platforms in Romania (Bălan, 2016). During the first wave (2008 - 2010) a small number of ride-sharing sites were developed by local entrepreneurs, while the second wave (beginning with 2012) witnessed the entry of foreign companies such as Uber and Comuto that in the following period became major players. Given the small number of actual users of each platform and mobile application and future rides announced as targets, this sector might be characterized as being in an emerging stage of development (*idem.*).

In spite of the controversies that accompanied its operation in Romania, Uber has been identified as the typical example of operator in the local sharing economy. Controversies were inevitable since the main aim of this operator has been to circumvent the heavy regulations through which traditional taxi companies were protected from competition. Leighton (2016) identifies three major points of contention: the definition of Uber, work relationship, and problems related to public safety and security. All these points manifested themselves in a particular form in Romanian context. There is still no dedicated legal base for the operation of this service, being an “undefined” service that seeks to gain legal recognition through dedicated law in the eyes of the general manager of Uber Romania and an “unauthorized activity” in the eyes of Bucharest vice-mayor (cited in Olteanu, 2017). Due to this legal uncertainty, the activity of Uber has been prohibited for five months in a major city as a local court ruled in favour of the taxi companies that denounced Uber's unfair competition. Officials have been habitually warning the public about the lack of security that accompany the operation of this service.

These matters of disagreement surround the activity of all operators in the sharing economy. Companies that operate online platforms have been constantly accused of circumventing working security, consumer protection and tax regulations. To address these issues, draft legislation has been recently proposed to clarify the rights and obligations of the providers and users of online platforms and to address taxation issues. However, the lack of clarity persists since in the draft legislation there is no definition of the online platforms that the law sets out to regulate. The envisaged legislation is very permissive, as the service providers are free to use online platforms if they are willing to adopt the rules set out by the providers of these platforms, fact that prompted taxi operators to protest the bill.

These developments have been hailed by supporters of free markets who tend to depict the lack of regulation in positive terms. As Cannon & Summers (2014) make the case, sharing economy firms should proactively follow a set of rules in order to minimize the regulatory costs, such as: being offensive (rather than defensive) with regulators, being responsive to regulators’ legitimate concerns and working to devise the best regulatory framework and share it with the authorities.

Using the taxonomy of framings related to the sharing economy devised by Martin (2015), we may suggest the main lines of the discourse in Romanian context. These activities have been mainly portrayed as offering new economic opportunities, even more necessary in the post-crisis environment (e.g., Aron, 2015). The framing that sees the sharing economy as creating an unregulated marketplace, friendly towards producers and consumers alike has also been used and is gaining ground in professional debates.

To sum up, it is safe to say that the development of business models specific to the sharing economy in Romania has had the merit of revealing the burden that state regulation imposes on the consumers. Companies operating in the sharing economy emerged in a legislative vacuum and did not pay the same regulatory costs as the long-established firms. As suggested by the discussion around the activity of Uber, the public began to realise that companies protected by high entry barriers lack the incentive to increase the quality of the services provided. Up to date, regulators have not responded by extending old rules to new operators. Instead, the draft legislation under consideration is rather laissez faire towards companies that use online platforms. On the ideological front, the free-market capitalism with which people tend to associate operators in the sharing economy seems to have received a reinforced public support. Surely, to prove or disprove this claim empirical investigation of the public attitudes is needed, as surveys have not yet been conducted to probe the mind-set of the Romanian public towards collaborative consumption.

4. Conclusion

The sharing economy is a relatively new and ever more popular peer-to-peer business model based on online trading platforms. The sharing that takes place in the sharing economy is usually for-profit sharing aiming at reducing transaction costs and promoting efficiency. The basic features of the capitalist system, such as reliance on private property rights in productive resources in order to optimize resource allocation, remain in place. We suggest that the development of the sharing economy has the potential of orienting our economic system towards a liberal market economy – one in which firms compete on a peer-to-peer base, without a supervisory body endowed with amending powers. Although in its initial stages of development, the Romanian sharing economy is growing rapidly. The legislative and regulatory void that surrounds the local sharing economy proved to be beneficial to consumers and producers alike.

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SYSTEMATIC APPROACH FOR THE LESSONS LEARNED SHARING

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Abstract. The global economic environment allows organizations to use widely-shared methods for the performance of their business activities. When activities are performed, experience is generated and this asset could also be shared with others. Teams or projects can all learn from experience, both from their own experience and from the experience of other teams, projects, or disciplines. This process is based on the principle of learning from our own mistakes and our own merits, from negative and positive experiences. This vision of the learning from experience is part of more approaches - the Lesson Learned method, further commonly used quality methods such as Kaizen, FMEA. These methods recommend the identification and analysis of error points. The gained experience can be an effective tool how to avoid repetitive mistakes thanks to targeted information and experience shared not only in areas of industrial companies. However, the gained experience is often isolated and is not further developed and handed over. On the one hand, knowledge is gained on the basis of specific approaches of various methods at different stages of the project. In addition, these experiences often only work within one project, as there are no conditions for sharing experiences across organization(s). It is necessary for the acquisition of knowledge to become a defined process. This process need combine the appropriate principles of different methods and has to be supported by a defined IT service. Only then, the principle of learning can lead to changes aimed at improving or increasing performance.

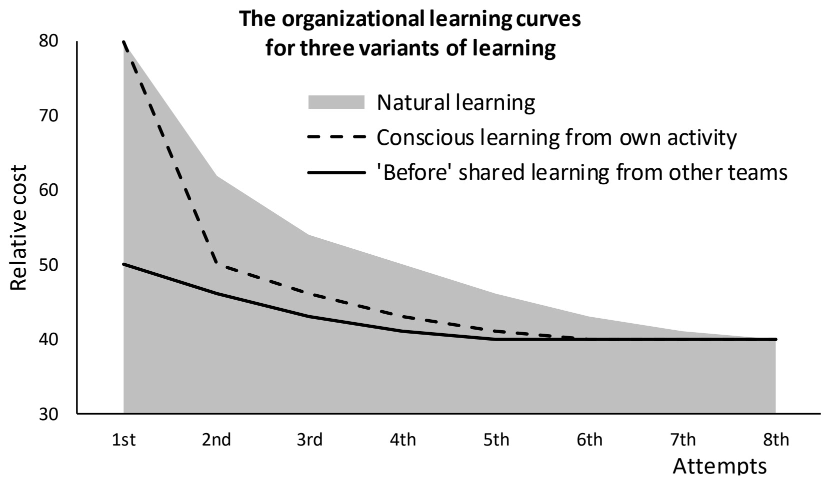
Keywords: lessons learned, experience sharing, IT service

JEL Classification: D83, L15, L86

1. Introduction

The distinctive feature of the current global world is the increasing value of knowledge and the resulting need to work with knowledge. Companies have to respond to ever-evolving changes (social, technological, changes in management systems, etc.), so there is pressure for permanent learning. At the same time technological development (access to information and resources, distance elimination) also creates an environment for global sharing of experience, knowledge (Kopackova et al., 2007). Companies can share human, financial, informational or material resources. Resources sharing provide higher efficiency, lower costs and higher profits (Kundrikova et al., 2016). Learning is a natural activity. Just as an individual can learn, so organisations can learn, teams can learn, disciplines and projects can learn. They can learn from experience, whether this is their own experience, or experience from other teams, other communities, or other functions and disciplines. It is the vision of learning from experience, that if something does not go according to plan, then the company as a whole can reflect on what has happened, draw lessons from the past, and vow not to repeat them in future (Milton, 2010), (Kahun, 2016). The ability of organizational learning means the ability to perceive signals from the external environment, interpret and respond to them, and anticipate future needs (Lukasova & Klapalova, 2010).

Figure 1: The organization learning curves



Source: own processing, based on (Kahun, 2016)

The value in learning comes in avoiding repeating bad experiences and in repeating successful experiences (Milton, 2010). Figure 1 shows three variants of learning in an organization, three variants of work with experience – natural learning, conscious learning from own activity, and 'before' shared learning from other teams. If an organization can draw lessons from experience, can eliminate repeat mistakes, and can reproduce success, the result should be a continuous improvement in performance.

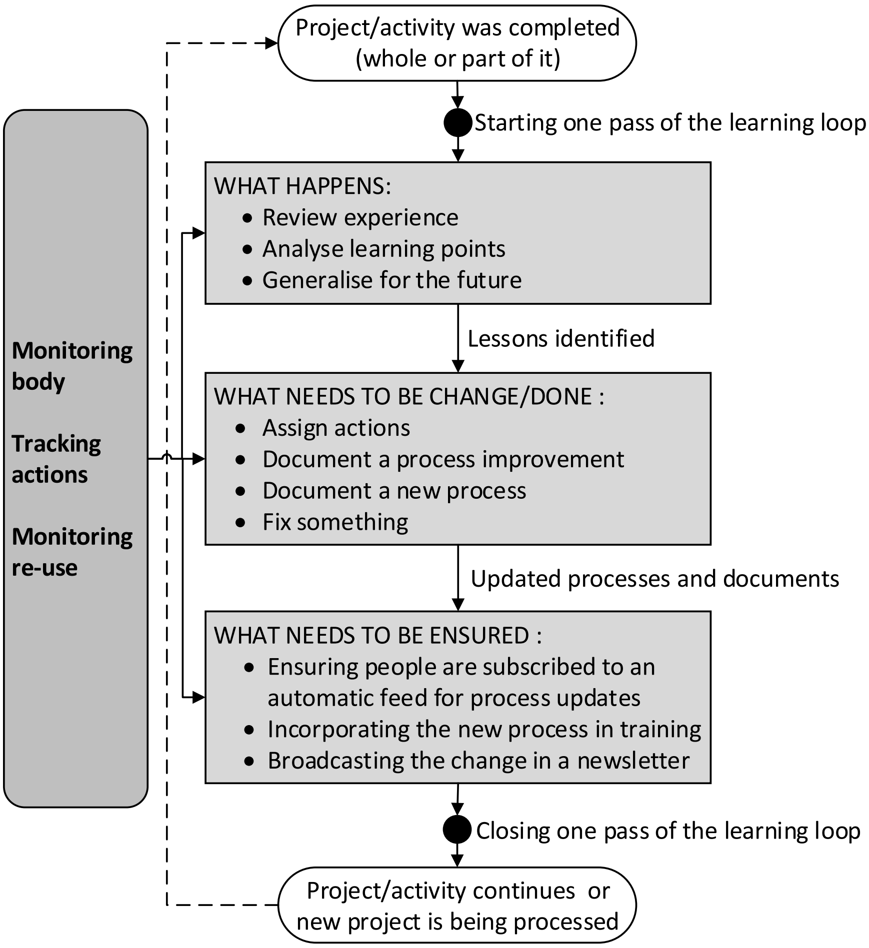
2. Methodological Framework

The need to use knowledge to improve the quality of an organization is embedded in various procedures and methods of the quality management in the organizations. These are specialized methods, such as Lessons Learned, or partial principles within quality methods.

2.1 Lessons Learned Method

A specialized method for acquiring and retaining knowledge (both positive and negative) is the Lessons Learned method. The term Lessons Learned refers to knowledge management and project learning, "ways of knowing" that have quality, value, or significance (Milton et al., 2006). Lessons Learned method is an efficient tool, how to avoid (repeated) mistakes due to the effective and targeted information and experience (Tessi & Chaves, 2017). The method, of course, is supported by technology. Technology is needed to help facilitate the lessons learned know-how, technology provides a knowledge library home, a communication medium, links to process/templates, links to where knowledge can be found in the organisation and learning development tools (Duffield, 2015). There are several main steps in learning a lesson - reviewing existing activity (project), identifying lessons learned, assigning countermeasures and implementing changes (e.g., updating the production process). The learning loop is illustrated in Figure 2.

Figure 2: The steps of the lessons learned loop



Source: own processing, based on (Milton, 2010)

Identifying lessons from experience is the result of a process of reviewing, analysing and generalising, the content of these phases is (Milton, 2010):

- Review experience: an individual or a team looks back on a project or event and recalls what happened. Is detected where there is a difference between what was planned or expected, and what actually happened. This are a positive or negative difference – things may have gone better than expected, or worse than expected.
- Analysing: the individual or the team discusses the root causes behind what happened.
- Generalize for the future: At this stage is a lesson identified. It is set out how to proceed in the future to either repeat success or not repeat mistake. Thus, a lesson learned identifies is a recommendation, based on analysed experience, from which others can learn in order to improve their performance on a specific task or objective.

The lesson learned can require assigning countermeasures and implementing change/s (e.g. exchange of equipment, change of information flows) (Thomas, 2015). The lessons learned should be documented and, mainly, spread among employees and all concerned staff (publication, employee training).

2.2 Quality Management Methods and Principles

The approach of gaining experience, respectively improving activities and following permanently embedding this improvement by help of standardization, is the principle of many methods within the quality management. Sharing experience is thus reflected in the fact that the modified (improved and standardized) procedure is introduced to all similar workplaces within the organization. Methods and principles of improvement and standardization are applied basically by every company, whether by implementing the method as a whole or by implementing selected principles of the method/s.

The Six Sigma method is focused on increasing quality with emphasis on defect elimination. The method strives for production perfection, i.e. avoid mistakes; a mistake is perceived as any incompliance with customer wish, i.e. any state when the customer is dissatisfied. Performance improvement procedure of Six Sigma is known as DMAIC model, (define - measure - analyse - improvement - control) (Pyzdek, 2001). Integral part of Six Sigma improvement method is applying the gained knowledge, and then its anchoring and sharing it in the form of standardization.

Lean Production approach is focused on waste elimination, decreasing the extent of such activities which do not add value to the production. Lean method includes tools (Niederstadt, 2015) such as 5S tool (organization and standardization of changed activities), Standard Work (standardization of work focuses on reduction of process variability, reduction of mistake correction, easier reaction to problems). The method is a path that must be approached with lifelong learning (Rymaszewska, 2017). Also for Lean is valid that integral part is applying the gained knowledge, and its anchoring and sharing it in the form of standardization.

The Kaizen method represents continuous improvement approach; it is a flow of partial improvements on all levels (Masaaki, 2012). The central principle is a quick analysis of the small components of a problem and rapid implementation of a solution with ongoing, real-time reassessment (Knechtges & Decker, 2014). The Kaizen and Lean methods recommend improvement realization by sequence of phases, specifically in accordance with Deming's PDCA cycle (plan – do – control – act), including the need to standardize changes, inform others about process changes and make recommendations) (Liker & Franz, 2012). Important principles of the Kaizen concept include monitoring performance and quality levels and comparing these values with the level of competition, also problem sharing among employees and with employees (Richnak, 2015). Integral part is an Yokoten principle. It represents the horizontal expansion of successful results from Kaizen in one area by sharing the learning with people in other areas (Massaki, 2012). Yokoten means horizontal deployment and refers to the practice of sharing good results of Kaizen from one plant to other plants (not sharing information from above to a lower level). The core is the sharing when the idea spontaneously spreads between departments. In addition, it is expected, that each department will add something to a new shared idea to further improve it. The basic idea of Yokoten is - the effect of one improvement is intensified when it spreads further (to the other departments).

As already stated in this text, the approach of gaining and sharing experience is the principle of many methods within the quality management. Sharing experience is thus reflected in the fact that the modified (improved and standardized) procedure is introduced to all similar workplaces within the organization. And the sharing of experience is also reflected in the targeted transfer of new knowledge.

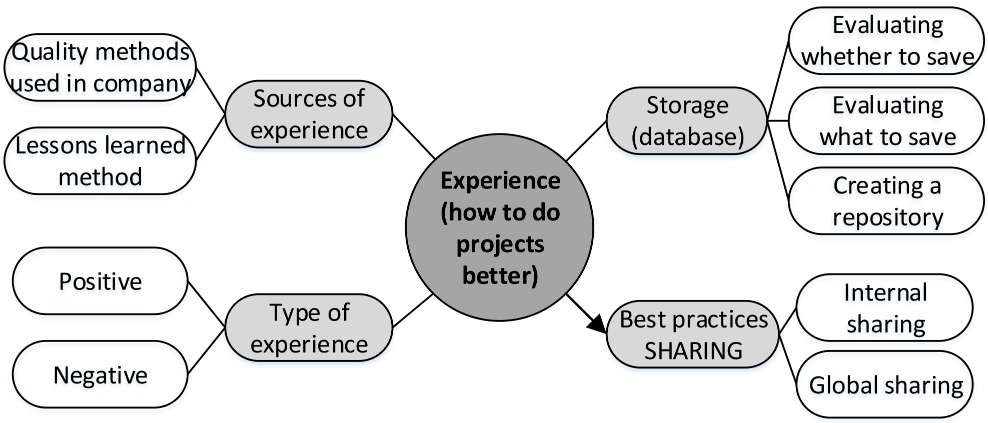
3. Systematic Approach For The Lessons Learned Sharing

The organizations try to set up some way of learning from experience. It is mostly part of the quality methods/principles that are applying within the organization. The authors refer in particular to large, often international, economic organizations. The authors used their personal experience to set typical characteristics of such an organization:

- It is an economic organization, where fully integrated quality principles are implemented. Thus, the organization has experience in managing production quality.
- Production is realized in comprehensive projects. One project, for example, represents a two-year production for a particular customer.
- The client is also a large, international, organization and has experience in managing production quality. Furthermore, the customer organization enters often actively into the project, it means customer is involved in a certain way in the project running.
- Each project has several stages, and the experience gained is used within the project stages. However, experience is no longer passed on to other similar projects.
- Production organization perceives the need to implement a lessons learned system from experience, including the sharing of experience.

Aspects for decision to implement the system shows Figure 3. Organization must identify appropriate resources for identifying experience (in accordance with the Lessons Learned method), choose appropriate information for storage, and create a database repository.

Figure 3: The initial characteristics of the lessons learned system



Source: own processing

Let us, as an example, use a particular economic organization. It is an international organization whose Czech branch produces equipment for automobile manufacturers. The aim was to strengthen "Lessons learned principles" in this organization. Therefore, the following procedure was established:

1) Identify appropriate resources from the point of view of Lessons Learned on the basis of an analysis of the current situation
2) Extension of another Lesson Learned principle
3) Design and management of the Lessons Learned Database

3.1 Identify appropriate resources from the point of view of Lessons Learned on the basis of an analysis of the current situation

In analysing the current state, it was found the following:

- During the start of new project, the Product Development Team (PDT) meets regularly at meetings (once a week). Risks are discussed, how to prevent them, what needs to be improved. The outcomes are action plans. Successful events from PDT meetings are not specifically registered and remain only as part of action plans. There is no further work on these outputs, apparently no one wants to search in many of action plans.
- Daily Quality Meetings (DQM) are regularly held (twice a day). The purpose is to solve problems, search for causes and identify countermeasures. Troubleshooting is documented using the Quality Trouble Report (QTR). Part of QTR is an obligation to assess whether countermeasures is relevant to other projects, i.e. Yokoten. These findings are applied only to current projects, not to future projects.
- The organization uses the Kaizen method. After applying the improvement, it is not investigated whether this change could be applied to other projects.

Based on a previous analysis of the current state, the following sources were determined for Lessons Learned identifying:

a. Lessons defined in PDT discussions: countermeasures listed in Action Plans,

b. Lessons defined in DQM discussions: countermeasures listed in QTRs and Yokotens,

c. Lessons identified in the Kaizen improvements: generalized recommendations.

3.2 Extension of another Lesson Learned principle

The Lessons learned method recommends evaluation after each step of the project (AAR, post-action reviews), and also a revision at the end of the project (PPR, post-project review). There has not yet been a meeting in the company for an overall evaluation of the project after its completion. Therefore, the proposed extension of the Lessons Learned principle is:

d. Lessons defined during PDT discussions at the PPR meeting (after the end of project).

3.3 Design and management of the Lesson Learned database

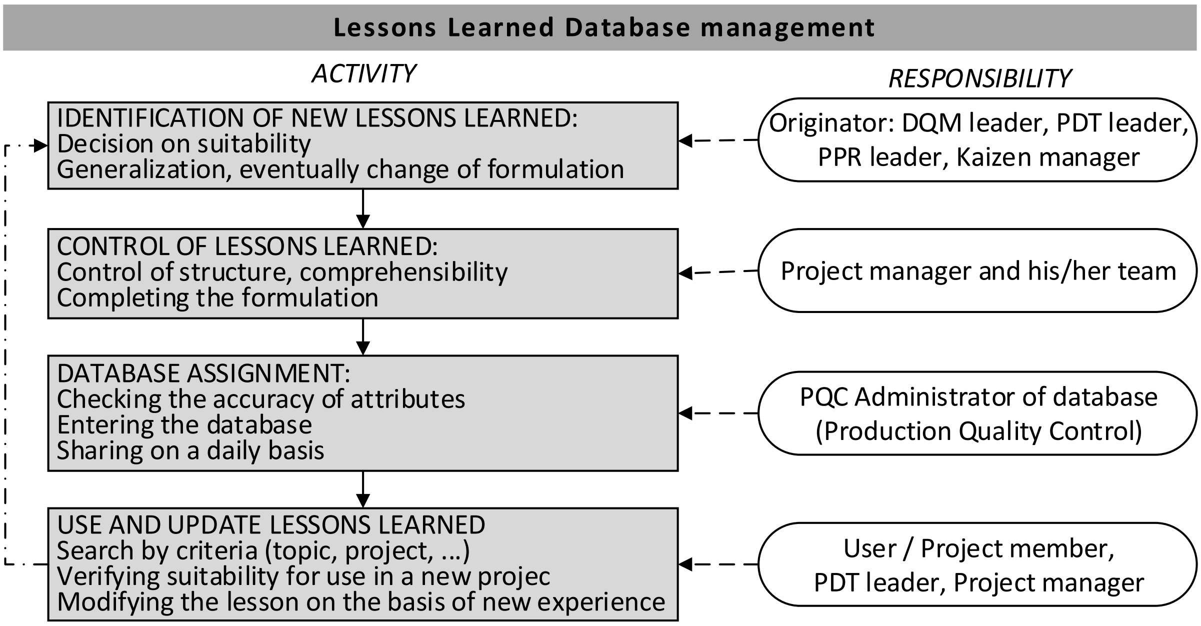
The default database requirements were - the database will contain filters for quick search, the database will be shared by email with relevant users (such as, for example, project leaders, project managers, quality engineers, process engineers, leader lines). Furthermore, the attributes that the designers decided to include in the planned database were discussed and later proposed (e.g. Problem/Success Description, Root Cause, Identified Lesson, Proposed Countermeasures, etc.). A plan for the training of the relevant staff was drawn up.

The basic phases of lessons learned database management are:

- lesson learned identification: decision on suitability, generalization, control of quality,
- database assignment: checking the accuracy of attributes, entering the database,
- database sharing: search and implementation in a new project, updating lesson learned based on new experiences.

Activities and responsibilities of Lessons Learned Database management shows Figure 4.

Figure 4: Activities and responsibilities within Lessons Learned Database management



Source: own processing

For future sharing of lessons, the quality of inputs is particularly important. It is necessary to consider and decide especially the suitability of inputs, well-formulated recommendations (understandable and feasible) and also check that lessons have been used for other projects.

4. Conclusion

The gained experience is an important tool how to avoid mistakes (avoid repeating them) due to the targeted information and experience transferred/shared among – among projects of one organization, among branches of one organization (in case of international companies), among different organizations (in a global sense). Of course, the question is to what extent to release and transmit own experience for global sharing among organizations.

A suitable approach to actively gathering and passing on experience is the Lessons Learned method. Appropriate resources in applying this method may be the experience gained from the activities that company performs in the quality control of its production. Important for introducing Lessons Learned approach is the targeted creation of a Lessons Learned system within the company, of course, with the support of technology (the management and sharing of Lessons Learned Database). The individual activities Lessons Learned system are in the responsibility of designated responsible persons in order to identify proper Lessons Learned, verify them in terms of clarity, check their usability and utilization, make their update based on feedback. Only such a system can serve to share experience effectively.

Acknowledgment

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THE IMPORTANCE OF UTILISATION OF WOOD AS A RENEWABLE MATERIAL IN THE CONTEXT OF THE GREEN ECONOMY

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Abstract. The green economy is an economy that results in improved human well-being and social equity, while significantly reducing environmental risks and ecological scarcities. This paper deals with the issues of the global green economy principles and their use in the wood processing industry. The main objective is to define respective principles, explain their meaning, utilisation and contributions resulting from their implementation in the wood processing companies for the development of the green economy. A special attention is paid to the principle of cascade use of wood that contributes to increasing efficiency of wood utilisation as a renewable material. Based on the available information in the sector of wood processing it is possible to define the impacts of a long-term implementation of the principles of the green economy. Positive future changes can be expected in the optimal use of available wood assortments value structure, increase of the proportion of domestic wood consumption, improvement of the rate of waste utilisation in wood processing companies, effective utilisation of renewable energy resources and elimination of carbon footprint through substitution of fossil fuels.

Keywords: green economy, wood processing industry, cascade use of wood

JEL Classification:Q50, Q56, Q59

1. Introduction

V posledných rokoch sa s pribúdajúcim množstvom dôkazov o globálnych problémoch spôsobujúcich znižovanie kvality životného prostredia oboznámila väčšina svetových politických lídrov, ktorí si uvedomujú, že planéta čelí vážnej globálnej kríze. Navzdory viacerým snahám nájsť riešenie, doterajšie aktivity nepriniesli relevantný efekt. V nedávnej minulosti bolo prijatých množstvo opatrení, ktoré môžu napomôcť k zmenám, ale na druhej strane existuje mnoho krajín, ktoré svoj prístup stále nezmenili (Jacobs 1993). Podľa Browna a McGranahana (2016) je ekologicky zamerané hospodárstvo široko podporované v rámci trvalo udržateľného rozvoja 21 storočia.

Obehové hospodárstvo je podľa Maira a Sterna (2017) systém, ktorý umožňuje aby sa pridaná hodnota v produktoch udržiavala čo najdlhšie. V prípade, že produkt dosiahne koniec svojho životného cyklu je nutné jeho opätovné využitie pričom uvedený cyklus je možné opakovať niekoľkokrát čoho dôsledok je vytváranie novej hodnoty. Spôsob prístupu akým jednotlivé štáty narábajú s dostupnými zdrojmi energie napovedá o hospodárnosti resp. ekonomickosti daných krajín. Ich prístup logicky buď prispieva k zhoršeniu súčasného stavu životného prostredia alebo práve naopak podporuje prirodzené uzdravovanie planéty, posilňuje ekonomiku a zabezpečuje diverzifikáciu priemyslu a poľnohospodárstva.

Využívanie drevnej suroviny v kontexte zelenej ekonomiky je na globálnej úrovni dôležité so zameraním na objem viazaného uhlíka v dreve a zároveň na produkciu kyslíka. Drevospracujúci priemysel, ako významné hospodárske odvetvie využívajúce drevo, môže výrazne prispieť k dosiahnutiu politických cieľov zelenej ekonomiky a tým napomôcť k zlepšeniu súčasného stavu životného prostredia. Tak ako uvádza Kizinievic a Kizinievic (2016) hlavné témy odborných diskusií sa týkajú využitia biomasy, obnoviteľných zdrojov energie a využitia druhotných surovín. Jedná sa o prechod z lineárnej ekonomiky na obehové hospodárstvo, ktoré je zamerané na niekoľkonásobné opätovné použitie produktov ako aj na minimalizovanie a využitie odpadového materiálu.

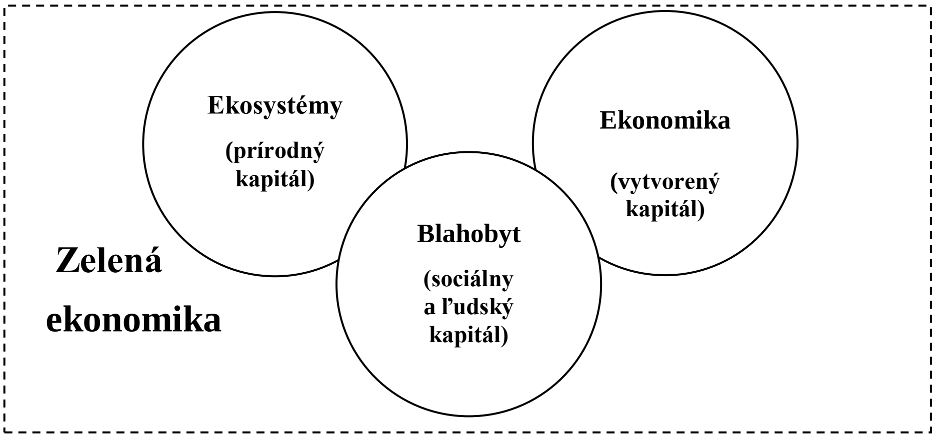
Slovensko ma rad významných komparatívnych výhod v oblasti využívania zdrojov drevnej suroviny, ktoré však nie sú vždy považované za pozitívum. Za jeden z kľúčových faktorov môžeme považovať svetovú hospodársku krízu, ktorá mala výrazný negatívny dopad aj na drevospracujúci priemysel. V dôsledku nepriaznivej situácie na trhu takmer vo všetkých krajinách došlo k poklesu obchodu s drevom a výrobkami z dreva. V súčasnosti sa produkcia výrobkov na báze dreva v značnej miere zakladá na primárnych vstupoch, pričom často pri spracovaní dochádza k relatívne vysokej produkcii vedľajších produktov a drevného odpadu. Ich využitie je úzko späté s výrobou iných produktov na báze dreva či zhodnotením odpadu na výrobu energie.

2. Charakteristika a princípy zelenej ekonomiky

Podľa UNEP (2011) je zelená ekonomika definovaná ako ekonomika, ktorá má za následok zlepšenie ľudského blahobytu a sociálnej spravodlivosti a zároveň výrazne znižuje riziká pre životné prostredie. V zelenej ekonomike by mal byť rast príjmov a zamestnanosti riadený pomocou verejných a súkromných investícií, výsledkom ktorých bude redukcia emisií uhlíka a znečistenia, zvýšenie energetickej účinnosti a účinnosti zdrojov a v neposlednom rade zabránenie straty biodiverzity a ekosystémov. OECD (2011) definuje zelenú ekonomiku, ako väčšie využívanie obnoviteľných zdrojov, výraznejšie šetrenie energiami, ekologické poľnohospodárstvo, využívanie environmentálne priaznivých technológií a výroby, ktoré nepoškodzujú životné prostredie. Týka sa to aj presunu investícií vo výskume, napr. z jadrovej energetiky do ekologických a udržateľných zdrojov. Zároveň zdôrazňuje, že zelená ekonomika musí chrániť nielen prírodu, ale pomáhať aj v boji proti chudobe v snahe o zvyšovanie sociálnej a rodovej rovnosti. Trvalá udržateľnosť znamená poskytovanie príležitostí pre všetkých pomocou vytvárania rovnováhy medzi sociálnymi, ekonomickými a ekologickými rozmermi rozvoja. Je nutné vyvrátiť mýtus, že medzi ekonomickým a ekologickým stavom spoločnosti existuje rozpor. Vďaka inteligentnej politike a správne zameraným investíciám môžu krajiny ochrániť životné prostredie, pričom ich ekonomika môže rásť, môžu sa vytvárať adekvátne pracovné príležitosti a urýchľovať pokrok v spoločnosti. Kordošová a Galbičková (2014) však upozorňujú, že pri väčšine výziev, ktoré sú zamerané globálne sa zabúda na populáciu a jednotlivcov.

D'Amato et al. (2017) zastáva názor, že zelená ekonomika je strategická koncepcia OSN pre rozvoj, ktorá zahŕňa širokú škálu možných významov a implikácií. Filozofickým základom je vnímanie prírodných zdrojov ako spoločného dedičstva ľudstva, ktoré si vyžaduje spravodlivé obhospodarovanie a ponechanie dedičstva pre budúce generácie (Lorek et al. 2014). Koncept zelenej ekonomiky ilustruje obr. 1.

Figure 1: Koncept zelenej ekonomiky



Source: vlastné spracovanie podľa Kanianska (2013)

Zelená ekonomika zabezpečuje dodržiavanie ekologických limitov na planéte a lepšiu kvalitu života pre všetkých za pomoci základných princípov zelenej ekonomiky (Kordosova & Galbickova 2014):

a) Princíp trvalo udržateľného rozvoja
b) Princíp spravodlivosti (zelená ekonomika podporuje spravodlivosť)
c) Princíp dôstojnosti (vytváranie prosperity a blahobyt pre všetkých)
d) Princíp zdravej planéty (obnova biodiverzity, investícia do prírodných systémov a rehabilitácia zničených)
e) Princíp inklúzie (zelená ekonomika je v rozhodovaní inkluzívna a participačná)
f) Dobrá správa vecí verejných a princíp zodpovednosti
g) Princíp odolnosti (vedenie k ekonomickej, sociálnej a environmentálnej odolnosti)
h) Účinnosť a princíp dostatočnosti (prínos udržateľnej spotreby a výroby)
i) Generačný princíp (investície do súčasnosti a do budúcnosti)

Zelená ekonomika je nástrojom, ako dosiahnuť trvalo udržateľný rozvoj. Rešpektuje svoju závislosť na zdravom životnom prostredí a snaží sa vytvárať blahobyt pre všetkých, pričom zastrešuje všetky tri oblasti (životné prostredie, sociálnu a ekonomickú sféru) a rozvíja kombinácie politík, ktoré integrujú a hľadajú tie najlepšie výsledky v každom z nich. Snaží sa zaisťovať efektívne a racionálne využívanie prírodných zdrojov bez toho, aby boli ohrozené vyhliadky budúcich generácií. Zároveň posudzuje dôsledky hospodárskych politík na životné prostredie a snaží sa nájsť čo najmenej rušivý a čo najviac pozitívny prínos pre životné prostredie a ľudí. Podporuje obnovu rovnováhy medzi ekologickými a sociálnymi vzťahmi, riadenie životného cyklu a usiluje sa o nulové emisie, nulový odpad, efektívne využívanie prírodných zdrojov, pričom uprednostňuje obnoviteľné zdroje energie a obnoviteľné zdroje surovín. Pre dodržiavanie princípov zelenej ekonomiky sú však nutné investičné stimuly (Jones 2011).

Ako uvádza Campiglio (2016) prechod na spoločnosť s nízkym obsahom uhlíka si bude vyžadovať veľké množstvo hospodárskych zdrojov, ktoré sa majú investovať do ekologických sektorov. Zmeny po dlhodobom uplatňovaní princípov zelenej ekonomiky na globálnej úrovni môžeme očakávať len po ich aplikácií v jednotlivých štátoch, ktoré vyjadrili svoj súhlas na Parížskom samite o globálnom otepľovaní a zmene klímy.

3. Prínos LH a DSP k zelenej ekonomike

Lesné hospodárstvo a odvetvie spracovania dreva slúžia ako pozitívny príklad odvetví s prínosom k prechodu na zelenú ekonomiku vzhľadom na fakt, že základným strategickým materiálom fungovania oboch odvetví a je obnoviteľná a trvalo udržateľná surovina – drevo. Prevažná časť lesných zdrojov SR je využívaná na produkciu dreva a ostatných produktov lesa. Podľa mnohých štúdií (napr. Raunikar et al. 2010) bude dopyt po dreve a nedrevných produktoch v EÚ narastať predovšetkým kvôli očakávanému nárastu dopytu po energetickom dreve. Tento nárast sa za predpokladu dodržiavania princípu trvalo udržateľnosti očakáva spolu s nárastom dopytu po ostatných zdrojoch obnoviteľnej energie, predovšetkým z dôvodu znižovania množstva skleníkových plynov pri výrobe bioenergie. Aj keď výroba energie z obnoviteľných zdrojov ponúka potenciálne významné environmentálne výhody, je zrejmé, že rozsah týchto výhod bude závisieť na rozsahu využívania obnoviteľných zdrojov. Výrazný nárast v ťažbe dreva môže spôsobiť neúmerný tlak na lesné zdroje. Toto nastoľuje vážne obavy o dostupnosť dreva na trvalo udržateľnej báze a teda je potrebné predpokladať, že spotreba bioenergie musí byť koordinovaná s dopytom po tradičných ako i inovatívnych výrobkoch z dreva a súvisiacich službách. Z toho dôvodu je nutné, aby strategické rozhodnutia v oblasti využívania bioenergie boli zosúladené s rozhodnutiami na podporu ostatých investičných možností v lesnom hospodárstve a odvetví spracovania dreva. Organizácia OSN pre výživu a pôdohospodárstvo uvádza, že 34,1 % spotreby energie z obnoviteľných zdrojov pochádza priamo alebo nepriamo z lesa a v EÚ tvorí drevná biomasa až polovicu tejto spotreby. Mnohé aktivity zamerané na mobilizáciu lesných zdrojov v EÚ majú za následok zvýšené využívanie drevnej biomasy na energetické účely, zvýšenú produkciu dreva ako materiálu a tým podporu konkurencieschopnosti DSP a v neposlednom rade aj podporu ekonomickej prosperity vidieckych oblastí. Buongiorno et al. (2011) naznačuje, že zvýšenie cien energetického dreva v dôsledku rastúceho dopytu v budúcnosti, môže mať negatívny vplyv na ceny priemyselného dreva. Nárast cien tak môže spôsobiť zníženie konkurencieschopnosti DSP. Zvyšovanie podielu spotreby energetického dreva na úkor priemyselného dreva sa môže zdať ako snaha o uprednostňovanie menej hodnotného využitia dreva s negatívnym dopadom napr. na zamestnanosť. Na druhej strane je potrebné vziať do úvahy fakt, že DSP popri výrobe produktov s vyššou pridanou hodnotou a tvorbe pracovných miest, dodatočne produkuje významné množstvo zvyškov (30-50% objemu spracovaného dreva), ktoré je možné použiť na výrobu energie. Z tohto pohľadu je dôležité a správne uprednostňovať najskôr výstupy s vyššou pridanou hodnotou, tvorbu pracovných miest a prínos k lepšej bilancii uhlíka (efektívnosť zdrojov).

3.1 Princíp kaskádového využitia dreva

Potreba uprednostňovať medzi rôznymi potenciálnymi využitiami lesných produktov v hodnotovom reťazci je súčasťou konceptu „kaskád". Kaskádový princíp znamená, že v zmysle zásady uprednostnenia využitia drevného materiálu spôsobom, ktorý prináša vyššiu pridanú hodnotu, by drevná surovina z lesa mala byť prioritne použitá v stavebníctve, výrobe nábytku alebo iných produktoch s dlhým životným cyklom, pričom energia by mala byť primárne generovaná z drevného odpadu, zvyškov alebo recyklovaných produktov. Energetické využitie dreva (po tom ako sú vyčerpané ostatné možnosti zhodnotenia) je v tomto zmysle pokladané za najmenej hodnotnú možnosť využitia dreva. Mair & Stern (2017) opisujú kaskádový reťazec ako teoretickú koncepciu, ktorá integruje koncepcie zdrojovej ekonomiky a udržateľnosti do operačného rámca v snahe určiť efektívnosť a primeranosť využívania zdrojov v danom kontexte. Kaskádové využitie je určené na optimalizáciu využitia všetkých komponentov a materiálov s viacnásobným použitím aplikovaním ďalších externých zdrojov skôr ako sa výrobky po skončení ich životného cyklu použijú na výrobu energie (Geldermann 2014). Ku kaskádovému využitiu dochádza vtedy, ak je biomasa spracovaná na finálny produkt pričom tento produkt je minimálne aspoň raz znova použitý buď ako materiál, prípadne výrobok vo výrobnom procese, alebo je použitý na výrobu energie. Rozlišuje sa jedno a viac stupňové použitie. Kaskádové využitie dreva je systematická snaha získať biomasu pre produkty s vyššou pridanou hodnotu (Keegan et al. 2013). Termín "kaskádovanie" sa v posledných rokoch v diskusiách čoraz častejšie používa pri tvorbe stratégií zameraných na prerozdeľovanie zdrojov biomasy s cieľom maximalizovať sociálne a environmentálne prínosy. Koncepcia kaskádovania môže pomôcť optimalizovať používanie dreva v celom reťazci jeho spracovania a využitia (Parobek & Palus 2016, Parobek et al. 2014). Podľa Hoeglmeiera et al. (2013) kaskádová metóda je metóda na zvýšenie efektívnosti využívania zdrojov postupným opätovným využitím rovnakej jednotky zdroja pri viacnásobnej aplikácii materiálov vysokej kvality, po ktorom nasleduje konečné použitie materiálu na výrobu energie. Tým sa ušetria primárne suroviny a môžu sa zvýšiť pozitívne účinky v dôsledku substitúcie materiálov za obnoviteľné zdroje energie. Aby sa maximalizovali účinky kaskádového využitia, mali by sa pri aplikovaní využívať vhodné sekundárne zdroje s najvyššou možnou kvalitou (Fraanje 1997). Sathre a Gustavsson (2006) dospeli k záveru, že výhody plynúce z kaskádového využívania dreva sú nepodstatné v prípade dispozície vyššieho objemu biomasy, čo by mohlo mať za následok jej nevyužitie.

Úloha kaskádového využitia dreva v bioekonomike (koncept hospodárska založeného na prírodných materiáloch a zdrojoch) spočíva vo vytvorení trvalo udržateľného systému, v ktorom je biomasa účinne a efektívne využívaná, a v ktorom sú možnosti kaskádovania optimálne implementované. K základným možnostiam prispievajúcim k rozvoju bioekonomiky patrí:

a) udržateľná produkcia biomasy,
b) efektívnejšia konverzia biomasy,
c) znižovanie energetického a materiálového využívania prostredníctvom navrhovania výrobkov,
d) využitie odpadu a vedľajších produktov,
e) využitie biomasy v sektoroch a produktoch, kde má biomasa najvyššiu pridanú ekonomickú, sociálnu a environmentálnu hodnotu,
f) biorafinérie.

Kaskádovanie predstavuje rozumné a inovatívne spôsoby využívania biomasy. Vo všeobecnosti možno kaskádovanie pokladať za efektívne, po sebe nasledujúce využitie biomasy pre rôzne účely. Kaskádovaním sa tiež rozumie predlžovanie času, v ktorom bude biomasa spaľovaná na tak dlho, ako je to len možné, čo súvisí s hodnotovým využitím biomasy, t.j. využiť biomasu najskôr spôsobmi alebo v produktoch s vyššou hodnotou. Základným predpokladom uplatnenia kaskádové využitia pre efektívne fungovanie bioekonomiky je trvalá udržateľnosť. Vo všeobecnosti je možné rozlíšiť nasledovné princípy kaskádovania (Odegard et al. 2012, Taskhiri et al. 2015):

a) kaskádovanie v čase - zabezpečuje väčšiu dĺžku života biomasy,
b) kaskádovanie v hodnote - maximalizuje sa celková hodnota počas životného cyklu,

c) kaskádovanie vo funkcii - vzťahuje sa na produkciu vedľajších produktov a vytváranie funkčných tokov z pôvodne jedného toku biomasy.

3.2 Hodnotenie prínosu kaskádového využitia dreva

Pri hodnotení významu kaskád je potrebné identifikovať základné ciele a oblasti, ktoré má využitie kaskádového princípu naplniť. Tieto ciele sú zvyčajne rámcovo definované. Hodnotený systém musí byť jasne definovaný produktom, alebo produktmi a ich službami, ktoré kaskádový systém generuje. Tieto produkty musí byť previazané prostredníctvom väzieb ako je počiatočná produkcia, opätovné použitie produktu, recyklácia materiálu alebo príprava na energetické použitie. Kaskádovanie vyžaduje dodatočné zdroje energie, materiálu, ľudské zdroje a investície a môže spôsobovať emisie skleníkových plynov. Začiatok systému predstavuje výroba s použitím čerstvej suroviny, poslednú činnosť predstavuje príprava na konečné použitie (likvidácia, výroba energie, skládkovanie). V prípade ak sa hodnotí efektívnosť systému je potrebné definovať vhodný referenčný systém, ktorý zvyčajne predstavuje porovnateľný fosílny reťazec, resp. iný (bežne zaužívaný) systém kaskádového využitia dreva s nižšou pridanou hodnotou. Jedným z navrhovaných indikátorov na meranie efektívnosti zdrojov je napr. ukazovateľ úrovne účinného využívania domácich zdrojov v rámci národných hospodárstiev (COM 2011), ktorý predstavuje pomer HDP k domácej spotrebe materiálov vyjadrený v EUR/tonu. Takýto ukazovateľ však nezohľadňuje ostatné oblasti ako sú napr. životný cyklus, hodnotu reťazca, zohľadnenie uhlíka a pod. Vhodné sú i ukazovatele ako napr. použitie materiálu, úspora materiálu, efektívnosť zdrojov, miera recyklácie materiálu, miera opätovného využitia produktu alebo životný cyklus. Ďalšou súčasťou hodnotenia kaskádových systémov je ich environmentálny prínos. Z environmentálneho pohľadu sa okamžitým spálením dreva (bezkaskádové použitie) bez jeho predchádzajúceho použitia v kaskádovom systéme (napr. recyklácia) dosahuje vysoký efekt z dôvodu znižovania emisií uhlíka v porovnaní s alternatívnym použitím fosílnych palív. V tomto kontexte sa sleduje prínos systému k znižovaniu emisií skleníkových plynov a schopnosť viazať uhlík. Ukazovateľmi sú napr. uhlíková stopa a relatívna, resp. absolútna úspora emisií uhlíka. Výrobky z dreva majú schopnosť viazať uhlík počas ich celého životného cyklu. Tento uhlík by mal byť súčasťou národných uhlíkových bilancií. Miera schopnosti výrobkov z dreva viazať CO_2 je rôzna. Líši sa v závislosti od druhu výrobkov, stupňa ich spracovania a životnosti. Tiež prínos jednotlivých odvetví spracovania dreva k znižovaniu emisií uhlíka je rôzny. Na úrovni EÚ sa navrhuje používať ukazovateľ (EÚ 2013), ktorý pre započítavanie uhlíka uvažuje s polovicou času rozpadu produktov z dreva (2 roky pre papier, 25 rokov pre aglomerované materiály a 35 rokov pre rezivo). Hodnotenie ekonomickej výkonnosti v kaskádových systémoch je možné merať napr. prostredníctvom zvýšenia zamestnanosti alebo pridanej hodnoty, ktorá sa v danom reťazci vyprodukuje, ako sú napr. hrubá pridaná hodnota (výstup znížený o medzispotrebu) alebo medzispotreba (hodnota statkov a služieb spotrebovaná v procese výroby).

4. Conclusion

Príspevok sa zaoberal problematikou globálnych princípov zelenej ekonomiky a prínosu lesnícko-drevárskeho komplexu k tomuto konceptu. Najdôležitejším prínosom napĺňujúcim predstavy bioekonomiky a obehového hospodárstva je kaskádové využívanie dreva. Jeho hlavným princípom je využitie drevného materiálu spôsobom, ktorý prináša vyššiu pridanú hodnotu v produktoch s dlhým životným cyklom, pričom energia by mala byť primárne generovaná z drevného odpadu, zvyškov alebo recyklovaných produktov. Jeho úloha spočíva vo vytvorení trvalo udržateľného systému, v ktorom je biomasa účinne a efektívne využívaná, a v ktorom sú možnosti kaskádovania optimálne implementované. Tieto zahŕňajú možnosti súvisiace s podporou udržateľnej produkcie biomasy, efektívnejšej konverzie, znižovaním energetického a materiálového využívania prostredníctvom navrhovania výrobkov, využívaním odpadu a vedľajších produktov, biorafinérií a využitím biomasy v sektoroch a produktoch, kde má biomasa najvyššiu pridanú ekonomickú, sociálnu a environmentálnu hodnotu. Na hodnotenie ekonomického a environmentálneho prínosu je navrhnutých a používaných niekoľko indikátorov.

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HARMONIZATION OF LAWS OF TORT AS A POTENTIAL DIRECTION IN A GLOBALIZED WORLD

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Abstract. In an evermore-smaller world, impacted greatly by globalization, the use of comparative law and harmonization of laws in the European Union or Common law context is an often-debated topic, even more so as the potential harmonization of law would impact other areas, especially economics. There exist two opposing views on the issue. The functional method operates on a presumption that all societies face similar problems and the main aim of law is to respond to them, it follows that jurisdictions can be comparatively evaluated and conclusions drawn as to which rules deal better with the problems, thus, drawing inspiration for national law and ultimately unification of law. On the other end of the spectrum, the cultural method presumes that a given country's body of law is a manifestation of its general culture, acknowledging that different legal cultures are deemed worthy of protection and views unification and comparative evaluation as impossible and unnecessary. The paper set out to evaluate the current usage of comparative law in the UK and draw normative conclusions about its benefits and drawbacks. To achieve this goal the paper is based on the analysis of a survey on the use of comparative material in the UK highest court, as well as case law and academic literature. Comparing the different bodies of law in the UK, a common law jurisdiction, and France and Germany, both civilian countries, develops a platform for inductive conclusions on harmonization of law as a potential direction in the future.

Keywords: globalization, harmonization of law, tort law

JEL Classification: K13; K40

1. Introduction

The universality of the problems developed societies are facing justifies and even favors considering other jurisdictions and theorists, however, it should not go as far as making English tort law part of a bigger harmonized body of law either in the European or in the common law context. The functional method of comparative law developed on the presumption that all societies face similar problems and the main aim of law is to respond to them, it follows that jurisdictions can be comparatively evaluated and conclusions drawn as to which rules deal better with the problems, thus, drawing inspiration for reform of national law and ultimately unification of law. The essay will evaluate how comparative law from both common and civil jurisdictions is used currently and further argue that although such consideration is beneficial, it should not amount to efforts to unify the law, as this would be practically impossible, due to the inherent differences in the laws of Tort of different countries. There exists a point of view that while mass torts are important for each individual country they can also be transnational; this requires unification of tort law. The legal aspects of mass torts in a globalized Europe are in the spotlight of European academics, legislatures, courts and politicians. The challenges posed by mass torts are explored, mapped and analyzed. Such 'massification' of private law relationships poses both in and outside of tort law (Wagner, 2016).

There are significant differences across Europe; this leads to problems on the transnational level. Solutions for globalized processes are constantly being sought. Attempts to solve issues of differences in Tort laws on a transnational level are still limited to pan-national regulation of the definition of applicable law. The Rome II Regulation (EC) No 864/2007 covers the European Union level by creating harmonized rules within the European Union to govern choice of law in civil and commercial matters regarding the applicable law in non-contractual obligations. The Regulation includes specific rules for tort (delict) liability and its specific categories, unjust enrichment (Article 10), *negotiorum gestio* (Article 11) and *culpa in contrahendo* (Article 12). There was an intention to prepare a report on the results of the practical application of the Regulation in the specific field of road traffic accident disputes.

With the aim of researching issues of Tort law, including its harmonization` possibilities, the European Group on Tort Law was founded, which subsequently founded the European Centre of Tort and Insurance Law. The European Group on Tort Law is pursuing the most ambitious of projects: drafting the "Principles of European Tort Law", which is the first step towards harmonization of the law of Tort across the European Union (EU). The European Group on Tort Law published the key elements of the law of delict in separate comparative studies in the Unification of Tort Law Series by Kluwer Law International (The Hague/London/New York).

Nevertheless, it is a serious question – can these Principles serve as a guidelines for national legal systems, thereby leading to gradual legal harmonization. Moreover, can the European Union legislature in the future require a uniform concept of law of Tort for the European Union countries?

It must be note that Brexit at least for a while will remove the urgency for UK to participate in the discussion of the EU on the harmonization of laws, including tort law.

2. Law of tort and its harmonization

2.1 Benefits of the current use of comparative law

Surveying and considering comparative material is beneficial, not only in the pursuit of academic knowledge, but also when deciding cases and making the law, as it allows judges to take advantage of the solutions to the same problems that other legal systems have developed. Furthermore, in an evermore "shrinking world", heavily impacted by globalization, it is possible to argue that the problems, with which the law has to deal in different countries are very similar in case *Fairchild v Glenhaven Funeral Services Ltd & Ors [2002]*. This becomes especially useful when the judges are presented with novel issues, where the application of established principles would produce harsh results or would be seen as incapable of achieving justice.

The use of comparative material should only amount to a source of inspiration for the judges, rather than something to blindly follow. The 25-year survey examining the use of comparative law in the House of Lords and the UK Supreme Court provides a valuable insight on the way English judges currently use other jurisdictions in their judgments (Stanton, 2013). Burrows sets out three main ways of how Law Lords use comparative law: first, to support propositions about existing English law, second, in support of developments of English law, and third, to reject it as an example of how English law should develop (Burrows, 2015).

The first method of using comparative law is crucial where there is no or only a small body of national cases that can be used to support the outcome that the judge feels should be the law. It is a way of filling a gap of authority for the proposition in English law. The judges have to turn to other jurisdictions to find authority and illustrate the conclusion reached in case *Hedley Byrne & Co Ltd v Heller & Partners Ltd [1963]*. This approach is, understandably, generally confined to comparative common law, as these jurisdictions have a common core: similar legal history and a closer development. It would be very difficult to use civilian law in such cases, as the way the legal system functions and the way judges think and reason differs widely. This method increases the weight of the proposition; it becomes more convincing. Such use of comparative law shows that it is part of a bigger body of law, and has relevance not only in the UK.

The second method is used when there is a novel problem with which the current state of law is unable to deal with to achieve justice and there are calls for reform and development of domestic law. This method shows that judges appreciate that the English body of law does not have all the answers and that it is useful to look to other jurisdictions to better understand the problem itself and gain valuable insights in different possible solutions. (Stanton, 2013) In the case of *White* Lord Goff draws on the law of both common law and civilian jurisdictions (including, Canada, US, France, and Germany) to award the claimant a remedy, even though on the facts there was essentially no reliance, so the principle in *Hedley* could not have been directly applied in case *White v Jones [1995]*. This goes to the very heart of the functional method of comparative law: English judges actively use comparative law to look at how other jurisdictions have dealt with a similar problem and draw inspiration to incrementally develop national law.

Prima facie the third method seems redundant: if the judges did not intend to develop the law in the same way as in another jurisdiction, why bother evaluating it only to reject it. Nevertheless, the method also illuminates the advantages of the comparative method- the English judges accept that national law has limits and in asking whether it should develop to accommodate claimants in a particular situation, they evaluate how other jurisdictions have dealt with such an issue. In the judgment in *Hunter* the judges considered authorities from the US and Canada, in order to come to the conclusion that the narrower approach taken in English law satisfactorily deals with the issue of standing in private nuisance claims and no development in this area is needed in case *Hunter and Others v. Canary Wharf Ltd; Hunter and Others v. London Docklands Corporation [1997]*.

To sum up, the effective comparative law tool allows reaching a variety of goals: give the authority more weight and assess carefully the way English law should evolve. The survey shows that comparative materials are widely used in the highest level of judiciary; this is confined largely to common law jurisdictions.

It must be noted that the result of comparison can be directly used only in countries of common law jurisdictions (case law), where the court and not the legislature can come up with ways to solve certain problems in the application of Tort law.

2.2 Justification for harmonization of law of Tort

Arguably, the main goal of the European Union is the development of a common market throughout the European Union, in order to facilitate the free movement of goods, persons, services, and capital (Treaty on European Union 2012/C 326/01, Official Journal C 326, 26/10/2012 P. 0001 – 0390).One way of achieving greater integration of national economies of members of the European Union is the harmonization of its laws (Goebel et al., 2015)

Taking into account this goal, the European Group on Tort Law published its "Principles of European Tort Law" (the first version in 2005). Moreover, the Study Group on a European Civil Code and the Research Group on Existing EU Private Law "designed Draft Common Frame of Reference, presented to the public in 2008." (Koziol, 2015)

The "main justification for harmonization [is] … that the differences between the legal systems are hindering commercial cross border transactions in Europe.". Undertakings that span across national borders are at a disadvantage, because it is necessary to navigate about and comply with different national tort law systems. This diversity of laws "gives rise to transaction costs, which can prove to be obstacles to the market, especially for small and medium-sized businesses.". Harmonization also would reduce uncertainty as to the content of the applicable law. Furthermore, "European citizens—who are encouraged to move around in the European Union—cannot be expected to be very understanding that, in the case of an accident, they are treated very differently depending on which legal system is applicable.".

Nevertheless, there are strong arguments for the analysis that there is no need to unify tort law even within the EU. An examination of why tort law should not be unified even in the EU context will follow. Consideration of other jurisdictions in national law making, be it by the legislature or judiciary, is undeniably valuable. Advocates of the functional method Zweigert and Kotz argue that civil and common law should come together in the European context and create the basis of a*ius commune* (Legrand, 1996). Harmonization in the authors' view, although theoretically beneficial in terms of clarity, coherency and better functioning of internal markets, in practice is unattainable because of the inherent differences of the law of tort in different countries.

The cultural method of comparative law focuses on the different bodies of national law as the manifestation of the country's general culture. The law of a country cannot be viewed as only that, which can be found in statutes and case law, it has to be seen as one with the culture of that particular society. The method acknowledges that different legal cultures are deemed worthy of protection and views unification and comparative evaluation as impossible and unnecessary. The aims of tort and the standards of liability will be explore in three jurisdictions: Germany, France, and UK, the law of road traffic accidents will be used for illustrative purposes. This will illuminate the irreconcilable differences that enable to make broader claims as to why unification of the laws is unnecessary and, in fact, impossible to achieve.

2.3 Purposes of Tort law: comparison of Germany, France and UK

Broadly speaking, **German** tort law focuses on the protection of citizen's rights, there is a mix of strict and fault-based liabilities; a claimant is able to sue for an infringement of his right and there is no requirement for "actionable damage", as would be the case in UK (*see case: Rothwell v Chemical & Insulating Co Ltd and another and other appeals; Re Pleural Plaques Litigation [2007] UKHL 39 (25–28 June, 17 October 2007)*). The approach in Germany is justified if one explores the history of the nation. Under Hitler's rule the rights of particular classes of society where close to non-existent, the law of the land seeks to avoid a similar situation arising, and places emphasis on protection of citizens' rights. This approach sits well with what Stevens describes as the rights-based model: when the defendant breaches his duty towards the claimant; the claimant's primary right is infringed this generates a secondary duty of the defendant to compensate (Stevens, 2007). It can also be explored through the notion of justice: if it is established that the defendant violated the claimant's rights, which the law deems worthy of protection, he becomes obligated, as a matter of justice, to compensate the claimant for this breach. Goldberg describes this as the pre-modern understanding of UK tort law. (Goldberg, 2002) The law of road traffic accidents illustrates the general notions of German tort law; the driver will be strictly liable with limited defenses, as governed by the Road Traffic Act.

In **France** the law of tort has developed towards strict liability in order to uphold the principles of equality and solidarity, arguably the very core notions of the French society since the French Revolution. The main idea behind French tort law is the need to compensate the victim. Realization of risk is seen as arbitrary and that the person on whom it actually falls upon should not bear the risk alone, rather all members of society who engage in the particular activity, out of which the tort arose, should bear it equally. The model is based on compensating the victim whether the defendant was at fault or not, thus aiming to achieve a system of distributive justice. (Moreteau, 2008) Such a tort law system is capable of dealing with the socially difficult phenomena arising when a claimant is seriously injured, but it is impossible to prove the fault of the defendant or pinpoint a particular defendant who has been in the wrong. The purpose of road traffic accidents law in France, like the general purpose of tort law in the country, is to ensure a high level of protection of individuals. It is established that the driver will be almost absolutely liable, if his vehicle is implicated in the accident with an extremely limited defense of inexcusable fault. (Ebert, 2015)

UK's approach is cardinally different from that of France and Germany. Even though it still focuses on compensating the victims of torts, it places emphasis on individual freedom to act and, thus, it is mostly fault-based. If one would endeavor to place UK's law of tort on a scale where on one end there is 100% freedom and on the other 100% protection, UK would be very close to the freedom end, contrast this with the French system discussed earlier, which would be placed on the other end of the spectrum. Under UK tort law the claimant will not be compensated whenever his right has been infringed or whenever he has suffered harm, in most torts, the claimant will only be compensated if he has suffered actionable damage because of the defendant breaching his duty towards the claimant. Holmes' idea that "loss must lie where it falls" provides explanation and justification of the way UK tort law functions. This approach can be justified on moral grounds: the defendant should only be liable, if he was at fault. It can be concluded that the rules that govern road accidents in Germany and France are much more victim friendly, if compared to the UK. In UK road traffic accidents are governed by the tort of negligence; the claimant has to prove that the driver's conduct fell below an objective standard, essentially, that the driver was at fault. The imposition of strict liability is staunchly opposed in this area of law in the English system.

To sum up, it becomes clear that the underlying aims or functions of tort law in the two civilian jurisdictions can be put forward as protection (including compensation) of the victim and distributive justice, whereas UK tort law focuses on corrective justice. The standards of liability in tort law differ greatly: mainly strict in France, mixed in Germany and fault-based in the UK. The aims and the standards of liability are irreconcilable, however, they reflect the very core values of each of the nations, thus making *aius* commune an unattainable goal.

2.4 Practical problems with aius commune

Since the end of the Cold War there have been calls to develop harmonized bodies of law based on global values, these calls are particularly strong in the context of the European Union. It is argued that if laws would be harmonized in the Union context it would ensure better protection of citizens, better functioning of the market and provide an overall certainty and predictability of law. The authors accepts that there are benefits to such unification; however, the irreconcilable differences explored earlier coupled with the practical problems, which will be explored now, make it an impossible task to achieve.

First, there would be considerable barriers associated with developing the harmonized laws, in terms of access to different legal system and the accuracy of the material. Further, linguistic barriers would be a crucial problem in both development and application of the harmonized material. (Stanton, 2013) This is likely to bring about problems, rather than solutions, as the difficulties could lead to misapplication of the (now unified) law and generate uncertainty, as different systems would apply the same rules inconsistently. Weir explored this problem in the context of using comparative law when deciding domestic cases. He criticized Lord Bingham's use of comparative civil law in the case of *Fairchild*, claiming that the judge did not acknowledge that in Germany workers would not be able to sue in tort. (Weir, 2002) Even though the example used arose when a judge was exploring the law of other jurisdictions, not being bound by it, this illustrates that problems arise due to a lack of understanding of other countries' laws in context and linguistic barriers.

And although the legislator of the EU before had more or less successfully coped with the linguistic problem, creating legal acts for application in all EU member states, the European Court of Justice had to explain quite often what was meant in this or that case. Further, there is a great risk that harmonization on the EU level could lead to loss of national identity. The development of one unified system of tort law undoubtedly involves an evaluation of which approach, taken by the Member States to address the problems they face, is better. It would seem practical to adopt the majority solution, however, the mere practicality of it does not justify the superiority of the majority view. (Smits, 2011) Who is to say that a particular approach is better in achieving a goal? Further, the goals that the laws are aimed to achieve in different jurisdictions differ widely, because of the diverse historical, social, political and economic values of countries. Unification would gravely impact the legal cultures of smaller, politically and economically weaker member states, for example, the Baltics. Unification of laws would in essence mean the imposition of German and French legal systems on all other Member States.

It can be argued that for small countries without a sufficiently developed legal culture, such unification could help to prevent legislative mistakes in the development of legal norms. Facing this problem, it should be acknowledged that in order to prevent legislative mistakes, skeptically assessing the possibility of unifying of law of Tort, scientists across the world are encouraged to develop the basis of tort law. (Goudkamp & Murphy, 2015) It follows, if the very basis is unambiguously identified and justified in doctrine, legislators will be much less likely to make mistakes.

2.5 Tort law and insurance

One of the possible insurance objects is civil liability that is regulation area of tort law. In addition, taking into account the essential importance of rapid and full compensation of losses, many types of civil liability must be insured by virtue of provisions of the law, meaning that some types of civil liability insurance are compulsory.

Principle of compensation meaning with small exceptions that insurance can only pay losses also is one of areas that law of Tort covers. Connection between the nature of liability (in particular in the case of strict liability) and the imposition of compulsory liability insurance is discernible. Statutory obligations to take out liability insurance are the most important means to ensure compensability of damages arising from dangerous activities where some unified rules for insurance contracts applies (there is unification of insurance rules on the European Union level, for example for motor third party liability insurance). However, academic research on the topic has not been extensive so far. Some group of scientists undertake a comprehensive survey of compulsory liability insurance from nine national perspectives, (Heiss, 2016) including the UK, taking constitutional and European law (four freedoms, European Convention on Human Rights) as well as the Principles of European Insurance Contract Law (PEICL) (Heiss et al., 2011) into account. Conclusions about differences and difficulties for justifications of unifying tort law are very current.

Harmonization in the area of insurance contracts would be desirable on diversity of existing national law systems, particularly in relation to cross-border insurance. PEICL was an attempt of scientists to ensure unification in this area at least in the EU. At present PEICL are developed and published, but this cannot be regarded as sufficient to establish a formal framework at the European Union level. The PEICL project is part of a wider programme to create a Common Frame of Reference for European general contract law.

In 2013 the European Commission set up an expert group to examine the framework of insurance contracts in the context of possible unification of law. In 2014 the group had finished this examination by Final Report of the Commission Expert Group on European Insurance Contract Law, publishing it on the European Commission home page. The expert group has concluded in this document that the national systems of the Member States are diverse and it is quite difficult to establish a common framework. Based on the Panel's findings, the European Commission has concluded that the development of a common framework at the European Union level is not impossible, hence the need for further analysis both from an economic and legal point of view, while assessing the consumer gains and losses, as well as the potential costs.

3. Conclusion

The final argument can be put simply: why fix something that is not broken? There are suggestions that harmonized laws are necessary for a better functioning of the internal market. Suggesting that diverse legal systems lead to distortion seems unfounded, as currently, even though there is no general unification, the market is able to function. It might be more costly or more impractical for market players at times, however there is no empirical evidence that this leads to market problems. This can be observed not only in the EU, but also in the US and as between England and Scotland. In this context an interesting paradox arises. If it is accepted that the main premise of the functional method of comparative law is correct: the law is a mechanism to respond to similar problems arising in societies, then it follows that even if the responses are different they achieve the same goals. A pragmatic unification of the rules becomes redundant, as the systems are already in theory uniform. To sum up, practical problems arise when considering harmonization; these include barriers to developing the law and applying it, further it poses a risk of losing national identities and lastly it was argued that such harmonization is unnecessary as the EU is capable of functioning without. To conclude, the benefits of using comparative material in national decision-making were explored, further the author argued that the incompatible differences of tort law systems in different jurisdictions as well as the practical problems make harmonization of law impossible and undesirable. The view that the problems in the tort law are universal across civilized and sophisticated legal systems and that the universality calls for consideration of the different responses is entirely true to the extent that it amounts to drawing inspiration rather than making efforts to harmonize the law of tort in the common law or European context.

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THE ROLE OF CSR IN DEVELOPING A POSITIVE IMAGE OF THE BANKING SECTOR IN THE GLOBALIZED WORLD

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Abstract. Trade liberalisation and economic reform have opened up new markets for labour, consumers, services, and raw materials. The moves toward greater economic integration have ushered in new opportunities for businesses but also raised a number of new challenges. The article seeks to present issues connected with Corporate Social Responsibility (CSR) and its impact on the development of organisations in a globalised world. CSR has become a major focus of interest for development practitioners in recent years and is one of the most modern and promising business strategies in today’s market. Adopting this concept can create new possibilities for relationships both within the organisation and with the surrounding environment – building a new image for the organisation. The main aim of this paper is an attempt to relate CSR strategy to the banking sector, a sector which has a tremendous impact on the contemporary global economy. The first part of this article is devoted to theoretical aspects of CSR. The authors focused on the role this concept plays in building a positive image of organisations. The second part contains the authors' own findings on the implementation of a strategy of CSR by banks and the impact of activities of CSR on the competitive position of banks. Banks that want to develop and achieve success in the future must prepare strategies of CSR and try to implement them effectively.

Keywords: Corporate Social Responsibility, CSR, create image, banks sector, globalization.

JEL Classification: M14, F6

1. Introduction

A growing process of internationalisation and globalisation is a characteristic feature of today's world. The processes of "opening up" internal markets to foreign competitors have created new conditions for the functioning of enterprises and given rise to new challenges. An important position in the global world is held by financial institutions, especially banks, which being public trust institutions have always played a main role in the economic development of every country. With great losses suffered by this sector in the context of the 2008 financial crisis, banks have to take actions to restore their image and regain confidence of their stakeholders. As public trust institutions, banks should reflect and strengthen moral standards and values. They should conduct business not only to pursue their own economic benefits, but also to ensure an increase in the prosperity of the country and society. Taking CSR actions is regarded as key to regaining corporate credibility and customers' confidence. By such initiatives companies increase their social investments for restoring reputation (Perez et al., 2013).

Nowadays, ethics and philanthropy help to respond to social responsibility expectations faced by odern organisations that seek stability on the competitive, dynamic global market. In view of the above, the main aim of the paper was to present issues related to CSR and its impact on the development of organisations in a globalised world. These issues were applied to the banking sector.

2. CSR and the image of the banking sector - theoretical perspective

Increased market competition and multiple expectations of stakeholders force economic entities to look for different forms of strengthening their market positions.(Gorzeń-Mitka, 2017) Globalisation leads to homogeneity of offers in the different industries, with customers seeing less and less significant differences between products and services offered to them. This problem also refers to the banking sector. The differences between individual institutions are blurring as a result, among other things, of deregulation, financial innovations and new technologies that modify the traditional distribution channels of banking services as well as the popularisation of intermediaries. (Flavian, Guinaliu and Torres 2005). So, how can a company stand out against competitors and maintain stakeholders' trust?

An important role in building competitive advantage is played by reputation (Gupty 2002; Awang & Jusoff 2009). and customer satisfaction (Anderson & Sullivan, 1993; Matzler & Hinterhuber, 1998; Walsh et al., 2006). Creating a strong corporate image in the eyes of stakeholders is an important source of competitive advantage (Sipa et al., 2015; Kolomytseva, 2016). A good image ensures an enterprise stability of functioning and reduces risk. Thompson and Cowton (2004) pointed out that banks are instiimagtutions more exposed to the risk of reputation loss compared to other companies, and are more vulnerable to negative reactions from stakeholders. Improvement of an enterprise's image and reputation, and thereby increase in trust in it, can be a positive effect of corporate social responsibility - CSR (Brammer & Millington, 2005; Fombrun & Shanley, 1990)

In the context of the changes taking place on the market, banks have to restore confidence in them and develop deeper, long-term relationships with customers, rather than focusing on short-terms profits. It is key to educate customers about services and products in a more transparent and fair way. Of particular importance is "educating customers about services and products in a more transparent and honest way. Looking to educate and protect customers will also be important—for example, seeking to ensure that customers have manageable debt levels instead of taking a credit sales approach." (UN Global Compact, 2011).

The European Commission (2011) defines CSR as "the responsibility of enterprises for their impact on society." Corporate social responsibility initiatives can be an effective way of building positive relationships between customers and a company, relationships that the product alone is unable to create (McWilliams & Siegel, 2001). An important group of stakeholders comprises consumers, who are increasingly aware of various threats and unethical behaviour. Apart from a good price and quality, they increasingly expect that products and services are preferably eco-friendly and invoke positive associations, and that social responsibility principles are followed in the process of their manufacture (Lucas & Wilson, 2008). The ability to stand out in terms of an offer is particularly important and difficult in industries characterised by strong competition (Day & Nedungadi, 1994). According to Perez’s at al. (2013) "findings, better reputation and competitive advantage are consequences of increased customer satisfaction after engaging in CSR. " Bloching (2008) notices that on the one hand, skilful planning of CSR strategies is a tool that allows an enterprise to gain influence on its environment, while on the other hand - awareness of how important it is for enterprises to have positive relationships with their stakeholders may lead to pressure being put by such groups to introduce solutions that are beneficial to them.

3. CSR strategy actions of selected banks and corporate image

3.1 Methodological assumptions

The research was conducted in two stages. In the first stage, CSR reports published by banks were analysed. CSR reporting has become an increasing trend among companies worldwide.The aim of the research was to: analyse and assess the impact of CSR activities on the image of a bank. The following research problems have been formulated: 1. Does CSR impact a corporate image? 2. In which areas of a bank's activity are CSR activities carried out? 3. Which of the CSR activities have the biggest impact on improvement of a bank's image?

The research was conducted in two stages. In the first stage, CSR reports published by banks were analysed. The analysis covered reports published by banks from the Top 10 banks in Poland, according to the value of assets in 2016 (Elaniuk, 2016). An additional criterion for selecting banks for analysis was publication of a 2016 CSR report by a bank. As a result, reports of the following banks were selected for analysis: Bank Zachodni WBK, mBank, ING Bank Śląski, BGŻ BNP Paribas. The next stage was a questionnaire survey, which was conducted in the period July-August 2016. The survey was anonymous. The research tool was a survey questionnaire addressed to 500 randomly selected customers of banks from the territory of Częstochowa poviat. The survey resulted in 99 completed questionnaires, of which 99 completely and correctly filled in questionnaires were accepted for further analysis.

Description of the respondents Males made up over half of the respondents (52%). The biggest age group among the rspondents comprised people aged 36-45 (28.6%). Respondents aged 26-45 made up 24.5%, those aged 46-55 – 21.4%, respondents aged up to 25 - 18.4%, and those aged over 55 – 7.1%. Almost 45% of those surveyed had secondary school education, 38.8% had higher education, while 16.3% - vocational education. None of the respondents had primary education.

3.2 CSR in the activity of selected banks

As stressed by Gambetta et al. (2017), the offer of financial institutions should take into account CSR issues, and reporting on sustainable development is a proper tool for communicating this initiative to interested parties. Reporting on sustainable development consists of public reports issued by companies to give internal and external interested parties a picture of the company's situation as well as its economic, environmental and social activities. All the banks analysed develop strategies of corporate social responsibility activities and report their CSR activities in accordance with the guidelines of Global Reporting Initiative (GRI) G4 and the relevant sectoral supplement.

In the case of Bank Zachodni WBK, the corporate social responsibility and sustainable development priorities are defined in the bank's Strategy, which includes priorities in the area of relationships with key stakeholders, with the following objectives: More durable relationships with individual customers and SMEs; The best bank in Poland for business customers; Strengthening relationships with customers based on an improved portfolio of products; New technologies; Multichannel transformation; Working environment that supports employees' involvement. Since 2015, the bank has had a strategy of comprehensive approach to an employee in place. In 2016, the bank achieved very good results in a survey of employees' involvement. In the "community" area, the bank supports social initiatives, is committed to the development of science and advocates equal chances (examples of initiatives include: Santander Universidades with 472 initiatives implemented and over 50 000 participants; 4 concerts of Santander Orchestra and release of a CD; a new education portal for children, parents and teachers www.finansiaki.pl; voluntary projects, in which over 660 employees were involved and to which the Foundation of Bank Zachodni WBK contributed around PLN 196,000; the "Bank of Children's Smiles" project which provided support to 140 organisations; the "Bank of Active Youth" project which provided support to 87 organisations. The Foundation of BZ WBK contributed over PLN 1.4 m. to both these projects).

mBank implements a developed CSR strategy, which defines 5 basic objectives. As part of the implementation of objective 1, the bank focuses on dialogue with customers. The following initiatives have also been undertaken, among other things: consultants available 24 hours a day in social media, contact via Messenger, **platform designed for micro-entrepreneurs' dialogue and involvement (a series of meetings "Tomorrow belongs to women"); satisfaction surveys; "Closed loop"; reliable, clear and transparent communication of products (simplification of credit agreements); complaints (request for a feedback in the process of handling complaints); security of customers and their data (Security Campaign awarded the title of Social Campaign of the Year 2016); banking without borders, mobility (agreement between mBank and the Ministry of Family, Labour and Social Policy on the "Family 500 plus" programme, implementation of a feature in a mobile application to make instant transfers to the receiver's phone number via BLIK system); accessibility of banks for the disabled, education activities. The Foundation of mBank's subsidised 136 projects (around 190 beneficiaries) in the period 2014-2016. As part of the "mPotęga" grant project, it co-financed 304 projects (around 175 000 participants). The Foundation supported 17 projects as part of the scholarship project "Mathematics champions" (400 scholarships granted). In 2016, the Foundation organised the first edition of the "Step into the future" competition for the best assignment in mathematics and for the first time announced the grant competition "Holidays with mathematics" for local non-government organisations, libraries and informal groups. Objective 2 was implemented, among other things, through adopting "good practices regarding standards for filing complaints concerning a consumer credit". The bank implemented the principles: "a credit has to be comprehensible" and "constructive communication of the credit process", in which the focus was on** a clear and consumer-friendly communication. The bank informs customers about subsequent stages, allows them to trace them, and a credit application is usually processed within a dozen or so minutes. The bank launched the "ABC of a credit" page on its website. It also adopted the principle **of refusing to finance irresponsible business activity. Objective 3 was implemented, among other things, through a properly designed motivation system and such projects as "Family Care", the anti-smoking programme for mBank's employees entitled "Do not quit, because it will come back", "Banking Talents", cooperation with University of Łódź in co-creation of a field of study, voluntary work in mBank, Code of Concuct", i.e. prevention of unethical behaviour. Objective 4 was mainly implemented through the following projects: "Car sharing" (reducing the environmental footprint of the car fleet), "Paperless in mCentre of Operations" (saving paper and office supplies). The last objective involves coordination of activities in the area of sustainable development, responsibility in the supply chain and public reporting on corporate social responsibility.**

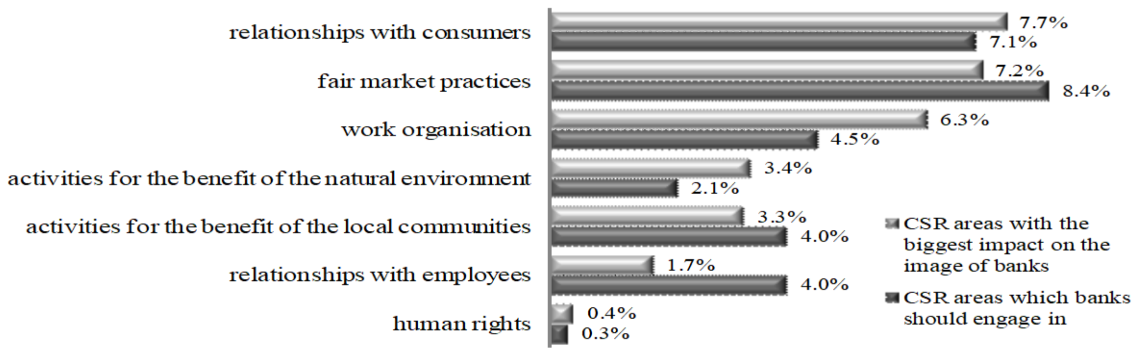
As part of corporate social responsibility, ING Bank Śląski adopted in 2016 a Strategy for sustainable development for the years 2017-2019 with the following main directions: getting people involved in financial education (selected initiatives include: development of tools and products that provide support in making good financial decisions, such as My ING, Navidom; partnerships with organisations specialising in educating children and youth, such as BKCYL, Paczka Biznesu; simplification of communication - the "Simply" project); supporting enterprising people in implementation of their objectives (selected initiatives in this area include: development of platforms designed to support business, e.g. Aleo; development of My ING for business people (accounting, leasing, financing of invoices); cooperation with start-ups; support for business people in obtaining subsidies for implementing technological innovations - including consultancy, issue of promissory notes, granting credits for more risky projects); removing barriers in the access to banking services (selected initiatives: online sign language translator; cash machines with facilities for the blind; branches adapted to the disabled; simple communication ("Simply")); ensuring safe digitalisation of services (including: customer education - raising awareness of personal security and that of devices with Internet access; workshops on cybersecurity for strategic customers; development of security measures in online banking, e.g. OOBA).

BGŻ BNP Paribas implements a CSR strategy in which activities have been grouped into those related to economic responsibility, social responsibility, citizenship responsibility and environmental responsibility. As part of the economic responsibility, the bank pays special attention, among other things, to monitoring CSR risks in 7 sectors regarded as sensitive, i.e. coal energy, mining, defence, forestry, nuclear and agricultural sectors. The bank's social responsibility is manifested in promotion of openness and respect for diversity, which has been included in the Principles of Management and the CSR strategy. The bank signed **Charter of Diversity**, implemented **Policy of Diversity** and **Principles of Diversity Management**. The Group BNP Paribas is a signatory of the **ILO Global Business & Disability Network Charter**. It promotes and raises awareness of this issue among its employees through, among other things: **Days of Occupational Mobility** (a week dedicated to presenting various possibilities of professional development at the bank – as well as in other departments, business lines or countries), **Standards for services for the disabled** (workshops, training courses and scripts for employees concerning good practices in conduct and principles of savoir-vivre towards the disabled, accompanied with new facilities in branch offices), **CSR Days** (diversity at the workplace is always one of the modules of a cyclical, several-day event for employees, which is dedicated to a broad context of CSR activities), **participation of the bank's board of directors' members in cross-sectoral initiatives** (Club Deloitte SheXO and a mentoring scheme for women established by the Foundation Vital Voices), **Woman in Business** (global programme of the Group BNP Paribas, under which the bank supports and prepares talented female managers for the role of future leaders in the organisation), **Diversity & Inclusion Week** (Job Shadowing: a global project addressed to the business line of large enterprises. The bank's citizenship responsibility involves **free and convenient use of the services it offers (consumer-friendly facilities, consumer-friendly service and a website with facilities for the disabled). The bank is examining the issues of accessibility of its facilities and has made alterations to its website.** With respect to environmental responsibility, the bank focuses on prevention of climate changes. The bank supports the execution of green investments. It popularises their environmental and business benefits and supports customers at each stage of execution of such investments. It specialises in financing small and medium-sized RES projects: wind power plants, agricultural biogas plants, small water power stations and photovoltaic installations. It is also involved in legislative works related to ecology in the broad sense.

3.3 Impact of CSR activities on the image of banks according to customers

During the execution of the second stage of the research project, data obtained from customers of the banks surveyed were analysed. Activities undertaken as part of CSR strategies refer to varied groups of stakeholders, therefore they can be perceived in different ways. As stressed by Torres et al. (2012), while initiatives addressed to customers tend to be rather visible on the market, those intended for internal and external stakeholders higher up the supply chain will be less visible to consumers. Of those surveyed, 72.4% think that the activities undertaken as part of corporate social responsibility have an impact on the image of a bank; according to the remaining 27.6%, such activities have no such impact. However, it is worth stressing that when selecting a bank 56.1% of those surveyed rely on the image of such institutions. For the remaining respondents, the image does not matter when choosing banking services (43.9%). For bank customers, of huge importance is the range and price of the bank offer. The respondents also indicated areas which, according to them, have the biggest impact on the image of banks and areas which they think banks should engage in (fig. 1). Among the areas with the biggest impact on the image of banks, the respondents indicated building good relationships with customers, fair market practices and activities in the area of work organisation.

Figure 1: CSR areas with the biggest impact on the image of banks and CSR areas that banks should engage in



Source: own.

It is a fair assumption to conclude that activities undertaken in these areas have an impact on the quality of provided services, and thus customers' satisfaction with the service.

4. Conclusion

The globalising market leads to homogeneity of offered services and products. This results in attempts to find possibilities to stand out against competitors. Business interaction with stakeholders requires new knowledge, various skills and additional resources. We can see an increasing interest in CSR activities. In the case of financial institutions, engagement in CSR may be directly connected with the fact that the banking sector has traditionally faced a difficult control and has always had to make great efforts to maintain corporate credibility and customer confidence. It is believed that the aim of a positive image of CSR is to improve the reputation of a company, as banking institutions always occupy high positions in international CSR rankings (Perez at al., 2013). In the case of the Polish market, according to the survey "Poles' confidence in banks" (Procontent Communication, 2016) conducted in March 2016, PKO Bank

Polski is most trusted among those surveyed (40 proc.), followed by mBank and ING Bank Śląski in second place (28 proc.), and Bank Zachodni WBK in third place (25 proc.). Analysis of the results of surveys showed that bank customers appreciate the activities undertaken as part of CSR and regard them as contributing to the image of a bank. Building good relationships with customers, fair market practices and activities related to work organisation have the biggest impact on such an image. The authors of this article are aware of the fact that a small extent of the research sample will not allow to form far-reaching generalisations but it may be the basis for further analyses.

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UNDEREMPLOYMENT AS A GLOBAL CHALLENGE IN THE 21ST CENTURY

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Abstract. The article is a discussion concerning the essence and importance of use of available labour resources on global labour market. Their effective use, both in the micro and macro scale is one of major challenges in 21st century. The extent to which the available supply of labour is utilised is an important economic and social issue. The unemployment rate is well known measure of labour underutilisation, but it may give a falsely optimistic picture of the labour market and the economy. It is because two important groups of people are excluded from official unemployment statistics – underemployed and marginally attached to the labour force. Underemployment may take different forms (e.g. underutilization of skills, underutilization of labour). However, only underutilization of labour, which occurs when workers are willing and able to supply their labour full-time, but work in part-time jobs as they could not find full-time employment, can be measured. It is often called a "visible underemployment" and this form of underemployment is the subject of the paper. The questions that naturally arise from these considerations apply to the scale of underemployment and the socio-economic consequences of this phenomenon. The main research questions are: "what is the scale and dynamics of underemployment in the European Union"?, "how big are disparities across UE?", "is there a relationship between underemployment and characteristics of the labour force (e.g. age)"? Considering the aforementioned conditions, the goal of the paper is to present diversity of underemployment in EU-28 between 2008 and 2016.

Keywords: globalization, involuntary part-time job, labour market, underemployment

JEL Classification: F66, J21, J64, O52

1. Introduction

The extent to which the available supply of labour is utilised is an important economic and social issue. The unemployment rate is the most widely used labour market indicator, however with an increasingly fragmented and diversified labour market and strongly varying degrees of attachment to it, this index is no longer sufficient. It's because two important groups of people are excluded from official statistics. The first one includes underemployed - the share of the employed who are willing and available to work "better" or "more adequately". The second group are marginally attached to the labour force – the share of the economically inactive wanting to work but otherwise classified as unavailable or unwilling. As such, official unemployment tends to understate labour underutilization.

The questions that naturally arise from these considerations apply to the scale of labour underutilisation, the consequences of this phenomenom for the economy, society, both on micro- and macro level. Considering that the subject of the article is the phenomenon of underemployment, the main research questions are: “what is the scale and dynamics of underemployment in the European Union”?, “how big are disparities across UE?”, “is there a relationship between underemployment and characteristics of the labour force (e.g. age)”? Considering the aforementioned conditions, the goal of the paper is to present diversity of underemployment in EU-28 between 2008 and 2016. This is important, because growing underemployment (not only high unemployment rate) becomes one of the global problems in the 21st century.

2. Underemployment as the form of labour underutilisation

Labour underutilisation includes three different groups of people (Bolle, 2009, Trapeznikowa, 2017, Baum & Mitchell 2010, Von Aerden. et al., 2017):

a) unemployed,
b) underemployed, mainly people who are part-time workers who are willing and available to work more hours,
c) marginally attached to the labour force, people who are willing and available to work but have become discouraged and stopped looking for work. The sum of these groups is called potential additional labour force (PAF)[1].

Considering that the subject of the article is underemployment, it should be stressed that there are many different definitions of this phenomenon in literature (e.g. International Labour Organization (ILO) (1998), Australian Bureau of Statistics (ALS) (Wilkins, 2004), US Bureau of Labor Statistics (BLS), Eurostat and many others) what causes some problems, especially in comparative research. Being aware that underemployment may mean different things to different people, its definition needs to be explicitly stated to enable proper understanding and use of its results. Therefore, the analysis adopted the definition of Eurostat, according to which underemployed part-time workers are persons aged 15-74 working part-time who wish to work additional hours and are available to do so.

Underemployment may take a number of different forms; the two most prevailing of them are underutilization of skills and underutilization of labour – see figure 1.

[1] This group includes: persons actively looking for work, who were not available to start work in the reference week, but were available to start work within four weeks; and discouraged job seekers - a group of people wanting to work and who were available to start work within four weeks; however their main reason for not looking for work was that they believed they would not find a job for labour market related reasons.

Figure 1: Types of underemployment

Education/Knowledge Underemployment	• The degree to which a person's education level or knowledge, skills and abilities exceeds the education level that is required for his/her job
Experience/Hierarchical Level Underemployment	• The degree to which a person's experience level or previous hierarchical level exceeds that which is required for his/her job
Wage Underemployment	• The degree to which a person's prior wages exceed the current wages on his/her job
Job Status Underemployment	• The degree to which a person's desired job status (e.g., full-time, part-time) matches his/her current job status
Job Field Underemployment	• The degree to which a person's desired occupation or field of employment matches the occupation or field of employment of his/her current job

Source: Thompson et al., 2013, pp. 114.

The first one occurs when workers with higher level of education and/or job experience are employed in occupations that do not require such qualifications. It also may appear when individuals are employed in a field outside of their area of formal education or expertise whether or not the level of educational attainment is a good match to employment requirements. This phenomenon is often called "an invisible underemployment" because the data collection tools currently do not gather information on the degree of matching between the level of individual's skills and the requirements of the job they perform (Congregado et al., 2015, Kulkarni et al., 2015, Blake et al., 2017).

In turn, underutilization of labour occurs when workers are willing and able to supply their labour full-time, but work in part-time jobs as they could not find full-time employment. It is often called a "visible underemployment" as a number of indicators exist to capture this phenomenon (Sugiyarto, 2008, Kauhanen & Nätti, 2015, Skorska 2015, Young & Mattingly, 2016), and this form of underemployment is the subject of the paper.

3. Results and Discussion

3.1. Underemployment in the European Union in 2008-2016

The attempts to distinguish and identify the scale and dynamics of underemployment encourage asking the following questions: does the rate of underemployment differ between the European Union members?, is there a relationship between high unemployment and underemployment?

The number of underemployed part-time workers in the whole EU-28 in 2016 exceeded 9,5mln, which means that the rate of underemployment was 3,9 %, the share of persons seeking work but not immediately available among active population – 0,9% and persons available to work but not seeking – 3,6%. In comparison, the unemployment rate was 8,6%. It means that 17% of active population belongs to the category of labour underutilization. While EU-28 unemployment increased sharply since 2008, because of global crisis, the three other indicators have experienced far more stable trends during this turbulent period. The proportion of underemployed part-time workers in the labour force has grown slightly from 3,1 % in 2008 to 3,9 % in 2016, but the higher rate was in 2013 and 2014 (4,3%) – see table 1. It can be stated that it is not a big increase, however it should be stressed that almost 2 mln more workers became underemployed.

The analysis of available data confirms large disparities among the EU Member States. In 2016, underemployed part-time work was highest in Cyprus (7,8% of the labour force), Spain (6,2%), Netherlands (5,7%), Greece and France (5,6 %). The lowest rates were measured in the Czech Republic (0,5%), Bulgaria (0,7%) and Hungary (1,0%). Compared to the situation nine years before, the increase was particularly high in Cyprus (+5,9 p.p.), Netherlands (+4,6 p.p.) and Greece (+3, p.p.). Only Germany (-2,5 p.p.) and Sweden (-1,0p.p.) has less underemployed part-time workers than in 2008 – see table 1.

Table 1: Underemployed in European Union in 2008-2016 as percentage of active population -%

Country	2008	2009	2010	2011	2012	2013	2014	2015	2016	Change (p.p.)
EU 27	3,2	3,5	3,7	3,7	3,9	4,3	4,3	4,1	3,9	0,7
Belgium	0,8	0,8	0,8	0,8	3,2	3,3	3,1	3,4	3,3	2,5
Bulgaria	0,6	0,6	0,8	0,8	0,8	1,0	1,0	0,8	0,7	0,1
Czech Rep.	0,3	0,4	0,6	0,5	0,5	0,7	0,7	0,6	0,5	0,2
Denmark	2,3	3,2	3,0	3,1	3,0	2,7	2,5	2,3	4,6	2,3
Germany	5,9	5,4	5,4	4,6	4,3	4,2	3,9	3,7	3,4	-2,5
Estonia	0,7	1,8	1,8	1,8	1,5	1,2	1,0	1,2	1,2	0,5
Ireland	1,9	4,9	5,2	6,4	6,9	6,8	5,9	5,2	4,6	2,7
Greece	2,0	2,4	2,7	3,2	3,9	4,4	5,0	5,1	5,6	3,6
Spain	3,5	4,3	4,8	5,3	6,0	6,7	6,9	6,6	6,2	2,7
France	4,5	4,7	5,0	4,7	4,7	5,4	5,6	5,8	5,6	1,1
Croatia	1,7	1,9	2,4	2,4	1,9	1,8	1,8	2,3	1,9	0,2
Italy	1,6	1,6	1,7	1,8	2,3	2,5	2,9	2,9	2,9	1,3
Cyprus	1,9	2,3	2,7	3,8	4,7	6,2	7,8	7,8	7,8	5,9
Latvia	2,0	4,2	5,1	4,3	4,2	3,2	2,7	2,7	3,2	1,2
Lithuania	1,2	2,1	2,3	2,5	2,5	2,4	2,1	1,5	1,3	0,1
Luxembourg	0,7	2,1	1,7	1,6	2,1	1,8	1,8	2,3	2,1	1,4
Hungary	0,1	1,3	1,4	1,6	2,0	2,1	1,8	1,5	1,0	0,9
Malta	1,8	1,9	2,5	2,4	2,2	2,7	2,4	2,2	1,7	-0,1
Netherlands	1,1	1,3	1,3	1,4	1,7	6,6	6,7	6,3	5,7	4,6
Austria	3,2	3,5	2,9	3,1	3,4	3,8	3,9	4,2	4,2	1,0
Poland	1,5	1,7	1,8	1,8	2,0	2,1	2,2	1,9	1,6	0,1
Portugal	1,8	1,7	1,8	4,0	4,8	5,0	4,8	4,7	4,4	2,6
Romania	2,2	2,0	2,4	2,3	2,3	2,5	2,6	2,9	2,4	0,2
Slovenia	1,3	1,8	1,9	1,9	1,8	2,3	2,5	3,1	2,8	1,5
Slovakia	0,7	0,9	1,3	1,4	1,4	1,6	1,7	2,1	2,3	1,6
Finland	2,7	3,0	3,0	2,9	2,8	3,0	3,4	3,7	3,8	1,1
Sweden	4,4	4,8	4,6	4,5	4,7	4,9	4,6	4,1	3,4	-1,0
United Kingdom	4,1	5,0	5,4	5,6	6,0	6,0	5,6	5,3	4,9	0,8

Source: own calculations based on data from Eurostat http://eurostat.ec.europa.eu/ (accessed 10.08.2016)

Considering the level of underemployment rate, EU can be divided into 4 groups:

a) countries of the lowest underemployment rate in 2016 (below 1,5%) –Bulgaria, Czech Republic, Estonia, Lithuania, Hungary,

b) countries of medium-low underemployment level (1,5-3,2%) –Croatia, Italy, Latvia, Luxembourg, Malta, Poland, Romania, Slovenia, Slovakia,
c) countries of medium underemployment level (3,3-5%) – Belgium, Denmark, Germany, Ireland, Austria, Portugal, Finland, Sweden, United Kingdom,
d) countries of high underemployment (over 5%) – Greece, Spain, France, Cyprus, Netherlands.

It should be stressed that in most cases there is a relationship between high unemployment and underemployment rate (e.g. Greece, Spain, Portugal or Cyprus). On the other hand, in the Netherlands, the unemployment rate is low (6% in 2016), but underemployment is high (5,7%) as well as the dynamics (increase of 5,6p.p. between 2008 and 2016).

3.2. Age distribution of underemployment in EU-28

It ought to be stated that, out of the 9,5 million underemployed part-time workers in the EU-28 in 2016, almost 16% (over 1,5 million) were aged 15-24, and it slightly decreased (1,8 p.p.) since 2008. While the mean level of underemployment rate in EU-28 in 2016 is 8,3%, in Czech Republic it is lower by 7,3 percentage points, whereas in Cyprus, Spain and Greece it is higher by 9-10 percentage points – see table 2. As seen in table 2, the highest increase of underemployment of this age group was in Belgium, Czech Republic and the Netherland. On the other hand, Germany, Denmark, Estonia, Latvia and Malta has less young underemployed part-time workers than in 2008. The diversity in the level of underemployment among young people in particular EU countries and occurring differences in this sphere should be stressed.

Table 2:Youth underemployed in European Union in 2008-2016 as percentage of total employment

Country	2008		2010		2012		2016		Changes 2008=100	
	thous.	%	thous.	%	thous.	%	thous.	%	thous.	%
EU-28	1 359,0	6,0	1 529,9	7,8	1 573,5	8,5	1 593,6	8,3	234,6	117,2
Belgium	7,5	2,1	7,2	2,2	30,9	9,2	32,1	9,4	24,6	428,0
Czech Rep.	0,9	0,2	2,4	0,7	3,4	1,1	3,8	1,0	2,9	422,2
Denmark	33,1	7,9	40,8	10,4	39	10,1	27,7	15,5	-5,4	83,6
Germany	231,7	5,3	183,7	4,5	135,4	3,4	117,7	2,9	-114	50,7
Estonia	1,7	3,3	:	:	1,2	2,3	1,6	3,3	-0,1	94,1
Ireland	12,4	4	24,1	12,5	24,2	15,5	16,8	11,3	4,4	135,4
Greece	15,5	5,3	19,9	8,4	19,6	13,3	20	17,3	4,5	129,1
Spain	147	8	171,9	14,2	166,4	19,5	159,8	17,7	12,8	108,7
France	205,4	8,7	222,2	9,9	200,3	9,6	256,2	11,7	50,8	124,7
Croatia	3,5	2,4	5,9	4,8	1,8	2,1	4,9	3,2	1,4	140,0
Italy	38,5	2,7	39,4	3,2	52,1	4,7	56,9	6,1	18,4	147,7
Cyprus	1,6	4,5	2	5,8	3,2	10,7	4,3	18,3	2,7	268,7
Latvia	2,5	2	4,8	6,4	4,2	5,7	1,9	3,7	-0,6	76,0
Luxembourg	:	:	:	:	0,7	5,5	1,3	7,6	:	:
Hungary	6,2	2,8	7,6	3,5	9	4,2	6,2	1,8	0,0	100,0
Malta	1,1	4,2	1,5	6,2	1,3	5,6	1	3,1	-0,1	90,9
Netherlands	34,6	2,5	44	3,5	49,3	4	139,6	9,9	105,0	403,4
Austria	18,9	3,5	19,3	3,7	20,5	3,9	23,4	5,3	4,5	123,8
Poland	34,5	2,3	52,1	3,9	63,4	5,5	44,2	3,6	9,7	128,1
Portugal	10,7	2,6	14,6	4,5	27	10,4	31,1	12,2	20,4	290,6
Romania	51,8	6,7	43,7	7,2	41,8	7,3	54,2	7,8	2,4	104,6
Slovenia	5,2	5,3	7	8,5	5	8,1	8,8	11,6	3,6	169,2
Slovakia	2	0,9	4,4	2,7	5,9	4	6,3	4,6	4,3	315,0
Finland	24,5	8,6	24,8	10	24,2	9	29,5	11,1	5,0	120,4

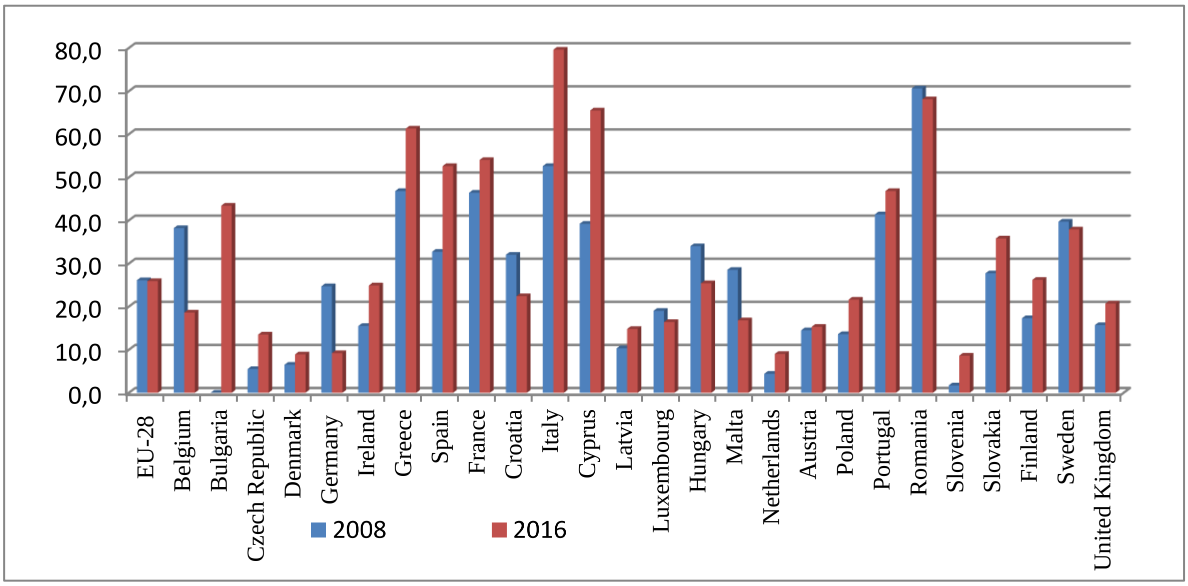
Sweden	64,8	12,7	71,7	14,8	76,6	15,4	67,1	10,7	2,3	103,5
United Kingdom	406,9	10,1	507,3	13,9	562,3	15,5	473,4	11,7	66,5	116,3

*there is no data available for Bulgaria and Lithuania.

Source:Ibidem.

The analysis of available data allows for stating that young people are particularly vulnerable to this phenomenon (Green & Henseke, 2016, France 2016). What is more important, in 2016, the proportion of young underemployed part-time workers among total part-time workers varied significantly among Member States, with the largest shares observed in South Europe - Italy (79,6%), Greece (61,3%), Cyprus (65,5%), Romania (68,1%) and the smallest in Slovenia (8,6%), Denmark (8,9%) and the Netherlands (9,0%). Between 2008 and 2016 the largest increase in underemployment among youth was observed in Italy and Cyprus (26-27 percentage points) and in Spain (by 20p.p.), whereas the decrease was observed in Belgium (slightly over 19 p.p.), Germany (15,5p.p.) and Malta (11,7p.p.) – see figure 2.

Figure 2: Involuntary part-time employment as percentage of the total part-time employment, aged 15-24 (%)



Source: Ibidem

Labour underutilisation can significantly influence the financial, personal and social lives of both individuals and their families. It can also affect the community and the economy. From a social viewpoint, there is concern that people, particularly young, whose aspirations for work are not being realised may suffer in a number of ways - personally, financially and socially. From an economic perspective, there is interest in the capacity for growth in the labour force now, and the future labour supply and its potential to contribute to the production of goods and services. For employers, labour underutilisation and especially underemployment of workers leads to higher personnel turnover and a growing challenge in developing and retaining human capital and corporate knowledge (Nunley et al, 2016).

4. Conclusion

Underemployment is an extremely large, multi-disciplinary subject which includes issues such as employment stability, earnings and income adequacy, underutilisation of skills or qualifications and that is why it is conceptually difficult. The scope of its implications crosses the boundaries of economics, management, sociology, and psychology.

The number of people who are underemployed is rising, so public debate on labour underutilisation should be started as soon as possible. It is necessary to realize that we are dealing with a new global crisis of employment. The analysis of available data also confirms large disparities among the EU Member States. The highest increase of unemployment and underemployment occurred in majority of countries of South Europe (e.g. Italy, Greece, Spain Cyprus). The age distribution of part-time workers who could not find full-time work reveals that the young people, aged 15-24, are particularly vulnerable to this phenomenon. With few exceptions, the rate of underemployment among young people increased between 2008 and 2016.

There is no single measure that can fully capture the complexity of the labour underutilization. The number of unemployed persons and the unemployment rate which are usually used as measures of the underutilized labour resources in the economy do not satisfy all the purposes for which such data are needed. Combining information about the unemployed and underemployed provides a more complete picture of the underutilised labour resources. These measures should be used by governments and economists to understand better the composition of the labour market. However it should be stressed that underemployment is a broad and complex issue and available data is insufficient.

The consequences of labour underutilisation are experienced mainly by individuals, but may also spill over and affect businesses and the economy. The consequences of unemployment and underemployment for an individual may appear through the erosion or loss of skills and abilities, reduction of current and life-long income, job dissatisfaction and emotional distress which, in turn, may lead to deteriorating health. At macro level, underemployment reduces the potential level of the nation's well-being as the level of utilization of labour's skills, experience and availability to work remains at sub-optimal levels. Effective policy responses to labour underutilisation require appreciation of its causes or sources and consequences. We should also indicate most appropriate activities directed to those groups – unemployed and underemployed.

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THE IMPACT OF GLOBALIZATION ON HIGH-TECH INDUSTRY DEVELOPMENT IN CENTRAL AND EASTERN EUROPE

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Abstract. The article is a discussion concerning the essence and importance of high-tech industry in contemporary economies, with focus on a special role performed by manufacturing, distribution, and application of knowledge and information, the high share of which is typical of high-tech industries. Their development is determined by many factors among which globalization, reindustrialization and technological revolution are really important. The visions of a collapse in global industry have not proved to be true, and the need for reindustrialisation has become a new paradigm for Europe. The large share in worldwide export of high-tech products became a key element in the development of modern economies, on the basis of which their competitive advantage is built on international arena. The development of high-tech industries in Poland, similarly to other countries of Central and Eastern Europe, started significantly late in comparison with developed countries. Therefore, the purpose of the paper is to present spatial diversification of the level of high-tech industry development in the countries of Central and Eastern Europe, with special emphasis on employment changes**.** The research period covers the years between 2008 and 2015. Implementation of the goal formulated in this way is achieved through discussions regarding the following areas: 1) the substance of the high technology industry; 2) trading in high-tech products; 3) innovativeness of high-tech sector; and 4) changes in employment in the high-tech industry in the countries of Central and Eastern Europe.

Keywords: development, globalization, innovativeness, high-tech industry, trade

JEL: F63, O14, O31, O52.

1. Introduction

Changes occurring in the contemporary world show an increase in the importance of the spheres that are significantly based on intensive use of knowledge. These areas primarily include entities belonging to high-tech industries that significantly determine modern and competitive structure of economy. The causes of economy structure transformations, including development of high-tech industries, are found, among others, in globalization, development of information and communication technologies, innovativeness and reindustrialisation.

In the light of the above considerations, the purpose of this paper is to present the spatial diversification of the level of development of high-tech industries in the countries of Central and Eastern Europe, with special focus on employment changes. Being aware of the distance separating Poland from Western Europe, the analysis includes the countries of Central and Eastern Europe, that joined the European Union together with Poland, in 2004 and in the following years, and therefore, their level of socio-economic development was comparable. The research period covers the years between 2008 and 2015, and the conducted analyses are mainly based on statistical data obtained from Eurostat.

2. High-tech industry – ways of defining

Despite intensification of work of Eurostat, the OECD, or the US Department of Commerce concerning international methodological standards in this area, defining the category of high-tech industry is difficult. This category includes industries or products that, in comparison with others, have a higher share of expenditures on research and development in the final value or value added (intensity of R&D activity is higher than 7%), and the use of advanced technologies that are subject to relatively rapid "ageing ". Furthermore, they are characterised by high share of people with higher education among employees, including those falling into HRST category, patented and licenced technologies, as well as cooperation with scientific centres, other companies providing knowledge-intensive services and manufacturers of high-tech products.

In applied analyses, the sector or product approaches are most frequently used. They are examples of the enumerative and quantitative approach (Leach, 2009, Chen, 2008, Grilli, 2014). According to the sector method high-tech industry include:

- manufacture of basic pharmaceutical substances, medications and other pharmaceutical products,
- manufacture of computer, electronic and optical products,
- manufacture of air and spacecraft and related machinery.

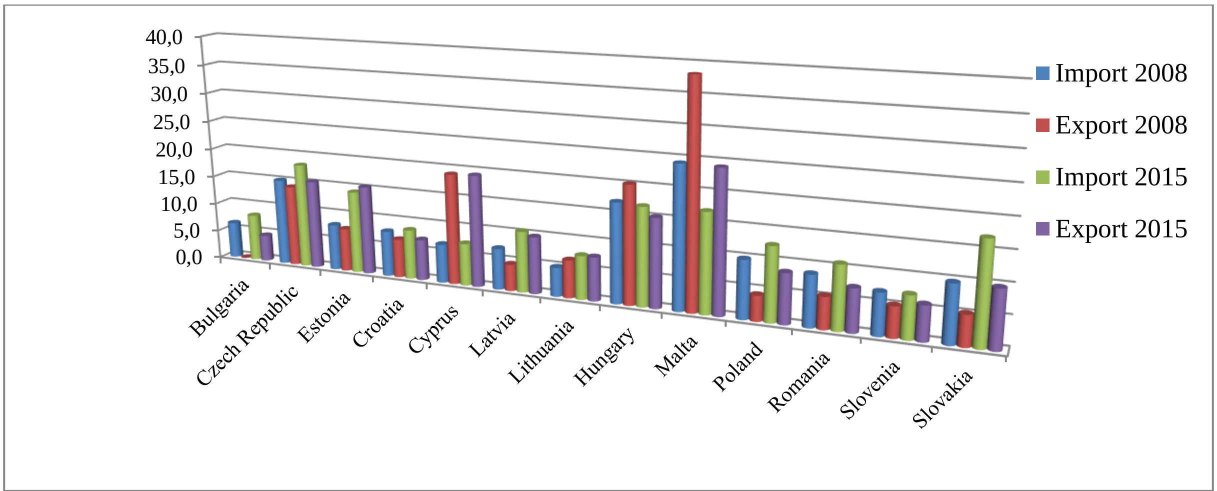
The product method is a development and extension of the sector method, but it also takes into consideration the list of high technology products approved by Eurostat in 2009 (aircraft equipment, computers - office machines, electronics – telecommunication, research and development equipment, electrical machines, non-electrical machines, chemicals, armament). Because of defects and limitations of applied approaches, in some countries the horizontal definition is used.

3. Results and Discussion

3.1 Globalization as a determinant of high-tech industry development

High-tech industry develops under the influence of many factors, among which the processes of reindustrialisation and globalization are really important (Martens, 2015, Wink et al., 2016, Prause & Atari, 2017). While they accounted for around 5% of the world industrial production in the 1970s, their share has constantly been growing over the next decades and they still show a growing trend. These industries are perceived as a key element in the development of modern economies, on the basis of which their competitive advantage is built on international arena (Skorska et al., 2016). Significant expenditures on research and development work and their innovativeness are the features that differ high-tech industries from other categories belonging to sector II. Short life cycle of products and processes, as well as rapid diffusion of technological innovations should also be mentioned. Taking all these into consideration, it must be indicated that China and the United States have had the largest share in worldwide export of high-tech products for many years. According to GUS [*Central Statistical Office*] (2016b, p. 123), the largest exporters of high-tech products among European countries in 2015 were Germany (177 billion EURs), Netherlands (102.2 billion EURs) and France (98.4 billion EURs).

Figure 1: Trade in high-tech products in selected EU countries in 2008 and 2015 – in % of the total



Source: own case study based on Eurostat data. Downloaded from: ,http://ec.EURpa.eu/EURstat/data/database (accessed 12.04.2017)

The development of high-tech industries in Poland, similarly to other countries of Central and Eastern Europe, started significantly late in comparison with developed countries. The beginnings of modern branches such as the computer or microelectronic industries were observed only in the late 1960s. After 1989, a significant decline in the share of advanced technology industries was observed both in Poland and in other post-socialist countries. Pursued economic policy, privatization and restructuring that were often rather ineffective, and finally import orientation targeted at other countries, especially of Western Europe, contributed to a decline in production and employment, and in some areas to liquidation of entities belonging to high-tech industries (Skorska, 2016). Hence, export of high-tech products from Poland was estimated in 2015 at the level of EUR 15.3 billion, which accounted for 8.5% share in total exports, whereas the share of imports was higher than 12.6% - see Figure 2. It was twice lower in comparison with the EU mean of 28 member states (17%).

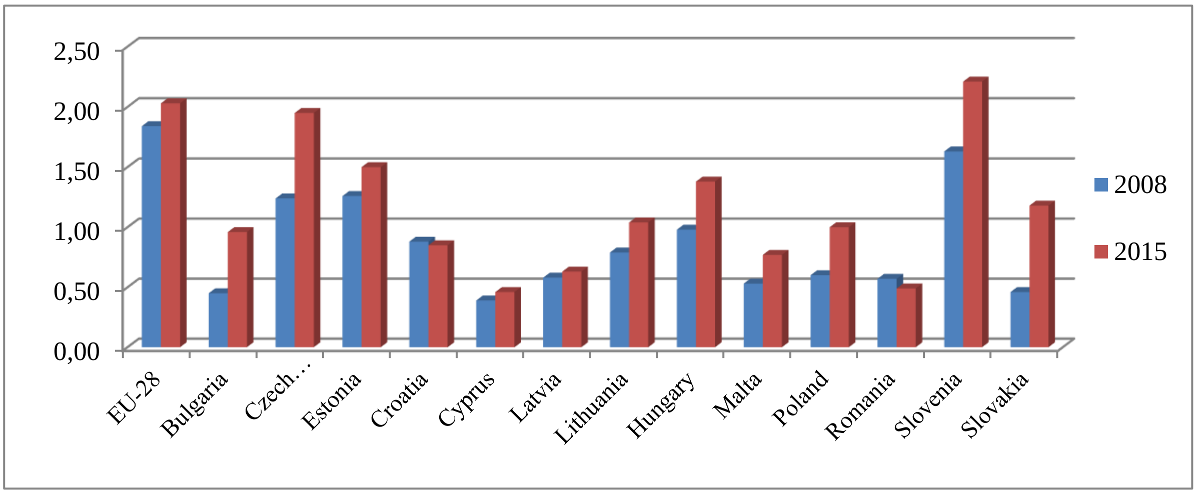
Electronics - telecommunication had the highest share of 41.9% in foreign trade in high technology products both in import and export. This share, in many other countries of Central and Eastern Europe, was at a similar level, although considerable differences were observed - see Figure 2. In 2008, the highest share of export of high-tech products in total export was recorded in Malta (38.3%), whereas the lowest share in Poland (4.3%). Despite the observed declining trend, in 2015 Malta remained the country with the highest share of export of high-tech products (24.2%), whereas Bulgaria was characterised by the lowest share (4.6%). In most of the analysed countries, the trade balance in this area was unfavourable, except for Estonia, Cyprus and Malta, where the share of exports surpassed imports in 2015. However, it should be mentioned, that because of the small size of these countries their importance in international exchange is insignificant. For example, export of high-tech products from Poland was estimated in 2015 at the level of EUR 15.3 billion, whereas from Malta at EUR 563 million.

Unfavourable trade balance and relatively small share of high-tech industry production, not only prove the outdated structure of Polish economy, but they also have impact on limitation of the scope of changes in other economy sectors. This is because technological progress, which is supported by high technology industries, automation, robotics and innovative solutions in electronics or telecommunication contribute, among others to increase in productivity and replacement of physical work, that does not demand high qualifications, with work based on the knowledge and competencies of employees.

3.2 High-tech industry and innovativeness

Bearing in mind that the size and share of expenditures on research and development work is an important indicator of the state involvement in the creation and use of highly advanced technologies, a relatively low position of Poland in this category should be noticed - see Figure 3. In Poland, in 2015 intensity of research and development work in comparison with the whole European Union was almost 2.2 times lower, and similarly to Bulgaria and Croatia it did not exceed 1%. The lowest rate was recorded in Romania and Cyprus - it was not higher than 0.5%. After calculating the value of internal expenditures for research and development per capita in 2014, Poland, with the amount of EUR 101.6, was located on 23rd position among the EU-28 states in which the mean value of expenditures was EUR 564.4. It should be mentioned that Poland, together with Slovakia and Bulgaria, belonged to the group of countries, which in the analysed period were characterized by the highest mean annual growth rate of internal expenditures on research and development work. However, given the target value (3% of GDP in 2020 for member states and 1.7% for Poland), it is still insufficient. The 3% threshold determined for this rate has been reached so far only by Sweden, Austria and Denmark.

Figure 2: Research and development work intensity rate (GERD / GDP) in selected states of the European Union in 2008 and 2015



Source: Ibidem.

If the level of expenditures on research and development activity against the value of production is the criterion for identification of high-tech industries and products, their diversification in individual countries should be noticed (Janger et al. 2107). Although a growing trend is observed in all these countries, the dynamics of changes and the size of expenditures are significantly diversified. Taking this aspect into account, three groups of countries can be identified:

- group I includes countries with the lowest level of BERD (*business expenditure on research and development*), not exceeding EUR 10 million: Estonia, Cyprus, Latvia, Malta, Slovakia,
- group II – the countries where BERD is at the level of EUR 10-100 million: Bulgaria, Lithuania, Romania, Croatia,
- group III includes countries with the highest BERD level - over EUR 100 million: Czech Republic, Poland, Slovenia, Hungary.

It should be emphasized that in Hungary and Slovenia the expenditures are twice as high as in Poland and the Czech Republic, and in 2015 they were higher than EUR 200 million.

Expenditures incurred for R&D activity are associated with innovativeness of enterprises. High-tech enterprises are the key element of the innovation system, both with respect to their own innovativeness, and to stimulating the innovativeness of other sectors as well as the role of intermediaries in the transfer of technology to traditional industries (Zeleny, 2012; Hansem & Winther, 2011). Furthermore, they are characterized by a prominent level of cooperation with external partners, particularly with the spheres of science and research.

Analysing the types of innovation, in recent years, similarly to the previous period, enterprises included in high-tech industry have more often introduced product innovations (31.8%) rather than process (24%), organizational (20.3%) and marketing innovations (14.2%) (GUS [*Central Statistical Office*], 2016a, p. 56, 62, 68). It is also worth emphasising that among enterprises that were active with respect to innovations, more than 50% of them cooperated with other units in the area of innovative activity. Good functioning of channels of knowledge transfer between the science sector and the industry is vital for the development of high technology. High technology companies are more dependent on basic knowledge that emerges mainly at universities, than other industries.

3.3 Human capital used in high-tech industry

In modern economy sectors, there is a growing demand for high quality human capital (Ehrlich, 2017). This is reflected in the level and structure of employment in these areas. In Poland, after 1989, similarly to other countries of the former communist bloc, there was a recession in high-tech industries. In 1989 in Poland a total of 257 thousand people were employed in them which accounted for 5.4% of total employment in industry. In 2000, the number decreased to 84 thousand. In the following years, the figure was growing and reached the level of almost 128 thousand in 2015, but it represented only 0.8% of total employment in the national economy, and respectively 4% of employment in industry. The position of Poland, both in comparison with the EU-15 and other countries of Central and Eastern Europe was unfavourable. In Hungary, the share of employment in high-tech industries was 2.3%, in Malta 2.4%, and in Slovenia 2.1% - see Tab. 1. A lower rate was observed only in Romania, Croatia, Cyprus and Latvia. It should also be noticed that because of the economic crisis among others, the dynamics of changes in most EU countries was negative, which further exacerbated the distance separating Poland from highly developed countries with respect to this.

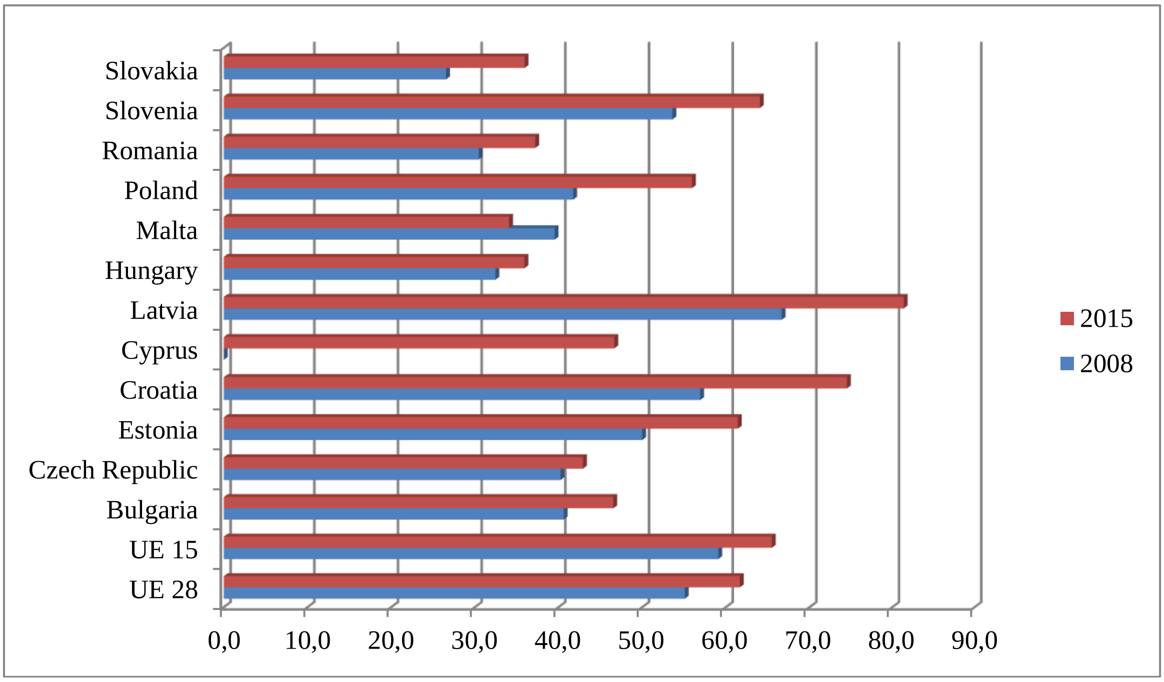
Table 1 Employment in high technology industries in selected EU countries in 2008-2015

Country	2008	2009	2010	2011	2012	2013	2014	2015	Change
EU 28	2 530	2 382	2 332	2 371	2 342	2 348	2 343	2 356	-173.7
EU 15	2 048	1 942	1 895	1 892	1 863	1 878	1 871	1 887	-160.6
Bulgaria	28.8	24.1	19.9	21.6	23.9	24.7	24.3	26.0	-2.8
Czech Republic	73.8	68.4	72.5	79.2	90.1	86.7	89.1	82.0	8.2
Estonia	7.0	7.4	6.8	9.2	7.2	7.4	6.1	7.0	0.0
Croatia	13.7	7.9	6.1	7.2	8.5	7.4	10.4	9.8	-3.9
Cyprus	1.5	1.0	0.8	1.0	1.6	1.8	1.7	1.5	0.0
Latvia	4.5	4.2	3.2	2.1	2.6	3.6	3.9	4.3	-0.2
Lithuania	:	:	:	:	:	:	:	:	b.d.
Hungary	107.5	92.8	104.4	117.2	101.7	96.9	94.2	96.3	-11.2
Malta	4.3	4.3	4.2	3.9	3.5	4.6	5.2	4.4	0.1
Poland	125.5	121.9	118.7	125.1	130.7	119.7	120.1	127.8	2.3
Romania	51.2	53.0	46.3	55.9	56.9	66.2	67.0	56.7	5.5
Slovenia	16.6	16.1	16.9	15.6	15.2	16.4	16.1	19.2	2.6
Slovakia	43.3	34.4	33.7	37.4	32.9	30.7	30.2	30.6	-12.7

Source: Ibidem.

Because production of technologically advanced goods demands involvement of high quality labour resources, the share of people with higher education among workers employed in high technology industries, and the direction and dynamics of changes occurring in this area is higher than in other industry sectors. Among people working in high-tech industries nearly 37% have higher education, whereas in the whole industrial sector this rate is not higher than 15.5%. Furthermore, almost 49% of workers in high-tech industries in Poland are classified as HRST (*Human Resources for Science and Technology*), but their rate is lower by 18 percentage points in comparison with the rate of people employed in this category in Lithuania or Croatia.

Figure 3: Share of employment of HRST workers in high-tech industries in 2008 and 2015. -%



Source: Ibidem.

Analysis of available data shows that our delay in the sphere of high technology industries, in comparison with some countries of Central and Eastern Europe, especially Western Europe, constitutes a barrier to the construction of modern, competitive and innovation-based economic structures. Consistently implemented industrial policy of the state is one of the determinants of creation and implementation of high technologies (Bianchi & Labory 2011; European Commission, 2012). This should be supported by educational policy promoting investment in qualifications as the basis for formation of high quality human capital. Without properly qualified staff, further development of high technologies is not possible. Enterprises should be more actively involved in this process, as well as in other forms of cooperation with the higher education sector. This will encourage development of innovations that can later find application in industry.

4. Conclusion

Transformations in economy structure and associated process of reallocation of labour resources have been taking place in recent years under the influence of the process of globalization and regionalization of the world economy among others. Over the recent years, as a result of the occurring changes, industry as approached globally has been relocated from the United States or Western Europe to the countries of a lower level of development that have cheap labour force and much cheaper energy - for example, to India and China. However, the visions of a collapse in global industry have not proved to be true, and the need for reindustrialisation has become a new paradigm for Europe. Reinforcing the right role of industry shall ensure sustainable economic growth, stimulate creation of high-quality workplaces and offer solutions to contemporary social problems. Hence, so much space is devoted to industries based on the latest technologies, the support for which demands thoughtful and active state policy. The active role of the state should be based on a long-term strategy providing support for economy sectors, mainly for those export-oriented. It should find reflection in sectoral policies, including industrial, service oriented, innovative and other policies. The legislation in the sphere of protection of ownership of scientific research results, and creation of innovation systems are also highly important.

Bearing in mind that high-tech industry is characterized by added value, innovation and productivity of work that are higher in comparison with other industries, their development may become a development impulse for contemporary economies. The chances for their further development, especially in the countries of Central and Eastern Europe, are noticed, among others in intensification of research and development activities, consolidation of local enterprises and enhancement of international co-operation, with special focus on promotion of high-tech exports.

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IMPACT OF GLOBALIZATION ON MANAGEMENT EDUCATION IN EUROPEAN UNION

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Abstract. This paper describes the trends of globalization development and the demands they make on management education in the EU. The term globalization in the world means integration of economies and societies in the world through cross country flows of information, ideas, technologies, goods, services, capital, finance and people. Cross border integration can have several dimensions – cultural, social, political and economic. In fact, some people fear cultural and social integration even more than economic integration. Globalization is a feature of changing world. It is no more a recent phenomenon in the world. Initial enthusiasm for globalization as a beneficial set of processes has yielded to an understanding that the phenomenon is largely associated with increasing social inequality within and between countries as well as instability and conflict. Globalization is impacting the institutional framework in both developing and industrial countries. It is changing the way in which governments perceive their role in the society. Globalization has a multi-dimensional impact on the system of education. It promotes new tools & techniques in this area like E-learning, Flexible learning, Distance Education. Globalization will mean many different things for education. In the near future, it will mean a more competitive and deregulated educational system modelled after free market but with more pressure on it to assure that the next generation of workers are prepared for some amorphous job market of the 21st century.

Keywords: Globalization, management education, European Union, lifelong learning, E-learning

JEL Classification: I25, I28

1. Introduction

Globalization – defined here as the increased flows of goods, services, capital, people, and information across borders – has been the source of many worries in Europe over the past decade, way before the global financial meltdown that began in 2008. In many European countries, globalization is perceived more as a threat than an opportunity. Some see a narrow threat to their jobs, others to their broader social welfare, and yet others to their entire way of life. At the same time, globalization promises opportunities, especially to those who can serve new markets or existing markets with cheaper inputs.

This blend of threat and opportunity – combined with a sense that globalization may simply be too powerful to be resisted outright – has led many European policy-makers to speak of what we term ‘globalization with adjectives’. Typically, the adjective injects a note of caution that suggests the embrace of globalization is a conditional one – whether globalization is to be ‘humanized’, ‘tamed’, ‘harnessed’, or ‘managed’ (Tomsic et al., 2006).

1.1 Education for global society and development of the key competences model

As a result of many ties of interdependence among countries, the world we live in has evolved into a globalised system. Recent history unquestionably shows that the lives of the men and women of this planet may be affected by events and processes thousands of kilometres away (Schmidt, 2006). World-wide economic, geopolitical and social relations, modern communications and technologies, media and transport allow a fast flow of information (Nagi et al., 2009). People and goods are both causes and characteristics of globalisation as a process that leads to an interdependent world and to what nowadays is called globalisation.

Globalisation is complex and ambivalent and its consequences can be regarded as both positive and negative: among the positive consequences of globalisation are the widening of peoples’ horizons, access to knowledge and the products of science and technology, multiculturalism and intercultural views, an increase in opportunities, personal and social development and possibilities of sharing ideas and joint action towards solutions to common problems (Twigg, 2003). The negative consequences are mainly on social, economic and environmental levels. On one hand there is increasing poverty in societies, a growing gap between developed and developing countries and between privileged and excluded people, low standards of living, disease, forced migration and human rights violations, exploitation of weak social groups, racism and xenophobia, conflicts, insecurity and growing individualism. On the other hand, there are many environmental repercussions such as the greenhouse effect, climate-change, pollution and the exhaustion of natural resources (Wong, 2000).

Adapting European education and training systems to new requirements dictated by an increasingly competitive international environment has, as already noted, become a reality (Warburton, 2009). One of the main components is promoting basic skills to support this process. Gradually, as part of the concept of lifelong learning, a reference framework of competences began to be formulated to identify the key competences that should enable individuals in Europe to be regarded as properly qualified to perform a successful and creative role at the workplace, as part of a professional career and while playing a competent role in society (Leach, 2008). This is all with the aim of providing effective support for the work of Member States in meeting the objectives set and at the same time creating an appropriate reference framework at European level. There are several important markers here. The European Commission communication on lifelong learning contains a new emphasis; it identifies ‘new basic skills’ as a priority and stresses that lifelong learning must cover the period from pre-school education to post-retirement age.

The report of the European Council on the broader role of education, adopted in November 2004, stressed that education contributes to preserving and renewing the common cultural background in society, and is particularly important at a time when all Member States are challenged by the question of how to deal with increasing social and cultural diversity. Moreover, enabling people to enter and remain in the world of work is an important part of the role of education in strengthening social cohesion. Penetration level e-learning in the educational system in Central Europe is different. Individual countries have their own characteristics in the education system and also access to the development of e-learning. In some countries, e-learning develops without established institutional coverage of the other countries created state-funded public institutions, which has long been involved in the development of e-learning as part of distance learning. This focus on a more strategic use of e-Learning has become important as the environment in which higher education institutions operate changes. Over the last decade higher education institutions have experienced profound changes in their external environment affecting both their primary and secondary processes of education, research and organization. It is generally acknowledged that technology, demography, governmental policy and economic factors are the main external drivers for change. Eight key competences have progressively been identified (and put into operation) within this reference framework. These are (Austin, 2002), (Pelgrum, 2001):

1. Communication in the mother language,
2. Communication in foreign languages,
3. Mathematical competences and basic competences in science and technology,
4. ICT competence,
5. Learning to learn,
6. Social and civic competences,
7. Sense of initiative and entrepreneurship,
8. Cultural awareness and expression.

For the purposes of our discussion, individual elements of these competences are not important. It is, however, important to realize that the key competences defined constitute a multifunctional package of knowledge, skills and values that all individuals require for their personal fulfilment and development, and for their social inclusion and employment. It is important to know and understand that these competences are conceived as a combination of knowledge, skills and attitudes adapted to individual circumstances and with very close common links (Tondeur, 2006).

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Worldwide consciousness of global change towards more sustainable, fair development and the need for international cooperation have been increasingly addressed through covenants, declarations and campaigns promoted mainly by a growing civil society commitment and international organisations (Silerova, 2015). Hence, the need for global education as an international dimension in learning and teaching methods in both formal and non-formal education in order to move towards a better understanding of the current issues of the world, its impact at local and global level, is not only a need, but an ethical challenge in today’s world.

Globalisation poses fundamental challenges for all areas of education in every country. It provides access to people, cultures, economies and languages in a new way. In this context education on global issues may be regarded purely in market driven terms as enhancing the skills and knowledge to be efficient consumers and workers in the global economy, for those who have access to the market. However, the importance of education lies in helping people recognise their role and individual and collective responsibilities as active members of this global community in the sense of engagement for social and economic justice for all and the protection and restoration of the earth's ecosystems. Global education is the pedagogical concept behind this vision. As educators in the 21st century we are living in challenging times and in a controversial world. How can we prepare people to cope with such challenges? What are our responsibilities in the world of increased knowledge and technological developments? What are our responsibilities in a world of poverty, violence, prejudice and environmental damage?

1.1.1 Global education aims

Global education aims at educating citizens in social justice and sustainable development. Global education aims at opening a global dimension and a holistic perspective in education in order to help people understand the complex realities and processes of today's world and develop values, attitudes, knowledge and skills that will enable them to face the challenges of an interconnected world. Global education helps learners to understand some of the complex processes leading to violence and conflict at individual, collective, national and global levels and be aware of some of the ways in which these conflicts can be prevented or resolved. By promoting an understanding of different cultures and fostering the role of people as dynamic players for a more just and equal world for all, global education aims at developing attitudes that lead to constructive, non-violent resolution of conflicts. Global education aims at developing learning communities, in which learners and educators are encouraged to work cooperatively on global issues. Global education aims at stimulating and motivating learners and educators to approach global issues through innovative teaching and pedagogy. Global education aims at challenging formal and non-formal education programmes and practices by introducing its own content and methodology. Global education aims at accepting otherness and interdependency and creating the conditions for others to express themselves and build behaviour of solidarity.

Global education is not just concerned with different perspectives on globalised themes and what you teach and learn about them. It is also concerned about how you teach and learn and the contextual conditions in which you teach and learn. In fact, there is a necessary unity between the content, form and context in which the learning process takes place. If global education is the teaching that has to deal with the goal of change in order to set up education that does not reproduce the system but envisions social transformation and opens people's eyes it is evident that the traditional definition of content has to be replaced by a new perspective of the concept. The global education contents proposed here do not come from abstract categories but from people's needs, captured in their own expressions. The traditional concept of content is replaced by:

- an analysis of events and developments happening at micro level in the nearest reality,
- selection of specific themes related to those events,
- recognition of connections with the macro world and the emerging dialogue between them.

Therefore, in a global education learning process students and educators go deeper into the roots and causes of events and developments and share ideas on possible solutions in a dynamic exercise of observation, analysis, reflection and exchange of information that creates a new circle of knowledge and interests. Gender, social class, ethnic, religious, social-economic and cultural differences will flow through dialogue and figure among the items and problems discussed and also be part of the discussions on possible solutions. In this process knowing is not accumulating knowledge, information or data on certain themes or problems. Knowing means everyday knowledge, taking care of all aspects of life and thinking locally and globally in linked, interdependent understanding so that the outer world will be part of everyday life analysis, refuelling the learning process. The content is therefore a result of a constant interrelation between abstract knowledge of theory and concrete experience of everyday life. If, in the process of building this content, concrete behaviours in specific contexts are transformed, we call it praxis - a phenomenon that eradicates the distinction between abstract content and behaviour in context.

1.2 Methodology and ICT in global education

A distinction between methodology and methods may help the discussion: Methodology, as the core of epistemology, is the scientific foundation and development of methods, in order to formulate fundamentals for the creation of new specific methods or for the study and analysis of existing ones. A method is a planned procedure that regulates a line of action undertaken to obtain defined objectives in a specific science. Methodology in education, and especially in global education, is more than a discussion about teaching methods; methodology is an important pillar of education policy. More than how to teach, or how to develop learning activities, methodology includes all the issues of what education is. In this sense the content of any educational activity needs to be directly related to the methods that will be used within the learning group in order to accomplish the objectives of the chosen activity.

This basic statement becomes crucial if we accept that each activity in each learning group, in formal and non-formal education, is the application of a wider ideological context. Therefore, methodology issues have to be regarded not only in relation to particular learning activities, but as the framework of a continuous learning process related to the main objectives of education and in dynamic interaction with the evaluation process. And if we agree that any form of education influences human beings' way of thinking, acting and living, we may conclude that any discussion about the role of methodology in education is close to the whole discussion about the role of education in our societies.

Information and Communication Technologies (ICTs) play an increasingly important role in the way we communicate, learn and live (Polakovic, 2016). The challenge is to effectively harness these technologies in a way that serves the interests of learners and the larger teaching/learning community. UNESCO considers that ICTs can contribute to universal access to education, equity in education, the delivery of quality learning and teaching, teachers' professional development as well as improve education management, governance and administration provided the right mix of policies, technologies and capacities are in place. UNESCO takes a comprehensive approach to ICTs in education. It is through the Organization's Intersectoral Platform that it focuses on the joint work of the Communication and Information, Education and Science Sectors where the issues of access, inclusion, equity and quality in education can be addressed.

The swiftness of ICT developments, their increasing spread and availability, the nature of their content and their declining prices are having major implications for learning (Poliak, 2010). They may tend to increase disparities, weaken social bonds and threaten cultural cohesion. Governments will therefore need to establish clearer policies in regard to science and technology, and undertake critical assessments of ICT experiences and options. These should include their resource implications in relation to the provision of basic education, emphasizing choices that bridge the 'digital divide', increase access and quality, and reduce inequity. There is need to tap the potential of ICT to enhance data collection and analysis, and to strengthen management systems, from central ministries through sub-national levels to the school; to improve access to education by remote and disadvantaged communities; to support initial and continuing professional development of teachers; and to provide opportunities to communicate across classrooms and cultures. News media should also be engaged to create and strengthen partnerships with education systems, through the promotion of local newspapers, informed coverage of education issues and continuing education programmes via public service broadcasting.

2. Conclusion

Global education, with its wide spectrum of issues and dynamic aspirations, indeed offers many opportunities for various methods to be used when practising it – from, let's say, more classical to more innovative ones. What educators need to remember is that a method is a learning approach, directly related to the objectives and in coherent, dynamic interaction with the content of every issue and activity. Moreover, what matters more is not the acquisition of knowledge itself, but the process by which learners learn how to learn. The important thing in global education is that, in any case, we use the methodological proposals presented above. Thus, a learner-centred environment generally excludes the very "classical" method of a lengthy lecture directed at passive learners, even if modern technology is used during this lecture. Similarly, worksheets cannot be very effective if they are based on long, dry scientific texts followed by numerous "academic" questions demanding an individual answer. On the other hand, stories (narrated or given in the form of comic strips) or cartoons, both accompanied by some inspiring questions, can better motivate learners to search for answers in groups and discuss aspects of global issues in a participative, cooperative, experiential and, above all, democratic learning environment.Educational institutions are facing new facts in terms of by us mentioned problems during last ten years. Beginning the ICT implementation was mainly represented technical equipment of schools with computers, later thanks to the government's supports of the Internet, On the other hand, it is necessary to remember that the phenomenon called Internet has changed our households as well. The similar at our schools' development occurred also in our households, sometimes even on a higher technological level. The new coming population has changed, children from their low age are coming in touch with, there is growing the so called digital population, the so called multi-tasking population - the students can concentrate their attention on more things or activities at the same time. E-learning courses as the initial support for distance learning are becoming highly spread tools for teaching of full-time students (Kollar, 2016).

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PERSONNEL WORK IN SLOVAKIA UNDER THE INFLUENCE OF GLOBALIZATION

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Abstract. As a result of globalization, personnel work has seen a significant change towards its improvement and adapting to new conditions in Slovakia as well as worldwide. Along with increasing presence of multinational corporations and the employment of people of different nationalities, the changes in some processes of human resources management are noticeable. Personnel work in Slovakia gains international character. The inflow of new foreign investments and know-how owners come to Slovakia, influencing personnel work in multinational companies, the competition is increasing. Employers are increasingly focusing on the selection, stabilization, education and development of employees with development potential. In general, various human resource management activities have begun to be used more efficiently to meet the needs of organizations and employees themselves. A holistic approach to working with people in the work process is visible. This new direction of personnel work reflects the importance of people, human labor force as the most important factor of production. At the same time, there is pressure on the labor market because high quality personnel work cumulates more lucrative jobs which is a competitive advantage for many companies. The aim of the paper is to present the results of the research focused on the current practice of personnel work in organizations in the Slovak Republic. The information gathered by sociological interview provides an insight into where the personnel work in Slovakia is heading.

Keywords: Human resource management. Personnel work. Slovak organizations. Personnel activities. Globalization.

JEL Classification: M12, O15

1. Introduction

The quality of life of our planet is affected by globalization both positively and negatively. According to several authors (Scholte, 2000), globalization is not only a phenomenon of the present days because its roots are identifiable in ancient historyThe globalization process can be a catalyst that accelerates development, but on the other hand it can also be a chaotic disruption of the system, resulting in socio-economic and political problems (Carayannis et al., 2015). From the globalization point of view (and with a certain amount of simplification), we can divide the world community into developed countries, countries with strong globalization impact and countries with weaker globalization impact. This impact, if it is positive for the economy, the population and the environment of a country, generates positive feedback in the majority of society. "To achieve this, organizations need an understanding of the factors that can determine the effectiveness of various HR practices and approaches" (Mzee, 2012). On the contrary, if the effects of globalization are detrimental to the quality of life of the citizens, they generate dissatisfaction and refusal to engage in this process. "Organization performance is better in companies where there is congruency between national culture and human resources practice" (Ponisciakova & Gogolova, 2015). In general, we can claim that globalization has its supporters and opponents in all three of the above-mentioned categories of countries. It is, however, an irreversible process that the world community must accept, operate under its influence in different areas of its existence, and at the same time seek and exploit the chances of further positive development. At the same time, due to the changes in the business world, human resources departments should change (Sahu & Sharma, 2014).

The aim of the paper is to present the results of the research conducted by the Faculty of Economics at Matej Bel University in Banská Bystrica in the field of current practice of personnel work in organizations in the Slovak Republic. Information gathered by sociological inquiry provides an insight into where the personnel work in Slovakia is heading.

2. Globalization and personnel work in Slovakia

The impacts of globalization are also reflected in the development of regions and municipalities, especially in the possibility of using European funds, know-how from international cooperation – building intelligent cities, etc. Organizations (both private and public) are an integral part of cities and regions; they are able to fill a market gap in the area of community centers and non-governmental organizations, effectively creating a common economic, cultural, social and sports environment for their strategic development (Borsekova et al., 2016). Enterprises operating in cities and regions are major contributors to the budgets of higher territorial units, cities and municipalities; the more successful they are, the more the inhabitants of the area benefit. Since the most important sources of organizational success are the employees, it is clear that the work with people in the work process is a key activity of every organization. "It is recognized that the best results and appropriate responses come from people that are professional in their field of specialization, but also who are well supported, motivated and enthusiastic" (Olariu et al., 2013). In particular, the impact of globalization is mainly pronounced in this area. "The cross-national dimension is the subject of the closely related fields of international human resource management (IHRM) and comparative human resource management (CHRM), with the former more focused on internationalization of human resource management systems and practices through multinational corporations (MNCs) and the latter on the impact of national contextual factors, such as political, social and cultural institutions, on the adoption of human resource management configurations across individual countries and regions" (Kaufman, 2016). International human resources management means working regardless of national boundaries when formulating and implementing strategies to provide labor force resources, their development, career management and remuneration, policies and practices that can be applied to international labor. It is more demanding than managing within a single country, taking into account the national and cultural diversity of employees, the diversity of social systems and legislative requirements, the complexity of people-to-people communication scattered across the country, staffing issues for international operations, and many others. "Organizations in frequently changing environments often seek leaders who are able to formulate visionary and strategic goals and lead people in an organization towards the fulfilment of the strategic plan" (Theodoulides, 2016). Transnational companies, established in Slovakia, employ tens of thousands of people of different nationalities. "At present, there are about 140 companies from USA, 400 from France, many others from Germany, Austria, Italy, Korea, Japan, etc. in the Slovak economy" (Vetrakova et al., 2016). It is generally accepted that no further development is possible without the support of innovation. "Dynamic management response to operational and strategic changes, or rather the degree of inertia to the historically important way of managing and thinking significantly affects the efficiency of the innovation process" (Hiadlovský et al., 2016). "At the same time interest in work, quality and productivity at work, willingness to become responsible, level of submitting proposals, concentration at work, personal participation of an employee and punctuality are declining" (Hitka et al., 2015).

"The business practice seems to have realized the importance of intercultural dialogue and therefore global managers are trained to succeed in negotiations at an international level" (Bencikova et al., 2013). At the same time, with the inflow of new foreign investments, there are also know-how owners in Slovakia who also influence personnel work in multinational companies. The competitiveness of the environment is increasing. Employers focus more on the selection, stabilization, education and development of employees with development potential. "Both the managers and employees must fully comply with the requirements of the positions, and are hired only if they have passed all the strict examinations. The organizations by no means compromise to anybody or lower the standards" (Meng, 2016). On the other hand, "the deterrent factor for the staff turnover rate and the prerequisite for any successful business operations are represented by the personnel loyal attitude as a criterion of the effective human resources policy" (Morozova et al., 2016).

3. Material, methods and results of the study

The levels of personnel work, approaches to human resource management are the subject of many stakeholders in Slovakia. Many teams of researchers in research institutes, personnel agencies and educational institutions including universities are concerned by this issue. Various aspects of personnel work has also been systematically investigated at the Faculty of Economics of Matej Bel University in Banska Bystrica since 1997. The study was carried out in several stages.

In 1997 and 1998 (Vetrakova et al., 1998) the first survey of the level of personnel work was carried out in 378 organizations in the Slovak Republic. The purpose of the survey was to find out what approaches to personnel work are used in organizations, and what level personnel work is at. The results of the survey showed that personnel administration (the lowest level of personnel work) was the most frequent HR approach, but personnel management was starting to develop in SMEs, and human resource management was identified in large enterprises. Employers in most enterprises had not realized the importance of people as the most important factor that could have provided them with a competitive advantage in their market through their knowledge, skills, energy and motivation. They did not realize the need for strategic human resource management. In most of the surveyed companies, managers did not use modern management principles; they worked intuitively, based on experience. Operational management dominated over the strategic one. In spite of the statement by top executives that working with people is considered to be one of the most important tasks in running an organization, many managers lacked basic knowledge and skills in human resource management. This condition persisted, although the transformation process of the Slovak economy had been going on for several years.

In order to get an image of the quality of the human resource management system and the competence of managers in the complex area of the national economy of the Slovak Republic, an examination of managers focusing on their human resource management capabilities was conducted at the Faculty of Economics at Matej Bel University in 2004. The subjects of the survey were universal line managers (generalists) and managers specializing in personnel activities (personalists). The sample of surveyed enterprises (a total of 327) consisted of enterprises from all sectors of the national economy. The method of sociological inquiry via a questionnaire was used. The survey found that 58.2% of the interviewed managers were ready for work in the European Union, 75% of the managers invested in their own education, 74.1% of the managers believed that the entry into the European Union would increase the quality of the work process, skills of employees, control of information technologies, monitoring of new trends and European legal norms, communication, relationship with customers (Vetrakova, 2004). While examining the preparedness of managers for personnel work in an international environment, the following issues of particular concern were identified: foreign language control, experience with negotiation at international level – especially for middle and line management and specialists managers, application of modern technology in personnel work, ability to educate and influence line managers, IT abilities, ability to define and mediate future visions of human resources, knowledge of the practice of competitors in the field of human resource management, international experience in employing people.

In 2005 and 2006, (as part of the project VEGA 1/2620/05 The Employee Benefit Assessment Methodology in Small and Medium Sized Enterprises) a survey of personnel work was carried out in 680 companies based in Slovakia. Sociological inquiry via a questionnaire produced the following results: From enterprise resources – material, human, financial and information – employers considered human resources to be the most important ones (1.7 in scale 1 to 4 where 1 = the most important). We rate this finding very positively because human resources in an enterprise put all other resources into motion, and are a source of inimitable competitive advantage. The human resource development strategy was identified in 29% of the enterprises. The least realized work activity was job analysis (60.01%). On the other hand, enterprises were the most concerned about selection (86%) and the adaptation of employees (89.47%). The examination showed insufficient dedication to the job analysis, even if it was considered the third most important personal activity in the opinion of the respondents. Only 21.1% of the surveyed organizations used a self-service personnel information system. About 54.56% of the organizations had considered its implementation in the future. This was evaluated as a positive trend with regard to the benefits such system provides. A number of businesses had been performing a personnel audit. We were interested in knowing when the audit was carried out in the investigated enterprises. By then, in 56.76% of the organizations the personnel audit was never carried out. Personnel work was carried out mainly by HR manager (32.5%), owner (30.8%) or wage department (28.7%). Top managers took very little care in personnel work (only 8%), which indicates that they did not attach sufficient importance to this area of managerial work. Working with people must be an integral part of the management work of each manager.

In 2009, using a questionnaire, personnel work in 312 organizations was examined. We found that the most frequent personnel activities carried out were the selection of employees (87.8%), the evaluation of employees (81.4%) and the recruitment and adaptation of employees (80.8%). Only 47.4% of organizations created strategies, policies and other plans, even less (31.1%) conducted personnel controlling and auditing. Job analysis was conducted in 47.8% of the organizations, which cannot be evaluated positively because it is the basis for the success of all personnel activities. Selection of employees (35.9%), strategy and policy making (22.1%), personnel administration and staff development (both 16.3%) were of the greatest importance, indicating that the preference for the operation remained over strategy and underestimated strategic approach to personal work. Personnel strategy was formalized in 42.9% of organizations. Personnel work was mostly performed by independent personnel departments (37.5%), wage (economic) departments (29.8%) or owners (26.6%). The most frequent problems faced by personnel were recruiting and selection of employees, fluctuation, performance evaluation, lack of qualified workforce, motivation of employees. In the future, they would like to improve especially the system of personnel work itself and its functionality, simplifying administrative work, introducing personnel control, personnel audit, job analysis, employee evaluation and remuneration system, motivation of employees. We note that there is an advancement in employers' understanding of the importance of personnel work for the success of the organization not only in the declaration, but also in the improvement of human resource management systems.

Within the VEGA project 1/0235/14, the formation of an organizational culture and corporate governance system with an international representation in an intercultural environment, another survey was conducted in 2015 and 2016 to analyze the specificities of human resource management in multinational companies operating in Slovakia. We wondered what changes in human resource management were brought by multinational companies. Through structured interviews with managers of 26 multinationals, we found that the competence and responsibility for taking strategic decisions in human resource management was more centralized in 20% and more decentralized in 31% of surveyed companies, 49% considered the distribution of centralized and decentralized competences as balanced. An ethnocentric approach to governance was applied by 19% of companies, polycentric by 31% of companies, regiocentric by 8% of companies and transnational by 42% of companies. The way in which multinational companies were managed in a multinational environment was more flexible and diverse, used multi-national functional processes and was characterized by the application of international management and marketing, examples of best practice tailored to the specificities of the regions in which local businesses operated. New impulses, ideas and differences had become a driving force, employees were inspired by each other and they also helped each other internationally and increased their knowledge and experience in an international environment. Great professionalism and international experience of senior managers were also of great benefit.

So far, the latest survey was conducted through sociological inquiry (questionnaire supplemented by interviews with competent managers) in 2017. 381 organizations participated. Our intention was to find out what changes occurred in the personnel work compared to 2009, so we used the same questionnaire as in 2009 with minor variations. The most frequent activities performed were the selection of employees (90.79% of organizations), recruitment and adaptation of employees (86.58%) and training and development (82.63%). Only 49.74% of organizations were involved in the development of strategies, policies and other plans, which is only a slight increase compared to 2009. Personnel controlling and auditing performed 41.58%, which is 10% more than in 2009. Job analysis was performed by 56.05% of organizations; 20.53% had a self-service personal information system; 17.89% of organizations were dedicated to talent management, so we can see a positive trend here. A new positive finding is the interest of 19.74% of respondents in providing external anonymous counseling to solve personal problems of employees. Respondents also expressed their views on the prerequisites for managers working in an intercultural environment. First of all, it is the use of at least 1 foreign language (75.53% of respondents), followed by effective communication (56.32%), knowledge of cultural differences (52.63%), organization of work (51.05%), bargaining competency (38.16%), awareness of own culture (35.26%). In the management of personnel work, organizations with an international representation preferred an ethnocentric approach (45.79%) over transnational (37.11%) and polycentric one (17.11%). Personnel work in most organizations was done by personnel managers (37.11%), economic departments (31.32%) or owners (28.95%). The most frequent problems in the personnel work appeared to be the lack of qualified workforce in connection with recruitment and selection; fluctuation and absence; labor relations and workplace conflicts; evaluation, remuneration, motivation, performance of employees. In the future, in the HR system, they would like to change mainly the approach to employee training and development, to improve the system of employee evaluation, to streamline administration, to establish a strategic personal information system and personal control, to develop a personnel strategy, to establish a functioning human resource management system, improve motivation, adaptation and talent management, introduce a dual education system.

4. Conclusion

Personnel work in Slovakia has undergone many changes over the last period. Even as a result of globalization, it has seen significant movements towards improvement, but some steps backwards have also emerged. After 1989, many companies have made so-called “partial human resource management”, not paying attention to some personnel activities, such as evaluation or job analysis, the operative approach in human resource management prevailed over strategic one. With the growing presence of multinational corporations and employing people of different nationalities, there are also changes in the individual processes of human resource management. Personnel work also gains an international character in Slovakia. The labor market gap did not eliminate the problem of lack of qualified labor in the required structure – despite the high unemployment rate; employers have reported a problem with the shortage of jobseekers in many jobs. In the near future, they are also expected to face a new situation caused by extreme migratory waves or by the departure of the United Kingdom from the European Union (BREXIT). Human resource managers are therefore facing new external business conditions resulting from globally linked economies. In particular, it will manage a globally diverse workforce – employing people of different nationalities coming from different parts of the world, sending staff abroad – relocating where they will be most effective. This requires creating a suitable, motivating environment for them (at home and abroad), taking into account their specificities in different areas, promoting creativity, enabling them to grow and self-realization, applying new, effective approaches to leadership, such as coaching, creating conditions for the application of flexible forms of employment, to implement the concept of freedom at work. If personalists will be able to create a system by which these external business conditions can cope and deal with them, then their fear of an uncertain future will change to self-confidence because they will be able to define, predict and manage their responses (Ulrich et al ., 2014).

In general, it is possible to say that particular human resource management activities have begun to be used more effectively to meet the needs of organizations and employees themselves. A trend towards a holistic approach toward working with people in the work process is observable. This new direction of personnel work expresses the importance of people, the human labor force as the most important factor of production. At the same time, it puts pressure on the labor market, because better quality manpower offers more lucrative jobs, which is a competitive advantage for an enterprise. As a result of these changes, some new trends and tendencies are beginning to appear in personal work in Slovakia, which fundamentally change the way in which particular work activities are carried out. The company's personnel work becomes more qualified, more flexible and more modern, more focused on the quality and service of the internal customer – an employee. New forms of work organization are applied, with emphasis on the flexibility, efficiency and quality of enterprise solutions (including the use of HR services and outsourcing of personnel activities), growth in investment in employee training and development, the development of the use of electronic HRM as well as knowledge management tools and talent management, specific approaches to Y-generation employees (so-called millennials born in 1985 – 2001) and their entry into the labor market. According to the survey, (www.forbes.com, 2015) by 2020, this generation will account for 40% of the world's workforce. Young people handle digital technologies, have a specific approach to work, possess different values, and prefer different motivators that employers have to understand and implement to their personnel work processes.

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THE COOPERATIVE BANKING SECTOR IN POLAND: DO UE RISK REDUCTION MEASURES AND CAPITAL ADEQUACY REQUIREMENTS AFFECT PERFORMANCE AND STABILITY?

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Abstract. The purpose of this paper is to evaluate the links between regulatory practices and both Polish cooperative banking sector performance and the institutions' stability. Research methods cover the comparative analysis of scientific literature documents and reports as well as statistical data. The paper points out that bank consolidation in the Polish cooperative sector resulted in sharp reduction in the number of banks. The cooperative banks have been forced to reorganize their structures in order to respond effectively to challenges of the globalization trends in the modern banking sector and to adjust to the European regulatory framework. The Capital Requirements Directive (CRD IV) and the Capital Requirements Regulation (CRR) were implemented into the EU to comply with the global standards (i.e. the Basel Committee on Banking Supervision). Findings indicate that the quality of cooperative banks loans granted to SMEs has worsened and the deterioration of basic measures of effectiveness has been observed in the years 2012 through 2016. In the capital requirements of cooperative banks, the requirement for credit risk was predominant, while the average credit risk weights were higher than in commercial banks. The bankruptcy of SK bank (one of the largest cooperative banks) at the end of 2015 and over 2 billion zlotys payment of guaranteed deposits by the Bank Guarantee Fund, highlights the key importance of supervision approaches on banks' liquidity risk and a funding structure.

Keywords: cooperative banks, capital requirements, Poland

JEL Classification: G21, G28, G34, L39

1. Introduction

The last financial crisis highlighted that banks were highly leveraged, i.e. they took on large exposures off-balance sheet items with relatively limited additional capital based on risk weights applied to assets. Some banks were either forced to request emergency liquidity assistance from central banks or to be bailed-out by their governments. The purpose of this paper is to evaluate the links between regulatory practices and both Polish cooperative banking sector performance and the institutions' stability. The paper also covers an analysis of the risks and dilemmas of cooperative banks in Poland in the context of capital requirements laid down in new EU regulations. Research methods cover the comparative analysis of scientific literature documents and reports as well as statistical data. The analysis of the operations of cooperative banks in Poland was based on data provided by National Bank of Poland (NBP) and Polish Financial Supervision Authority (KNF).

2. Literature review

There is a growing body of work examining the impact of capital adequacy requirements, information disclosure requirements and disciplinary power of the authorities on bank performance and stability (Barth et al., 2004; Gonzalez, 2005; Boenin et al. 2005; Teglio et al. 2012; Beck et al. 2006; Drake et al. 2006). Recent research revealed that higher capital stringency and higher regulations that enhance private monitoring (i.e. Pillar 3 of Basel) are positive associated with higher bank efficiency (Delis et al., 2008). There is recognition in the literature that bank capital requirements reduce risk taking incentives, reduce monitoring incentives, which reduces the quality of banks' portfolios and influence the nature of strategic competition among banks (Gehrig, 1995; Blum, 1999). However, according to Barth et al. (2004), research findings also provide conflicting predictions as to whether the restricting bank activities will have positive effects because capital requirements may increase risk-taking behavior. Additionally, the opportunity to engage in a wide range of operations and fewer regulatory restrictions on the activities of commercial banks may produce more efficient and more stable financial systems.

In theory, the fact that a cooperative's clients are also its members and are involved in oversight over management, should provide it with an informational advantage over commercial banks (Fonteyne, 2007). Yet, the size of cooperative banks has increased in recent years and management pressure to raise their profitability to market level, reduced this comparative advantage. This may be specifically true in a credit service context, where members have lost good knowledge of other's credit- and trustworthiness. Moreover, prior research indicate greater financial stability of cooperative banks in comparison with commercial banks in the European countries (Fiordelisi & Mare, 2014; Groeneveld & Vries, 2009; Fonteyne, 2007). Meriläainen (2016), examining a sample of banks from 18 European countries notes that the lending growth of cooperative banks was less affected by the global financial crisis compared to shareholder banks. As Caselli et al. (2016) explain, diversity of ownership structures in the banking industry (co-operative banks operating alongside other ownership types) is beneficial for the stability of the financial system and its resilience to crises. Additionally, good lending relationships between local banks and SMEs are important for SMEs (Musa et al., 2016). Furthermore, research findings by Mamatzakis et al. (2008) suggest that smaller banks may find it easier to engage in "relationship" banking than larger commercial banks, as this type of banking cooperation requires local knowledge of clients' financial needs.

According to Pasiouras et al. (2009), the bank efficiency measures show how efficient banks are, relative to the best-practice frontier, in transforming their deposits to loans. As a result, capital requirements can affect bank efficiency by influencing: both the quantity and quality of lending and the decision of banks regarding their sources of funds.

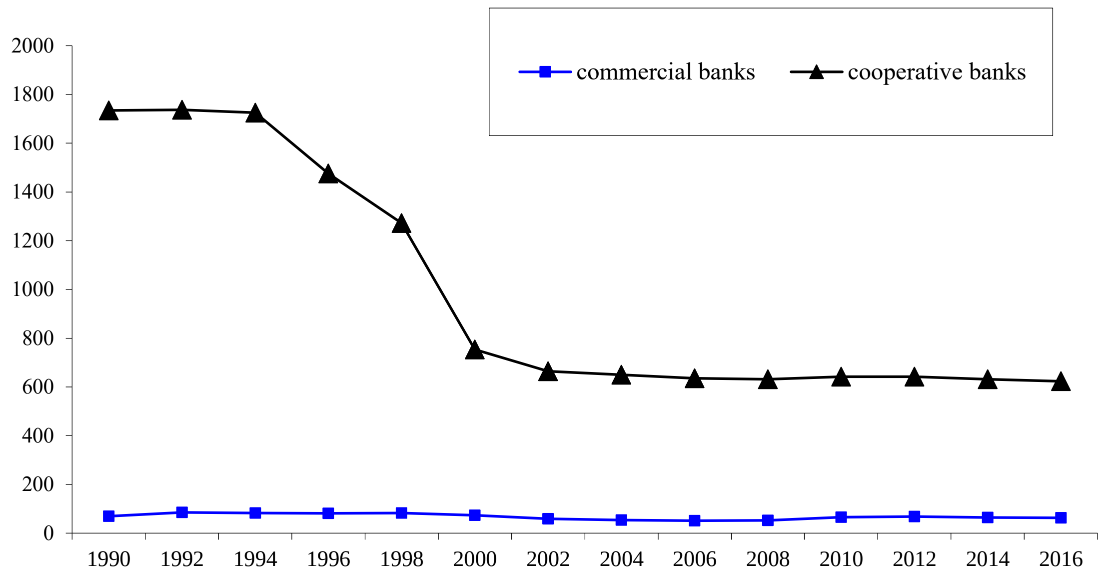
3. Results and discussion

3.1 Cooperative banks in the Polish banking system

In Poland cooperatives are voluntary associations of people whose aim it is to satisfy their common economic and integrative needs, and they are a display of the aspirations of local communities. Cooperatives operate in various sectors of the economy. The earliest credit cooperatives in Poland came into existence in the second half of the 19th century in Greater

Poland. Credit institutions, irrespective of organizational structure (Raiffeisen unions, Stefczyka unions or people's banks such as Schulze), helped to finance local economic development and maintain the assets of Poles regardless of invader until the beginning of World War I . During the interwar period, the credit cooperative movement developed, among other things, thanks to preferential regulations of law. At the first stage of political and economic transformation in Poland, in 1989-1994, without having staff experienced in risk management, great numbers of cooperative banks ran into financial trouble. In the following years, the banks were subjects of consolidation in the form of mergers and acquisitions, recovery programmes and liquidation The number of cooperative banks decreased from 1664 at the end of 1990 to 560 at the end of 2016 (Fig. 1).

Figure 1: The number of banks in Poland in the years 1990-2016



Source: Own elaboration based on the data of Polish Financial Supervision Authority

Over time, Polish cooperative banks have modernized. Cooperative banks reinvest most of their resources in their local areas. They are often operate in low populated areas. It helps to finance the local economy. Cooperative banks run their activities in Poland pursuant to the regulations of the Banking Law and Cooperative Law. According to Polish banking regulations, cooperative banks must hold minimum equity at the amount equivalent to EUR 1 million compared with EUR5 million in commercial banks. Cooperative banks are cooperatives, whereas commercial banks are joint-stock companies. Rights to shares in cooperative banks are not subject to trading in the Warsaw Stock Exchange. Furthermore, cooperative banks have a disadvantage to raise capital compare to commercial banks due to regulation of Warsaw Stock Exchange. It should also be emphasized that liquidity on the Warsaw Stock Exchange, as measured by the ratio of turnover to capitalization of instruments, is low when compared to other large stock exchanges. due to relatively large number of companies with small capital and low free float (Sołoma, 2014).

3.2 CRD and CRR

The Capital Requirements Directive (CRD IV) and the Capital Requirements Regulation (CRR) were implemented into the EU to comply with the global standards (i.e. the Basel Committee on Banking Supervision). The CRR or Directive 2013/36/EU introduced the detailed provisions on calculating capital requirements for all banks, in parallel with their risk-based capital requirements. The CRD and CRR were expected to both considerably reduce the probability of European banks failure. CRD allowed national authorities to apply additional capital and reporting requirements to selected institutions in order to deal with micro- and systemic risks in the financial system. Polish Financial Supervision Authority expects banks to maintain the minimum level of the Total Capital Ratio (TCR) at 12%, higher than the CRDIV/CRR standard of 8%. In 2016, most banks in Poland used more conservative methods of capital requirements for given credit exposures, based on supervisory parameters, than advanced methods permitted in the CRDIV/ CRR package. The regulatory capital adequacy ratios in cooperative banks in Poland continued to grow. In 2016, TCR for the cooperative banking sector was 17.1% compared to 17.8% for the commercial banking sector. In 2016, cooperative banks started to increase Common Equity Tier 1 capital with membership capital due to positive result of the notification of this type capital instruments with the European Banking Authority (Osiński, 2017).

However, according to the data of Polish Financial Supervision Authority, a total of 28 cooperative banks (representing less than 2% of total assets of the banking sector) failed to carry out this minimum capital requirements (*Raport o sytuacji banków*, 2017). Furthermore, the different structure of regulatory capital in Polish cooperative banks than in commercial banks was observed. Retained profits accounted for a larger share in the structure of cooperative banks' regulatory capital compared to shareholder banks. This was despite the fact that cooperative banks had a negative funding gap (excess of deposits over loans). By comparison, the majority of Polish commercial banks had a positive funding gap (excess of loans over deposits).

3.3 Efficiency and financial stability of cooperative banks

In 2015, Institutional Protection Scheme (IPS) for Polish cooperative banks was implemented. Participation of banks in the IPS provides mutual capital and liquidity support for the participants and could be one of the aspects of a deeper integration within the group. For example, after the banks join the IPS, they can use risk weights of 0% for mutual exposures as a result of which the capital requirements are lower. A total of 476 cooperative banks were members of the IPS in 2016. Yet, over 80 cooperative banks remain outside the IPS. This risk to maintaining the liquidity standards is still important from the point of view of financial system stability in Poland. In case of insufficient liquidity of financial institution, early intervention of banking sector supervisors can reduce the costs for taxpayers and increase market confidence. For example, Polish Financial Supervision Authority suspended the operations of SK bank and decided to file bankruptcy proceedings against the bank in 2015. SK bank was one of the largest cooperative banks with 40 branches and thousands of clients who entrusted it with PLN 3.3 billion. The takeover by another bank was unsuccessful. According to authorities of NBP, the most expensive method of "removing" the bank from the market was implemented, i.e. through bankruptcy. Payment of guaranteed deposits by the Bank Guarantee Fund amounted to over 2 billion zlotys (Osiński, 2016).

Table 1: Structure and selected indicators of the effectiveness of Polish banking sector in the years 2012-2016

Shares of the assets of the entire banking sector, in %					
	2012	2013	2014	2015	2016
Commercial banking sector	91.4	91.1	91.1	91.2	90.7
Cooperative banking sector	8.6	8.9	8.9	8.8	9.3
ROE (net income/average funds), in %					
Commercial banking sector	11.1	7.8	10,1	7,6	7.7
Cooperative banking sector	11.1	8.4	7.5	4.4	5.2
C/I (costs / income), in %					
Commercial banking sector	49.1	51.0	48.7	56.8	54.3
Cooperative banking sector	65.8	70.9	69.3	76.5	70.4

Source: Own elaboration based on the data of Polish Financial Supervision Authority and National Bank of Poland.

The C/I ratio for Polish cooperative banks is higher than that of commercial banks (Tab.1). The C/I ratio (cost/income ratio), referred to as cost efficiency ratio, is measured through comparison of bank’s operating costs and depreciation with income from banking operation. The lower the ratio, the greater the cost efficiency. The higher C/I ratio of cooperative banks was, to a large extent, driven by the vast number of cooperative banking branches. In 2016 cooperative banking branches accounted for 38.0% of the overall number of banking branches in Poland, and gave employment to almost 20% of the people employed in the banking sector (*Informacja o sytuacji banków spółdzielczych,* 2017). In Poland, cooperative bank branches are to a much greater extent located in the countyside compare to commercial bank branches.

The profitability of Polish cooperative banks has declined over the period 2012–2016. Compared to commercial banks, ROE ratio of cooperative banks decreased significantly in 2013. (Tab.1). This can be explained by the low interest rates, weak efficiency associated with the sector’s business model and the low quality of loans to the non-financial sector. In the capital requirements of cooperative banks, the requirement for credit risk was predominant, while the average credit risk weights were higher than in commercial banks. With regard to lending portfolio, the quality of loans to SMEs deteriorated notably in 2016. At the end of 2016, the share of the non-performing loans granted to SMEs in non-financial sector loans amounted to almost 25% (*Informacja o sytuacji banków spółdzielczych,* 2017). However, the quality of loans to individual farmers was still much better than average in the non-financial sector.

4. Conclusion

Bank consolidation in the Polish cooperative sector resulted in sharp reduction in the number of banks (from 1664 in 1990 to 560 in 2016). The profitability of cooperative banks has declined over the period 2012–2016. The Polish cooperative banking sector managed to adjust to EU regulations, including capital requirements. Yet, bankruptcy of SK bank (one of the largest cooperative banks) highlights the key importance of supervision approaches on banks’ liquidity risk and a funding structure. The findings of this study are potentially important for the application of improvments to the cooperative banks’ governanance systems. Such improvments could include mechanisms that allow members to decide the size of the institution, forming networks and exsposure to market mechanisms.

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SELECTED ASPECTS OF QUALITY OF LIFE DURING THE PROCESS OF GLOBALIZATION

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Abstract. The quality of life of inhabitants living in any territory is affected by several factors. By quantitative expression of these factors it is possible to create the quality of life indicators. It is possible to classify them according to the common properties into several separate dimensions. In order to improve the quality of life of the population, all countries have to positively influence these indicators. This increases the living standards of the population and greater satisfaction with their life. However, in the present world the quality of life indicators are in many ways influenced by globalization. Besides a number of positives, globalization also brings negatives in the form of a deterioration in the security situation, increased crime, threats of terrorism, and so on. All these security threats negatively affect not only the quality of life of the population, but they influence also other indicators of quality of life. The aim of the paper is to analyse the development of selected indicators of the quality of life of the population in selected European Union countries with a focus on security. Based on the analysis of these indicators, the paper points out positives and improvement of the standard of living for the countries of the European Community and also the way how globalization negatively affects the quality of life of the population.

Keywords: quality of life, indicators, globalization.

JEL Classification: F15, F36, F63

1. Introduction

Problematika zvyšovania kvality života je v súčasnosti jednou z najdôležitejších oblastí. Merať kvalitu života obyvateľov je však zložité z dôvodu množstva faktorov, ktoré ju ovplyvňujú. V súčasnom procese globalizácie sa kvalitu života snažia merať rôzne medzinárodné organizácie podľa svojich vlastných metodík. Metodika merania je však závislá od faktorov, ktoré jednotlivé medzinárodné organizácie považujú za najdôležitejšie. Medzi faktory, ktoré možno považovať za univerzálne, keďže ich využívajú takmer všetky medzinárodné organizácie, sa zaradzujú ekonomické a sociálne indikátory. Medzinárodné organizácie by však pri hodnotení kvality života mali brať do úvahy aj aktuálny vývoj sveta v procese globalizácie. V súčasnosti sa do popredia dostáva predovšetkým problematika bezpečnosti, ktorá značne ovplyvňuje kvalitu života obyvateľov. Hrozba teroristických útokov, nekontrolovateľná migrácia, testovanie jadrových zbraní a ďalšie hrozby súčasnosti negatívne vplývajú na život obyvateľov.

Indikátory bezpečnosti, ktoré vyjadrujú stav bezpečnosti v spoločnosti sú pri meraní kvality života často nepovšimnuté. Medzi takéto indikátory bezpečnosti je možné zaradiť predovšetkým kriminalitu vo všetkých jej druhoch. Pre zaistenie zvyšovania kvality života obyvateľstva v súčasnom svete, ktorý sa nachádza v procese globalizácie, je potrebné skúmať vývoj sociálno-ekonomických indikátorov, ale aj indikátorov bezpečnosti, ktoré majú čoraz väčší vplyv na život obyvateľov.

2. Meranie kvality života

Medzinárodné organizácie, ktoré sa vo svojej činnosti zaoberajú aj skúmaním kvality života obyvateľov pre túto činnosť využívajú rôzne nástroje. Meranie kvality života je závislé predovšetkým od indikátorov, ktoré tieto organizácie používajú (Sedliacikova, 2015). Kvalita života je zväčša vyjadrená indexom, ktorý je vypočítaný na základe indikátorov (Majernik, 2016). Vo väčšine prípadov neberú do úvahy indikátory bezpečnosti, ktoré čoraz viac ovplyvňujú ľudský život.

2.1 Meranie kvality života

Kvalita života je podľa stav sociálnej pohody jednotlivca alebo skupiny, ktorý možno vnímať alebo identifikovať vybranými indikátormi (Johnston, 1994). Dané indikátory je možné kumulovať podľa spoločných znakov do jednotlivých súborov indikátorov, takzvaných dimenzií kvality života (Kovacikova, 2016). Na základe toho je možné vytvoriť demografickú, vzdelanostno-informačnú, bezpečnostnú a environmentálnu dimenziu, dimenziu materiálneho komfortu a sociálnych istôt a dimenziu vybavenosti bytov (Ira, 2005).

Skupina odborníkov Svetovej zdravotníckej organizácie definovala kvalitu života ako individuálne vnímanie životnej situácie človeka v kontexte kultúrneho a hodnotového systému, v ktorom žije a vo vzťahu k jeho cieľom, očakávaniam, normám a záujmom (Van Kamp, 2003). Tento prístup možno považovať za subjektívny, keďže dôraz sa kladie na individuálne vnímanie (Antalová, 2016).

Nástroj Svetovej zdravotníckej organizácie zisťuje subjektívne hodnotenie kvality života na základe telesnej kapacity, psychického stavu, miery nezávislosti, sociálnych vzťahov, prostredia a vierovyznania, resp. osobného presvedčenia (Kubas, 2017).

Organizácia spojených národov pre potreby merania kvality života zaviedla index ľudského rozvoja (Darcin, 2016). Na rozdiel od Svetovej zdravotníckej organizácie je tento index objektívny, keďže kvalitu života meria v troch základných dimenziách (Stofkova, 2016):

a) dlhý a zdravý život meraný priemerným očakávaným vekom dožitia pri narodení,
b) vzdelanie merané indexom gramotnosti dospelých a kombinovanou mierou hrubej návštevnosti základnej, strednej a vysokej školy,
c) stupeň životného štandardu vyjadreného v HDP na obyvateľa, váženom paritou kúpnej sily.

2.2 Aspekt bezpečnosti pri meraní kvality života

Hrozby súčasného sveta vytvárajú predpoklad pre ovplyvňovanie kvality života negatívnym spôsobom (Sakovich, 2016). Z tohto dôvodu je preto pri skúmaní kvality života zamerať sa čoraz viac na aspekt bezpečnosti a skúmať indikátory bezpečnosti (Butek, 2016). Tie charakterizujú úroveň bezpečnosti určitého systému. Pojem indikátor vo všeobecnosti označuje viditeľný jav, trend alebo skutočnosť, ktorý indikuje stav alebo stupeň niečoho, ťažko pozorovateľné spoločenské zmeny alebo umožňuje iné javy predvídať (pouličné nepokoje indikujú napätie) (Hofreiter, 2014). Rozlíšiť je možné dva druhy indikátorov bezpečnosti (Belan, 2015):

a) reaktívne indikátory – patrí sem napríklad pouličná kriminalita (mravnostná, majetková), vandalizmus, násilná kriminalita, drogová kriminalita, a pod.
b) prediktívne indikátory, ktoré sa zaoberajú monitorovaním prevádzkových procesov so zameraním na ich kritické miesta a potenciálne nehody.

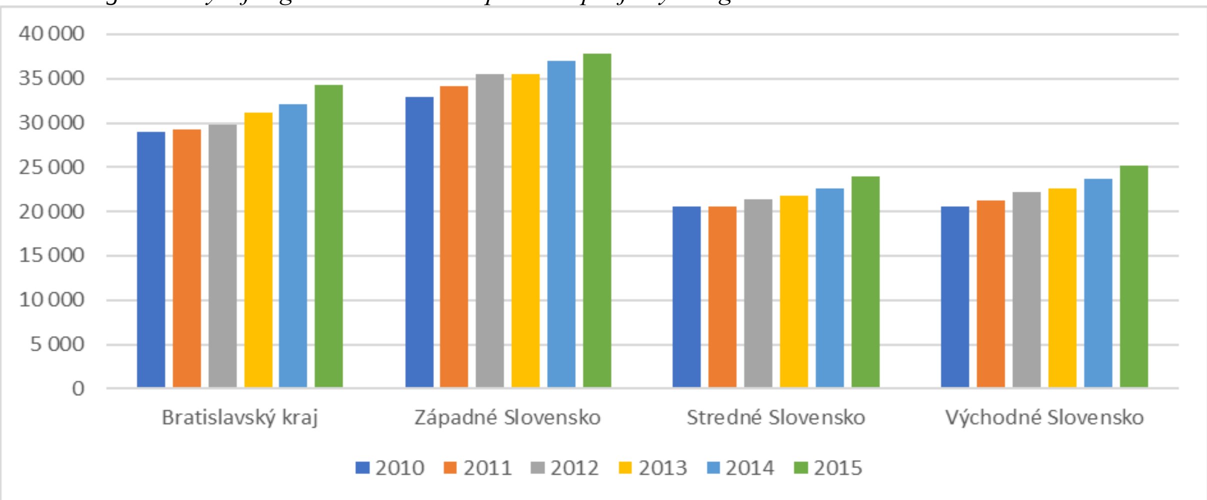
Pre skúmanie kvality života z hľadiska bezpečnosti je potrebné zaoberať sa predovšetkým reaktívnymi indikátormi bezpečnosti (Baranovskyi, 2016). Tie reprezentuje predovšetkým kriminalita, ktorú je možné považovať za objektívny indikátor (Kovac, 2015).

3. Vývoj vybraných indikátorov kvality života

Zo sociálno-ekonomických indikátorov, ktoré najviac ovplyvňujú kvalitu života (či už priamo alebo nepriamo) hrubý domáci produkt a miera nezamestnanosti. (Stofkova, 2015) Z hľadiska bezpečnosti je možné považovať kriminalitu za najvýznamnejší indikátor vplývajúci na kvalitu života.

Skúmanie uvedených indikátorov pre posúdenia ich vývoja, a teda aj vývoja kvality života obyvateľov je vykonané pre vybrané krajiny. Slovenská republika je spolu s Českou republikou, Poľskom a Maďarskom členom Vyšehradskej štvorky, ktorá predstavuje spoločný supranacionálny región. Z týchto krajín je vývoj uvedených indikátorov skúmaný pre regióny úrovne NUTS 2 Slovenskej republiky, Českej republiky a Poľska.

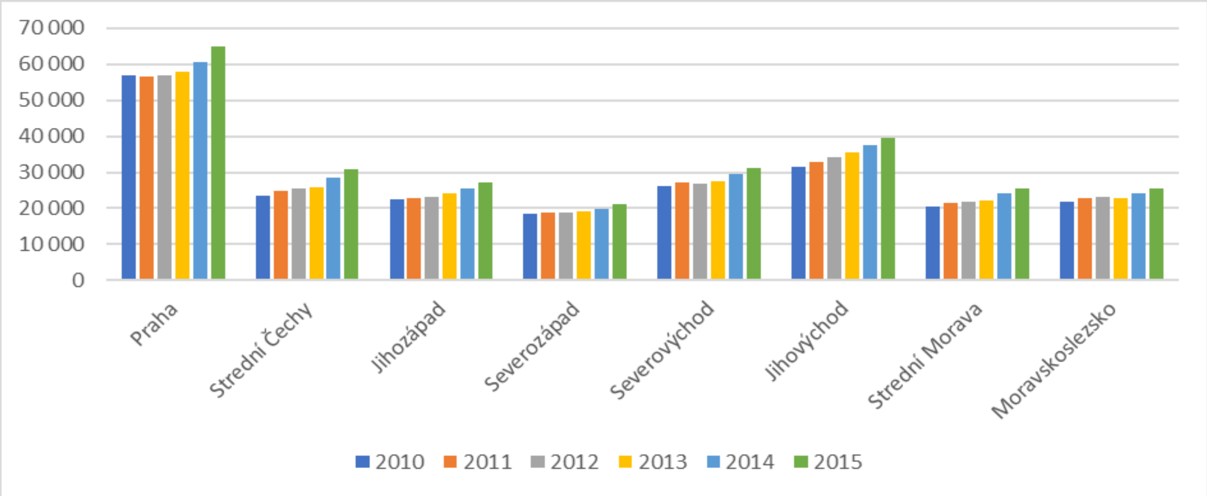
Figure 1: Vývoj regionálneho HDP v parite kúpnej sily v regiónoch úrovne NUTS 2 na Slovensku



Source: Eurostat

Podľa obrázka 1 vývoj regionálneho HDP v regiónoch úrovne NUTS 2 v parite kúpnej sily na Slovensku je priaznivý. Každoročne dochádza k jeho zvyšovaniu vo všetkých regiónoch, pričom najvyššie regionálne HDP je zaznamenané v regióne Západného Slovenska.

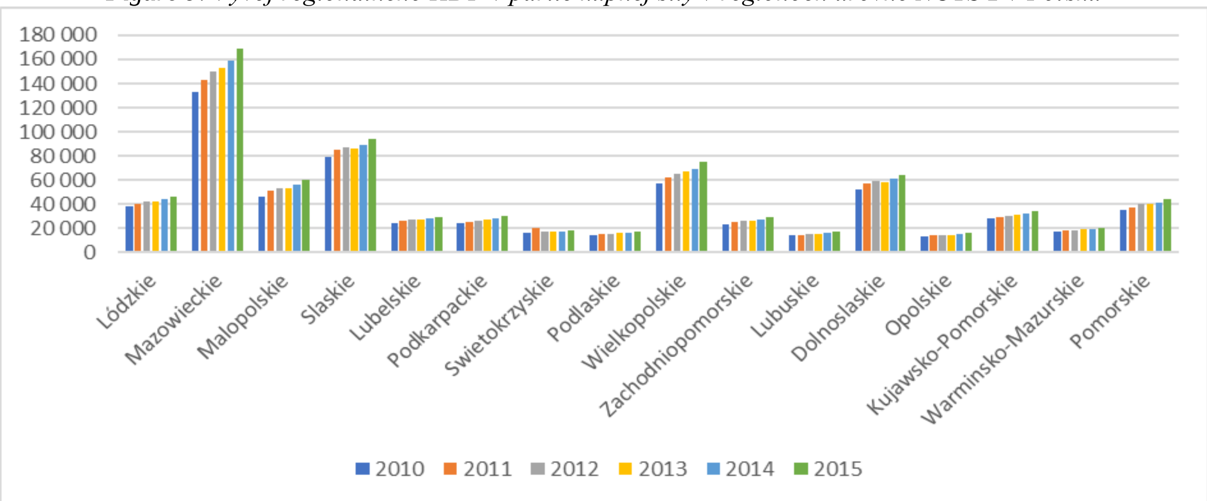
Figure 2: Vývoj regionálneho HDP v parite kúpnej sily v regiónoch úrovne NUTS 2 v Českej republike



Source: Eurostat

Obrázok 2 znázorňuje vývoj regionálneho HDP v parite kúpnej sily v regiónoch úrovne NUTS 2 v Českej republike. Je zrejmé, že najsilnejším regiónom z tohto pohľadu je región Prahy. Všetky ostatné regióny sú podľa tohto indikátora kvality života približne rovnaké, pričom, podobne ako na Slovensku, je možné si všimnúť rastúci trend vo všetkých regiónoch. Porovnaním regiónov úrovne NUTS 2 Českej republiky a Slovenska z hľadiska výšky regionálneho HDP v parite kúpnej sily je možné (s výnimkou regiónu Prahy) konštatovať vyrovnanosť regiónov.

Figure 3: Vývoj regionálneho HDP v parite kúpnej sily v regiónoch úrovne NUTS 2 v Poľsku

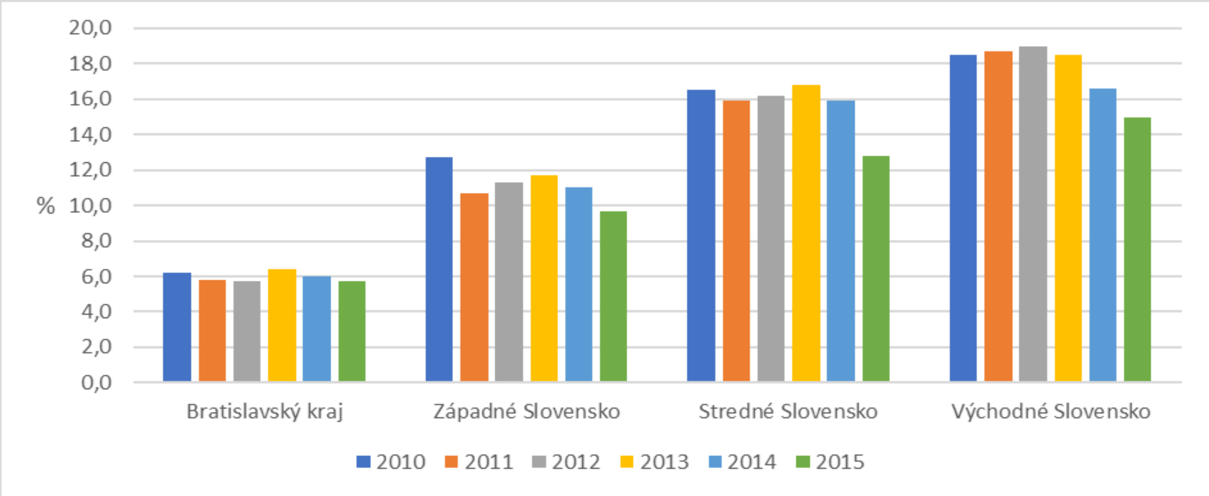


Source: Eurostat

Poľsko má v porovnaní so Slovenskom a Českou republikou najviac regiónov úrovne NUTS 2. Obrázok 3 znázorňuje vývoj regionálneho HDP v parite kúpnej sile v týchto regiónoch. Najväčšie regionálne HDP má jednoznačne región Mazowiecko. V tomto regióne výška regionálneho HDP niekoľko násobne prevyšuje najlepšie regióny Slovenka a Českej republiky. Vo väčšine prípadov regiónov úrovne NUTS 2 Poľska je možné pozorovať rastúci trend regionálneho HDP. Vyskytujú sa však aj regióny, kde dynamika rastu nie je vysoká, resp. je stagnujúca.

Druhým významným indikátorom kvality života je miera nezamestnanosti. Obrázok 4 vyjadruje vývoj miery nezamestnanosti v regiónoch úrovne NUTS 2 Slovenska.

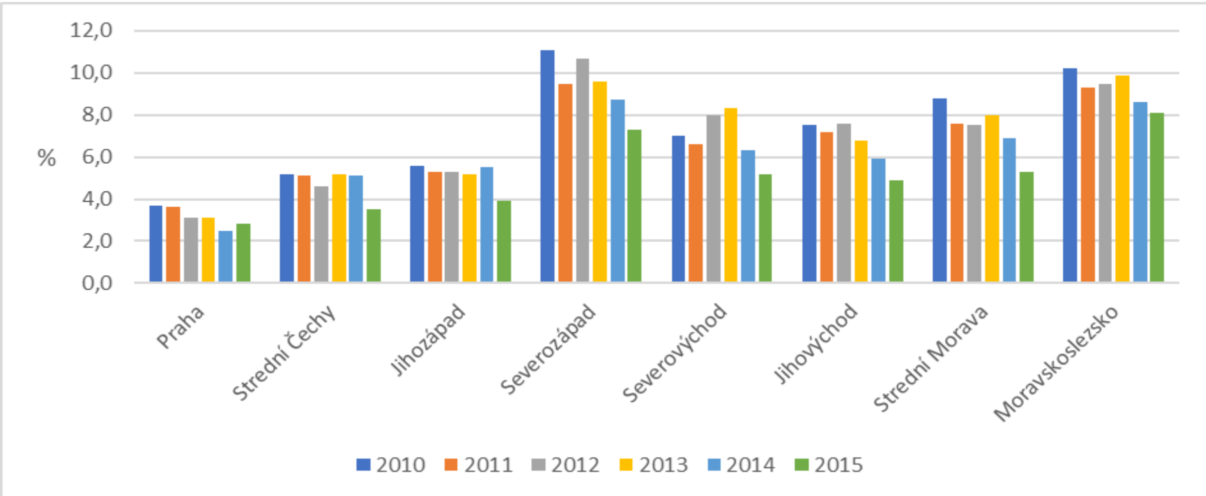
Figure 4: Vývoj miery nezamestnanosti v regiónoch úrovne NUTS 2 na Slovensku



Source: Eurostat

Vývoj miery nezamestnanosti v regiónoch úrovne NUTS 2 na Slovensku má prevažne klesajúci charakter. Najnižšiu mieru nezamestnanosti je možné badať v regiónoch, ktoré majú najvyšší HDP. Najnižšia miera nezamestnanosti je v Bratislavskom kraji, kde sa pohybuje v okolí 6 %. Naopak, najvyššiu nezamestnanosť je možné pozorovať v Prešovskom kraji, kde jej hodnoty v súčasnosti presahujú hranicu 14 %.

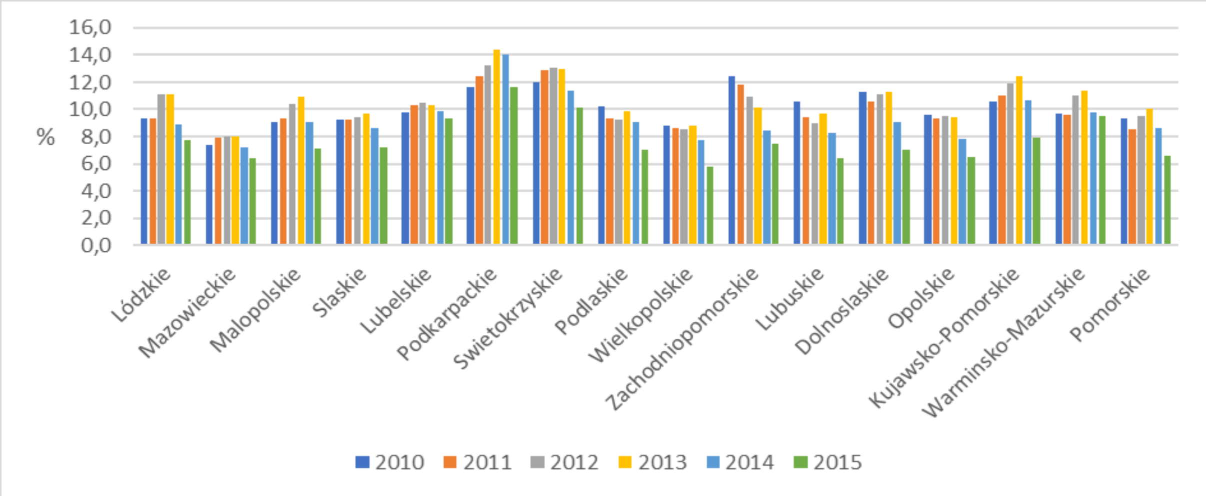
Figure 5: Vývoj miery nezamestnanosti v regiónoch úrovne NUTS 2 v Českej republike



Source: Eurostat

Obrázok 5 zobrazuje vývoj miery nezamestnanosti v regiónoch úrovne NUTS 2 v Českej republike. V skúmaných regiónoch v sledovanom období má zväčša klesajúci charakter. Hodnoty miery nezamestnanosti v porovnaní so Slovenskom sú však celkovo nižšie. Najvyššiu nezamestnanosť aktuálne dosahuje Moravskoslezsky región, kde sa hodnoty miery nezamestnanosti pohybujú na hranici 8 % (len cca 2 % viac ako kraj s najnižšou mierou nezamestnanosti na Slovensku).

Figure 6: Vývoj miery nezamestnanosti v regiónoch úrovne NUTS 2 v Poľsku

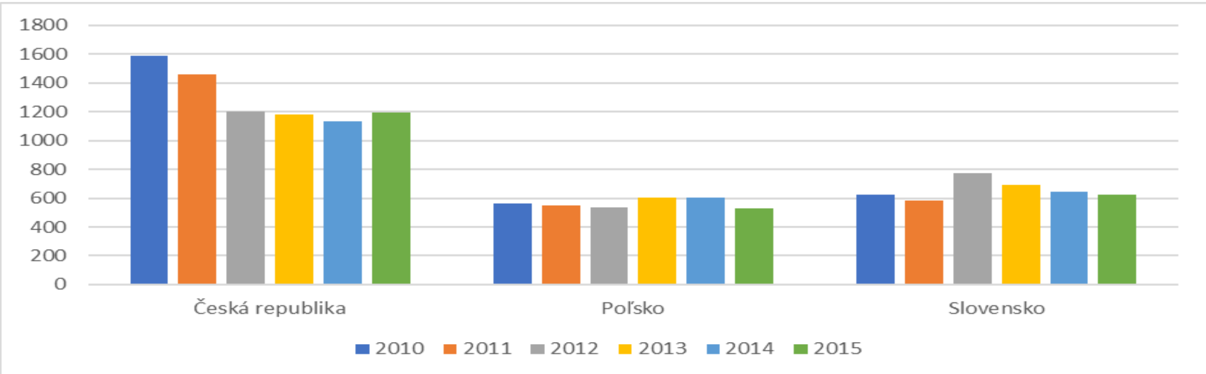


Source: Eurostat

Obrázok 6 vyjadruje mieru nezamestnanosti v regiónoch úrovne NUTS 2 v Poľsku. Je zrejmé, že nezamestnanosť vo všetkých regiónoch postupne klesá. Hodnoty miery nezamestnanosti sa v priemere pohybujú medzi hodnotami v regiónoch Českej republiky a Slovenska. Poľsko je však z tohto pohľadu možné považovať za najvyrovnanejšiu krajinu.

Na kvalitu života má okrem sociálno-ekonomických indikátorov vplyv aj bezpečnosť. Relevantným indikátorom bezpečnosti je kriminalita, ktorá vyjadruje počet zaznamenaných trestných činov na určitom území.

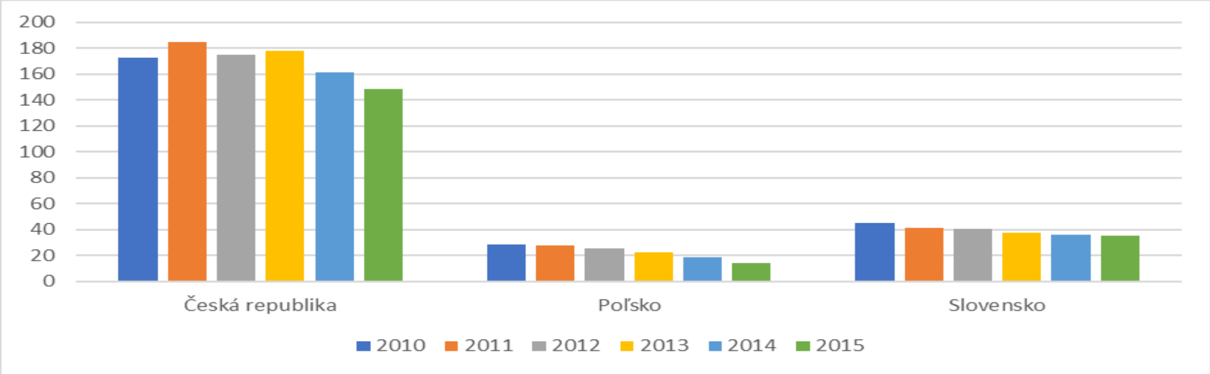
Figure 7: Vývoj krádeží na Slovensku, v Českej republike a v Poľsku



Source: Eurostat

Pre objektívnejšiu možnosť komparácie jednotlivých krajín je vhodné využiť index kriminality, ktorý vyjadruje počet zaznamenaných trestných činov na určitom území vzhľadom na 100 000 obyvateľov. Obrázok 7 vyjadruje počet krádeží zaznamenaných v jednotlivých krajinách pripadajúcich na 100 000 obyvateľov. Z tohto pohľadu sa ako najbezpečnejšia krajina javí Poľsko, za ktorým tesne nasleduje Slovensko. Najviac krádeží je dlhodobo zaznamenaných v Českej republike, pričom klesajúci trend narušil len posledný sledovaný rok. V Poľsku a na Slovensku je možné badať stagnujúcu situáciu.

Figure 8: Vývoj útokov na Slovensku, v Českej republike a v Poľsku



Source: Eurostat

Obrázok 8 vyjadruje počet útokov zaznamenaných v sledovanom období vo vybraných krajinách vzhľadom na 100 000 obyvateľov. Aj z hľadiska tohto druhu kriminality nastáva obdobná situácia ako pri krádežiach. Najmenej krádeží je zaznamenaných v Poľsku, za ktorým nasleduje Slovensko a s veľkým odstupom Česká republika. Vo všetkých krajinách je však možné všimnúť si klesajúci trend vývoja.

4. Conclusion

Kvalita života obyvateľov je ovplyvnená viacerými faktormi. Medzi tie najvýznamnejšie patrí predovšetkým sociálna a ekonomická situácia. V súčasnosti sa však do popredia dostáva aj problematika bezpečnosti, ktorá v procese globalizácie a pribúdajúcich hrozieb negatívne vplýva na kvalitu života. Nevyhnutné je teda skúmať vývoj porovnateľných sociálno-ekonomických, ale aj bezpečnostných indikátorov. Zo sociálno-ekonomických indikátorov boli zvolené regionálne HDP v parite kúpnej sily a miera nezamestnanosti. Za indikátor bezpečnosti je možné považovať kriminalitu, z ktorej boli skúmané len dve zložky – krádeže a útoky. Dané sociálno-ekonomické indikátory boli skúmané pre regióny úrovne NUTS 2 Slovenska, Českej republiky a Poľska. Krádeže a útoky boli skúmané pre celé územia krajín.

Vývoj regionálneho HDP v parite kúpnej sily takmer vo všetkých skúmaných regiónoch a štátoch rástol, čo pozitívne ovplyvňuje kvalitu života. Rovnako aj znižujúca sa miera nezamestnanosti mala pozitívny vplyv na kvalitu života. Pokiaľ ide o krádeže, ich počet sa znižuje predovšetkým v Českej republike. Rovnaký počet bol zaznamenaný pri útokov v jednotlivých štátoch. Možno konštatovať, že vo všetkých troch štátoch bol zistený pozitívny trend vývoja skúmaných indikátorov, čo indikuje zvyšovanie kvality života obyvateľov v jednotlivých regiónoch a štátoch ako celku.

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THE POWER OF THE MARK IN THE PALNE OF THE GLOBAL VALUE CHAIN

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Abstract. Globalization is a phenomenon of the present time that examines political, economic, geolinguistic, sociological, ecological and many other theories. These dimensions at the level of their research, present their positive and negative consequences of globalization. Views of globalization vary greatly depending on the dimension of social life. The article provides a cross-section of the socio-economic dimensions of globalization, and presents an analysis of the global value chains in the selected business sector - namely Starbucks Coffee Company - which is America's largest "coffee" chain in the world. The article shows, how important and powerful the brand is in the continuity of global value chains. It points to the phenomenon of the global brand in the context of benefits, reputation and success for the company and consumers. The internationalization of human resources and the current political and economic problems indicate new forms and possibilities of management and dynamics of entrepreneurial subjects. The analyzed company has a clearly defined vision of its ethics in all parts of the established value chain in its business, which differs significantly from others who deal marginally with ethical and environmental issues. Starbucks is part of the LEAD (Leaderschip in Energy and Environmental Design) project, which ensures that coffee houses around the world are built to meet environmental requirements. Starbucks with its avant-garde management underlines the global scope and global responsibility of today's society.

Keywords: globalization, global value chains, brand value, Starbucks, ethitc, environmental

JEL Classification: D60, P46

1. Intorduction

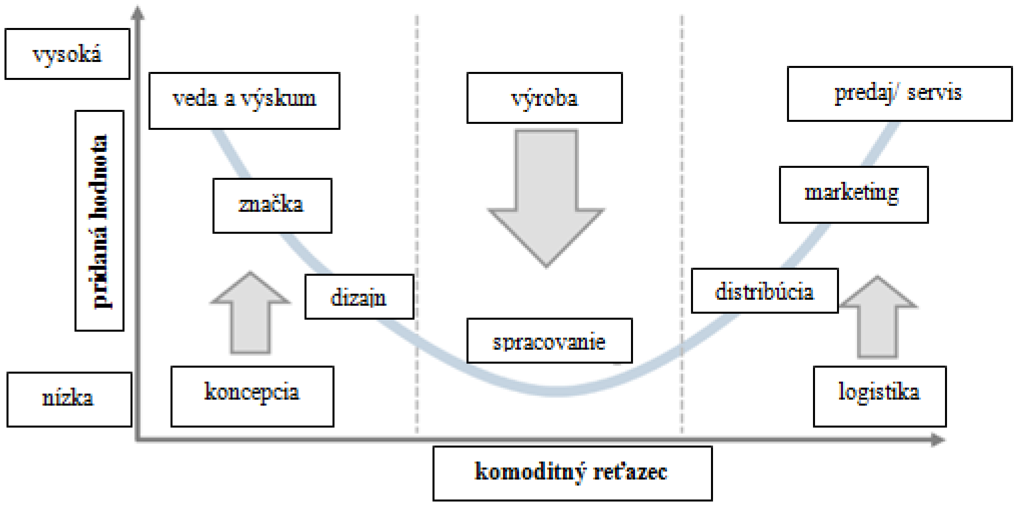
Pojmy globalizácia a globálne hodnotové reťazce sa významne implementovali do rôznych vedných disciplín súčasnej spoločnosti. Na základe vedeckých výskumov a analogických interferencií predstavujú proces globálnej integrácie a rozvoj vzájomnej závislosti jednotlivých krajín sveta. Globalizáciu možno chápať ako transformačnú etapu v dlhodobom vývojovom procese svetovej civilizácie. V súčasnosti sa vytvára určitý „globalizovaný spotrebiteľ" v dôsledku racionalizácie výroby a metód poskytovania služieb, ako aj spôsobom ich dodávania, ktorý je prispôsobený globálnemu marketingu so štandardizovaným charakterom. Súčasné prepájanie ekonomiky, kultúry i globalolingvistiky vedie k vývoju, ktorý sa označuje ako „coca-kolonizácia" alebo „mcdonaldizácia" (Dandaneau & Dodsworth, 2006) a podľa nás, už aj „starbucksizácia" sveta. Súčasťou tohto vývoja sú predovšetkým globálne rozlíšiteľné produkty, označené globálnymi značkami, ktoré sú ovládané pomocou miestnych franšízových zmlúv, stanovujúcich celý rad aktivít od spôsobu dodania až po predaj produktu.

2. Vytváranie pridanej hodnoty v globálnom hodnotovom reťazci

Rastúca medzinárodná deľba práce viedla k vzniku globálnych hodnotových reťazcov, pričom deľba práce sa prejavuje v pokračujúcej fragmentácii výrobných operácií, ktoré sa rozkladajú medzi jednotlivé krajiny sveta. Krajiny sa špecializujú hlavne na tie časti výrobného procesu, v ktorých majú určitú komparatívnu výhodu. Môže ísť napríklad o zásoby kvalifikovanej pracovnej sily, prítomnosť zdroja určitej suroviny, či kvalitné inštitucionálne prostredie, ktoré podporuje špecifické fázy výrobného procesu. Podstatou myšlienky komoditných reťazcov bola analýza vstupov a výstupov výrobných operácií, ktoré vedú k výrobe finálnych produktov. V 80. rokoch 20. storočia sa v svetovej literatúre o obchode, dodávkach i predaji začína aktívne používať pojem komoditný a neskôr hodnotový reťazec. (Bair, 2005) V súčasnom ponímaní „globálny hodnotový reťazec“ zahŕňa úplný súbor aktivít, ktoré firmy a ich pracovníci vykonávajú od počiatočného konceptu výrobku, až po jeho distribúciu a použitie spotrebiteľmi. Deľba práce sa prejavuje vo fragmentácii výrobných operácií, ktoré sú distribuované v jednotlivých krajinách sveta, kde daná výroba má pre firmy a spoločnosti vysoký ekonomický význam z hľadiska dosahovania ziskov. Existuje niekoľko indikátorov, ktoré poukazujú na stupeň fragmentácie výroby. Najčastejšie používanými býva index participácie a index dĺžky produkčnej reťaze. Vyspelé krajiny sveta sú konkurencieschopné vďaka vysokému objemu pridanej hodnoty v exportovaných tovaroch a službách. Na určenie konkurencieschopnosti krajiny je dôležité zistiť, v ktorej krajine a v ktorom štádiu produkcie pridaná hodnota vznikla. Vo všeobecnosti platí, že sofistikované aktivity hodnotových reťazcov sú lokalizované vo vyspelých krajinách. (Ritzer, 2003) Na obrázku (Obr. 1) je znázornený komoditný reťazec (úsmevná krivka) podľa S. Shiha (taiwanského manažéra a zakladateľa počítačovej firmy ACER) v súvislosti s vytváraním pridanej hodnoty.

Najvyššia pridaná hodnota sa v súčasnosti vytvára pri koncepcii vedy a výskumu, resp. pri predaji a servise a naopak, najmenej pridanej hodnoty pripadá v danom modeli práve na spracovateľské činnosti (napr. montážne práce), ktoré sa spravidla presúvajú do menej rozvinutých ekonomík. Rozloženie kompetencií v reťazci vo veľkej miere závisí od charakteru výrobného procesu, pričom vo všeobecnosti sa rozlišujú reťazce riadené kupujúcimi a reťazce riadené výrobcami. Reťazce riadené kupujúcimi majú jednoduchší produkt a horizontálnu štruktúru riadenia. Definované sú základné štandardy, ktoré musia dodávatelia produktov spĺňať, pričom sami do výrobného procesu nezasahujú. Reťazce riadené výrobcami poskytujú komplexný produkt a reťazec vykazuje vyšší stupeň vertikálnej integrácie. Z hľadiska previazanosti kľúčovej firmy s jej dodávateľmi môžeme rozlíšiť 5 typov správy globálnych hodnotových reťazcov. Ide o riadenie trhom, modulárne riadenie, prepojené riadenie, priame riadenie, hierarchické riadenie. (Schmitz, 2006) Jednotlivé krajiny v podstate súťažia o získanie článku pracovných aktivít v rámci celého reťazca. Konečným efektom úspešného fungovania globálneho hodnotového reťazca je dosahovanie optimálneho pomeru medzi vstupmi a výstupmi.

Figure 1: Úsmevná krivka Stana Shiha (komoditný reťazec)



Source: vlastné spracovanie podľa The geography of transport system (2017)

Mapovanie globálnych hodnotových reťazcov je realizované na mikro a makro úrovni, pričom neodmysliteľnú súčasť tvorí etika a psychológia posunov v rovine hodnotových článkov (Wahl & Bull, 2014), ktorá je spojená vždy s ľudským fenoménom práce, s ľudským fenoménom riadenia i s fenoménom spotrebiteľského absolutória, bez ktorého by samotné globálne hodnotové reťazce nemali význam. V rámci globálneho hodnotového reťazca a na základe fragmentácie produkcie sa vysoko rozvinuté know-how celosvetovo kombinuje s lacnou pracovnou silou, pričom práve v rozvíjajúcich sa ekonomikách je to mnohokrát v rámci tej istej korporácie. Jednotlivé firmy, ako články globálneho hodnotového reťazca, sa nachádzajú v rôznych krajinách. Existujú možnosti posunu po krivke hodnotového reťazca, pričom firmy a spoločnosti môžu získať významnejšie pozície v rámci reťazca a tým aj vyšší stupeň pridanej hodnoty a objemu ziskov. Medzi základné stratégie firiem patrí posun v rámci procesov, posun v rámci produktov, funkčný a sektorový posun. Prostredníctvom posunov jednotlivých firiem a spoločností, ktoré sú začlenené do oblastí s vytváraním nižšej pridanej hodnoty, by mali mať aj samotné krajiny schopnosť posúvať sa v hodnotovom reťazci smerom nahor. Rizikovým prvkom sa javí možnosť vtiahnutia málo rozvinutých krajín, ktoré často participujú na globálnych hodnotových reťazcoch do istého začarovaného kruhu s nízkou úrovňou ľudského kapitálu, nízkou technologickou náročnosťou a slabým inovačným potenciálom. Dôsledkom toho nižší dopyt po vysoko kvalifikovanej pracovnej sile tak oslabuje impulzy na investovanie do skvalitňovania vzdelávania a ľudského kapitálu, pretože vysoko kvalifikovaní odborníci by neboli v krajine dostatočne využití a ocenení. (De Backer & Miroudot, 2013)

3. Význam a sila značky v kontexte etiky globálnych hodnotových reťazcov

V koncepte globálneho hodnotového reťazca má významné postavenie práve značka. Obrazný význam značky, ktorý je chápaný pod týmto pojmom, v sebe zahŕňa viaceré atribúty produktu. Na začiatku celého brandingu stojí výber vhodného mena. Vďaka tomu je možné si značku nielen zapamätať, ale monitorovať aj jej povesť. Ak výrobca nestanoví na začiatku vhodné meno, ktoré môže znamenať polovicu úspechu, neskôr dokáže len veľmi ťažko zmeniť meno značky. (Zhang & Fang, 2014) (Kohli & LaBahn, 1997). Nami analyzovaný reťazec

Starbucks je inšpirovaný menom postavy z románu Biela Veľryba od Hermana Melvilla. Logo firmy je spojené s námornou tematikou v ktorom je zobrazená siréna z gréckej mytológie. Vzájomné analógie samotného vzniku spoločnosti až do dnešnej možnosti pitia z rôzneho druhu šálky a kávy na každom kontinente, predstavuje logickú interakciu v podobe globálneho hodnotového reťazca. Konečným článkom v rámci globálneho hodnotového reťazca je spotrebiteľ, zákazník, ktorý je hnacou silou výroby. Zároveň je aj súčasťou enormne rastúcich nárokov na kreativitu výrobkov, ako aj na samotné nonetické správanie v rámci spotreby. (Marques et al., 2015) Problémy ekologickej vhodnosti, ako aj porušovanie práv duševného vlastníctva v modulovaní a kreovaní značky v rovine etiky reťazcov, sú často diskutované. Problémy vyskytujúce sa v dodávateľskom reťazci, proces exportu a importu musia byť kontrolované v rovine „fair podielov" v procese tvorby hodnôt. Konflikt v otázkach marketingu a s ním súvisiacich krokov, napr. fenomén obalu, spôsobuje, že uvedené princípy nie je výrobca schopný eticky dodržať. (Varadarajan & Menon, 1988) V neposlednej miere aj cena produktov predstavuje značný etický problém, nakoľko zákazníci zabudnú na etiku a bez váhania sú ochotní platiť za falzifikáty, keď je cena prístupná či nízka. (Klink & Athaide, 2010) Výber produktu spotreby na základe značky znamená akceptáciu kvality i hodnotu sociálneho statusu. Byť globálnou značkou so sebou prináša výhody, ale aj určité riziká. V dôsledku toho vzniká otázka, ako môže firma získať dôveru svojich zákazníkov, ako môžu fungovať regulátory a ako tieto skutočnosti môžu hodnotiť povesť značky. Vyplývajúc z tejto úvahovej skutočnosti môžeme konštatovať, že na rozdiel od iných značiek (napr. niektoré v automobilovom priemysle, v ktorých prepukol mnohorozmerový etický škandál) v spoločnosti Starbucks, práve dominuje proetický imperatív, ktorý je identifikovateľný takmer v každom článku globálneho hodnotového reťazca.

3.1 Etický a environmentálny pohľad na značku Starbucks

Spoločnosť Starbucks predstavuje najväčší „kávový" reťazec na svete a svojimi aktivitami podčiarkuje globálny rozmer a vytvára globálny dialóg medzi jednotlivými článkami globálneho hodnotového reťazca. Svojim fungovaním indikuje globálny rozmer a vytvára globálnu komunikačnú stratégiu. Internacionalizáciou ľudských zdrojov prezentuje globálnu zodpovednosť v rovine environmentálneho vnímania súčasného globalizovaného spotrebiteľského prostredia. Etické získavanie a spracovanie surovín na neposlednom mieste predstavuje avantgardnú značku v rovine poskytovania služieb a prístupu k zákazníkom. Značka v tomto prípade predstavuje významný fenomén, ktorý má obrovský marketingový potenciál a je na konkrétnej značke, akým kvalitatívnym a kvantitatívnym rozmerom vplýva na svojho potenciálneho zákazníka. (Harrington et al., 2017) Cieľom zakladateľa spoločnosti Starbucks, (Ignatius & Schultz, 2010), bolo vytvoriť hodnotový reťazec, ktorý sa bude diametrálne odlišovať od ostatných, ktorý bude rešpektovať nie len svojich spotrebiteľov, ale aj zamestnancov a prostredie, v ktorom budú realizované interakcie na základe etických princípov. (Hahn & Kim, 2016) Tento koncept odrážal dva programy. Prvý z nich sa týka zdravotného poistenia, ktoré bolo, i je, hlavne v USA, veľmi komplikované. V roku 1988 začal Starbucks, ako jedna z mála spoločnosti, poskytovať svojim zamestnancom plné zdravotné poistenie. Ďalšou dôležitou etapou v roku 1991 bolo zavedenie zamestnaneckých akciových opcií nazývaných Bean Stock (zrnkové akcie). Takýmto spôsobom sa zamestnanci stávajú zároveň aj partnermi spoločnosti. V roku 1992 Starbucks ponúkol svoje akcie širokej verejnosti a akcie sú predávané na NASDAQ National Market pod kódom „SBUX", čo podstatne zvýšilo prestíž spoločnosti. (Starbucks Company Timeline, 2011) K 1.1.2017 bol počet kaviarní po celom svete 25 734. Najväčší počet kaviarní je v USA – viac ako 13 tisíc (54 %). Spojené štáty nasleduje Čína s viac ako 2 tisícami kaviarní, Kanada (1,4 tis.) a Japonsko (viac ako 1 tis.). (Loxcel geomatics, 2017) Starbucks posilňuje svoje miesto na svetovom trhu. Ide o výsledok integrovaných psychologicko-marketingových a environmentálno-etických zručností, ktoré sú v tomto čase na trhu vysoko hodnotené. Reťazec má zjavnú perspektívu na svetovom trhu uspokojovať milióny zákazníkov a tisíce zamestnancov. Od svojho vzniku významne rastie počet prevádzok a tržieb. Porovnateľné tržby rástli medzi rokmi 2014 a 2015 celosvetovo o 4 %, v reťazci pribudlo 690 nových pobočiek. Spoločnosti pomohli praktické novinky ako mobilné platby alebo rozšírená ponuka. Starbucks neustále rozširuje svoje portfólio jedla a pochutín, ktoré začínajú významne prispievať k tržbám, nadväzuje partnerstvá s lokálnymi dodávateľmi. Dariť sa začína baleným produktom, typu kapsuly, mletej káve a v skle balenej „frap" káve. Z hľadiska regiónu sa najviac darí Číne (tržby vzrástli o 29 % a otvorených bolo 316 nových prevádzok). Spoločnosť nadväzuje na úspechy rastom hodnoty dividendy z 20 centov na akciu na 25 centov na akciu. (Cooke, 2010) Starbucks do roku 2021 plánuje celosvetovo zamestnať viac ako 240 000 zamestnancov, to zahŕňa nových 68 000 pracovných miest pre USA. Tento reťazec z oblasti kávy, plánuje do roku 2021 po celom svete navýšiť počet svojich prevádzok o 12 000. (Starbucks to add, 2017) Spoločnosť sľúbila, že do roku 2025 zamestná 25 000 veteránov alebo ich manželiek, čím rozšíri svoj predchádzajúci záväzok pre zamestnanie 10 000 jednotlivcov. Do roku 2020 taktiež plánuje najať 100 000 mladých ľudí, ktorí neštudujú, alebo sú nezamestnaní. (Keenan & Evans, 2014) Starbucks si taktiež pevne stojí za svojím záväzkom okolo plánov pre zamestnanie 10 000 utečencov po celom svete, čo je krok, ktorý firma oznámila, deň potom, čo novozvolený prezident USA Trump realizoval svoj prvý zákaz cestovania utečencov. (Starbucks to add, 2017)

3.2 Životné prostredie a recyklácia v ponímaní spoločnosti Starbucks

Spoločnosť Starbucks kladie dôraz na ochranu životného prostredia a udržania zdravej planéty. Jednou z najviac diskutovaných tém z oblasti životného prostredia je recyklácia. Táto téma je často diskutovaná, a to najmä v súvislosti s používaním jednorazových šálok na kávu. Tie však nepredstavujú absolutórium, nakoľko existujú možnosti ako si zákazník môže vychutnať nápoj aj z nie jednorazovej šálky. Starbucks v plnej miere, na rozdiel od iných spoločností priznáva, že tomuto fenoménu prikladá veľký dôraz, napriek tomu zatiaľ sa nepodarila dosiahnuť plná recyklovateľnosť. Problém spočíva aj v tom, že nemôže mať pod kontrolou recyklačné možnosti, nakoľko kaviarne sú v rukách prenajímateľov kaviarenských priestorov a nie priamo spoločnosti. Spoločnosť už takmer 20 rokov podniká kroky k tomu, aby čo najviac znížila dopady používania týchto jednorazových šálok na životní prostredie. V roku 1997 sa začali používať recyklovateľné návleky na šálky, ktoré chránia zákazníkov pred vysokou teplotou nápoja a vyhnú sa tak dvojitému používaniu šálky pre tento účel. V roku 2006 a 2008 boli inovované šálky tak, aby mali väčší podiel recyklovateľných materiálov a nižší dopad na životní prostredie. Spoločnosť taktiež ponúka v USA a Kanade zľavu 10 centov z ceny nápoja, pokiaľ si zákazník sám donesie vlastnú šálku a kaviarne samozrejme ponúkajú možnosť vypiť si kávu z keramického Starbucks hrnčeka. (Cup and Materials, 2017) Spoločnosť je súčasťou projektu LEED (Leadership in Energy and Environmental Design). Je to systém hodnotenia vyvinutý U. S. Green Building Council (Americká rada pre ekologické budovy) z roku 2000. Certifikát LEED je zárukou, že stavby sú navrhnuté a postavené v súlade s požiadavkami na bezpečnosť a životné prostredie. Starbucks má v súčasnosti tieto typy budov v 20. štátoch a je prvým LEED certifikovaným maloobchodným predajcom vo Francúzsku, Nemecku, Španielsku, Thajsku a na Filipínach. Taktiež Starbucks zabezpečuje 20 % LEED projektov po celom svete. (Global Social Impact Report, 2016) Starbucks je aj signatárom

BICEP (Business for Innovative Climate and Energy Policy), čo je koalícia podnikov, majúcich za cieľ vytvorenie a udržiavanie takých politík, ktoré zaistia prechod k nízko uhlíkovej spoločnosti 21. storočia. Spoločnosť dokonca využila The Greenhouse Gas Protocol, ktorý predstavuje štandard, umožňujúci firmám redukovať množstvo skleníkových plynov a negatívnych dopadov podnikania na životné prostredie.Podľa zistených výsledkov z roku 2015 je viac než 75% skleníkových plynov spoločnosti spôsobených využívaním energie. Pre porovnanie, v roku 2010 bol tento podiel 80 %. (Greenhouse Gas Emissions, 2017)

3.3 Etické získavanie surovín, podpora farmárov, zodpovedne pestovaná káva

Starbucks je spoločnosťou závislou na prírodných zdrojoch. Pre jej fungovanie je nevyhnutné, aby tieto zdroje boli i naďalej dostupné vo výnimočnej kvalite, preto je v jej záujme udržiavať dobré vzťahy s farmármi a pestovateľmi a pomáhať im vytvárať vhodné podmienky pri spolupráci. Starbucks si uvedomuje závislosť na farmároch, od ktorých kupuje kávu a preto sa angažuje v miestnych komunitách. V roku 2004 Starbucks založil prvé podporné centrum v Kostarike, neskôr v Rwande, Tanzánii, Kolumbii a v Číne. (Farmer Support Centers, 2017) Tieto centrá zásobujú miestnych farmárov najrôznejšími prostriedkami a školí ich, ako najefektívnejšie a najkvalitnejšie suroviny pestovať. V roku 2013 Starbucks zakúpil aj vlastnú farmu, ktorá sa nachádza v Kostarike a funguje nie len ako pestovateľské, ale taktiež ako agronomické centrum, kde sa vedecky skúmajú vlastnosti kávy a nové spôsoby jej pestovania. (Farmer Support Centers, 2017) Starbucks už viac ako 15 rokov spolupracuje s organizáciou Conservation International (CI), ktorá pomáha vytvárať pravidlá pre etické získavanie surovín. C.A.F.E. Practices program predstavuje súbor merateľných noriem pre etické pestovanie kávy. Obsahuje 4 oblasti: kvalita produktu, ekonomická zodpovednosť, sociálna zodpovednosť a ochrana životného prostredia. Posledné dve zmienené oblasti sú hodnotené nezávislou treťou stranou, a to spoločnosťou Scientific Certification Systems, Inc. (SCS Global Services), ktorá je dôveryhodným lídrom v oblasti certifikácie, auditu, testovania a vývoja štandardov pre životné prostredie, trvalej udržateľnosti a kvality potravín. Tento podiel bol 81 % v roku 2009, pričom v súčasnosti je to už 99 %, s cieľom dosiahnuť 100% hranice. (Ethical Sourcing: Coffee, 2017)

4. Conclusion

Rozvoj svetovej globálnej spoločnosti prináša do životov spotrebiteľov nové kvality, otvára nové možnosti, rozširuje rozmer globálnych hodnotových reťazcov, pričom sa vytvára nový priestor pre lokálne hodnotové reťazce, ktoré majú svoje opodstatnenie v ekonomickej praxi. Rozvíjajúca sa globálna spoločnosť má zatiaľ menlivú podobu, s bohatou rôznorodosťou dynamizácie v každom článku globálneho hodnotového reťazca. Vyplývajúc z tohto pohľadu aj spoločnosť Starbucks si počas svojho pôsobenia vybudovala významné postavenie na svetovom trhu. Zákazníci v celosvetovom rozmere túto značku spájajú s kvalitou, exteriérovým, interiérovým a marketingovým dizajnom, spoľahlivosťou a množstvom zákazníckych i zamestnaneckých benefitov. Etický a environmentálny rozmer, ktoré sú pre spoločnosť imperatívom, sa premietajú aj do kvality ponúkaného sortimentu, pričom je citeľná stratégia globálnej zodpovednosti za životné prostredie, etické získavanie surovín, vzdelávanie a podpora zamestnancov, ako aj samotný zdroj získavania komodity prostredníctvom ľudských zdrojov. Spoločnosť Starbucks predstavuje vo svojom segmente podnikateľského zamerania určitý rozmer avantgardy v mnohých oblastiach a bude zaujímavé z psychologicko-etického a ekonomického hľadiska sledovať jej ďalší vývin a konkurencieschopnosť v celosvetovom meradle.

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ELECTROMOBILITY AS A GLOBAL MARKET TREND – EUROPEAN PERSPECTIVE

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Abstract. Electromobility is widely considered as a leading trend on transport or traffic market. There are several reasons for that, mainly a) increase of traffic intensity and b) pollution caused by intensive traffic (both on global level). According to these (and others) reasons we can observe a significant change in customers' behaviour which affects its transportation or traffic habits. We can speak mainly about more ecological thinking or living and seeking of smart and eco-friendly transport or traffic solutions. Of course, electromobility will not solve all above-mentioned problems, but it could provide to more efficient and ecological solutions. There in our paper we want to describe main trends on the market of electric passenger vehicles. We have isolate the trends within our more comprehensive research considering electromobility market. Considering the trends presentation in this paper, we will focus on following: electromobility and technologies – its adoption by the customers and markets; infrastructure – useful solutions, main needs and necessary development. Our main goal considering this paper is to present main trends on electric passenger vehicles market from the marketing management point of view.

Keywords: electromobility, market trends, global trends, market analysis

JEL Classification: R40, O32, M31, M21, L10

1. Introduction to the topic

The efficiency of automotive industry has increased drastically recently. The growth of the industry is a global trend, which can be seen in all the automotive companies. Electric vehicles represent an alternative to more common vehicles with combustion engine. The reduction of CO2 gas produced by vehicles with combustion engines is currently a big concern all around the world. This fact creates new opportunities for electric vehicles, hybrids and the growth of electromobility. Negative impacts of the transportation industry keep getting more and more public attention.

The transportation is one of the main aspects causing the climate change. Road transport is responsible for 75% of the global CO2 emissions. This percentage is projected to grow even higher in the future. Approximately 90% of all road transportation relies on oil. The oil consumed by road transportation represent 60% of total global oil consumption. Electromobility represents a necessary aspect of future economic growth considering the repeating negative aspects of transportation on the environment. One of the main goals of electromobility on European market is reduce emissions by almost 60% by 2050. (CFF, 2015)

Main goal of our paper is to present comprehensive overview of main trends on European market with electric vehicles. We provide analysis of data considering electromobility in EU area. This analysis is based on our previous research where we set up case studies about single electric and hybrid vehicles on European market: Mitsubishi Outlander PHEV, Mitsubishi i-MiEV, Tesla model S, Nissan Leaf, Toyota Prius, Toyota Yaris Hybrid and Volkswagen e-Golf.

In this research, we have examined market and marketing data about most selling electric passenger cars produced by global companies (portfolio, marketing, market shares, market trends, analyses of European market of electric passenger cars, main strengths and weaknesses, identification and description of marketing strategies, etc.). According to this information background we focus on isolating and describing of main trends in electromobility on European market. As research method we used content analysis.

2. Analysis of European electric car market

The trend of electric vehicles moves current situation on market. We search how high is the interest and the scope of the situation. In France (the Nord Pas-de-Calais) area, electromobility has been chosen for sustainable development and contributes an important tool in the struggle for carbon reduction and energy independence. Energy storage systems are in demand as never before (Weiner, 2017). According tu Busse et al., (2011) battery systems, charging devices and motors is components of future vehicle look like. When energy efficiency is the mission of territorial collectivities (rural and semi-urban areas). (Boyom et al., 2016) Bahamonde-Birke and Hanappi (2016), also confirm proclivity of green-minded people and reluctance of older individuals for the Austria market. The Lithuania is another example with potential of building electronical vehicle infrastructure (Raslavicius et al., 2015).

The electric mobility appears to be an alternative solution meeting the economic, ecological and social aspects of sustainability in view on the current traffic situation. It has currently the greatest opportunity to establish itself in the market. (Rehak, 2016) The entry of electrical vehicles in market often means changing behaviour of market´s actors, e.g. triggered the entry of newcomers trying to challenge the dominating firms, combining new and existing knowledge bases, increase country-level competition and transferring capabilities (Altenburg et al., 2016). Battery electric vehicles are already a real option for the majority of peoples' everyday trips and trip chains (Figenbaum et al., 2015). A well-designed and reliable electromobility system (vehicle and charger) would be operationally competitive with the current conventional vehicles (Teoh et al., 2015).

European survey (Buehne et al., 2015) show positive attitude towards electromobility, but also a high purchase prices as most important barrier. From the customer's perspective a dense network of charging stations and financial measures such as tax and energy cost reductions are vital prerequisites in order to convince them to buy an electric vehicle. The new mobility services can act as catalysers in the process of creating more sustainable travel options for a wide range of users (Coppola & Arsenio, 2015).

Sales of electric vehicles have been growing very fast since their introduction to the market. (Blokland, 2015) In September 2015 the global sales of hybrids reached one-million milestone. According to study „The Rise of EV & Hybrid Cars“ by Blokland (2015) this trend will continue and the market share of electric vehicles will grow every year. The expected future size of the market share in the study varies. The pessimistic view predicts 5% of global car sales by 2025. On the other hand, the optimistic view predicts more than 50%. Programs for building new charging stations and expected price reductions of electric car batteries will also help the expected rise of electric cars sales.

According to data from European parliament, the best way to prepare the market for massive commercial use of electric vehicles is to increase the number of charging stations. In 2013 the European commission decided to support the future growth of charging stations infrastructure built in individual member states by 2020. For example, by 2020 there should be 86 000 charging stations in Germany, 72 000 in Italy and 70 000 in Great Britain.

Based on BBC Research the market of electric vehicles grew from 58,6 billion dollars in 2013 to 73 billion in 2014. A Study by Cambridge Econometrics (2015) analysed market readiness of Great Britain for future developments in electric car industry. It says, that by 2030 the investments into gasoline and diesel will be reduced by 40% and the CO2 emissions will be cut by 47%. In France, there is currently around 10 000 charging stations. The most convenient locations for the charging stations are being determined by Green Deal scheme.

Hungary has 46 charging stations, but plans to build 150 more next year. Germany plans to have 1 million electric vehicles on its roads by 2020. It also plans to build 400 more fast charging stations by 2017. So, drivers will be able to charge their electric cars approximately every 30 kilometres. Since 2016 the road fees on highways in Germany should be based on emission norms and the cubic capacity of the engine. This policy is clearly a positive development for electric vehicles. (Horčík, 2015)

Government of Great Britain is starting to test the possibilities of a separate road lane dedicated exclusively to electric vehicles. This lane also enables the electric vehicle to charge itself from the lane while driving. The testing started in last mounts of 2016 and should last 18 mounts. The main goal is to find out if this technology can be implemented in real life traffic situations. This technology could also possibly solve the most fundamental problem of electric cars, the substantial energy requirements for long drives. (Spector, 2015)

Some countries also support the sales of electric vehicles with financial incentives. For example, France offers 6 300 € and it also plans to offer additional 3 700€, if the buyer decides to get rid of his old diesel car. The condition for this incentive is, that the diesel car must be produced in 2002 or sooner.

2.1 Main trends on European electric car market

2.1.1 European Union and member states initiatives

European Union is paying close attention to topics of electromobility an alternative form of transportation. These topics play an important role in achieving EU goals like reducing the dependence on fossil fuels and reducing emissions by 60% by 2050 (Soone, 2013).

In 2015 EU financed 135 projects concerning electromobility by the sum of 470 million €. Member states use this money in two main areas (JRC, 2013):

a) Targeting bigger cities and infrastructure.
b) Targeting “model regions”, which are characteristic by their tourism importance or by their short distance travel.

Example of Norway

Norway is currently a global leader in electromobility. Electric cars like Tesla model S and Nissan Leaf are some of the best-selling cars here. Drivers with electric cars have many advantages, for example lower taxes, lower highway fees, premium parking spaces and driving in bus lanes. Generous government incentives cost Norway more money than anticipated, what makes the government think about cutting some of the incentives. (Andrejcak, 2015)

Example of Netherlands

Dutch drivers save around 5 365 € on buying an electric car (Blockland, 2015). The government financial incentives used to be even higher here in Netherlands. The announced reduction of government incentives in 2014 caused a steep growth in sales of electric cars in the last months of 2013. Electric car sales in December 2013 reach the record taking 9 309 sold cars. In January 2014, this number fell to only 581 cars (Vergis et al., 2014). Study by Netherlands Enterprise Agency (2015) also shows, that some regions, cities and towns in Netherlands give additional financial incentives to buyers of electric vehicles. For example Amsterdam, Utrecht and Rotterdam give buyers additional 5 000 €. They also support electric car owners by financial incentives to build homebased charging stations or to trade old diesel cars for electric cars. Some cities and towns also banned the old diesel cars from city centres.

2.1.2 Charging infrastructure development

The EU initiatives are closely tied with the development of charging infrastructure. Reliable network of charging stations is crucial for the future of electromobility. Development of new charging stations raises the demand for electric vehicles. That is why EU enacted policy which establishes a minimal number of charging stations for the individual member states. Scientists from Cornell University say that a 10% growth in number of charging stations for 1 million inhabitants means a 10,8% growth in electric car market share in the city.

TEN-T program supported by the EU focuses on making long and international drives with electric cars easier. The main objective of the project is to make market ready for fast charging stations and their acceptance by consumers in Northern Europe. It also should help the future of electromobility by finding new solutions for trips longer than 500 kilometres using electric cars. (Alexia, 2015)

Charging and Tesla Motors

Tesla focuses on building its own charging network. Tesla is bringing program called Destination charging to Europe. The point of this program is to establish a partnership between Tesla and local establishments like hotels, restaurants, shopping centres and airports. This way customers can charge their car in their original destinations, what can be understood as an added value for the customers. Local partners get from tesla 2 charging points for free, if they make them visible for potential customers.

Company also gives superchargers to its customers for free. These chargers can charge the batteries up to 80% in just 30 minutes. Locations for public superchargers are chosen very carefully and strategically. Tesla plans to have 280 superchargers in Europe by 2016.

2.1.3 Research and development – main areas in the EU

Project called Smart Vehicle-to-Grid sponsored by the EU focuses on connecting electric vehicles to network to simplify the charging process and add more value to a customer. System enables a two way and nonstop communication between individual vehicles, charging points and an operator centre.

Another solution may be a dynamic charging achieved by a special road lane dedicated to electric vehicles, that is equipped with special charging infrastructure. This way the car is charging while driving on this lane and it doesn't need to stop. According to Damousis (2014) the biggest benefits of dynamic charging are: smaller batteries, longer distances and most importantly higher customer comfort.

European commission gathered information from more than 320 science projects with cumulative budget 1,9 billion € (65% from public sources) (JRC, 2013). Based on this information the potential risks and shortcomings for individual member states were determined. Analyses and possible solutions of the European commission are focusing on three main areas:

a) Control systems (interactions battery – electrometer – electronics), energy storage, design, financial resources.
b) Finding solutions to main obstacles to the future of electromobility – costs and range (fear of not reaching the target destination because of lack of power).
c) Development of new electric vehicles and infrastructure.

2.2 Situation on Slovak market

Favourable conditions for future growth of electric vehicles market in Slovakia are being supported by the European Union through GreenWay project. European commission supports 2 Slovakian project focusing on enhancing comfort for the electric cars drivers. Five-year plan focuses on building on network of superchargers, but also on building stations where drivers can trade their empty batteries for charged ones. Thanks to this Slovakia can join the Middle European green corridor and electric transportation in Middle Europe will be more fluent.

The main objective of the corridor is to connect Austria, Slovakia, Slovenia, Germany and Croatia. Future growth of electromobility is a clearly priority, but it is also clear, that development of electromobility will be very time consuming. The main problems with electromobility are high prices of electric cars, insufficient interest of customers and limited infrastructure of charging stations. (TASR, 2014)

The efforts to address the topic of electromobility by Slovak government started at the beginning of 2014. A program created by an expert group has been submitted, but the proceedings on this matter have been postpone several times.

In May 2015 Ministry of Economy of the Slovak Republic submitted 18 policies focused on improving the electric vehicles sales in Slovakia. These policies have been submitted for the third time.

In September of the same year 16 of the 18 policies were approved. The name of this program is Strategy for development of electromobility in Slovak Republic. Some of the main policies of this program are lower taxes on electric vehicles, assistance with developing carparks with charging stations, simpler legislative concerning the development of charging network. Another goal of the program is to create a charging network covering the whole country so all electric vehicles can move free on main roads. Director of SEVA (Slovak Electric Vehicle Association) Peter Badík thinks this is a very important step for the future of electromobility in Slovakia. Till now the only initiative to support electromobility in Slovakia came from private sector. If the policies are implemented in real life, the conditions for future development of electromobility in Slovakia are very favourable. (SEVA, 2017)

3. Conclusion

Electromobility is indeed not just European but significant global trend. Recently we can read in news that China wants to probably ban selling of new gas powered vehicles to promote electric cars. (Rapoza, 2017) All the information we provide to the topic of electromobility show us that the market is very dynamic and that we can anticipate an interesting growth. Of course, for Slovakia and central Europe is it a great challenge. We observe several problems, e.g. lack of infrastructure and price of electric vehicles. From another point of view, it could be a great opportunity to set and manage all the elements in more efficient and effective way.

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URBAN TRANSPORT PLANNING AS A GLOBAL ISSUE FOR SUSTAINABLE DEVELOPMENT

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Abstract. Urban transport sustainable planning is considered to be a key issue in balancing the development of city infrastructure, local budgets and the interests of the society and business. The sustainability challenges make urban planning not only a regional but a global issue that must be considered on the nation-wide and international scale. The metropolitan areas around the world are seeking for the universal solutions when facing a similar set of problems: overstrained infrastructure, traffic control, congestion, ecology, demand for increased personal mobility, together with tight budgets and various social issues. In this situation, the international exchange of ideas and the development of integrated solutions can provide an essential basis for the development of innovative solutions. The transport planning executed by the transportation companies is known to be one-sided. Transportation system cannot be separated from the social, economic and political environment but very often the urban transport operators act from the point of view of pure economic efficiency and may overlook the interests of the society, such as providing equal mobility for all the passenger segments, compensating for the impacts on air, water resources, land, and biosystems. The article discusses the international practice in the field of sustainable urban planning and provides a set of solutions for public transport systems.

Keywords: public transport, sustainable transport systems, transport planning development, database, cloud technologies

JEL Classification: L91, L98, L15

1. Introduction

Transport planning has become one of the crucial elements of the sustainable urban development. The traditional urban and transport planning based on growth-of-mobility or reduced-travel-time approach is restricted by the urban environment itself (Knoflacher, 2007). The introduction of digital technologies has promised to lift these restrictions, at least partially. Among the recent trends in the development of the metropolitan areas, one can name the “smart city” concept. Even though the term has been used in many urban areas’ strategic plans, there is still no generally accepted definition for it (Pinna et al., 2017) . The smart city concept is a human-centered self-adjusting system that uses the advanced information technologies, digital tools, and economic mechanisms to improve the quality of life and enforce sustainable development. The city transport being the core of city infrastructure and uniting the various elements of urban life also becomes the primary target for the sustainability initiatives. The main tasks of the sustainable transport development (STD) have been formulated during the

UN International Conference on Environment & Development Conference held in Rio de Janeiro in 2012. The STD provides transportation services without adverse social, environmental, or economic effects and ensures the stepwise approach to the satisfaction of increasing demand for mobility. Thus, the STD plan must provide interlinkages between the dimensions of sustainable development and the need for accessibility, availability, comfort, and security of transportation services. The lifecycle of urban transport systems is relatively long, but the throughput capacity is limited. That is why the urban transport management must cover all the stages of the lifecycle starting from the system design to customer care. In the last decade, the European Commission has changed its attitude to urban transport management and its implications for local policies. The basic approach to the transportation development in the past century was to impose the responsibility for the STD on the municipal authorities and to provide them with state subsidies to execute the corresponding policies. Currently, economists, entrepreneurs, and politicians agree that transport development of metropolitan areas goes far beyond the interest and the scope of control of municipal authorities. In European countries, around 70% of the population and 80% of productive facilities are concentrated in urban areas. The city transport was responsible for 80% of congestion costs, 23% of all carbon emissions from transportation and 38% of all road fatalities (May et al., 2017). Thus, the city transport being one of the major elements of economic and social infrastructure, cannot be managed and controlled on the municipal level only but rather requires the state and regional authorities' attention. Therefore, the European Commission has launched several initiatives to promote the concept of a single European transport area. Among them was the Sustainable Urban Mobility Plans (SUMP) and Sustainable Urban Transport Plans (SUTP) initiatives which provided a strategic approach to satisfy society and business mobility needs and to reach a better quality of life. Thus, the urban transport planning becomes an important tool to ensure the sustainable development of transportation systems. The study of international experience and the application of the best practices in this field may help to find the optimal solution for a particular region or urban area. Even though the transportation planning may have the national specifics, determined by the laws, regulations, cultural and behavioral models, the sustainable transport development is a global problem that requires global solutions.

2. Creation of transport planning systems: challenges and opportunities

Urban transport planning is a relatively new field of research that has become a significant trend in urban sciences in the past decades. Most of the metropolitan areas around the world consider it to be the core tool in the implementation of state and regional STD strategies. Transport planning aimed at detection of internal and external results of transportation activities and minimization of their adverse consequences for the passengers, city residents, business, and society thus incorporating the interests of various stakeholders (May et al., 2013). The strategic objectives may also vary but the most common ones are efficiency in the use of resources; improved accessibility; environmental protection; sustainability; and safety; with an underlying requirement for financial feasibility (May et al., 2000). The study of international experience in this filed may help to select the best practices as a template for the future transportation planning policies implementation.

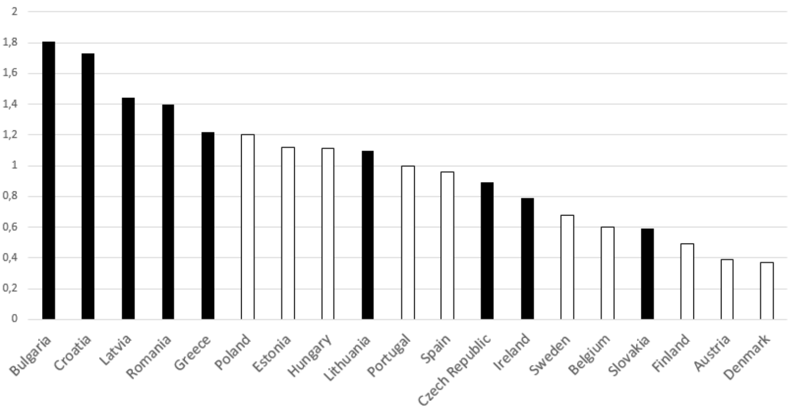
2.1 Transportation planning in EU

Among the first EU document that offered the integrated strategy for transport planning was Thematic Strategy on the urban environment, adopted in 2006. The plan listed many common environmental transport-related challenges. Among them: poor air quality, traffic intensity, and congestion, high levels of noise, greenhouse gas emissions, intensive urban sprawling. All these issues had visible social, economic and environmental effects. Another vital document - the White Paper (Roadmap to a Single European Transport Area) was aimed at the greenhouse emissions. To achieve the desired decline in the level of emissions, a list of ten goals addressing the urban transport, freight transport, high-speed rail and multimodal transport information systems was announced. More than 100 countries have already assumed political measures on the national and sub-national levels to stimulate investments in the public transport (Makarova et al., 2016). Still, the fulfillment of the sustainability goals depended on social, political and behavioral aspects which brought additional challenges to the implementation of the roadmap. The first obstacle is the introduction of fuels and technologies that satisfy the “sustainability” criteria. Some literature suggests that the use of some fuels (e.g., Hydrogen) is questionable itself in terms of sustainability (Steenberghen & López, 2008).

The second set of problems concerns political and legal environment. The transportation planning process differs in different European countries. For example, in Austria, Belgium, Denmark, Estonia, Finland, Hungary, Poland, Portugal, Scotland, Spain, and Sweden transportation planning is a part of strategic development programs. In these countries, the new solutions, the local transport plans, and the KPIs are set through the discussions among the major stakeholders, such as local authorities, public, transit and freight operators (Robèrt et al., 2017; Emberger, 2017).

In such countries as Bulgaria, Croatia, Czech Republic, Greece, Ireland, Latvia, Lithuania, Romania, and Slovakia the transportation planning is not among the primary goals on a strategic agenda. The personal car-based paradigm is still strong in th*ese countries, and it is reflected in the local decision-making, perspectives, norms and regulations which bring additional economic costs (Figure 1).

Figure 1. Urban delay cost by country (share of GDP %)



Source: Based on Charlotte Brannigan, Marius Biedka, Guy Hitchcock (Ricardo Energy & Environment) and Davide Fiorello Study on urban mobility – Assessing and improving the accessibility of urban area. (TRT) March 2017.

Another barrier is the fact that new policy measures to support transportation planning, reorganization of urban transport systems, the introduction of new technical solutions are considered to bear the additional investment costs for society. Hence, there might be a lack of funding to support the most cost-effective solutions (Brand, 2008; May & Crass, 2007). The barriers to effective transportation planning in the EU include some technical issues, especially when it comes to the introduction of new technologies. The second topic includes political and institutional regulations requiring the agreement of all the stakeholders to implement the coherent and mutually advantageous planning to transform the current transportation system. Thus, it can be said that there is a distinct need for more integrated approach and a closer connection between transport planning and urban design and management that covers issues related to personal mobility, freight/supply chains (Allen et al., 2012; Tiwari et al., 2011), urban space planning. But the overall progress will still depend on a shift of mindsets and priorities among passengers, authorities and urban planners.

2.2 Transportation planning in the US

The US has a long and impressive record of transportation planning activities. The first instructions on the road infrastructure are dated back to the middle of the previous century. The laws and codes of highway and metropolitan area design and planning have facilitated the development of metropolitan areas intercommunications and, on the other hand, helped to balance the formidable personal vehicles fleet, road modernization, and urban public transport development. Travel demand modeling remains a cornerstone of the transportation planning process in the US. However, the travel demand models are unable to take into consideration all the aspects of sustainable transport development, especially in urban areas, such as pricing, market fluctuations, or pollution. Modern travel demand models can predict traffic volumes reasonably well, but they lack precision in such critical areas as latent and induced travel demand, intermodal impacts, and land use/transportation relationships. For example, travel demand models cannot predict land use changes resulting from transportation improvements. The modeling stream accepts a land use scenario as given and proceeds to predict the traffic associated with it. In reality, land use and transportation development are mutually dependent. Obviously, land use plans need to be coordinated with transportation planning activities, but there are legal impediments to coordination of the planning processes. Traditionally, transportation planning is a regional function. The land use planning, on the other hand, is principally the sphere of local government's authority. The funding strategies create additional problems. Motor fuel taxes in the US are used to fund highway construction, and transit agencies have their own funding programs. Which means that the development of well-coordinated policies for multimodal challenges and area development may be a hard target.To improve the current situation, one can propose several operating initiatives:

a) Improve travel demand modeling.
b) Coordinate the transportation and land-use planning processes
c) Ensure training and technology transfers
d) Provide sponsored university research to promote student involvement in the transportation planning process.

Another trend in the transportation planning is the increased engagement of the public in the process. Quality planning and project development require significant input from the public. Many members of the public are genuinely interested in the future development strategies and planning, and they may be able to effectively provide input to influence the outcome of a transportation plan or project. The key challenge here is to grab the public's interest in a project or program and make people participate either in crowdsourcing activities, taking part in transportation agencies and community meeting or web-based surveys. The public participation can help transportation agencies improve their strategic visioning and make better decisions in the future.

2.3 Transport planning in Russia

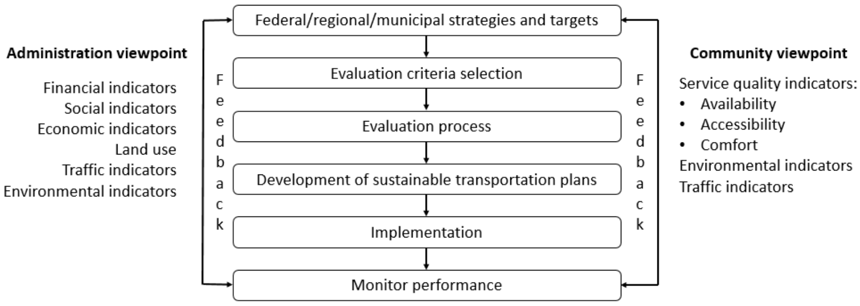
Strategic transport planning has been a critical issue for the Russian authorities since the end of the 90-s when the exponential growth of personal automobiles in the major cities has caused a set of severe social and environmental problems. It has propelled the changes in the Federal Law on passenger transportation, and the clause on mandatory transportation planning was included in the document. The transportation plans combine the development of road infrastructure, passenger transportation, local routing. Unfortunately, the introduction of transportation planning arrangements has been overdue as compared to the majority of the European countries. The reforms of federal and municipal administration and management that has been underway for the past decade had not covered the transportation systems management. City transportation systems are still considered to be a local responsibility that requires local solutions. The issue is aggravated by a complex system of coordination and authority distribution among the federal and local administration which makes the budget distribution, decision-making and implementation processes rather cumbersome. The key strategic indicator for the future STD models and transportation planning process remains the economic efficiency. For that reason, some of the targets of the STD actions remain unachieved because of the budget constraints which reduce the effectiveness of transportation planning and discourages the local authorities or the community to prepare detailed planning or transportation and demand forecasting, models. The problem is aggravated by the fact that some of the transportation network development projects have weak economic effect if measured by the ROI or profit ratios. In 2016 Moscow transportation department has put into operation the so-called Moscow Central Ring (MCR) - former cargo railroad ring rebuilt for passenger transportation (Spirin et al., 2016). The new MCR has the length of 54 km and 31 stations. It was constructed using the infrastructure of Cargo Railroad thus no new land was required. The first weeks of exploitation of the MCR have shown that from 10% to 20 % of its users are the subway passengers who ceased using the subway transfer points easing up the subway's rush-hour tension. None the less the MCR project was officially announced to have zero profitability even if used at full capacity. The potential monetary profits would be less than exploitation cost. At the same time, the launch of MCR has become a major event for the reorganization of Moscow transport system offering social and environmental effects and implicit profits by raising the efficiency of the city transportation network.

3. Transport planning process and measurement

Transportation planning process is a set of complex procedures that need to take into account the interests of various shareholders and ensure the active in involvement by all users of the system: regional and municipal authorities, business organizations (including freight operators and transit companies), various community groups and environmental organizations, passengers and potential passengers, the general public. The transportation system even for the small towns can be rather complex. Its structure and functionality depends on many factors, including: road networks (1), automotive, pedestrian and non-mechanical vehicle traffic flows (2), cargo networks (3), geography and landscape (4), population and social structure (5), industry location (6), car fleet (7), transportation infrastructure under construction (8), demand patterns (9), and other technical, technological, political or economic issues.

The basic transportation planning process scheme is presented in Figure 2. The process includes a consideration of multiple strategies, based on the regional or municipal interests and an assessment procedure that evaluated the diverse viewpoints.

Figure 2. Transport planning process



Source: compiled by the authors

Transportation planning includes a number of steps:

a) Prepare a set of possible STD strategies and for different administrative levels by identifying current and projected future transportation problems and developing transportation improvement strategies;
b) Select a set of strategy evaluation criteria;
c) Choose the basic strategy and alternative strategy based on the selected criteria and make a set of indicators to monitor the progress;
d) Develop long- and short-term transportation plans and financial plans;
e) Implement the plans;
f) Monitor implementation process using the chosen indicators.

In should be noted that the choice of indicators and tools to monitor the implementation of STD strategy and transportation plans depends on a specific case and may vary from SWOT-analysis based techniques to complicated systems of indicators which are chosen on the basis of primary research and expert opinions (Munira & San Santoso, 2017; Perra et al., 2017; Tafidis et al., 2017).The sample set of indicators designed to monitor and evaluate the transportation planning process and transport system sustainability is presented in Table 1.

Table 1. Sample performance indicators of transport planning

Viewpoint	Type of indicator	Performance indicator
Administration	Financial/economic	Gross regional product per capita (1), Energy consumption (2), Project budgets (3), ROI (4), Urban delay cost (5), Portion of budget devoted to transport (6), Infrastructure investments per capita (7), Income from the use of transport infrastructure (8), Maintenance costs (9)
	Social	Transport diversity (1), % of destinations, accessible to people with disabilities (2), Public transport crime rate (3), Traffic causality (4), Social pricing (% of total revenues) (5)
	Environmental	Per capita emissions (1), % bike rides in total transit (2), Air quality(3), Noise levels (4), Per capita fuel consumption (5)
	Traffic	Congestion rate (1), Average trip time (2), Km of bike lanes to total (3), Quality of street and road environment (4), Traffic intensity (5), Average speed (6)
	Land use	Land use mix (1), Walkability (2), Bikability (3)
Community	Service quality	Transport diversity (1), Pricing (2), % of vehicles accessible to people with disabilities (3), Delays (4), Accessibility (5), Availability (6)
	Environmental	Air quality (1), Noise levels (2), % of eco-friendly transport (3)

	Traffic	Congestion rate (1), Average trip time (2), Km of bike lanes to total (3), Quality of street and road environment (4), Traffic intensity (5)

Source: Compiled by the authors

The table does not include strategic goals and objectives but rather serves as a sample list of performance indicators. The specific selection of indicators will depend on the key sustainable transport development goals.

4. Conclusion

The current issues and obstacles in the transportation planning have standard features throughout the world. The global trend in the transportation policies is to incorporate the political, economic and public efforts to ensure the sustainability of the transportation systems, the improving the quality of life in the urban areas and coherent development of urban infrastructure, land use and the level of service of public transport. To achieve that, a smooth transfer must be made from divided transport planning towards consolidation of federal, regional and municipal transportation management. The transportation planning must incorporate the following principles:

a) The balance between personal mobility, commercial interests and social and environmental issues;
b) Scientific forecasting and modeling of the sustainable transportation system development based on the set of criteria or KPIs that reflect the strategic goals of the regional transportation and urban policies;
c) Availability, Accessibility, Safety, and comfort of public transport for all category of passengers;
d) Coordination of public, commercial and administrative efforts aimed at sustainable transport development;
e) The system performance indicators reflect the viewpoints of various stockholders and prioritized by sustainable transport development strategy;
f) Prompt data collection and modeling and transportation demand forecasting;
g) Coordination of transportation and land-use planning processes
h) Transparency of decision-making process;
i) Experience and technology transfer are ensuring the use of the best global STD practices.

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THE IMPORTANCE OF SHARING ECONOMY IN THE GLOBALIZED WORLD

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Abstract. Sharing economy seems to be one of the possibilities how we can achieve the sustainable development. Paper points out different aspects of the sharing economy which are successively widespread globally. Sharing economy is the concept known already for several years, its concrete forms have been developed and changed in the meantime. There still not exist one accepted definition, as different factors of the sharing economy could be taken into account. In Slovakia, the "sharing economy" is still not very extended, even though it could serve as a solution for different issues which our economy is challenged with. Paper tries to look at economic background of the sharing economy in general, with special focus on the explanation of the need of private regulation within the sharing economy, compared to the public regulation needed in other sectors of economy. Last but not least, paper introduces the understanding of the sharing economy within the European Union, pointing out importance of it presented trough the different documents of the EU institutions.

Keywords: sharing economy, globalisation, sustainable development

JEL Classification: F6, O1, Q5

1. Introduction

Globalization is understood as the process by which states interconnect the fields of economics, politics or culture. Globalization as internationalization and liberalization represents an increase in the number of transactions (movement of goods, investments) and interconnectedness of countries. (Trelova, 2016A) Globalization increases possibilities of economic growth, which is inevitable precondition of economic development, which leads to increase the well-being of people in individual countries. (Paskrtova, 2016) In this process the sharing economy starts to play more and more important role as it has grown in both scale and scope over the past years. In a variety of sectors, internet-facilitated platforms have emerged that enable people to share their underutilized assets. These sharing platforms increasingly form a threat to existing businesses operating in the respective sectors. Apart from having economic consequences, the sharing economy is claimed to have positive environmental and social effects. More efficient use of goods can save scarce resources otherwise needed for production. The act of sharing could bring people together and stimulate social cohesion in neighbourhoods. (Böcker & Meelen, 2016)

While sharing itself is an old social practice, it is currently being expanded and redefined into an exploding „sharing economy". Classic examples of sharing, as for example libraries, are not nowadays understood as a core of the sharing economy. Nowadays platforms, mostly the internet ones, allow the development of the advantageous sharing economy. Before the emergence of those platforms, numerous potentially advantageous exchanges existed, which were never implemented because of high transaction costs. What prevented the very easy transactions was distrust that it could happen in a fair way by accepting set rules by both sides (especially difficult was to agree on a price). In other words, what prevented advantageous exchange was the high transaction costs. And it is thanks to the lowering of these costs, that the sharing economy platforms have begun to function — and to achieve a profit.

Over time, the term “sharing economy” has become popular among different groups of people and communities. Nevertheless, nor after several years there is no agreement on what the sharing economy exactly is. This modern phenomenon encompasses very heterogenous practices, sectors and players (e.g. consumers, businesses, NGOs, governments on different levels), and covers a wide spectrum of organisational forms, ranging from for-profit to non-profit initiatives. That is why, there not exist one accepted definition and also different terms for this concept are used (e.g. collaborative consumption, access economy, circular economy, community-based-economy, peer-to-peer economy). This special kind of economy started in the USA and was spread to the rest of the world.

The main principle of the sharing is not based just in “sharing” itself, but covers also renting, cooperation, or exchange with someone else, either for free or, which is more obvious, expecting financial or some other refunding. The subject of sharing does not need to be just tangible property. Shared could be for example services, skills, knowledge, time or money.

Understanding and explanation of the sharing economy depends also on who is using the term. -This economical concept is interesting not just for economists, or consumers themselves, but there are interesting issues for politicians, sociologists, marketers, geographers, anthropologists, managers, businessmen, innovators, layers… The sharing economy is interesting as well on different levels, in small it normally starts on the local level, then it spreads to the national, or regional level and we can find actually nice examples of the (already well-known) platforms of the sharing economy on the international level. Based on this, it is not clear, how to define the term “sharing economy”, if scholars can agree on a common definition, and whether currently thriving business models live up to conceptual ideas of what sharing is. (Acquier et al., 2017)

2. Methods

The aim of this paper is to examine the importance of the concept of the sharing economy in the present economic development on national, as well as international levels. This article exploits the current knowledge in the field of the sharing economy, trying to focus on its nature and its understanding from different perspectives. Economic background is very important, so part of the paper is approaching this special issue. The methods of data analysis and synthesis, literature review and review of research in the field were used in this paper.

3. Defining the term “sharing economy”

As was already mentioned, it is not possible to define the term “sharing economy” by one common and generally accepted definition. In literature, we can find that different authors use different definitions pointing out several aspects of sharing economy, highlighting those or others. Even definition on Wikipedia starts in a very general manner: “Sharing economy is an umbrella term with a range of meanings, often used to describe economic and social activity involving online transactions…" (Wikipedia, 2017) Some authors view the sharing economy as an alternative to market capitalism, yet it might actually bolster capitalism instead. From other point of view, sharing economy is a more ecological alterative to the present economy, but again, even if the sharing economy promotes more sustainable consumption and production practices, it also reinforces the current unsustainable economic paradigm.

In this paper we decided to use definitions of few authors, already known as an experts in the field of sharing economy.

Puschmann & Alt (2016) summarize that the term ''Sharing Economy'' was first mentioned in 2008 and denotes the collaborative consumption made by the activities of sharing, exchanging, and rental of resources without owning the goods. In the context of economic transactions, it refers to the use of an object (a physical good or a service) whose consumption is split-up into single parts. These parts are collaboratively consumed in consumer-to-consumer (C2C) networks coordinated through community-based online services or through intermediaries in business-to-consumer (B2C) models

Stephany (2015) defines the sharing economy as "the value in taking underutilized assets and making them accessible online to a community, leading to a reduced need for ownership of those assets".

Gregory & Halff (2017) explain that "sharing economy provides temporary access (as opposed to permanent ownership) to otherwise idle resources (as opposed to resources specifically activated for the transaction). Producers capitalize the unused capacity of things they own and consumers rent access to those things rather than acquiring ownership from a company or producer."

Schneider (2017) in his book "Creative Destruction and the Sharing Economy" cites different authors, while trying to define "sharing economy". Rachel Botsman, one of the best-known analysts of the sharing economy, explains that the term "sharing economy" does not automatically cover all models of matching supply with demand, even though in some of them there is zero sharing and any collaboration involved (not every digital platform is automatically part of the sharing economy). Sharing economy does not mean that we have an app through which we can order something. It needs to be built on the sharing of underused assets and that is the core. While in today's manifestation, the sharing economy heavily relies on technology, especially the internet, it is not by necessity so. Inversely, not every business or not-for-profit organization with a web presence is engaging in the sharing economy.

Schneider (2017) continues, that Botsman in several of her publications offers five criteria for delineating what it means for a business to be in the sharing economy: the business idea based on the value of unused or underutilized assets ('idling capacity') whether it's for monetary or non-monetary benefits; the company should have a clear values-driven mission and be built on meaningful principles including transparency, humanness and authenticity that inform short- and long-term strategic decisions; the providers on the supply side should be valued, respected and empowered and being able to prosper socially and economically; the customers on the demand side of the platforms should benefit from the ability to get goods and services in more efficient ways that means they pay for access instead of ownership; the business should be built on distributed marketplaces or decentralized networks that create a sense of belonging, collective accountability and mutual benefit through the community they build.

Based on the review of the literature collective of authors led by Acquier (2017) in their study, indicate that sharing economy is resting on three foundational cores:

a) Access economy – covers a set of initiatives sharing underutilized assets (tangible or intangible) to optimize their use.
b) Platform economy – set of initiatives that intermediate decentralized exchanges among peers through digital platforms.
c) Community-based economy – refers to initiatives coordinating through non-contractual, non-hierarchical or non-monetized forms of interaction (e.g. contribute to a community project, to create social bonding, to promote values).

Frenken & Schor (2017) distinguish sharing economy from some other, even though very close, terms. For example, when consumers sell (or just give) goods to each other, what is called the second-hand economy, it does not fall under the sharing economy as consumers grant each other permanent access, rather than temporary access to their goods. Renting goods from a company rather than from another consumer they call the product-service economy. The service provided by the company consists of giving the consumer access to a product while the company retains ownership of it. Once the product has been used and returned, it becomes available again for another renter. Finally, while dealing with peer-to-peer (p2p) service delivery instead of p2p good sharing, the term on-demand economy is used. The on-demand economy includes purchasing personal services such as a ride, a handyman or a cooked meal.

4. Economic background

Sharing economy opened the doors to the unused capital in the society, it made possible to use the so called “idle capital”, to decrease transactional cost and increase the confidence between unknown parties of the transaction. Sharing economy clearly pointed out that a lot of regulation and bureaucracy in economy is ineffective, not helpful for neither part – sellers and buyers – as a lot of people are satisfied by having the possibility to offer or use the capital, which would, otherwise, not be used (e.g. private accommodation, cars, mowers). Sharing economy made possible the direct relationship “demand – supply” at very simple conditions, using the platform, not needing any offices, rules and bureaucracy. (Chovanculiak, 2017)

The development of the internet platforms helped to develop the sharing economy in the different economic sectors. First of all, they made it very easy for supply to meet demand and vice versa. In addition, they helped to increase the confidence of both sides of the transaction, that the other side is not trying to behave unfairly. Simply said they decreased the problem of asymmetric information. The platforms serve as a guarantee that the supplier will be paid for the good, or service by customer, who is guaranteed that his payment will be paid just after receiving the good, or service (many platforms of the sharing economy serve as a intermediaries of these transactions). The interesting thing about the platforms based on the principles of the sharing economy is, that they function without any outside public regulation, just regulated privately.

In general there are supporters and opponents of the concept of regulation. Supporters of the public regulation argue with the economic concept of information asymmetry, which means that one party to the contract has an information advantage over the other. In general, the provider of the product or service is the more informed party who actually knows more about what is being sold than the buyer. Subsequently, as a solution to this “market failure”, the government recommends regulation by public authorities that would bring about a balanced relationship between provider and buyer, giving to consumer enough protection. This approach to regulation is what could be called "public regulation". (Chovanculiak, R. & col.) As an example of the area where public regulation is needed traditionally belongs Services of general economic interest (e.g. Zemanovičová, D. & Nováčková, D., 2015).

Above all, the last part — that of transaction costs for "enforcement and control" — is highly relevant for this study. This is exactly the point where the platforms have managed to replace and even surpass existing public regulation. In other words, in many traditional fields, the sharing economy brought with it an alternative to public regulation. An alternative in the form of a decentralised approach to the creation of private regulation. Subsequently, with the aid of various mechanisms and systems, it creates trust between the two parties to a contract and mitigates the problem of asymmetric information, simultaneously solving all three of the problems of public regulation described above.

However, as was shown above, creators of private regulations are owners and it is in their self-interest to create as effective regulations as possible. This does not hold for public regulations.

5. The understanding of the sharing economy on the EU level

In the recent years the concept of the sharing economy starts to play a role in the negotiations on the EU level. EU institutions are trying to define the rules and regulate this sector of economy. European parliament in its Report on a European Agenda for the collaborative economy (2017/2003(INI)) states that the collaborative economy may create significant opportunities for consumers, entrepreneurs and citizens, and as well as generate new jobs, growth and sources of income. It is estimated that collaborative platforms operating in five key sectors of the collaborative economy generated revenues of EUR 3.6 billion in 2015 in the EU. The potential of the collaborative economy is significant, with annual growth exceeding 25 % and, theoretically, the estimate of the economic gain linked with a better use of capacities as a result of the collaborative economy could reach up to EUR 572 billion. This would occur mainly because of better utilisation of valuable resources and capacities. Still these figures are just estimations, because despite the fact, that the share of the sharing economy on the whole economy's capacity grows in time, measuring the value of the collaborative economy remains difficult. (European Parliament, 2017) Several surveys, made in the last period, reveal rather considerable consumer support and interest in the collaborative economy. According to Eurobarometer, 42 % of consumers find collaborative economy services more convenient and 33 % appreciate the fact that it is cheaper or even free. (European Commission, 2016) European Parliament (European Parliament, 2017) believes that, if developed in a responsible manner, the collaborative economy creates significant opportunities for EU citizens and consumers, who benefit from enhanced competition, tailored services, increased choice and lower prices. On the other hand, the collaborative economy generates new and interesting entrepreneurial opportunities, jobs and growth, and frequently plays an important role in making the economic system not only more efficient, but also socially and environmentally sustainable, allowing for a better allocation of resources and assets that are otherwise under-used, and thus contributing to the transition towards a circular economy. According to the EP it is clear that the growth in this sector is consumer driven and allows consumers to take a more active role. That is why the proposed regulation of this sector is rather facilitating and enabling, instead of being just restrictive. But EP clearly understands that the collaborative economy can have a significant impact on long-established regulated business models in many strategic sectors such as transportation, accommodation, the restaurant industry, services, retail and finance and affects both urban and rural environments. Hand in hand with the European Parliament, other EU institutions pay more and more attention to the sector of sharing economy and its platforms. For example, the European Commission prepared in 2016 Eurobarometer "The use of collaborative platforms" and based on its findings it starts to formulate basic regulatory rules. In this process, they have in mind importance of the digital age and using of technologies in the collaborative economy. Another EU institution addressing the sharing economy is the European Court of Justice. It is for example expected to decide whether Uber will be considered a transportation service or a technology firm. Based on this decision, Uber will be subject to various regulations and limitations under the EU law. (Chovanculiak, 2017) Nevertheless, trying to create uniform regulation for the sharing economy on the EU level is not a solution either. The problem is that State public regulations that have to be changed as a result of the sharing economy are very diverse in different countries: taxes, labour codes, social policy, licensing, establishment of a business, etc.

6. Conclusion

The sharing economy is an opportunity for everyone. Of course, not everyone is able to profit from it. Like every innovation, the sharing economy threatens traditional ways of doing things and doing business. The difference between this so-called collaborative economy and traditional economy is, that sharing is based on a voluntary exchange. Hence, we can conclude, that the sharing economy is a threat to some, but an opportunity for everyone. The business, when they want to succeed, they need to react to changes in the market, society and economy. Beside other things they need as well to constantly develop their employees so that they will be flexible enough to react to changes in the business environment. (Trelova, 2016B) The sharing economy plays an important and for decision-makers very interesting role in the present development of economies on national, as well as international, or even global level. It is obvious that the concept of the sharing economy needs attention, because it raises questions in several areas (using of resources, business-models and business environment, regulation, taxation, ethics etc.), so that we would be able to avoid the movement of the sharing economy´s activities to the shadow economy. This paper outlined just the basic aspects of this issue. There is needed research mapping the added value of the sharing economy for the society as a whole (note. the recent research is mostly focused on the transportation sector, mainly the role of UBER in the competition with taxi services, and the sector of accommodation, mainly focused on the Airbnb). There is also important environmental side effect of the sharing economy, as sharing platforms holds that consumers become much less reliant and dependent on individual, private ownership. Instead, they accept the cheap and easy access to goods owned by other consumers. As Frenken (2017) admits "in doing so, consumers do not only save money but would also contribute to lower material demand and energy use. As such, the sharing economy can be considered, at least potentially, as contributing to a sustainability transition."

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REMUNERATION OF EMPLOYEES IN GLOBAL ENVIRONMENT

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Abstract. Employees – human resources – are indispensable source of success in any company. It follows that we should treat them at least with the care we treat material, finance and information resources. Therefore the key task of human resources management is to motivate its employees to give the best performance. Globalization made this task for human resources management slightly more challenging, due to accessibility of information and movement of human capital. Transnational corporations set a high bar of remuneration of their employees and expectation of future absolvents are raising. Companies have to use both money and non-money rewarding to attract targeted employees because demand for educated and skilled employees is increasing. The aim of the paper is to describe system of remuneration provided by companies in general. The first part of paper contains general framework of issue and the second part contains results of primary research. Research was conducted on students of the University of Zilina and was oriented on opinions about factors that would influence future absolvents when choosing an employment and examples of companies they dream to work for.

Keywords: remuneration, rewarding, survey

JEL Classification: J33

1. Introduction

Employees – human resources – are an indispensable source for success of any company. It follows that we should treat them at least with the care we treat material, finance and information resources. Human resources are a people capable of self-realization in the business carried on at its own discretion. (Ponisciakova & Gogolova, 2015) Human resources are the most important resources for effective functioning of the company, but also the most sensitive resource for management. (Durana & Chlebikova, 2016). Therefore, the key task of human resources management is to motivate its employees to give their best performance. Nowadays, in the era of globalization, companies cope with the so-called hyper competition, whilst it causes a fight for highly qualified human resource (Strenitzerova & Garbarova, 2016). Another challenge for companies is rewarding of expatriates in global environment. The decision to set up the correct remuneration system requires to have sufficient knowledge of the legislation valid in the host country that regulates the issue of remuneration and taxation, as well as certain habits typical of the country in question, or the sector in which the organization operates. (Svetozarova & Coculova, 2015). Due to globalization auditing of standardized management systems in organizations is becoming more frequent in social practice, in scientific research, professional and educational areas and could be also beneficial in human resources management. (Majernik et al., 2016)

2. Rewarding of employees

Rewarding of employees is one of the main part of a motivation program in the company. Generally, we can incorporate rewards into three categories (Kachanakova, 2002):

a) Direct money rewarding– it includes salary, bonuses, fees and commissions
b) Indirect money rewarding – it includes stocks, insurance, loans, extra fee for food, clothing and more
c) Non – monetary rewarding – material values – company car, phone, a variety of social benefits and services, for example use of recreational facilities, counselling services, child care and various other

Approaches and methods of rewarding evolved over time. The main changes occurring in companies at the turn of the 20th and 21st century are shown in Table 1.

Table 1: Development in rewarding

Old approach	New approach
The focus on monetary rewards	Focusing on the total rewards
Tactical wages and salaries	Strategic salaries and bonuses
Administrative salaries and wages	Wages and salaries reflecting business
Bureaucratic system of wages and salaries	Flexible systems of salaries and wages
Separate systems of wages and salaries	Integrated systems of wages and salaries with the management of human resources
Hierarchical structure	Focusing on continuous development
Rewarding according to performance	Rewarding by assets
Priority in the internal justice	Market orientation
Relation to the accomplished work	Relationships with people
Rewarding by best practice	Adapting to the culture
Management personnel department	Devolution to line managers
Payroll rankings and multistage structure	Different types of broadband matching structure

Source: Armstrong (2002)

2.1 Money rewarding

The most important weight in rewarding of employees is still represented by direct money rewarding (Hajduchova & Giertliova, 2015).

We can identify these types of direct money rewarding in Slovakia.

a) Fixed time wage - the amount of wage defined for a particular time unit.
b) Task wage - the amount of earnings is directly linked to the employee's work performance.
c) Commission wage - form of task wage, it is suited for work performance, which can be evaluated and measured by aggregate indicators.

d) Mixed wage - combination of fixed time wage and task wage or commission wage.
e) Contract wage - reflects individual conditions between employee and employer.
f) Natural wage - part of wage can be paid in other sources than money in special terms.

2.2 Non-monetary rewarding or employee benefits.

Employee benefits are rewards that the company provides to employees only for the fact that they are its employees (Kollar & Rebetak, 2015). Usually, they are not tied to employee performance. Sometimes however, they depend on status of employee in the company, his merits and the time he has worked in the company (Beresova, 2015).

Employee benefits can be segmented into three basic groups (Strenitzerova, 2015):

a) social nature (corporate pensions, life insurance, business loans and guarantees for loans, child care workers (nurseries and kindergartens), etc.),
b) work nature (food, discount for company products to employees, language tutor, etc.),
c) benefits associated with the position in the company (prestigious company cars for managers, pay phone in the apartment, allowances for clothing and other expenses representation of companies, corporate apartment, etc..).

3. Current situation of issue in Slovakia and abroad

3.1 Money rewarding

There is a list of average gross monthly income is year 2014 – 2016 in Table2.

Table 2: Progress of average gross monthly income in European union

Rank	Country	Population	2014	2015	2016	2015-2016	2014-2016
			EUR	EUR	EUR	%	%
1	Luxembourg	0.50	3,189	3,149	3,149	0	-1.27
2	Denmark	5.60	3,122	2,307	3,100	25.58	-0.70
3	Sweden	9.50	2,690	2,551	2,560	0.35	-5.07
4	Finland	5.40	2,330	2,300	2,335	1.49	0.21
5	Germany	80.60	2,054	2,155	2,225	3.14	7.68
6	France	66.00	2,128	2,180	2,180	0	2.38
7	Netherlands	16.80	2,136	2,158	2,158	0	1.01
8	Ireland	4.60	2,160	2,129	2,129	0	-1.45
9	Austria	8.50	2,114	2,124	2,124	0	0.47
10	United Kingdom	64.10	2,597	2,253	2,113	-6.62	-22.90
11	Belgium	11.20	1,946	2,091	2,091	0	6.93
12	Italy	59.80	1,923	2,033	2,033	0	5.41
13	Spain	46.70	1,615	1,734	1,754	1.14	7.92
14	Cyprus	1.10	1,833	1,574	1,574	0	-16.45
15	Slovenia	2.00	1,044	1,092	1,092	0	4.39
16	Greece	11.00	818	1,004	1,069	6.08	23.47

17	Malta	0.40	1,092	1,021	1,021	0	-6.95
18	Portugal	10.40	985	1,001	1,001	0	1.59
19	Estonia	1.30	841	832	903	7.86	6.86
20	Czech Republic	10.50	701	765	793	3.53	11.60
21	Croatia	4.20	710	735	742	0.94	4.31
22	Poland	38.50	678	705	723	2.48	6.22
23	Slovakia	5.40	683	704	708	0.56	3.53
24	Latvia	2.00	557	601	664	9.48	16.11
25	Lithuania	2.90	524	544	585	7.00	10.42
26	Hungary	9.80	503	643	570	-12.80	11.75
27	Romania	19.90	398	417	463	9.93	14.03
28	Bulgaria	7.20	333	356	382	6.80	12.82

Source: reinisfischer.com

Slovak Republic is almost in the end of this list although average gross monthly income is growing every year. The amount of the average gross monthly income represents challenge for many people due to price level is in some areas comparable with countries with highest average gross monthly income.

3.2 Non-monetary rewarding

The wave of globalisation and foreign companies in Slovak bring new trends in benefits and many employees expect bigger salary which is similar to companies abroad. Nowadays only 30% of employees in Slovakia declare that the employer does not provide them with any non-financial benefits (Nemcova, & Markova, 2015). Companies are more interested in their employees and provide for them many non-financial benefits. The most significant increase over the past years was recorded in corporate events for employees in the form of parties, teambuilding, sitting, and so on (Dugelová & Strenitzerova, 2015). Table 3 shows the most desirable benefits in Slovakia and USA, the country which is pioneer in benefits. We can see some benefits which are overlapped from USA.

Table 3: Ten most desirable benefits global vs Slovakia

Benefits in Slovakia	Benefits in USA
Corporate teambuilding	Better health, dental and vision insurance
Free beverages	More flexible hours
Education	More vacation time
Flexible working hours	Work from home options
Cell phones for private purpose	Unlimited vacation
Employee discounts	Student loan assistance
Retirements savings	Tuition assistance
PC for private purpose	Paid maternity/ paternity leave
Work from home options	Free gym membership
More vacation time	Free day care services

Source: Platy.sk and Jones (2017), respectfully.

International companies which are doing business in Slovakia used to offer the same benefits as in abroad. (Copus, 2015).Many foreign companies take care- of the culture of the company and its corporate social responsibility. (Stofko et al., 2015) They want to learn it their employees by using benefits, for example car factory Kia rewards blood donors. These benefits include 'eco-friendly' shopping, when on purchases friendly home appliances or use a bicycle as a means of transport provided by certain funds bearing the costs of employees. The modern problem nowadays becomes insufficient harmonization of work and family life of employees, which has adverse effects on the conditions of work, family life and society. In Table 3 we can see that some of the most desired benefits prove this trend. (Sukalova & Ceniga, 2015). More and more companies operating on domestic and foreign markets in the present era of globalization approaches the transition from traditional management to process management. Implementation of process management in the company leads to the creation of process-controlled company in which each strategic decision to implement the optimization of business processes through a certain degree of change or improvements in business processes, for example the impact of technological equipment, support of information systems and others. (Kovaciková et al., 2016). This change is also influencing the human resource management.

4. Data and methodology

The aim of research is to find out how globalisation can influence future decisions. (Daneshjo et al., 2016) Students were conducted by questionnaire about their salary and future benefits. The results show us the most frequent factors when deciding to get new job. This research can point to benefits which employers can use in the future to attract good skilled graduates.

The task of the questionnaire was to find out:

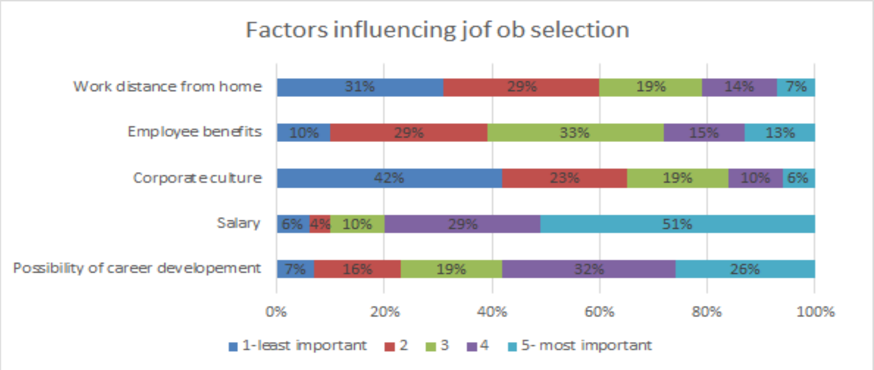
- which of the following factors would influence the students of the University of Zilina in job selection?
- have the students ever been employed?
- what is your dream company that you would like to work in?

Research sample contains 100 students of University of Zilina. The research was performed in February 2017. For research, we had to suspect that more than half of respondents had had working experience. Having a job means that students have their own experience with working environment and they have different type of expectations.

5. Results and Discussion

We presume that young people are influenced by international companies which are doing business in Slovakia and they expect different types of benefits. One of the question was asking about their future dream company. The research sample consists of 100 respondents, 43 % male and 57 % female.

Figure 1: Factors which influence job selection

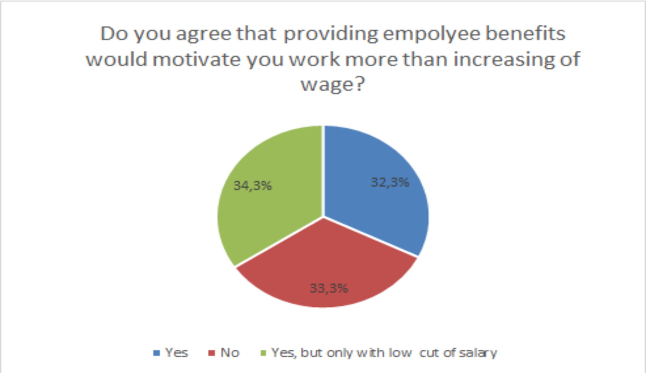


Source: Research of authors.

From complex look on Figure 1 we can see importance of various factors on respondents future job selection. The most important factor for respondents is salary. 51 % of respondents marked this factor as the most important factor. Second most important factor is possibility of career development and on the third place are employee benefits. The least important factors for respondents are distance of work from home and corporate culture.

In second question the respondents was asked if they motivate more benefits or increasing wages – Figure 2.

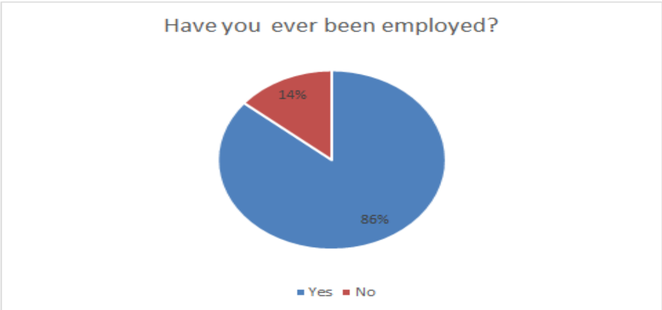
Figure 2: Answer concerned motivation to work



Source: Research of authors.

Question about motivation of respondents brought tied answers. One third of respondents prefer salary over benefits, second third would be more motivated by employee benefits and last third would consider amount of salary increase.

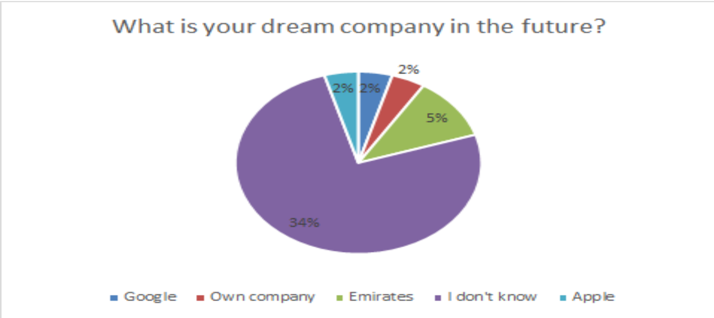
Figure 3: Previous employment



Source: Research of authors.

At Figure 3 is shown, that 86 % of respondents stated that they have been employed before, so we assume that their opinions are influenced by their work experience.

Figure 4: Dream company



Source: Research of authors

Answers on open question (Figure 4) revealed that respondents do not think much about their dream company because majority of answers on question "What is your dream company in the future?" were " I don't know." Mainly students picked international companies like Google, Emirates, AT&T or they want to run their own business. They mentioned only one Slovak accounting company KROS. Students use their products during lessons.

6. Conclusion

In order for the company to achieve the best results, company has to motivate its employees to the best performance. Globalisation brings change of working conditions and salary expectations. The fact that even foreign companies are doing business in Slovakia, there is strike of many corporate culture and Slovak companies have to face it. Therefore, many Slovak companies start build their own rewarding system.

Based on the results of the research, we recommend to companies take care of their employees more than in past. Young people rather consider to work in foreign companies than in Slovak ones because of better benefits and mostly salaries.

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VALUATION OF INTANGIBLE ASSETS: ESTIMATING THE VALUE OF PATENT

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Abstract. In the current globalization era intangible assets represent a significant source of competitive advantage and help firms to differentiate themselves from others in international markets. Companies and their stakeholders often face the need for valuation of assets, no matter whether tangible or intangible. The valuation, in general, is influenced by purpose of valuation, choice of a method and, of course, by valuator`s subjectivity. Valuation of identifiable intangible asset, in addition, is affected by their specific features. Therefore it is more difficult to estimate its value than estimate the value of tangible asset or the value of firm as a whole. For instance, intangibles are non-rivalrous in use with international reach; the economic benefit generated by intangibles is less predictable, more risky and quite often not generated by the asset itself, but in interaction with other business assets. Aim of this paper is to provide an overview of current globally used financial methods of valuation and discuss their advantages and disadvantages. In general, intangible assets valuation methods are based either on comparability, costs or income approach, however results obtained from various methods may differ quite significantly. This paper also presents a case study demonstrating application of chosen methods for valuation of a patent. The aim of presented case study is to compare several value estimations obtained by different methods and identify the key value determinants.

Keywords: intangible assets, invention, patent, valuation, valuation methods

JEL Classification: G32, O34

1. Introduction

V dnešnom globalizovanom svete plnom otvorených ekonomík podniky stále častejšie siahajú po zdroje konkurenčných výhod práve do oblasti nehmotných aktív. Niektoré druhy nehmotných aktív sú samostatne obchodovateľné, niektoré tvoria hodnotu pre vlastníka len ich využívaním v spojením s inými aktívami, alebo sa jedná o aktíva, ktoré len výrazne prispievajú k hodnote podniku ako celku. Dokonca sa môže jednať o aktíva, ktoré samotný podnik ani nevyužíva k svojej činnosti, len ich vlastníctvom bráni iným vo využívaní výhod z tohto aktíva plynúcich. Či sa jedná o prevod nehmotného aktíva samotného, alebo o prevod celého podniku, vzniká potreba určenia hodnoty týchto nehmotných aktív. Pojem hodnota je na prvý pohľad jasný, no pre každú stranu potenciálnej transakcie je hodnota toho istého aktíva rôzna. Hodnota nie je objektívna vlastnosť nehmotného aktíva, nie je teda možné zostaviť jednoznačný algoritmus k jej určeniu. Hodnota je závislá na účele ocenenia a tiež na subjekte, z ktorého hľadiska je určovaná (Marik, 2011; Wirtz, 2012). Cieľom príspevku je poskytnúť prehľad súčasných kvantitatívnych metód určovania hodnoty nehmotného majetku, so zameraním na patenty.

2. Teoretické východiská

Nehmotné aktíva Damodaran (2010) delí do dvoch základných skupín. Jednu skupinu tvoria aktíva, ktoré sú od podniku oddeliteľné a samostatne obchodovateľné. Vzťahujú sa na samostatný produkt, môžu teda samostatne tvoriť peňažné toky, od ktorých je možné odvodiť hodnotu takéhoto aktíva. Druhú skupinu tvoria aktíva, ktoré nie je možné od podniku izolovať, sú preň špecifické a samé o sebe negenerujú peňažné toky. Môžu sa významne podieľať na hodnote podniku ako celku, napriek tomu je náročné ich oceniť samostatne, prospech pre podnik totiž prinášajú v interakcií s inými aktívami. Investície do nehmotných aktív bývajú spojené s vyšším rizikom, než investície do aktív hmotných. Inovácie sú totiž spojené s vyššou alokáciou zdrojov do výskumu a vývoja, pričom výsledky sú ťažko predvídateľné, hrozí neúspešné ukončenie výskumu či zlyhanie pri implementácií riešenia (Săcui & Sala, 2012; Svačina, 2010). Predikcia budúcich prínosov je náročná, pričom v čase vynaloženia nákladov na vytvorenie nie je jasné, či nejaký budúci prínos bude, alebo s akým časovým odstupom je možné ho očakávať. Nehmotné aktíva, na rozdiel od hmotných, môžu byť užívané na viacerých miestach naraz, to znamená, že s jedným aktívom môže vlastník uskutočniť niekoľko investičných akcií súčasne (Svacina, 2010), v dnešnom globalizovanom svete dokonca medzinárodne. Hodnota nehmotného majetku môže pri správnom užívaní rásť, na rozdiel od hmotného majetku, ktorého hodnota v čase postupne klesá. Na druhú stranu môže hodnota nehmotného majetku prudko klesnúť, či už vplyvom zverejnenia technického riešenia alebo uplynutím lehoty právnej ochrany (Cada, 2007).

Patent je forma právnej ochrany vynálezu, je možné ho udeliť na vynálezy, ktoré sú nové, priemyselne využiteľné a sú výsledkom vynálezcovskej činnosti. Patenty majú teritoriálny charakter. Patentová ochrana umožňuje vynálezcom uviesť vynález na trh bez strachu z imitátorov (Cockburn & MacGarvie, 2011). Patent ale nie je možné považovať za právo na monopol, pretože konkurencia môže vytvoriť technológiu, ktorá prináša rovnaký efekt, no nie je chránená patentom (Wanetick, 2010). Patent je možné chápať aj ako právo brániť iným osobám užívať prospech z aplikovania špeciálneho procesu v období platnosti patentu (Blind et al, 2006). Patenty sa navyše vyznačujú tým, že sa nemusia vzťahovať k celému výrobku, postačuje, aby chránili len časť výrobku. Pre podniky je dokonca bežné, že vyvíjajú výrobky, ktoré sú chránené množstvom patentov. Na druhú stranu vlastník patentu nie je povinný patentovaný vynález skutočne produkovať či využívať, čim samozrejme neprichádza o práva domáhať sa prípadných náhrad v prípade, že ich využije konkurencia (Stahl & Fisher, 2010). Maresch et al. (2016) v svojej práci uvádzajú, že patenty síce časom svoju hodnotu stratia, ale ich životnosť nie je limitovaná dobou právnej ochrany, ale dobou, ktorú potrebujú konkurenti k tomu, aby uvedeniu na trh výrobok s porovnateľnou užitočnosťou.

1.1 Metódy určovania hodnoty nehmotných aktív

Pre oceňovanie nehmotných aktív sa vo všeobecnosti používajú tri tradičné prístupy – trhový, nákladový a výnosový (Parr & Smith, 2005; Jurecka, 2008; Marik, 2011; Svacina 2011 a iní).

1.1.1 Nákladový prístup

Hodnota aktíva je odvodená podľa toho, koľko by stálo jeho nahradenie. Náklady na jeho nahradenie by mali byť úmerné budúcim prínosom, ktoré oceňované aktívum prinesie, pri dodržaní predpokladu, že oceňované aktívum bude prinášať prospech dostatočne dlho a v dostatočnom množstve na to, aby pokryl náklady na vytvorenie. Rozlišujú sa dva varianty nákladového prístupu (Parr & Smith, 2005; Jurecka, 2008; Svacina, 2011):

a) náklady nahradenia – odhad nákladov na vytvorenie nového aktíva s porovnateľnou užitočnosťou s použitím nových vstupov, ktoré sú dostupné v čase ocenenia,
b) reprodukčné náklady – odhad nákladov na vytvorenie presnej kópie s použitím pôvodných vstupov a zohľadnením miery opotrebenia k dátumu ocenenia.

1.1.2 Trhový prístup

Trhový prístup je založený na porovnávaní virtuálnej transakcie s dostatočným počtom skutočných transakcií, ktoré sa uskutočnili v približne rovnakom čase na aktívnom otvorenom trhu a sú známe ich podmienky (Parr & Smith, 2005; Maly, 2007; Marik, 2011). Porovnávané transakcie by mali pochádzať z rovnakého odvetvia, alebo aspoň odvetvia s rovnakými ekonomickými výsledkami (Jurecka, 2008) a mali by byť uskutočnené v porovnateľnej fáze hospodárskeho cyklu (Svacina, 2010). Podľa Damodarana (2010) a Maleho (2007) sú metódy trhového prístupu Market-to-Book Value alebo Tobinovo Q, ktoré ale určujú hodnotu celého portfólia nehmotných aktív vlastneného jedným podnikom, nie jednotlivých druhov. Svačina (2010) uvádza ďalšiu metódu, a to metódu multiplikátorov, kde je kľúčové vymedzenie porovnateľných ekonomických parametrov.

1.1.3 Výnosový prístup

Princíp výnosového ocenenia spočíva v ekonomickom očakávaní. Podľa Svaciny (2010) racionálny záujemca nie je ochotný za aktívum zaplatiť viac, než je súčasná hodnota budúcich očakávaných prínosov z využitia aktíva pri miere rizika na úrovni porovnateľnej investície. Prehľad metód výnosového prístupu obsahuje tabuľka č.1.

Table 1: Prehľad metód výnosového ocenenia.

Metóda	Charakteristika
Metoda čistej súčasnej hodnoty	Prínos nehmotného aktíva je vyjadrený peňažnými tokmi, ktoré presnejšie zobrazujú úžitok plynúci z oceňovaného aktíva než účtovné veličiny. Metóda poskytuje informáciu o maximálne únosnej licenčnej sadzbe.
Metóda licenčnej analógie	Hodnota nehmotného majetku je rovná cene, ktorá by bola na trhu zaplatená za súhlas s jeho využívaním. Hodnota nehmotného majetku je daná súčtom hypotetických úspor plynúcich z vlastníctva tohto majetku, alebo súčtom príjmov z poskytnutia majetku k užívaniu tretím osobám.
Metóda prémie	Prémia predstavuje dodatočný prínos, ktorý plynie majiteľovi nehmotného aktíva v porovnaní s tým, keby toto aktívum nevlastnil. Prínos môže byť dodatočný zisk, alebo úspora nákladov. Podstata tkvie v porovnaní dvoch variant, a to s nehmotným aktívom a bez neho. Metóda je použiteľná v prípadoch, kedy je možné nájsť porovnateľnú výrobu bez nehmotného aktíva, prípadne ktorá používa nemej vyspelé nehmotné aktívum.
Metóda reziduálneho zisku	Reziduálny zisk sa určí tak, že sa od celkových výnosov podniku sa odpočítajú výnosy, ktoré plynú z hmotných aktív a ostatných nehmotných aktív. Takto určená čiastka predstavuje výnos, ktorý je možné prisúdiť oceňovanému nehmotnému aktívu. Metóda reziduálneho zisku má dva varianty, jeden z nich spočíva v hypotetickom ocenení všetkého majetku s výnimkou oceňovaného nehmotného majetku. Druhý variant je založený na predpoklade vlastníctva oceňovaného nehmotného aktíva a súčasného nájmu ostatných aktív od tretích osôb.
Metóda podielu na zisku	Spočíva v určení podielu na zisku podniku. Podiel pripadajúci na nehmotné aktívum sa považuje za hypotetickú licenčnú platbu, ktorá by bola zaplatená v transakcií. Hodnota nehmotného aktíva je potom daná súčasnou hodnotou týchto hypotetických licenčných platieb.

Metóda rozdelenia ekonomickej pridanej hodnoty	Ekonomickou pridanou hodnotou sa rozumie rozdiel medzi prevádzkovým hospodárskym výsledkom a ekonomickým nájomným za používané iné než oceňované nehmotné aktívum. Ekonomické nájomné sa odhaduje rovnako ako pri metóde reziduálneho zisku. Podmienkou použitia je kladná ekonomická pridaná hodnota.
Ocenenie podľa majetkovej a finančnej štruktúry	Modifikácia metódy reziduálneho zisku, ktorá spočíva v priradení požadovanej výnosnosti jednotlivým zložkám majetku. Zisk vyšší než je požadované od danej majetkovej štruktúry je považovaný za reziduálny zisk a prisudzuje sa nehmotnému majetku. Majetok sa člení na základné zložky podľa doby odpisovania, finančné zdroje sa členia na vlastný kapitál a úročené cudzie zdroje. Požadovaná výnosnosť sa odvodzuje od doby obratu majetku a nákladov na kapitál, zohľadňuje teda aj spôsob financovania majetku.
Opčné ocenenie	Zohľadňuje aktívne chovanie investora, ktorý má možnosť odložiť investíciu, kým sa nezlepšia podmienky na trhu, alebo už zahájený investičný projekt prerušiť či predať v prípade, že sa podmienky nevyvíjajú podľa očakávaní. O investícii sa uvažuje ako o možnosti, nie povinnosti, hodnota teda nemôže byť záporná.

Source: Vlastné spracovanie podľa Svacina (2010, 2011); Jurecka (2008, 2009), Maly (2007);Damodaran (2010).

Z uvedeného prehľadu metód ocenenia vyplýva potreba kvantifikácie budúcich prínosov. Ten môže byť vyjadrený formou rôznych ukazovateľov, ako zisk, prevádzkový zisk, prírastok tržieb, ekonomická pridaná hodnota, či cash-flow. Identifikácia je jeden z kľúčových bodov ocenenia. Môže sa jednať o peňažné toky plynúce z vlastnej implementácie vynálezu, alebo plynúce zo zdieľania vynálezu formou licenčných platieb. Van Triest a Vis (2007) uvádzajú, že pri oceňovaní patentu môžu byť identifikované tri druhy peňažných tokov, a to peňažné toky plynúce zo získanej konkurenčnej výhody, licenčné platby a náklady na údržbu patentu (obnovovacie poplatky či náklady na právne zastúpenie a podobne).

3. Určenie hodnoty patentu – prípadová štúdia

Prípadová štúdia prezentuje skutočný, ale anonymizovaný podnik Spoločnosť XX a.s., ktorý sa zaoberá vývojom, výrobou a predajom poľnohospodárskych strojov. Vlastnú technológiu majú patentovo chránenú. Cieľom prípadovej štúdie je ocenenie patentu, ktorý bol udelený v roku 2008. Ocenenie má slúžiť ako podklad k rozhodnutiu o predĺžení platnosti patentu. Patentované zariadenie slúži k regulácií polohy zavlažovača sejačky. Spoločnosť vlastní ku koncu roku 2016 celkom 19 patentov platných v Českej republike. Súčasťou všetkých produktov podniku sú patentované riešenia. Spoločnosť si uvedomuje potrebu investícií do výskumu a vývoja, vybudovala vlastné výskumné centrum a rovnako si uvedomuje potrebu ochrany vlastných vynálezov a technických riešení.

3.1 Odhad hodnoty patentu metódou podielu na zisku

Prognóza tržieb bola stanovená na základe strategickej analýzy podniku, do úvahy boli vzaté možnosti trhu, na ktorom podnik pôsobí rovnako ako výrobné možnosti a víze podniku. Z prognózy tržieb boli vyradené tržby z predaja tovaru a tržby z príležitostných činností. Výkonová spotreba vyjadruje náklady, ktoré sa vzťahujú k hlavnej činnosti podniku a boli určené metódou podielu na tržbách. Efektívna sadzba dane je uvažovaná vo výške 20%. Analýzou výrobného procesu a predaja podniku a analýzy konkurencie a ich výrobkov bolo odhadnuté, že 2% tržieb je možné prisúdiť práve oceňovanému patentu. V podstate sa jedná o hypotetickú licenčnú platbu. Diskontná sadzba bola odhadnutá vo výške 12%. Výsledný odhad hodnoty je zobrazený v tabuľke 2. Uvažovaná doba životnosti je maximálnych 20 rokov, z ktorej už uplynulo 9 rokov. Hodnota oceňovaného patentu k 31.12.2016 metódou podielu na zisku je 23,94 mil. Kč.

Table 2: Odhad hodnoty patentu metódou podielu na zisku.

(v mil. Kč)	**2016**	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
tržby	690	815	961	1134	1339	1446	1561	1686	1821	1967	2124	2294
výkonová spotreba	532	627	740	873	1031	1113	1202	1298	1402	1514	1636	1766
odpisy	35	41	48	57	67	72	78	84	91	98	106	115
EBIT	124	147	173	204	241	260	281	304	328	354	382	413
NOPAT	99	117	138	163	193	208	225	243	262	283	306	330
prírastok tržieb (patent)	14	16	19	23	27	29	31	34	36	39	42	46
NOPAT (patent)	1,99	2,35	2,77	3,27	3,85	4,16	4,50	4,86	5,24	5,66	6,12	6,61
súčasná hodnota	1,99	2,09	2,21	2,33	2,45	2,36	2,28	2,20	2,12	2,04	1,97	1,90
odhad hodnoty patentu	**23,94**											

Source: vlastné spracovanie.

Výsledná hodnota je citlivá na zmenu vstupných parametrov. Zmena predpokladanej životnosti patentu zo zostávajúcich 11 na 5 rokov, vyvolá pokles odhadu hodnoty o viac ako 50%. Rast diskontnej sadzby o 3 pb. vyvolá pokles pôvodného odhadu hodnoty o približne 14%. Zmena odhadu prírastku tržieb priraditeľnému k patentu vyvolá proporcionálnu zmenu výslednej hodnoty.

3.2 Odhad hodnoty patentu metódou licenčnej analógie

K odhadu hodnoty patentu metódou licenčnej analógie je použitý vzťah (Marik, 2011):

$$HV = RV \times LP \times KZ \times KK \times PM \tag{1}$$

kde HV je ročné ocenenie nehmotného majetku, RV je ročný rozsah výroby vo finančnom vyjadrení, LP je licenčný poplatok, KZ je koeficient zastarania, prípadne zhodnotenia, KK je koeficient miery kapitalizácie a PM je podiel nehmotného majetku na výrobe.

Table 3:Odhad hodnoty patente metódou licenčnej analógie.

(v mil. Kč)	**2017**	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**
RV	815	961	1134	1339	1446	1561	1686	1821	1967	2124	2294
LP	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03	0,03
KZ	0,45	0,45	0,45	0,45	0,45	0,45	0,45	0,45	0,45	0,45	0,45
KK	0,893	0,797	0,712	0,636	0,567	0,507	0,452	0,404	0,361	0,322	0,287
PM	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,08	0,08
ročná hodnota	0,982	1,035	1,09	1,148	1,107	1,068	1,03	0,993	0,957	0,923	0,89
odhad hodnoty celkom	**8,98**										

Source: vlastné spracovanie.

Rozsah výroby je vyjadrený prognózovanými tržbami za predaj vlastných výrobkov rovnako ako v predchádzajúcom prípade. Sadzba licenčného poplatku bola odhadnutá vo výške 3%. Koeficient zastarania bol odhadnutý na základe doby životnosti patentu, teoretická maximálna doba životnosti patentu je 20 rokov, k dátumu ocenenia z tejto doby uplynulo deväť rokov. Koeficient miery kapitalizácie je v podstate odúročiteľ, diskontná sadzba bola opäť stanovená vo výške 12%. Podiel na výrobe bol odhadnutý na základe analýzy výrobného procesu a finálneho výrobku na 8%. Výpočet hodnoty oceňovaného patentu je zobrazený v tabuľke 3, výsledný odhad hodnoty patentu metódou licenčnej analógie je 8,98 mil. Kč. Aj v tomto prípade je výsledné ocenenie citlivé na zmenu vstupných parametrov.

4. Diskusia

V prípadovej štúdii je prezentované ocenenie patentu dvoma zvolenými výnosovými metódami, a to metódou podielu na zisku a metódou licenčnej analógie. Napriek tomu, že obe zvolené metódy sú z kategórie výnosového ocenenia, na prvý pohľad je zrejmý markantný rozdiel vo výsledných hodnotách. Dôležité pri oceňovaní patentu sú nepochybne informácie, vedomosti a znalosť technológie, možností trhu a v neposlednej rade konkurencie. Ako vyplýva z prípadovej štúdie, pri výnosovom ocenení je kľúčové identifikovať peňažné toky spojené s oceňovaným aktívom s ohľadom na charakter aktíva, inými slovami, akou premennou vyjadriť budúci prínos. Pozornosť si vyžiada aj odhad zostávajúcej životnosti aktíva, teda ako dlho je schopné budúci prínos generovať. Významný vplyv na hodnotu má zvolená diskontná sadza, ktorá má zohľadniť pravdepodobnosť s akou budú predpoklady naplnené.

Metódy výnosového ocenenia sa snažia umelo priradiť prínos k samotnému aktívu, pričom opomínajú synergický efekt. Vzhľadom na informačnú a časovú náročnosť výnosového ocenenia je možné ho považovať za nevhodné ako podklad k rýchlym manažérskym rozhodnutiam. Nedostatky a riziko opomenutia niektorých faktorov je možné zmierniť variantným ocenením, ktoré zohľadní možné zmeny vstupov. Použitie jednej jedinej metódy je neprijateľné k dosiahnutiu spoľahlivého výsledku. Metódy nákladového prístupu sú v porovnaní s ostatnými metódami časovo najmenej náročné, ale vzhľadom na vstupné parametre ocenenia, ktoré vychádzajú výlučne z minulosti je možné považovať metódy nákladového prístupu skôr za doplnkové, než nosné. Ich využije je opodstatnené napríklad v prípade oceňovania nehmotného majetku, ktorý nemá vplyv na konkurenčnú výhodu podniku alebo pri oceňovaní nového, nezavedeného majetku, ktorého budúci prínos je len ťažko spoľahlivo odhadnuteľný. Definícia trhového prístupu indikuje bariéry jeho využitia, napríklad dostatočný počet porovnateľných transakcií uskutočnených v rovnakom čase a v rovnakom odvetví a to najdôležitejšie, sú známe podmienky týchto transakcií. Obzvlášť pri oceňovaní patentov, ktorých základnou charakteristikou je jedinečnosť. Patenty sa, okrem iného, môžu líšiť rôznou dĺžkou životnosti, prínosom aký prináša, pravdepodobnosťou zneužitia, či pravdepodobnosťou nahradenia technického riešenia novým, vyspelejších riešením.

Ďalšie faktory, ktoré ovplyvňujú hodnotu patentu a ovplyvňujú odhad vstupných parametrov ocenenia sú súčasný a budúci význam technológie, šírka patentu, možnosť vývoja inej technológie s rovnakým úžitkom, vek patentu či náročnosť dokazovania porušenia patentu (Tekic & Kukolj, 2013). Vek patentu nie je dôležitý len pre určenie potenciálnej životnosti patentu, je dôležitý aj k odhadu miery rizika súdneho sporu o patent. Podľa niektorých autorov (Love, 2013; Risch, 2012) v tomto zohráva dôležitú úlohu charakter vlastníka patentu. Podniky, ktoré vlastnia patenty za účelom užívania technológie majú tendenciu vstupovať do sporov o patent tesne po priznaní práv, na druhú stranu podniky, ktoré držia patenty za účelom obchodovania s nimi vstupujú do sporov s patentmi staršími, priemerne po ôsmich rokoch od udelenia patentu. Patenty, ktoré boli overené súdnym sporom majú vyššiu hodnotu, pretože riziko ďalšieho sporu je nízke a ich jedinečnosť a pravosť už bola overená. Legislatíva umožňuje preskúmať patent formou námietky v lehote deviatich mesiacov od jeho udelenia. Jedná sa o menej nákladnú formu napadnutia patentu a niektorí autori považujú podávanie námietok za indikátor vyššej hodnoty patentu (Hu et al. 2008; Harhoff & Reitzig, 2004). Vlastník vplýva na hodnotu patentu aj z iného hľadiska, podľa Grönqvist (2009) sú patenty vlastnené podnikmi hodnotnejšie než patenty vlastnené súkromnými osobami. Dôvodov je hneď niekoľko, podnik má väčšie zdroje, lepšiu vyjednávajúcu pozíciu a je viac motivovaný realizovať získanú konkurenčnú výhodu. Fakt, či prihlasovateľ pôsobí vo verejnom alebo súkromnom sektore ale nemá výrazný vplyv na hodnotu patentu (Sapsalis et al., 2006).

5. Conclusion

Do ocenenia patentu, či nehmotných aktív všeobecne, vstupuje množstvo premenných, pričom všetky majú niečo spoločné, neistotu. Je preto dôležité dobre porozumieť, aký je ich vplyv na výslednú hodnotu. Príspevok poskytuje prehľad používaných metód oceňovania, všetky sa nejakým spôsobom opierajú o minulosť, vychádzajú z vynaložených nákladov, porovnávajú zámer s uskutočnenými transakciami či v minulosti hľadajú zdôvodnenie prognózy budúcnosti. A budúcnosť je vždy spojená s rizikom. Jedinečnosť nehmotných aktív vylučuje existenciu jedinej univerzálnej metódy ocenenia. Tento príspevok ukazuje, že je vylúčená aj existencia univerzálnej metódy ocenenia vybraného druhu nehmotných aktív, patentov. Tak ako patent zo svojej podstaty chráni jedinečné technické riešenia, tak je aj každý patent jedinečný. Jeho hodnotu ovplyvňuje to, či patent chráni celý produkt, alebo len jeho časť, či ho vlastní podnik, alebo súkromná osoba a za akým účelom patent drží a mnoho iných faktorov. Aj keby bolo možné získať všetky informácie, podarilo by sa identifikovať všetky faktory, ktoré vplývajú na hodnotu oceňovaného patentu a spoľahlivo ich kvantifikovať, aj tak výsledok bude pravdepodobne ovplyvnený subjektívnym vnímaním oceňovateľa.

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APPLICATION OF PROCESS & LOGISTICS APPROACH TO THE MANAGEMENT OF RETAIL CHAINS IN CONDITIONS OF INTERNATIONAL ECONOMIC SPACE NETWORKING

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Abstract. Globalization processes lead to the development of supranational networks in retail, increasing cross-cultural interaction and to the increase in the number of regions participating in national retail chains. The article describes the concept and terminology of "retail chains", which are seen as a source of synergetic effect.The process & logistics approach to retail chain management system is proposed. The authors describe the system of management based on the principle of delegating authority and responsibility in business processes in order to achieve target growth rates of the integral indicator of their efficiency and to ensure satisfying the needs of all stakeholders. The authors systematize and analyze the internal and external environment factors influencing the organization of business processes in retail chains, identify the factors and conditions having negative and positive impact on the development and territorial expansion of retail chains which should be considered when choosing strategies of their development. The process & logistics approach is used to provide a matrix for determining the strategy of development of retail chains. It consists of four strategies: "stars", "gold miners", "downstream swimmers", and “lucky men” developed on the basis of indicators: efficiency of company business processes and profitability of sales. The matrix allows establishing strategic reference points of development for retail chains.

Keywords: retail chains, intensive development, process & logistics approach, leasing.

JEL Classification: L1, L81, M 300, M 310

1. Introduction

The development of networks in retail leads to the expansion of local markets, the spatial boundaries of which do not coincide with the boundaries of administrative entities. Globalization processes result in the development of supranational networks and the increasing number of regions participating in national retail chains. The retail sector accounts for 15.8% of the GDP in the Russian Federation. The sector employs the largest number of people: 12.7 million people (18.7%), and the tax revenue to the budget of the Russian Federation is 354.6

billion roubles (2.8%)[1]. 41.9% of retail turnover comes from large retailers, including retail chains.

The consolidation of retail chains in Western countries is significantly higher than in Russia. Thus, in Germany it accounts for 80%, in the USA - 55%, Switzerland - 63%, Portugal - 47%. Labour productivity in Russian retail is still significantly lower than in developed countries, although it has more than doubled in recent years, amounting to about 41% of the US level (calculated in US dollars, taking into account purchasing power parity). Obviously, in Russia the full potential of retail chains is not achieved, they lack effective strategies for growth; there are no systematic approaches to managing the efficiency of retail services.

For solving the above mentioned problems, there is a need to develop the theory and methodology of retail chain management, thus the study deals with acute issues and seeks to contribute to this area of research.

The research paper aims to provide the methodology and practical recommendations on developing the mechanism of retail chain management, assessing its performance and determining its development prospects.

The object of the study is organizing business processes in a retail chain and managing their economic efficiency. The scientific novelty of the study is as follows:

The study substantiates the need for using the process & logistics approach to managing a trading company’s performance with the account of customer satisfaction. In this approach, the management of a retail company’s performance is the continuous system of interrelated management functions (planning, organization, motivation and control), built along the way of movement of business processes: purchasing and supply management, warehouse operations, distribution and sales;

A methodology of complex multifactor evaluation of retail chain performance is developed. It involves developing a reference model of a retail company, a comparison with which makes it possible to determine the development prospects for a company in general and for each specific business process in particular. We present a well-founded set of indicators to determine the efficiency of organizing the main business processes in a retail company, which allow, when they are considered in dynamics, to identify problems in rationalizing distribution costs and ensuring the profitability of the retailer;

A matrix for determining the strategy of a retail chain future development is provided in the study. It is based on the indicators of business processes efficiency and profitability of sales; and consists of four strategies: "stars", "gold miners", "downstream swimmers", and "lucky men".

2. Theoretical aspects of retail chain management

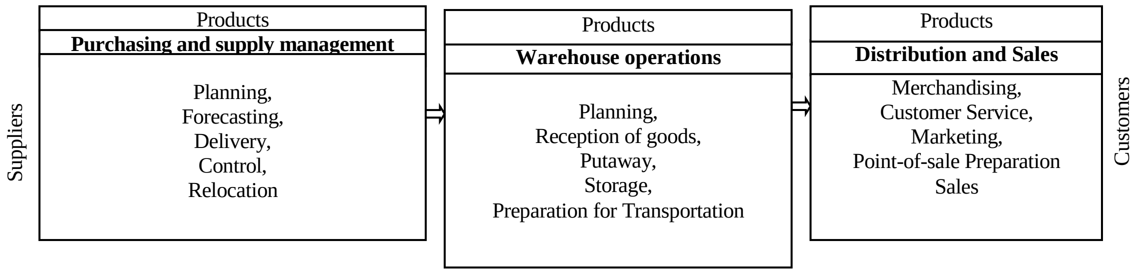
The theory of retail chains provides no unambiguous approach to understanding its intrinsic characteristics. The paper analyzes approaches to defining a retail chain presented in previous studies and legal documents. Retail chain is a group of specialized enterprises, the networking

[1] Federal State Statistics Service, data available for 2014, Tax payments in the budget of the Russian Federation by sector

of which allows reaching synergies; the activities are managed from a single center and are aimed at satisfying consumer needs.

The research of the concept "intensive development" in works of Mensch (1975), Iannetti et al. (2016), Konds et al. (2016), Kocas & Akkan (2016), Nousiainen et al. 2016) showed that the essence of this definition most often comes down to the complex characteristic of innovative activities of the entity and is characterized by such indicators as intensity, efficiency, effectiveness, etc. Iannetti et al. (2016) Kocas & Akkan (2016), Perdikaki et al. (2016)

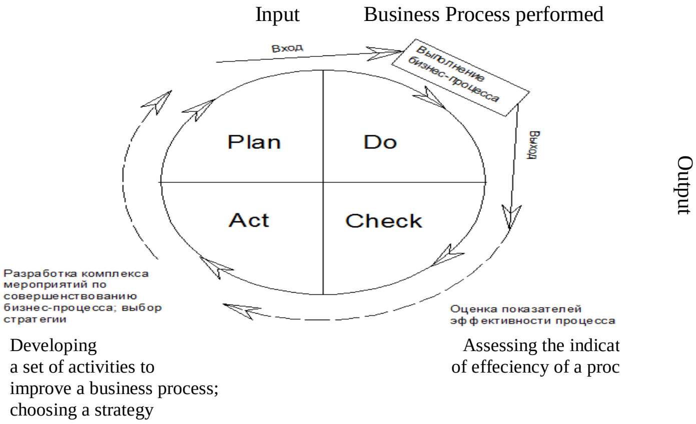
Figure 1. Logistics system of a retail company



Source: the results of authors' research in 2016

The process approach to the analysis of a company's performance requires its assessment at each stage (each business process). It looks at management as a continuous series of interrelated management functions (planning, organization, motivation and control). The advantages of this approach are that it allows identifying ways to reduce transaction costs, reducing the time spent on procedures, and improving the use of fixed assets. According to ISO 9000: 2000, a business process is defined as a set of interrelated and interacting activities that transform inputs and outputs of value to the consumer. In the proposed system, three main business processes built along with commodity circulation are identified: purchasing and supply management, warehouse operations, distribution and sales (Fig.1).

Figure 2. Retail chain management system based on the process & logistics approach (developed by the authors)



Source: the results of authors' research in 2016

Each business process is represented by the generalized retail and technological operations of the retail chain. Thus, the business process *Purchasing and Supply Management* consists of the following operations: planning, forecasting, delivery, control, relocation. The business process *Warehouse Operations* includes: planning, reception of goods, putaway, storage, preparation for transportation. Such operations as merchandising, customer service, marketing, point-of-sale preparation, sales - refer to the business process *Distribution and Sales*.

For retail chains we propose to put the composition of the business process on the Deming-Shugart cycle. The resulting scheme (Fig. 2) is a system of responses to the activities composing a certain process, transforming inputs into outputs, as well as interaction of people in charge of operations and processess. The use of business processes in the management of retail chains contributes to the optimization of the management system, makes it more flexible, reduces the time of response to the tasks; provides a system of indicators and allows to evaluate the effeciency of management at each stage of the logistics chain of commodity circulation, to satisfy the needs interests of all stakeholders of the retail chain: investors, managers, personnel, consumers, suppliers. The use of this approach will allow to take into account the influence of environmental factors and coordinate business processes in order to improve the efficiency of their organization (Valeeva & Sharafutdinova, 2015).

3. The method of complex multifactorial evaluation of efficiency of a retail chain

The method proposed by the authors consists of several stages shown in Figure 3. The methodology is based on a comparative evaluation of the most significant characteristics of the business processes.

Standardization of indicators is carried out according to the formula 1:

$$P_{ij} = a_{ij} : a_{iэ}, \quad (1)$$

a_{ij} standardized indicators of the state of the j-th enterprise;

$a_{iэ}$ indicators of the state of the reference enterprise.

The ideal/reference value is 1.

The summarizing indicator of the efficiency of each business process is calculated as the arithmetic mean of individual normative indicators P_n :

$$I = \frac{1}{N} \times \sum_{n=1}^{N} I_n \quad (2)$$

I summarising indicator for assessing the efficiency of each business process;

N number of individual normative indicators of the quality of the business process.

The integral indicator of the comparative efficiency of a trading enterprise on the basis of a process & logistic approach is a product of three summarizing indices of business processes:

$$Э = I_1 \times I_2 \times I_3 \quad (3)$$

Further, the integral index of the company's comparative efficiency is determined for several competing retail chains. The greatest value indicates high efficiency of a retail chain.

4. Approbation of the proposed methodology

Approbation of the proposed algorithm was carried out on the basis of the data provided by LLC "Bakhetle" and "Pyaterochka" LLC "Akbarstorg" for the years 2011 to 2015.

To determine the further development, a matrix of strategies is developed. The horizontal axis corresponds to the integral indicator of the efficiency of business processes of the retail chain, the vertical axis shows the profitability of sales.

Table 1: Integral indicators for the assessment of the effeciency of business processes in retail chains (developed by the authors)

Indicators assessed	LLC "Bakhetle"					"Pyaterochka" LLC "Akbarstorg"				
	2011	2012	2013	2014	2015	2011	2012	2013	2014	2015
Integral index of the efficiency of a trading company (Э)	0,65	0,75	0,70	0,76	0,77	0,46	0,43	0,40	0,48	0,50

Source: the results of authors' research in 2017

"Stars" imply high efficiency of the business processes of a company along with high profitability of sales. It is the best strategic position for a retail chain, indicating that the chain is efficient and it has won its competitive niche. The main forces should be directed to maintaining a stable economic position in the market. In the conditions of modern competition, constant improvement of its activities and attracting new consumers are necessary.

In the case of "gold miners" high efficiency of business processes organization comes with low profitability. This situation arises when the retail chain is working efficiently, but at the same time a high level of competition does not allow a high level of profitability. The high efficiency of "gold miners" is due to the economy of scale, when with the increase in sales the unit costs are reduced. The retail chain should develop extensively through the opening of new sales outlets, which allow reaching the greatest synergetic effect.

"Lucky men" are retail chains that have high profitability and low efficiency of business processes. Ssuch a situation may occur when the level of competition is insignificant. For the further development of such retail cains, it is necessary to improve the efficiency of business processes, as the level of competition can increase irrespective of the activity of the retail chain, and "lucky men" can turn into "downsream swimmers".

"Downstream swimmers" («пловцы по течению») have a low level of profitability accompanied with low efficiency of business processes. They should develop a set of measures to move to "gold miners". Otherwise, they should leave the market, as a high level of competition will not allow further development.

As can be seen from Figure 3, practically both the retail chains under analysis are in the box "gold miners". This means low profitability, despite the high efficiency of business processes. For the retail chains analyzed, practical measures have been developed to preserve the existing strategic position "gold miners".

5. Evaluation of the interrelated social and economic indicators of the region

The study of factors that affect the performance gives a clear guidance for determining the strategies of development of retail chains.

The paper identifies factors and conditions that have a negative and positive impact on the development and territorial expansion of retail chains (low level of service and quality control of goods sold, insufficient number of innovations being introduced, difficulties in finding qualified personnel, etc.).

Table 2: The regression equation of the influence of external factors on the sales revenue of retail chains

LLC "Bakhetle"	"Pyaterochka" LLC "Akbarstorg"
y=29783,21-128,44x4-13,34x6+27,26x7+94631,89x8 y - sales revenue of a retail chain x 4 - consumer household expenditure per person per year, rubles; x 6 - short-term loans, million rubles; x 7 - turnover of retail trade, mln. rubles; x 8 - official exchange rate of the US dollar against the ruble.	**Y= -19142690+3429.89x2+0.35x4+72.91x9** y - sales revenue of a retail chain x 2 - average annual population, urban, thousand people; x 4 - consumer household expenditure per person per year, rubles; x 9 - average per capita monetary income, per month, rubles.

Source: the results of authors' research in 2017

The regression analysis is applied to analyze and assess social and economic factors affecting the final indicator of retail chains - turnover (y). The regression equation is applicable for predicting the possible expected values of this resulting characteristic (Table 3).

6. Main conclusions and results of the study

The theoretical research conducted and practical developments of the study allowed us to formulate the following conclusions and recommendations:

a) Continuous system of interrelated management functions (planning, organization, motivation and control) built along with the movement of business processes – purchasing and supply management, warehouse operations, distribution and sales – is the management of the enterprise on the basis of the process & logistics approach.
b) It is recommended to use the process & logistics approach to manage the activities of retail chains, since this approach is an effective way of creating value for consumers.
c) The development of the retail industry in Russia has passed four main stages: retail under the planned administrative regime, the stage of the "wild" market, the stage of retail chains emergence, and the stage of fast retail chains growth.
d) The system of factors affecting the performance of retail chains can be divided into external and internal, they are also defferentiated according to the extent of their influence on the business processes of retail chains.
e) The efficiency of the retail chains LLC "Bahetle" and "Pyaterochka" was assessed on the basis of the process approach in the dynamics for 5 years. In order to verify the methodology, a correlation was made with the results of evaluating the performance of the retail chains on the basis of their financial reporting, which showed that the results of the assessment by these approaches are comparable, which in turn demonstrates the adequacy of the methodology.
f) The study of the factors influencing the development of retail chains is carried out through regression analysis, which allowed us to build a regression equation that shows the correlation of revenue and profitability of assets with the external and internal environment.
g) The analysis of the economic situation in the country and its regions, industry, competitors was made to determine the prospects for the development of the retail chains. A matrix of retail chain strategies has been developed, it provides four strategic

options to choose from: "stars", "gold miners", "lucky men", " downstream swimmers ". Recommendations how to implement the strategy chosen are also provided.

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APPROACHES TO INCREASE EFFICIENCY OF ELECTRONIC SERVICES IN THE NEW STAGE OF GLOBALIZATION

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Abstract. The paper deals with the issue of electronization of public administration, focused on services provided through the central government portal. Informatization in Slovakia resonates among citizens for more than ten years. The challenging for "last mile" of creating available electronic services is aimed to increasing the citizen's comfort, eliminating bureaucracy and increasing the efficiency of public administration, through the openness and cooperation of public authorities with the business sector. Results of negotiations are implemented to operational programs and reforms to create a "pro-client-oriented public administration". Nordic countries, Estonia and UK serve as an example, well designed electronic public services. Although eGovernment offers great potential for increasing interaction between public administration and citizen, its implementation is dependent on several factors. The contribution points to existing barriers from the perspective of the public administration - in particular from the point of view of legislation, funding, or organization, and from citizens - in the form of digital literacy or fear of lack of support. The paper focuses on primary research aimed at the central public administration portal, mapping the dimensions of efficiency, trust and reliability that are key factors which have to be met for satisfaction of real needs of the users. It also captures the most commonly used devices for searching information on the Internet. The results of research point out the problem areas and potential of new technologies that can be used for electronic services provided by public administration. These electronic services should be competitive and motivate citizens to use them.

Keywords: eGovernment, electronic services, central government portal, public administration

JEL Classification: H83, O38

1. Introduction

Projects aimed at implementing eGovernment bring many benefits and opportunities for public administration and citizens around the world as well. The governments of states are aware of need for innovation of electronic services in public administration sector. These innovations bring efficiency in long term and are focused on main areas of eGovernment - public administration, public sector economy and communication technologies. (Bannister, 2007)

Progressive results are reflected in provision of faster, more convenient and client - oriented public administration services by improving inward and outward directed activities. (Stedron & Budis 2009)

1.1 Barriers of eGovernment

The provision of electronic services is accompanied by increasing interaction between public administration on one side and citizens on the other side in the online world. A rising number of services carries a risk of a huge amount of information that can cause unclearness, slowdown in the administrative process among the service users and ultimately, to a return to a previous form of service. (Butek & Stofkova, 2016)

Despite the fact that there is a potential for increasing interaction and reducing long-term costs in this sphere, the implementation of electronic services depends on several factors. In reality it often happens that results of new projects regarding electronization of services in public administration sector are not satisfactory and do not meet the expectations. (Lee, 2007)

A lack of harmonization of technical and technological elements with other parts of the project and the stability of environment in which the service is implemented are common cause of barriers in this sector. Therefore it is possible to define restrictions on part of public administration concerning *technical and technological barriers*, *organizational barriers, funding* and *legislation issues.* (ITU, 2008) The citizens, as service users, are bothered of *security*, complexity of online forms and *digital gap* caused by not sufficient broadband internet coverage.

A standard level of digital literacy is essential for appropriate functioning of eGovernment, which comprises the ability of correct understanding regarding presented information from different sources. (Velsic, 2013) The level of this ability is determined by motivating backgrounds, demographics, education, living standards and geographical location, etc. (Stofkova & Stofko, 2016)

1.2 Quality of electronic services

For the evaluation of provided services it is important to monitor the quality of services by the available methods. Regular monitoring of selected indicators and their quantification enables the identification of “weak spots” and subsequently to carry out measures. Electronic services represent an interlinked system, that´s why several methods of monitoring quality of electronic services have to be applied - focusing on information systems, quality of information and provided services. (Gasova & Stofkova, 2017)

Transferring the interaction among citizens and institutions into online environment have some differences between the traditional form of service and its online version. From the point of view of providing electronic services to citizens, three aspects of quality are specified:

Quality of the electronic services and their environment depends on:
- Graphic design
- Layout of elements

Quality of electronic services and its provision depends on:
- Attractive selection
- Easy and intuitive use
- Source of information

- Technical security

Quality of outcomes of electronic services

- Reliability
- Functional benefits
- Emotional benefits. (Fassnacht & Koese, 2006)

The expected quality of electronic services is affected by various factors, in particular by current needs of clients in relation to the service provider. If the expected level of quality is higher than it is perceived, then service is unsatisfactory. If the expected level of quality is equal to the perceived one, the service is satisfactory. If the perceived quality is higher than the expected one, it tends to be the ideal quality of service. (Lindgren & Jansson, 2013) (Daneshjo, 2016)

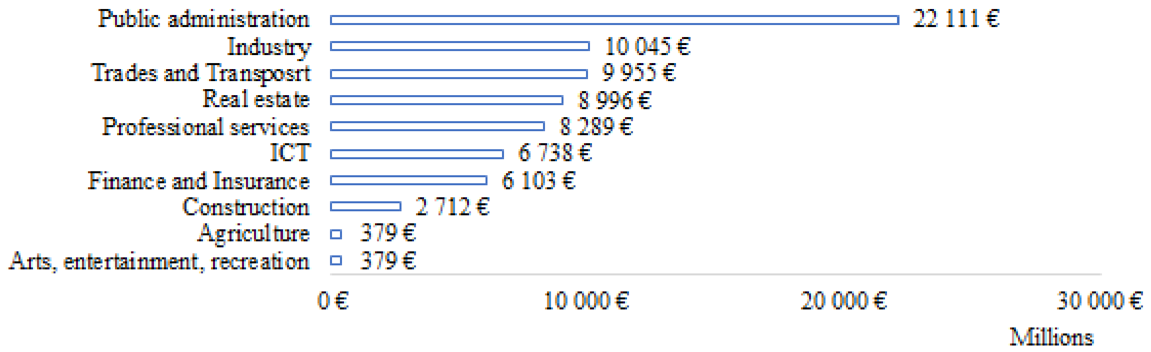
Attributes of quality for eGovernment websites, can be reduced to four dimensions:

a) Reliability - sufficient technical and software equipment and communication capability, independence of visual display on a web browser.
b) Efficiency - design and layout of pages that are easy to read, understandable for entire user group, provision of up to date and reliable information.
c) Citizens´ support - assistance in search for information, performing transactions in form of brief instructions, frequently asked questions, using one of operator's contact options.
d) Trust - security and privacy policy in interactions with online service portals. (Papadomichelaki & Mentzas, 2012)

2. Electronic public administration in global context

Construction of interconnected European digital market by means of legislative action points to efforts for optimization and effectiveness of processes in this sphere. Attention is focused on reduction of costs and barriers for citizens and entrepreneurs with a regard to building a social and ecological European economy. Providing access to open data, with regard to security, becomes a standard of today's communication. The main reason is to allow a reuse of data independent on specific software. The study of “Value creation through open data”, which was carried out across various economy sectors of 28+ European Union member states, expects growing importance of reused data. Prediction of “Value of open data for 2016” was 55.3 billion EUR, and it is estimated value increase of 36.9% by 2020. An overview of industries and expected value of open data market is illustrated in Figure 1. (European Commission, 2015)

Figure 1 Prediction and market size of Open data according to economy sectors in 2020



Source: Creating Value through Open Data, 2015

Current challenges of the European Commission lead to Action Plans aimed at creating a single digital gateway, linking and incorporation into e-Justice registers, pilot testing of one´s a registration of an enterprise operating in several EU countries was carried out, developing e-health services and provision of reusable data. (Loucanova, 2015)

Digital space for electronic services provided by public administration is divided into fragments, despite the effort made in this sphere. The space primarily consists of services on national level with minimum interconnection with other countries. (Spacek, 2012)

3. Portal of public administration

Information Portal for Public Administration services of the Slovak Republic was established in 2004. In 2008 the status of portal changed to a central portal as a result of discussions on Concept of eGovernment in the Slovak Republic. In 2012 gradual development, testing and availability of modules for communication with public authorities lead to the largest restructuring of the site Nowadays, the central portal provides more than 1400 services which are being gradually transformed from information level to a transactional level. The portal is trying to meet citizens' requirements. Specific objectives of operational programs "Effective public administration" and "Integrated Infrastructure" create competitive environment in the Slovak Republic along with other European Union Member States which are included in the priorities of European Strategy 2020. Now Central Government Portal is an information system designed to provide service and information to the public through the common internet access point. The portal is managed by regulations of Act No. 275/2006 Coll. on Public Administration Information Systems and by the Act No. 305/2013 Coll. on e-Government. (Slovensko, 2017)

3.1 Methodology of Research

The primary object of research was aimed at electronic services of the Central portal of public administration used by its clients. The survey which was carried out on a sample of 151 respondents, took into account the demography in country. The research was focused on four dimensions of home online – efficiency, trust, reliability and support – described in Chapter 1.2. Accompanying questions were devoted to the most frequently used device for searching for information and interest in installing additional apps on mobile devices.

3.2 Discusion

The most important factor for 47% of respondents, who visited the Central portal of public administration, was the factor of **reliability**. The attributes concerning reliability mapped:

- Correct page loading in browser used by the client
- Page loading speed
- Response time
- Availability of content
- Time for downloading forms

The highest degree of dissatisfaction was noted at the page loading speed and its subpages, together with the response time. The results reflect the current state since the portal serves only as a gateway to the electronic services of public authorities. Subsequently, Client´s communication is redirected to the competent public authority, whose headquarters are being redirected.

The area of **effectiveness** was identified as the most important by 33.1% of respondents. The effectiveness of the portal was closer characterized by these attributes:

- Verification of completed information
- Up-to-dated information
- Graphic processing
- Details of the information
- Individual access to the user
- Layout and navigation
- Relevance of search results
- Page layout orientation

Increased dissatisfaction was noted in intuitive orientation on portal site and degree of details of provided information. The main reason may be a complicated level of hierarchical layout of life situations which affects the user friendliness and continuity of search. Information provided is often a professional, similar to legislative text, so it may not be fully understandable to an ordinary citizen.

The **security and trust** were considered as important factors by 18.5% of respondents. The block of questions was represented by attributes focused on:

- Access passwords
- Obtaining access data
- Use of the information being sent by the client
- Security verification

The most frequent negatively reported feature concerning the services, which was mentioned by the respondents was the way how to obtain the access data. The main reason is a need of personal visit of the department issuing personal documents and the eID requesting together with certificates allowing full interaction. In addition to an electronic identifier, a card reader hardware is also required.

The last important feature of the provided electronic services is the **support**. Employee reliability and accuracy of the provided information are essential in solving life situations via Central portal for 1.3% of respondents. Support dimension was monitored on behalf of following attributes:

- Accuracy of provided information
- Knowledge of employees
- Contact center response rate
- Support by system operator

The results obtained in the research by questionnaire pointed also to the preference of devices, which are used to search for information on Internet. The computer is primarily used by 57.6% of respondents. The most of the government websites are optimized for this choice. The remaining part is in 36.4% made up of mobile devices and tablets. This can be influenced by increasing computing power and decrease of acquisition cost of the equipment as well as selling techniques by mobile operators. Increasing use of portable devices brings an appeal for application developers, but especially for websites providers responsible for optimized and correct displaying.

Downloading and installing applications from online stores are preferred by 85.4% of respondents. This is a reason why attention needs to be paid to the development of full mobile applications in the public sector as well. An example of this is the Kingdom of Bahrain's Handbook for eGovernment application development. (Kingdom of Bahrain, 2015) It contains information about how a visual of the application can be created, with focus on possible design mistakes. A positive example in Slovakia is an eStamp application that allows payment of administrative and judicial fees with the aid of a mobile device and extends a portfolio of payment options for public services.

A modern mobile application should provide full interaction. Currently implemented options in Slovakia do not offer such a functionality. One way how to remove communication barrier is to extend communication support to portable mobile devices as well. Compatible devices are available on the market to use eID cards - eID reader with microUSB port. The only question is to provide software support with security.

An innovative solution that uses the MicroSD card format responds to the expected eID acceptance in commercial space as well. This solution by SMK Logomotion Corporation contains two chips. The first role of the device is the storage of electronic documents, another function serves for non-contact payments using NFC technology. The combination of these modules allows payment while using the reader meanwhile it serves as an authentication of the citizen. (HP Enterprise, 2016)

4. Conclusion

Development of electronic public administration services designed for citizens to increase level of electronic communication should be based on basic pillars - available technical equipment, reliable operation, avoiding complicated functions, relevant content and in particular, intuitive control. Collaboration, learning and adopting effective eGovernment models from European leaders makes it possible to spend a less money on infomatization, eliminate errors and contribute to harmonization in creation of the Digital single market in Europe. The task of E-Government as a part of information society is to improve and simplify everyday life of citizens. The Slovak government adopted new legislative changes in the framework of promoting e-services and drew up various program documents in this sphere. Since 2008 the Ministry of Finance draws up satisfaction surveys of electronic public administration services. This trend only confirms the growing significance of e-government. The main purpose of electronization of public administration services is the satisfaction of citizens and entrepreneurs. The development of eGovernment increases confidence and willingness to use this kind of services with the aim to fulfill the needs of citizens in Slovak Republic. In time of globalization of Slovakia tries to approximate to more developed countries as for example United Kingdom, Bahrain, etc.

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IMPORTANT INDICATORS OF THE QUALITY OF LIFE IN TODAY'S GLOBALIZED ENVIRONMENT

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Abstract. The paper deals with the issue of quality of life in global context. In the context of determining the level of objective quality of life, indicators of economics, security, health, education are applied. The quality of life in the municipalities has many components, as life standard reflected by amount of income, safe housing, and availability of water, goods, services or health care. These indicators are quite good measurable. Subjective aspect of quality of the life, assessment of the satisfaction of individual areas and aspects of well-being, including the assessment of income and other indicators, such as the quality of environment, education, health services, or feeling of safety can be measured more complicated. The security of citizens and their property is also one of the key indicators of life quality. It can be characterized through subjective perception or objective statistical indicators. The contribution focuses on the primary research on the quality of life in selected cities und municipalities in European Union. This reflects at what level is human perception of safety and other indicators and how much is this limited by the external factors. In the contribution are presented the results of the primary survey about the perception from citizens' point of view, implemented in the selected cities and municipalities from European Union. In the paper, the comparisons are mentioned to highlight how globalization affects the feeling of safety in the cities and their surroundings.

Keywords: Security, quality of life, globalization, cities.

JEL Classification: J17, J28, I31,

1. Introduction

The environment of the city has an impact on the everyday life of its inhabitants. It also includes evaluation how the urban environment impacts people's lives. Quality of life in the city has many components. These attributes involve living standard, environmental conditions, quality of infrastructure and access to goods and services. Other components such as, satisfaction with these areas, the quality of the environment, the feeling of security, freedom and innovation can be measured much harder. Security is one of the main indicators of quality of life. It can be characterized by subjective perception of citizens or by objective statistical indicators. Security has long been one of the strongest human needs, local governments are trying to provide it as a service to citizens. They invest in security, trying to minimize unfavourable determinants that would endanger citizens and have a negative impact on their lives. For that reason, it is necessary for city managers to get the opinion of citizens, then compare it with theirs and get the information to use.

2. Perception of security in EU cities regarding quality of life

2.1 Quality of life domain

The quality of life represents concept of conditions of life on the one side and on the other side it also involves a subjective perception of quality of life, which can be seen as satisfaction with one´s own life. The objective dimension deals with the culturally relevant domains and subjective well-being deals with the life satisfaction and happiness weighted by individual personal importance. (Wei & Gao, 2017)

Rejeski and Michalko describe the definition of the quality of life as "the conscious cognitive judgement of satisfaction with one´s life", the concept that has been operationalized both uni-dimensional and multi-dimensional measures, i.e. terms of satisfaction with life as general, or of satisfaction with specific domains of life. (Rejeski & Mihalko, 2001)

The higher level of life satisfaction the stronger sense of subject well-being people will have. This construct is not only associated with people´s material living conditions, but also related to their subjective needs and social values. (Gogolova, 2016) Subjective well-being emerges from real living conditions. The priority people place on different domains varies across gender and age, level of education. (Cummins, 1997).

From an objective point of view, quality of life can be defined by the interdependence of 4 determinants that include important functions and activities of society. (Antalova, 2016) It is possible to hierarchical decomposition of each element, for example:

- the quality of the population may be derived from the population's demographic structure, health of the population, education and professional competence,
- material well-being - determined by standard of living differentiated according to the income, housing, education, culture, health system, access to public services and civic amenities,
- the quality of the social system is based on the right of people to education , the use of health services, insurance, employment, personal protection, social and political stability of the system, etc.
- the state of the environment is affected by the state of natural resources, civil rights, security, etc. (Durana & Chlebikova, 2016)

The list of determinants is incomplete and some items can be categorized into several categories. The environmental conditions of life promote quality of life even if they do not create it by themselves. (ENVIS, 2009)

Objective measurement of quality of life by means of indicators focuses mainly on the expected sources of quality of life, its level is perceived by indicators, which can be obtained mainly from secondary sources e.g. institutions like statistical office, etc. (Svobodova, 2008)

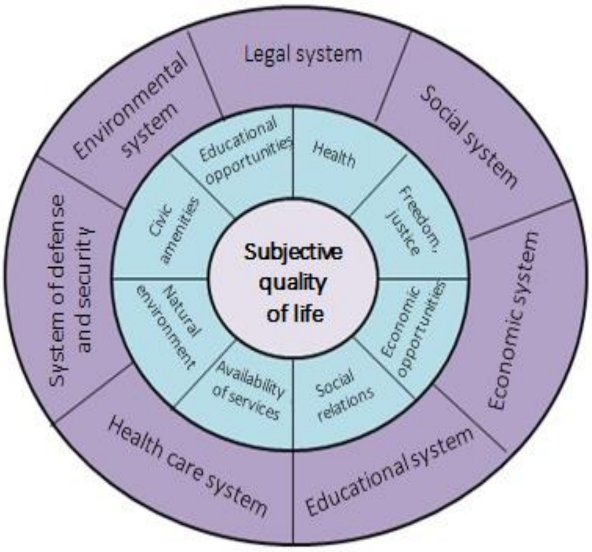
The importance of perception of personal safety and future security is pointed out also by which conceptualized the structure of subjective well-being assessment across seven life domains: quality of individual standard of living, health, life achievements personal relationships, feeling of safety, community well-being and future security. The priority people place on different domains varies across gender and age, level of education etc. (Cummins & Lau, 2006)

Overall quality of life can be divided to several domains: quality of relations, trust in people and institutions, access to services, quality of public sevices, subjective well-being, housing quality, standard of living, health, and quality of neighbourhood. (Betti, 2015)

The subjective quality of life that involves feelings like satisfaction and happiness, satisfaction with individual areas of life, and satisfaction with the overall life. (Payne, 2005)

Subjective perception of quality of life implicitly includes also real living conditions, circumstances and social relationships (their level) in which one experiences his life. (Tokarova, 2002)

Figure 1: Structure of theoretical systems of quality of life, concepts and causes



Source: Fazikova & Milotova, 2010

public good. No individual can be excluded from consumption and there is no rivalries between them. It is provided to all citizens without distinction. Safety as part of quality of life can be regarded as a service provided by local self-government to citizens which represent its clients. (Halasek, 2004)

2.2 Measuring quality of life

The concept of quality of life was operationalized both in uni-dimensional and multi-dimensional measures, i.e. terms of satisfaction with life as general, or of satisfaction with specific domains of life. (Rejeski & Mihalko, 2001)

The measurement of quality of life is realised currently mainly by the use of selected indicators. QoL is measured related to how the term is defined, and therefore to what is being measured. The QoL can be measured from subjective and objective perspective. Measure methods differ according to what is being measured: a) subjective perception of the external conditions of QoL, b) subjective perception balanced against objective indicators, c) subjective perception and objective indicators combined into a single index of QoL or d) solely objective indicators of external conditions of life. (Galloway, 2005)

Objective and subjective factors are ranked according to values be used to weight objective and subjective aspects of quality of life, thus obtaining an overall quality of life appraisal. (Felce & Perry, 1996).

Besides the weighting as a result of confirmatory factor analysis Betti and Verma proposed a variance correlation which solves the problem of redundancy and gives less importance to items not widely diffused in population. The method which was officially adopted also by Eurostat (2002). (Betti, 2015)

Satisfaction surveys serve as a measurement method of various domains of subjective quality of life, also used as measurement of the issue of personal´s safety.

3. Perception of security in the EU

Current legislation in the European Union approximates physical and object-based protection in a declarative manner. Nowadays it is necessary to specify the proposals for its solution. It is important to apply more deeply the existing relevant physical and security standards in local self-government, which have the effect of achieving the required level of security in local self-government. (Lovecek et al., 2016).

The importance of local self-government in developing and maintaining security results from the character of self-government. People living in particular territory need to decide independently about matters directly related to their interests. Initially, in most European countries, the extent of local authority rights was different (Soltes & Stofkova Repkova, 2016). The creation of the European Union has prompted the need for a uniform standard for local governments. Continuing globalization creates the need to strengthen the local level. The interconnection and co-operation of local self-government with its inhabitants is playing an increasing role in the world of globalization.

The quality of local government can be seen from a various perspectives. One aspect that directly affects the quality of life is security. The role of local government is, inter alia, to ensure public order, to protect the environment and to work together to protect citizens from threats of life and health. This task can be met by the quality of services provided in order to ensure security. Service quality assessment is very important for the management of the municipality. That is why it is necessary to identify the perception of citizens' safety as an aspect of the quality of life in local self-government. (Soltes & Stofko, 2015).

A model concept for the audit of integrated management systems was created by the synthesis of knowledge and experience from expert audits. This connection is important in relation to the current European development programs and their implementation. (Majernik et al., 2016)

The local government should be informed how the services are provided and how they are perceived by the citizens that are most affected by it. The development of the city, and its move towards prosperity in the identified area, depends not only on the introduction of a well-prepared strategy. It is necessary to reveal the strengths and weaknesses of the services provided with taking into account opinions of citizens. The period of globalization is s characterized by growing needs of the citizens, continuous changes in the environment and security demands. (Stofkova & Stofkova, 2011).

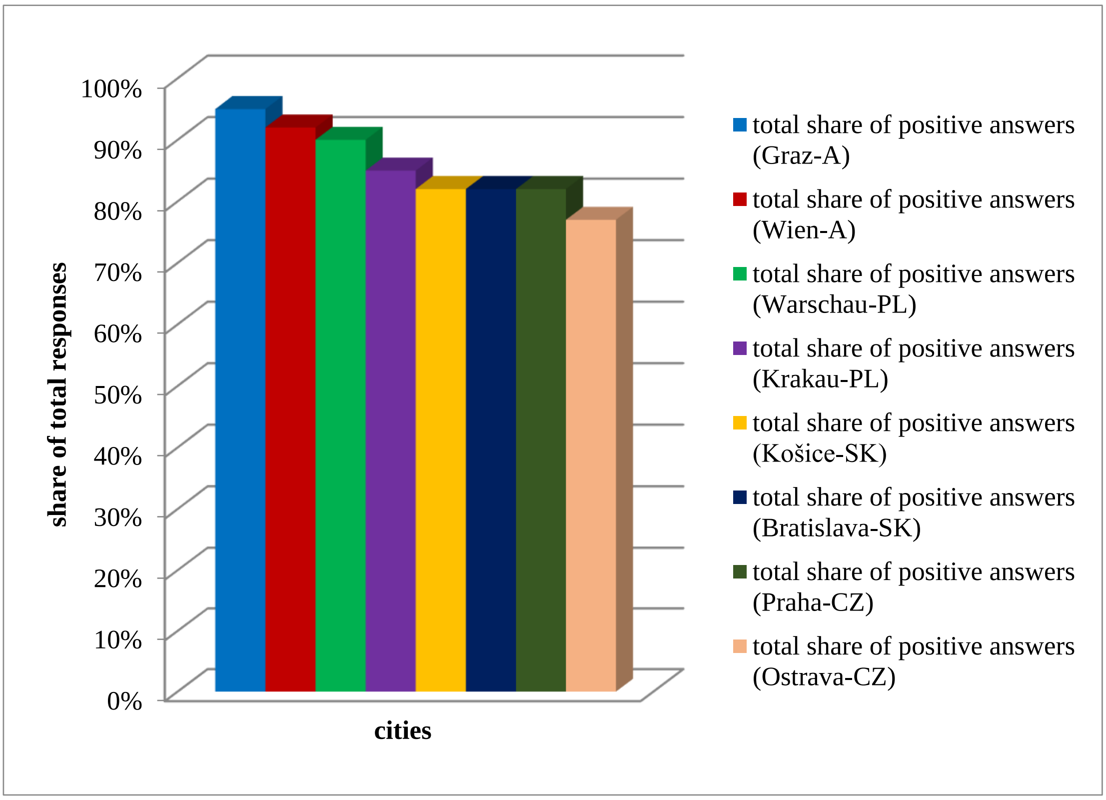
Several surveys have been carried out to receive citizens' perception of the security issue. The available data are be published by the Statistical Office of the Slovak Republic. There is also a long-term survey conducted in the countries of Europe in order to obtain information on attitudes, point of views and the lives of the people in the countries. The survey is carried out by the European Social Probe (ESS) which is carried out in two-year cycles. ESS data allow comparing findings between countries and also comparison in time. Another data source is the Statistical Office of the European Community - Eurostat. (EU, 2017).

Another source of information is the EU's Open Data Portal which includes a survey aimed at measuring the local perception of quality of life in 79 cities. It includes 28 EU Member States together with cities in Iceland, Norway, Turkey and Switzerland. The survey was also focused on the security. The respondents had to respond to the feeling of safety in the city and the feeling of safety in the neighborhood. A sample of respondents was 500 inhabitants of that city. In Slovakia, the questionnaire focused on the cities of Bratislava and Košice. For a more effective comparison of the opinion concerning the safety of the population in Slovakia, it also necessary to focus on the surrounding countries. The available data from the EU Open Portal will be used. For objective comparison In the Czech Republic, the issue of perceived safety at the place of living was dealt with by the Institute for Evaluations and Social Analysis (INESAN). The survey was conducted in 2013 under the title "The feeling of safety perceived by the inhabitants in the local residence". It was focused on examining public attitudes towards housing safety. The research verified the feeling of security in three basic respects. At first, the survey was focused on the perception of safety according to the day period, subsequently it was focused on monitoring the difference in the perception of safety between socio-demographic groups of the population and the third attribute describes the character of the community in which respondent lives. Further results on perception of safety in other countries were available in the Eurostat database.

The relationship and cooperation of the Slovak Republic in economic, security, social area with the Czech Republic, Poland and Austria is a result of geographical location. Countries have their territory divided by NUTS classification into 5 levels. The lowest level in all countries is LAU2, municipalities form the basis for other levels. The data obtained from the survey should be evaluated in comparison the perception of the population security in other countries locations among themselves. The results of the answers are in Figure 1 (surroundings of the cities) and Figure 2 (cities in four country). They are sorted according to positive reactions (I agree, I rather agree).

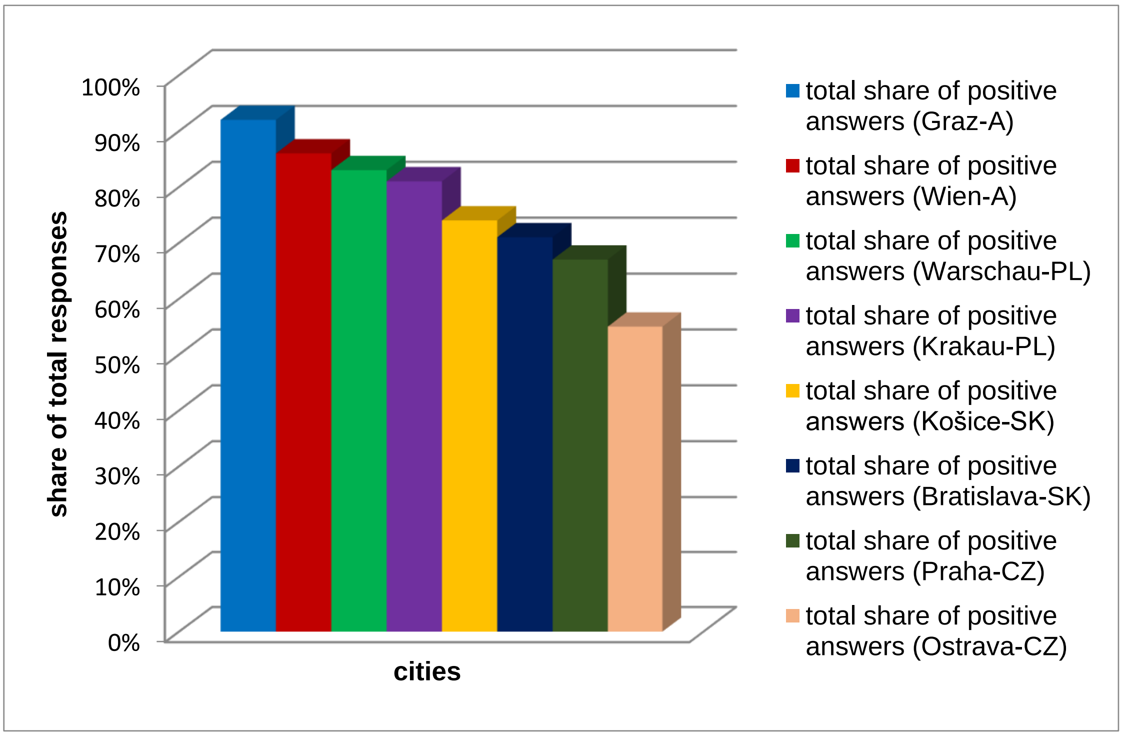
Perception of safety in respondents concerning the surrounding of the cities of selected countries is shown in Figure 1. The illustration displays that the inhabitants of Austrian cities felt at the safest. The citizens in two major Slovak cities felt safer in their surroundings than the citizens in selected cities in Poland. At least the citizens felt in Ostrava. The most important question, displayed in Figure 2, focused on the perception of security in the city, has to point out a subjective view of the security in the city in which the respondents are living. The respondents of Austrian cities felt at the safest, followed by respondents in Polish cities. In Slovakia, the inhabitants of the cities feel safer than the inhabitants of the Czech Republic, but attention should also be focused on why people feel safer in other towns.

Figure 1: Comparison of opinions on safety in the surrounding area of the cities



Source: own processing according the EU Open Data Portal

Figure 2: Comparison of opinions on safety in selected cities



Source: own processing according to the EU Open Data Portal

4. Conclusion

The statistical office of Slovak Republic records the crime rate. Regarding a specific perception or satisfaction with specific areas contains the Eurostat database. An official statistical survey aimed at comparison of opinions of citizens should be targeted at a larger number of cities. A greater attention should be paid at comparison of the subjective feelings of safety of inhabitants in cities of the Slovak republic with the EU's external cities, which are also affected by globalization. When trying to compare the safety from an objective stand, the results may be influenced to certain extent. The reason is that European cities differ in ways of defining legal concepts and how to collect and present their statistics on the security measures. Collected data at national level and is based on different legal concepts, procedures and their comparison is therefore difficult. The International Classification of Crime for Statistical Use (ICCS) has been developed to eliminate these differences. There is no problem in focusing on specific cities in Slovakia because of different concepts, procedures and rules, but the problem is that official data may be influenced due to this fact. The reason is that not all crimes and offenses are reported, so they are not even recorded. This is the reason why municipalities should carry out surveys with focus on security issues and to find out how they perceive safety in local government. On this basis, they have the opportunity to create an environment that will be agreeable for citizens. The results should be comparable between municipalities and serve for creation a map of the feeling of security in self-government area. The survey should be carried out in regular interval in order to monitor the impact of security management and globalization on the population.

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APPLICATION OF THE ACTIVITY-BASED COSTING METHOD FOR MANAGEMENT OF OVERHEAD COSTS WITHIN INTERNATIONAL RAILWAY TRANSPORTATION

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Abstract. This paper presents the research study of application of the Activity-Based Costing method for the management of overhead costs within international railway transportation. Activity-Based Costing represents the significant instrument to enhance the quality of products´ portfolio, provided services and processes complexity of particular railway company doing business at international level. Generally, it is a costing methodology that identifies activities in an organization and assigns the cost of each activity with resources to all products and services according to the actual consumption by each. This method is one of the new cost methods eliminating the inaccuracy of the traditional cost system. Compared to other calculation methods, significant change consists in the way of indirect (overheads) costs assignment to activities based on actual causations, and subsequently, assignment of activities to individual cost objects (items) according to intensity of their demanding consumption of activities necessary for their providing. In addition, this method allows for comprehending and identifying the specific cost item and proposes ways how it can be managed by individual companies with the global impact. The paper also outlines the particular research study with a sample application of the Activity-Based Costing method including description of individual steps of the overall procedure as well as calculations and final outcomes of this example study.

Keywords: Activity-Based Costing, overhead costs, international railway transportation, cost system management, global impact, calculation

JEL Classification: L92, R42, O18

1. Introduction

Cost calculations methods represent various ways for quantification of cost entries on calculation unit. The proper method selection depends on the nature of performances and the conditions in which performances are carried out. The way of costs calculation depends on subject of calculation, required costs structure, the method of adding and costs conversion on the measure calculating unit.

Calculation by dividing and calculation by surcharge are the most commonly used methods for costs calculation. These methods are used mostly in enterprises where the costs for certain time period or certain production volume are related only to one same type of performance or, in the same production process, a small number of species of homogenous products varying in their weight, labor content or quality (Mouter et al., 2013).

International transport enterprises´ costs are characteristic by significant differentiation of products where it is necessary to expend a large number of service activities. In that case, it is suitable to use the ABC method (Activity-Based Costing) which is focused primary on indirect costs (Babin et al., 2012), (Hokstok, 2013), (Sosedova et al., 2015).

2. Methods

The ABC method is one of the enhanced costs calculation methods, which removes inaccuracies of traditional costs calculation system. This method was founded by R. Cooper, R. S. Kaplan and H. T. Johnson (Cooper & Kaplan, 1988). The ABC is a method, which tries to assign enterprise´s overhead costs precisely to cost objects (items), which caused expending these costs (Bucek & Dubovec, 1990), (Garcia-Pastor et al., 2016).

In generality, it is possible to perceive the organization (railway transport enterprise) as the system of processes, activities and operations, which are needed to be performed so that the organization carries out its assignment (Cascetta & Coppola, 2016). The ABC method tries to structurally describe all processes, activities and operations running in the enterprise with their mutual relationships (Kral, 2008), (Liedtke et al., 2015). Enterprises´ activities can be characterized as partial process and procedure which is needed to be executed to ensure the performance or provide the service. Grouping the acts, which are related to each other and can be assigned to the object, forms an essential activity (Satanova and Potkany, 2008).

2.1 The principle of the ABC method

We gain more detailed view of organization by decomposition of basic processes. We get on the level of activities which are considered the center of attention when managing the costs using the ABC method. For completeness, it is necessary to mention that the level of activities is not the lowest level of decomposition due to the fact that activities themselves can be further analyzed in terms of the activity performed within the particular activities (Bokor, 2013), (Cisko et al., 2006), (Garcia-Pastor et al., 2016). The hierarchy of this access is so that the processes, which are a set of interdependent activities, stand on the highest level. The processes support a basic functions and assignments of the enterprise and have identifiable outputs. On level below, activities, which more detailed identify what people perform in enterprises, act. When applying the ABC method, the main object of interest of the manager is represented by activities which are responsible for generating the enterprises´ costs. From long-term point of view, it can be stated that if the enterprise does not perform anything, no costs will create (Jugovic &Vukic, 2016). It results in the situation that the activities execution causes the creation of costs for enterprise and that is why it is needed to deal with the relationship between costs and activities (Garcia-Pastor et al., 2016), (Somapa et al., 2012). The principle of the ABC method consists in the fact that, in the first step, direct costs are assigned to outputs. As for the second step, indirect (overhead) costs are assigned to activities. This process represents significant change comparing to other methods for costs calculation. In the third step, the activities are assigned to individual costs objects (items) depending the extent of their demand for consumption of activities needed on their provision (Bokor, 2012), (Foltinova, 2007). Unlike the traditional approach of united surcharge "everything to everyone with the same piece", thus, the selective application of overhead costs based on the actual causalities occurs; i.e. "to everyone just what he actually consumed, or what was consumed because of him" (Miragliotta et al., 2009).

2.2 The use of the ABC method

The ABC method focuses on indirect (overhead) costs and turns them into direct costs. Overhead costs are assigned to corresponding product instead of being arbitrarily divided into all products. In that case, it is possible to find out the actual costs of product with a greater accuracy compared to the traditional costs system. The ABC method is suitable for applying in following cases (Bucek & Dubovec, 1990), (Dolinayova et al., 2016), (Foltinova, 2007):

- enterprise´s overhead costs are high,
- products are differentiated,
- malfunctions and defects related costs are high,
- strong competition on market,
- production and activities are automated,
- the share of services activities increases (indirect costs increase).

The ABC method is a significant tool for improvement of products, services, processes and market strategies. The ABC method allows the transport enterprises´ management to understand what the cause of the costs generation is and how they can be managed. According to this system, the enterprise can obtain the view on the effective change of enterprise´s resources on values (Yang et al., 2016). The railway transport enterprise can also identify the activities which consume disproportionately huge amount of costs and bring small value, and thus, these activities can be excluded or at least limited (Kampf et al., 2012), (Majercak et al., 2016).

3. Results and discussion

The basic principle of the ABC method is to assign of consumed resources to activities. Subsequently, the activities are grouped into activities which are assigned to costs objects (carrier) (Gnap, 2002). For better clarity, this part of application of the ABC method is summarized in following table. (Table 1.):

Table 1: The assignment of consumed resources to costs carriers

Consumed resources	Operations	Activities	Cost carrier
Traction energy	Traction energy consumption	Transport	Transport performance
Charge for the use of railway infrastructure	The use of railway infrastructure		Transport performance
Wages of engine-drivers	Transport performance execution		Transport performance
Wages of administrative staff	Administrative activities	-Administrative	The number of administrative operations
Electric power consumption	Electronic registry		The number of operations carried out by electronic way

Source: authors

The next step is to create the calculation formula. For the ABC method application need, following formula for three kinds of performance A, B, and C is created (see Table 2).

Table 2: Calculation formula for performances "A", "B" and "C"

Calculation formula item (cost item)		Performance		
		A	B	C
Traction energy		14 300 €	15 200 €	16 020 €
Charge for the use of railway infrastructure		6 100 €	7 050 €	8 500 €
Wages of engine-drivers		800 €	900 €	1 000 €
Administrative overhead	Wages of administrative staff	13 000 €		
	Electric power consumption	15 000 €		

Source: authors, according to the (Foltinova, 2007)

Input data needed for costs calculation is summarized in following table (Table 3):

Table 3: The values of indicators for products "A", "B" and "C"

Indicator	Product			In total
	A	B	C	
Transport performance	200	500	80	-
Administrative operations	8	6	14	28
The number of administrative operations carried out by electronic way	2	6	3	3 640

Source: authors

3.1 Calculation of direct costs by the ABC method

Traction energy consumption on one calculation unit is determined as share (portion) of direct material value corresponding to the performance "A" and the number of executed performances "A" (see equation 1).

According to the previous mentioned, direct material on one calculation unit for products "B" and "C" is calculated analogously (see equations 2 and 3):

$$Traction\ energy\ (A) = \frac{14300}{200} = 71.50\ €/\mathrm{km} \tag{1}$$

$$Traction\ energy\ (B) = \frac{15200}{500} = 30.40\ €/\mathrm{km} \tag{2}$$

$$Traction\ energy\ (C) = \frac{16020}{80} = 200.25\ €/\mathrm{km} \tag{3}$$

Charge for the use of railway infrastructure on one calculation unit is determined similarly as a traction energy consumption on one calculation unit – share of the charge value for the use of railway infrastructure for given performance and a number of executed performances (see equations 4, 5 and 6).

$$Charge\ for\ the\ use\ of\ railway\ infrastructure\ (A) = \frac{6100}{200} = 30.50\ €/\mathrm{km} \tag{4}$$

$$Charge\ for\ the\ use\ of\ railway\ infrastructure\ (B) = \frac{7050}{50} = 14.10\ €/\mathrm{km} \tag{5}$$

$$Charge\ for\ the\ use\ of\ railway\ infrastructure (C) = \frac{8500}{80} = 106.25\ €/\text{km} \quad (6)$$

Wage of engine-drivers represents another direct cost item. The calculation of direct wages is as follows (see equations 7, 8 and 9):

$$Wages\ of\ engine - drivers\ (A) = \frac{800}{200} = 4\ €/\text{km} \quad (7)$$

$$Wages\ of\ engine - drivers\ \ (B) = \frac{900}{500} = 1.80\ €/\text{km} \quad (8)$$

$$Wages\ of\ engine - drivers\ \ (C) = \frac{1000}{80} = 12.50\ €/\text{km} \quad (9)$$

3.2 Calculation of indirect costs by the ABC method

Administrative overhead is considered the indirect costs. Basis of the cost items calculation included within administrative overhead is to specify the cause of occurrence of individual cost items (Kupkovic, 1999).

Assignment of cause of occurrence to particular cost item is vividly processed in Table 4.

Table 4: Costs calculation – administrative overhead – processing and sending an order

The cost item	**The cause of occurrence**
Wages of administrative staff	The administrative activity (A+B+C)
Electric power consumption	The number of administrative operations carried out by electronic way (A+B+C)

Source: authors

First of all, for the calculation of wages of administrative staff on one calculation unit, it is necessary to divide these cost items between individual administrative activities (for each kind of performance in total) (see equation 10):

$$Wages\ of\ administrative\ staffs\ \frac{13000}{28} = 464.29€/1\ \ administrative\ operation \quad (10)$$

Subsequently, the result is multiplied by number of administrative operations for given kind of performance and is divided by number of executed performances of certain kind. Specific calculations are as follows (see equations 11, 12 and 13).

$$Wages\ of\ administrative\ staff\ (A) = \frac{464.29*8}{200} = 18.57\ €/1km \quad (11)$$

$$Wages\ of\ administrative\ staff\ (B) = \frac{464.29*6}{500} = 5.57\ €/1km \quad (12)$$

$$Wages\ of\ administrative\ staff\ (C) = \frac{464.29*14}{80} = 81.25\ €/1km \quad (13)$$

For the calculation of cost item “Energy consumption” on one calculation unit, they are divided by a number of administrative operations carried out by electronic way (for each kind of performance in total), and then, they are re-calculated for individual kinds of performances (see equations 14, 15, 16 and 17):

$$Energy\ consumption\ \frac{15000}{3640} = 4.12\ €/1\ administrative\ operation \tag{14}$$

$$Energy\ consumption\ (A) = 4.12 * 2 = 8.24\ €/1km \tag{15}$$

$$Energy\ consumption\ (B) = 4.12 * 6 = 24.73\ €/1km \tag{16}$$

$$Energy\ consumption\ \ (C) = 4.12 * 3 = 12.36\ €/1km \tag{17}$$

A summary of costs calculations on one calculation unit for individual kinds of performances represents a content of Table 5.

Table 5: The resulting table of recalculated cost items on one product

Cost item	**Product**		
	A	**B**	**C**
Traction energy	71.50 €	30.40 €	200.25 €
Charge for the use of railway infrastructure	30.50 €	14.10 €	106.25 €
Wages of engine-drivers	4.00 €	1.80 €	12.50 €
Wages of administrative staff	18.57 €	5.57 €	81.25 €
Electric power	8.24 €	24.73 €	12.36 €
In total	156.88 €	84.85 €	438.39 €

Source: authors

4. Conclusion

The ABC method is one of the new costs calculation methods which remove inaccuracies of traditional calculation system. Significant change lies unlike the rest of methods of calculation in the way of assignment indirect (overhead) costs to an activities on basis of real casual links and then assignment activities to individual costs objects by degree of their difficulty on consumption of activities needed for their provision.

The ABC method is one of the enhanced costs calculation methods, which removes inaccuracies of traditional costs calculation system. Unlike other methods, significant change consists in the method of indirect costs assignment to activities based on actual causations, and subsequently, activities assignment to individual cost items depending on the intensity of their demanding consumption of activities necessary for their providing.

Thus, the international railway transport enterprise can identify the activities which consume disproportionately huge amount of costs and bring small value, and thus, these activities can be excluded or at least limited. That´s why the ABC method is very strong tool for improvement of products, services, processes and market strategies. The ABC method allows enterprises´ management to understand what the cause of the costs generation is and how they can be managed.

Thanks to this method, the enterprise can get a look on the effective change of its resources on values.

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DESIGN AND IMPLEMENTATION OF ENTERPRISE STRATEGY IN THE CONTEXT OF GLOBALIZATION PROCESSES IN THE CORPORATE ENVIRONMENT

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Abstract. The changes of the corporate environment that has taken part during the last decade significantly influence the function and behaviour of the enterprises. The effects of globalization and internationalization processes in turbulent environments are becoming increasingly intense, creating a need to a fundamental change of corporate architecture, including the development of business strategy development plans. If an enterprise, as an organized system wants to be effective and sustainable, it must be competitive both at the local, regional and national level and worldwide. This brings a new challenge to the corporate area. In particular, the top management should bear the crucial responsibility for the corporate development and its possibilities as a tool of competitiveness and stable prosperity. The basis for this new direction is the creation of qualified corporate strategies. The basic feature of such strategies include dynamism, based on anticipating the expected development of demand, prices, inputs, taxes, depreciation rates, expected available resources, and others. The main goal of the strategy, as currently being developed, is to prepare the enterprise for the expected future development of the area and at the same time to develop the ability to react quickly to pre-precisely unspecified changes. The paper discusses the results of a wide research of the corporate area in the Czech Republic (approximately 500 enterprises of all the most important sectors and sizes, performed in 2016) focusing on the issue of creating and implementing a corporate strategy in the conditions of a globalizing market environment with intensified competitive pressures.

Key words: Globalization and internationalization, corporate environment, business strategy

JEL Classification: L0, L1, L2

1. Introduction

The current changes of the corporate environment significantly influence the function and behaviour of the enterprises as seen by Esmaeili (2015). The globalization process is one of the most important factors that cause such changes, together with its accompanying processes such as turbulence and discontinuity of the external business environment. The globalization process has started to be discussed in the sixties and the seventies of last century, but the process itself developed at the end of the 20th century.

There are different approaches of scientists to the economic, cultural and political process of uniting the world. The first is focused on defining and analyzing the globalization process, highlighting its global dimension, specifying the main advantages but also the risks, including the reasons for its occurrence, as reported by Harris (2002) and Madison (2001). Other authors point out that globalization increases the interdependence of markets and national economies. They see the importance of technology transfer for the development of industry and trade, including retailing, on the growing importance of information technology and innovation processes – as described by Harris (2002), Bhagwati (2004), and Harford (2005). Floyd (2001), and Harris (2002), together with other authors, focus on the issues of personal and social consumption, the interdependence of markets and national economies, and the issues of the emergence of national and multinational corporations and their influence on the development of the world economy. In relation to this, Mudambi and Puck (2016) state in this context that not all human activities can be internalized. Ji, Fan (2016) see the uniqueness of raw material resources within a globalizing world economy, especially oil, and call it a means of a power play among countries, which at the same time reflects the role of the country in the global market. Aldaz, Alvarez, Calvo (2015) state that businesses that want to be competitive expect a higher stakeholder engagement. Together with these approaches, it is appropriate to notice the authors who further specify and profile the process of globalization and enrich it with new aspects and parameters. Such group include Bertucci and Alberti (2001), defining globalization as a process of increasing the interdependence of markets and national economies, caused by the high dynamics of commodity trade, capital, services and technology transfer and expertise. The link between globalization and the inflation process is highlighted by Altansukh, Besker, Bratsiotis, and Osborn (2017).

Globalizing world, European and regional markets are a challenge for the business sphere, to change their existing stereotypes of corporate behaviour, including strategic management and decision making. Businesses have been operating in a discontinuous and turbulent environment for a long time, as noticed by Drucker (1994, 1999), i.e. in an unpredictable, ever-changing and irregular environment. Similarly, Hammer (2002) notes that today's management and planning requires immediate recognition of responses and a flexible response to them. The most important trends affecting the surroundings of a company and thus the processing and implementation of the company´s strategy are discussed by Drucker (1994, 1999), and Kotler (2000). The most important change in the view to the processing and implementation of the development concept of a company can be found in the works of Michael Porter (1994, 2012, 2015). He notes that today, more than in the past, there is a need for companies, which have to face the new challenges of the developments in the global and European economic spheres, to develop and gradually implement a corporate development strategy built on a different theoretical and methodological approach. This requires taking all the factors of the competition ring into account and putting them into practice. Strategic management and business strategy design is an important part of organizational management in a dynamic and competitive environment. Strategic management consists of three processes, including strategic planning, strategy implementation, and strategic control; see Salamzadeh et al. (2016). In relation to this, a global value chain is becoming important, together with the value chain at the level of an enterprise.

2. Material and methods

The research was done in the sample of 456 enterprise of the Czech Republic. There were 109 micro-enterprises, 140 small enterprises (less than 50 employees), 124 middle-sized enterprises (to 250 employees) and 83 large enterprises (more than 250 employees). The most common occurrence of small and medium enterprises in the sample corresponds to the structure of economic entities in the Czech Republic, which is characterized by a large number of small and medium-sized enterprises. The enterprises were further classified by different industry sectors of the Czech Republic (excluding the quaternary sector), as production and industrial (187 enterprises), services (255 enterprises) and primary sector (14 enterprises) and by their scope as regional (189), national (126) or global (141) enterprises.

The aim of the paper was to analyze the individual components of corporate strategy creation (microenvironment - internal enterprise resources, intermediate environment - closest business environment and macro-environment) and evaluate their impact on profitability, and the success of enterprises in the current market environment of Czech enterprises in terms of their sectoral differentiation. To do this, dimensional reduction (DR) was used, extracting information of multidimensional data into fewer variables, see Cook (1998), Cook & Lee (1999), Chiaromonte et al. (2002). The dimensional reduction reduces the dimension of the variables with respect to the explained variable, meaning the economic profit/loss of the enterprises in the paper.

3. Results and discussion

Table 1: Dimensional reduction of internal enterprise resources and their impact on the profitability of sample enterprises based on sectoral differentiation

	Dir1	Dir1	Dir1
	Services	**Manufacturing enterprises**	**Primary sector**
Management level	-0.06753	-0.0878606	**0.38321**
Employee level	**-0.21573**	**0.2935342**	0.01666
Organization structure	0.12194	0.0254322	**-0.33323**
Enterprise strategy	**0.31305**	**0.2997468**	-0.19994
Technical equipment,	-0.11374	0.0569380	0.14995
Manufacturing technology / procedures	**0.29075**	-0.1627348	-0.23326
Product / service portfolio	**0.30066**	0.1597841	**0.46652**
Financial resources	**0.60066**	**0.6955649**	0.09997
Wage level	0.12261	**-0.2250152**	-0.06665
Marketing level	-0.17016	0.0003156	**-0.44986**
Brand and name of an enterprise	-0.04809	-0.0320998	-
Research and development,	-0.19395	-0.0012451	0.04165
Social environment	-0.16851	0.2373516	-
Training of workers,	0.16542	0.0094677	0.16661
Information and communication systems	0.03091	0.1211276	0.26658
Internal regulations and standards	-0.07225	**-0.3865621**	**-0.29991**
Corporate culture	-0.08362	0.0629441	-
Labour safety	**-0.36678**	0.0200956	-

Source: Own research

Based on the dimensional reduction in the service sector, financial resources, corporate strategy, and portfolio of services can be identified as growth factors. For the first factor, its positive impact on the profitability of the company is clear and expected. The other two factors are positive, and in terms of their importance for the competitiveness and stability of the business, they are irreplaceable. On the other hand, negative effects have been observed in case of labour safety and the level of employees, suggesting an underestimation of the importance of human resources in the service sector to a large extent, a bit contradictory to the role of human capital in the sector.

Regarding the manufacturing sector, the first two factors (enterprise financial resources and business strategy) are the same in terms of positive effects, in the opposite direction of the influence, i.e. the positive factor is the factor level of the employees, which can be explained by the high demands on the qualification structure of the employees operating in this sector, mostly for managers and senior management. Negative influence was indicated for internal regulations and standards and wage levels. For the first mentioned factor, this statement can be perceived as a signal for their simplification and refinement; the second factor is vividly discussed by the entire business sphere and by the relevant ministries; the solution lies in the productivity of labour and the overall state of the national and European economy.

The results of the primary sector are merely minimal in nature. They will be extended in the next stage of the research. The results suggest that factors that have a positive impact on business profitability include a portfolio of products and services and a level of management; on the other hand, a negative impact can be expected at the level of marketing, organizational structure of the company and regulations and standards. Such factors are seen as potential development factors

Table 2: Dimensional reduction of the intermediate-environment and their impact on the profitability of sample enterprises based on sectoral differentiation

	Dir1	Dir1	Dir1
	Services	**Manufacturing enterprises**	**Primary sector**
Competitors	0.222625	-0.06435	0.04890
Suppliers	-0.031152	**0.49897**	-0.04249
Customers	-0.125936	-0.19113	0.04485
Distributors	0.224714	0.03375	-0.06323
Business partners	-0.080058	-0.02135	-0.01239
Financial institutions	-0.002253	**-0.34143**	0.02917
Universities	**-0.665084**	-0.08129	**0.56652**
Research institutes	0.284509	0.28762	**-0.76784**
Local government	-0.051542	**-0.59327**	-0.16540
Political parties	0.244768	0.18837	0.06761
Government	**-0.504027**	0.32039	0.08220
Media	0.117814	0.06571	0.11811
Ecological associations	0.151404	0.09188	0.16009

Source: Own research

Regarding the intermediate factors on the stability and prosperity of enterprises, no factor with a significant positive influence was found for the service sector. Universities and government were identified as very negative factors in this sense. Especially in universities, where they are expected to have a significant share in the development of all sectors of the national economy, this finding is a stimulus for further detailed analyzes. Negative government action may be related to this sector with overburdened administration, stricter operating rules and some restrictive measures.

Manufacturing companies revealed a positive impact of suppliers, which is related to the nature of the sector. The very negative finding can be seen as the fact that cooperation with universities, research institutes and academics is not positively perceived. This is in direct contradiction with the needs of the sector itself, but also with the government's declared national economy policy, which considers cooperation between manufacturing companies and research institutions to be a major development factor in the national economy. It has also been demonstrated that there is insufficient interdependence between manufacturing enterprises on local government and self-government, which may be a separate issue to address the development of micro-regions, regions and the whole of the Czech Republic. In the case of financial institutions, their negative influence was expected due to their mission, function, but also due to control and revision activities that are frequently criticized.

Primary sector alone revealed a positive impact on its economy through collaboration with universities, compared to research institutes and academies of science, which is partly explained by a small sample of data, but at the same time, it raises the question of whether this sector is closer to higher education institutions than the Academy of Sciences that more often produce the results of basic theoretical research.

Table 3: Dimensional reduction of the macro-environment and their impact on the profitability of sample enterprises based on sectoral differentiation

	Dir1	Dir1	Dir1
	Services	**Manufacturing enterprises**	**Primary sector**
Demographic development	0.111565	0.31190	-0,09545
Distribution of income	**-0.328866**	-0.34893	**0.4295**
Living standard,	-0.282581	-0.05560	-
Level of education	**0.509325**	-0.14519	0.2386
Population mobility	-0.305454	-0.10096	-0.09545
Leisure time approaches	**0.361179**	**0.38074**	**0.3818**
Government expenditure on research and development	-0.037277	**-0.41150**	-0.09545
New patents	-0.045444	0.20544	**-0.4295**
Technology transfer	0.002626	0.15403	0.1909
Rate of obsolescence of production means	-0.123675	0.19057	0.3818
Gross domestic product	-0.017310	-0.07761	-
Interest rates	-0.153895	0.17215	0.1909
Inflation	**0.320081**	0.19934	-0.1909
Business life cycle	-0.220153	0.04796	-
Unemployment,	0.084723	-0.03499	-
Government stability	-0.092615	0.02528	-
Regulation of foreign trade	-0.060837	0.23693	**-0.3818**
Tax policy	-0.150689	-0.13296	-4.174e-17
Legislation	0.283832	**-0.42032**	-

Source: Own research

Regarding the service sector, the positive effect on three factors (levels of education, approach to leisure time, and inflation) was recorded. On the other hand the income distribution factor was negative. As revealed by list of factors, there is a differentiation between internal resources, mid-environment and factors of the external environment in terms of their influence on the profitability of enterprises. The level of education and approach to leisure time is one of the socio-cultural factors that have a permanent impact on the development of the sector. Regarding the economic factors such as inflation, sectoral differentiation has been fully demonstrated, with the service sector being ranked positively because of its own profitability, but not from the point of view of the population's purchasing power. For the manufacturing sector, the positive effect of this factor is significantly lower, both because of the prices of suppliers, the purchasing power of the population and pro-export policies.

In the manufacturing sector, the role and role of universities, research institutions and academies has again been evaluated in terms of development and prosperity in the sector, which reflects the negative value of government spending on R & D. A negative assessment of the legislative and legal base for this sector can be considered as the expected finding, particularly due to high reporting rates, inaccurate guidelines, regulations and laws.

In the primary sector, positive values were found for leisure time approaches, which is similar to the other sectors tested and for income distribution, negative for patents and foreign trade regulation. These factors need to be seen as merely minimal, mainly due to the lack of representation of certain groups of companies in the sector, such as metallurgy, forestry and agriculture, which would have a significant impact on this value.

4. Conclusion

When the Nobel Prize winner in the seventies of last century used the terms turbulence and chaos, the impact of such quote was not completely obvious. On the contrary, a number of studies and papers found that under the conditions of chaos, strategic management lost its significance or was even totally inapplicable. The present has shown that the opposite is true. A qualified business strategy is an irreplaceable tool against the undesirable effects of turbulence, discontinuity and chaos. What has changed significantly is the look at the creation of corporate strategy and the crucial roles of human resources and their knowledge and skills. Traditional approaches to business strategy development were based on the knowledge that emerged during the 19th and 20th centuries. It is time to leave these principles and accept new ones.

The paper analyzed the impact of individual components of the corporate environment (internal company resources, intermediate-environment and macro-environment) on profitability, and the competitiveness of Czech enterprises based on the sectoral differentiation. The results of the research specify the factors that the top management of the tested sectors should focus on more and further strengthen their influence. In the case of negatively indicated factors, it is necessary to create prerequisites for their positive influence on the prosperity of the enterprise, such as for human resources, for scientific and technological development and for the corporate infrastructure, for some, on the contrary, to limit them because of their reduced importance for the functioning of the enterprise and the necessity to ensure their standard from the viewpoint of the very existence and competitiveness of the enterprise (business education, leisure time, local administration, self-government, etc.) The authors are aware that some of these factors cannot be significantly influenced by the business sphere (government stability, tax policy, inflation etc.).

Most businesses today has reached a milestone of their further development. Despite the international nature of the process of globalization, its direct beneficiaries are business entities both national and global. A wide-ranging survey of businesses across the Czech Republic has demonstrated a critical requirement for business to change in corporate strategy development, increasing pressure on the innovation process, the importance of modern technology, pressure to accelerate the enterprise innovation process. Above all, it was revealed that objective knowledge of all components of the corporate environment might be crucial in the formulation and subsequent implementation of the corporate strategy.

At the end of the paper, the authors would like to notice Peter Drucker, a world-wide known management guru, who says that we all live in the same global world today, but not all of us know how to succeed in it. It means that businesses must constantly seek new approaches in addressing their existence and development in today's globalizing world environment.

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THE IMPACT OF GLOBALIZATION ON THE EMPLOYEE MOTIVATION – BEST EMPLOYERS STUDY

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Abstract. Today´s world is the world of globalization, which has been greatly influencing all areas of everyday life, especially in international companies and their human resource management. The employee motivation is an important part of human resource management in every modern company. Companies provide several benefits to their employees. The employees are involved in an achievement of the company's strategic objectives in order to gain a high level of motivation. The aim of such motivational program should be, except of financial benefits, also development of every employee and his future career. Global surveys confirm the positive correlation between the level of employee's motivation and financial indicators of the company. Best Employers Study is a proven methodology to determine motivation rate of people in the companies. It compiles ranking of the best employers, where the main criterion is the assessment of the own employees. The paper compares the average motivation rate in the world with motivation rate in Europe, the Czech Republic and Slovakia, as well as examines the level of motivation and satisfaction of the selected company's employees with the remuneration and meeting the other needs. The assessment of mentioned aspects and the recommendations for improving employees' satisfaction may be considered as the main result of this paper.

Keywords: motivation, need, Best Employers Study

JEL Classification: M12, M51

1. Introduction

Globalization trends currently affect all the spheres of social life. They affect the lives and work of people - positive and negative. Globalization is changing the priorities, values and needs of people - similarly in the business environment. This are is characterized by volatility and increasing demands on the ability of managers (Ponisciakova, 2016). A prerequisite for successful organizations are those who identify with the vision and objectives of the organization and effectively contribute to their achievement. Through human resource management, it is possible to achieve this ideal situation, or at least closer to it. It is not enough only to adequately reward the employees for their work, you need to give them space for self-realization, the development and implementation of their employment potential. This is related to increasing the responsibilities and competences of individual workers, which contributes to the growth of their motivation and productivity (Janosova, 2016).

According to Oxford English Dictionary, motivation can be defined as *"something tempting, offered as a tool of persuasion."* Motive, objective and the development of orientation activity are the core elements of every action. Such motivated human activity is the result of several simultaneous motivational influences. Impact of internal and external factors and motivational resources, stimuli of the environment and objects that are linked to internal resources in the process of motivation are reflections of human actions. Human motivation can thus be understood as a set of factors existing in internal borders of force of the activities that guide the actions and experience, i.e. the dynamic tendencies of personality.

2. Theoretical basis

Major authors, such as Alderfer (1969), Maslow (1954) and McClelland (1961) were most interested in the research of motivation in the last century. They began to examine the motives and actions of individuals. According to Zamecnik (2015), Sun and Fuschi (2015), Erwin & Miller (2001), minor progress in theoretical and empirical research of motivation appeared in the last fifteen years.

Moorhead & Griffin (1998) *describe the performance of employees as a common function of employees' skills and their motivation, with the primary task of managers is to motivate employees adequately, achieving full use of their skills. Pinder (1998) defines work motivation as a group of internal and external forces that initiate work behavior and influence its form, direction, intensity and duration. Devadass (2011) follows the Pinder's definition of motivation and presents it as an invisible, internal, and hypothetical idea. It is therefore a transformation process that has to be well managed and its effects are visible in the efficiency (cost reduction), economic efficiency (productivity, profitability) and the development of the organization itself. Fuchsova & Kravcakova (2004) identified the following areas of work activity most frequently stimulated by organizations in Slovakia: power and performance, creativity, self-development, cooperation, responsibility.

The executives subsequently assess the contribution of an employee in relation to the operation and success of the organization. The added value for achieving the objectives of the organization determines the amount of compensation for the employee. The organization enters into the process of motivation together twice. For the first time in deciding the direction, intensity and persistence of activity, the second time it deals with rewards, after working performance. This stimulation has the share in the reduction of the lacks (employee's expectation) and at the same time it comes to getting a positive or negative experience determining future (Fuchsova & Kravcakova, 2004).

2.1 Analysis of the current state in the world

Best Employers Study

Global surveys confirm the positive correlation between the level of employee's motivation and financial indicators of the company. Best Employers Study, which is annually conducted by Aon Hewitt, is a proven methodology to determine motivation rate of people in the companies. It compiles ranking of the best employers, where the main criterion is the assessment of the own employees. Thanks to the comprehensive and proven methodology, the study has become the prestigious global survey. The criteria for qualification are based on four measurable drivers:

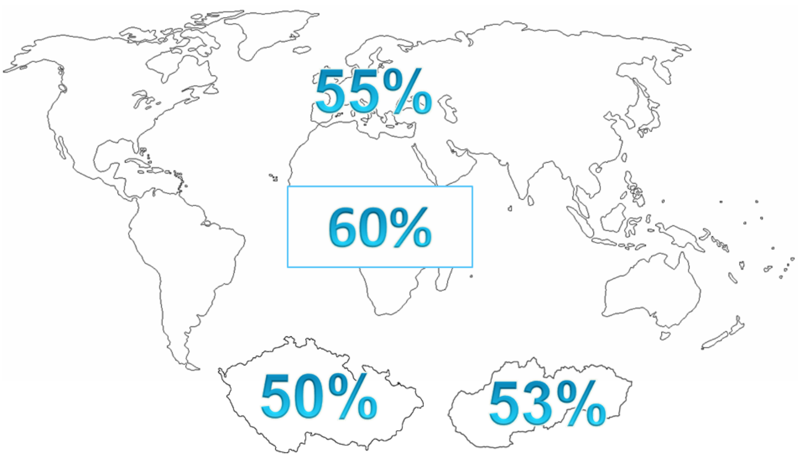
a) Engagement Index: Employees speak positively about the company, see their future in the company and are motivated to exert extra effort at work

b) Leadership Index: Leaders treat employees as valued assets, engage employees in the vision and lead the company to success
c) Performance Culture Index: Employees are aligned to company goals and are rewarded and recognised for their contribution
d) Employer Brand Index: Employees are proud to be part of the company and can clearly explain what makes their company different from others

These four indices are calculated for every company at the country level and then compared to the Aon thresholds for the four key indices.

Over the past decade, the Best Employers Study has gained the global range. So far, it has involved more than 7,000,000 employees from Europe, Australia, Canada, Latin America and Asia. In the Central and Eastern European region study provides a comparison within 8 countries (Czech Republic, Slovakia, Poland, Hungary, Ukraine, Bulgaria, Turkey, Russia). In 2016, the studies involved 479 companies and 123,000 employees. Figure 1 compares the average motivation rate in the world (60%) with motivation rate in Europe (55%), the Czech Republic (50%) and Slovakia (53%).

Figure 1: The average motivation rate



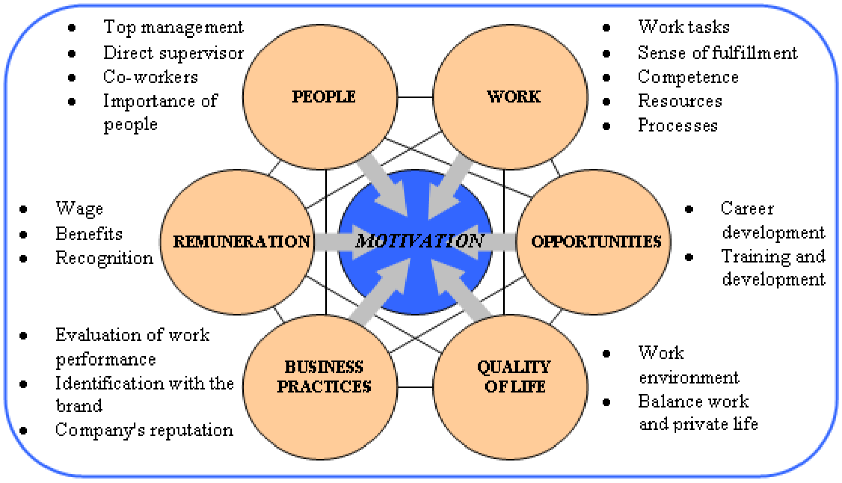
Source: Author

The survey of motivation and employee satisfaction measured employee satisfaction with various factors acting on their motivation (Figure 2) and the results quantify the impact of these factors on the overall motivation (i. e. to the influence analysis). The company can thus focus on areas *with the greatest potential for improvement* and areas *with the lowest satisfaction.*

Best Employers study *provides unique information*:

- how efficient is the companies in creating a stimulating working environment for their employees;
- how the companies achieves real competitive advantage through the employees;
- approximately where is the company on its way to becoming a preferred employer;
- analysis personnel strategies and practices in many companies both in Slovakia and abroad;
- the characteristics of the companies that create good place to work.

Figure 2: 19 factors of motivation



Source: Author

2.2 Analysis of the current state in the selected postal company

In the globalizing economy with increasing communication, the importance of postal services as an essential tool for development of communication and trade began to grow gradually (Achimska, 2016). The selected postal company is the second largest employer in the Slovak Republic. This postal company ensures the provision of services through 13,570 employees (on average). Of the total workforce, 82.40% of employees are women. The creation of incentive environment is greatly contributed by the selected postal company reward system. In 2010, company management came to the transformation of previously functioning reward system for a more effective system acceptable to managers and operational staff. Priority emphasis is put on new reward system of the mentioned operational staff, who make up more than two thirds of the company total employment (Donoval et al., 2010).

The role of benefits in employee motivation and retention is very important. It is necessary to determine the significance of the benefits for employee motivation and retention as one of many factors and explore changes in employee preferences (Nemeckova, 2017). The flexibility of benefit systems can be an effective source of employees' satisfaction (Manuel de la Torre-Ruiz et al., 2017). According to Donoval et al. (2010), benefits of the new system in practice can be divided by these beneficiaries: benefits for company, benefits for managers, benefits for employees. The new system should also contribute to the establishment of harmonious relations between employees in the workplace and in the company.

The subsequent staff remuneration takes place through multiple types of rewards. The company provides its employees also by other employee benefits:

- reimbursement for private use of fixed-line telephone company, located in households of employees,
- providing a vehicle to use for business and private purposes,
- provision of per diem allowances for business trips abroad exceeding the amount determined in an internal document which lays down the conditions for granting allowances for business trips,
- the provision of accommodation at the company facilities,
- reimbursement of accommodation costs associated with work performance,
- reimbursement for the use of wired Internet service at home,

- reimbursement for employee liability insurance for damage caused by their professional (or in the course of work) with respect to driving employer,
- the employer's contribution to the concluded life insurance, reimbursement for professional use mobile phone for private telephone connection.

3. Methodology

Important condition for ensuring a high level of participation and employee performance is an effective two-way communication and providing feedback by employers at all levels of company management and proactive oriented motivation of employees (Valachová, 2016). As a result of the development of elements of motivation and organizational culture of a service organization, the processes of self-regulation and selfmotivation of staff should come to the fore, overriding other objectives (Volkova & Plotnikov, 2016).

The aim of the paper is to determine the level of motivation of the selected postal company employees, fulfilling their needs and use of motivational factors. The partial results of the primary research will also evaluate the system and its actual contribution to the employees and their performance.

When analyzing the work motivation, it is necessary to know the causes of motivation encouraging the staff conduct and his behavior. Employees expect a fair evaluation and remuneration for their work performed. They expect justice to some great performance but also to other colleagues at work. According to Adams theory of justice granted rewards increase employee performance and the sense of injustice on the contrary reduced it (Fuchsova and Kravcakova, 2004).

Taking into account the labor theory of motivation we investigated the level of satisfaction of the needs of different groups of employees. The employees expressed their satisfaction with the working environment, job evaluation, provision of benefits, attitude of the managers and labour relations. They were allowed to express their satisfaction in various areas in the Likert scale 1-5 (1 = most satisfied, 5 = least satisfied). While carrying out research, we were mostly interested in the relationship between different groups of motivational needs and how it affects high level of satisfaction with one need satisfaction with another need. We also looked at the overall level of motivation among respondents and effectiveness of the new reward system in practice.

4. Results and discussion

The research was conducted by personal questioning. The work positions have uneven distribution typical for branches of the post network offices, the most respondents are working as an employee Teller and the Bearer.

To process the results we have chosen the method of correlation analysis. Table 1 shows quantification of the relationships among the six most important incentives to the selected postal company which we have defined above (satisfaction with the working environment, satisfaction with relationships in the workplace, satisfaction with supervisor, fair value on work, satisfaction with the financial evaluation and satisfaction with non-financial evaluation).

The highest positive dependence is observed between a sense of fair work assessment and satisfaction with the financial evaluation (0.629). It also is a high positive correlation between satisfaction with financial evaluation and satisfaction with non-financial evaluation (0,520). Conversely, the lowest dependency (the highest negative correlation) shows the relationship between satisfaction with supervisor and satisfaction with non-financial evaluation (-0.146). The degree of satisfaction with supervisors itself has an average value with the respondents 1.57 out of 5 (with 1 = the most satisfied, 5 = the least satisfied), which can be described as a high level of satisfaction. Dependence on other aspects of motivation, however, is low, in many cases to negative (see Table 1). Negative relationship also emerged between satisfaction with workplace relationships and satisfaction with financial and non-financial evaluation. However, in these aspects we did not either expect interdependence, since their drivers are different motivating factors.

Table 1: Correlation analysis of selected areas of motivation

	Satisfaction with the work environment	*Satisfaction with relationships in the work*	*Satisfaction with the immediate superior*	*Fair work assessment*	*Satisfaction with financial evaluation*	*Satisfaction with non-financial evaluation*
Satisfaction with the work environment	1					
Satisfaction with relationships in the work	0,388275855	1				
Satisfaction with the immediate superior	0,363487735	0,103546562	1			
Fair work assessment	0,490070240	0,029481746	-0,070989123	1		
Satisfaction with financial evaluation	0,329184830	-0,11454319	-0,117981208	0,629530973	1	
Satisfaction with non-financial evaluation	0,180837166	0,03907438	-0,146220818	0,395538628	0,520445402	1

Source: Author

5. Conclusion and recommendations

The implemented research allowed us to recognize deeper different motivational needs and dependencies between them and the level of motivation and satisfaction of employees at the selected postal company with the current system. Although the results were not indeed positive, employees expressed dissatisfaction with the evaluation of the work performed, the level of motivation from his superior and only less than half of respondents feel motivated enough to work. However, at the same time we have outlined the possibility of removing those problems by defining dependencies between different motivational needs.

A high positive correlation between the fair work assessment and satisfaction with financial evaluation highlights the importance of the manager's work with subordinates. If an employee knows his duties and their cost and knows that for each completed goal or overtime work will be rewarded, both financially and non-financially, his satisfaction with the assessment system in the company grows. The relationship between the level of the working environment and relationships in the workplace again highlights the importance of investments in joint and rest areas for staff. In an appropriate environment, employees are happier, have better relationships, thereby it also increases their motivation to work. Satisfaction with the working environment is positively influenced also by satisfaction with superiors, which did not record answers in significantly high values. The average rate of satisfaction with superiors is 2.5 out of 5. On the contrary, we found that satisfaction with superiors does not affect subsequent satisfaction with financial and non-financial evaluation, it is therefore necessary in this case to look for other causes and sources that we have mentioned above.

The reward system of employees at the selected postal company has a number of benefits not only for the company and managers, but also for employees. Its application and the right attitude can help to greater employee satisfaction as well as a higher level of motivation in the workplace. The constant and systematic work of superiors with subordinates leads to greater understanding and improving the working environment, which is then reflected in the positive results of the company. Executives should therefore take care to satisfy all the needs of their subordinates and promote their own performance by own good example.

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DETERMINANTS OF PLANNING IN THE SLOVAK ENTERPRISES IN GLOBALIZATION ERA

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Abstract. The planning in Slovak enterprises is influenced by the turbulent development of the business environment ever since 1989. There were numerous capital amends of Labour Code, there were changes of tax rates and taxing system in general, there is public finance consolidation ongoing, etc.). There is also a historical context (the central planning ceased to exist in 1989 and a lot of starting entrepreneurs were lacking experience in planning since they did not need to plan by themselves in the past) which influenced and is influencing still the way of planning in many enterprises.

The paper evaluates the impact of the foreign ownership, size of organisation and work position on selected problems (the methods of planning used for estimation of the future need of employees; further education and development of employees and fairness of assessment system of employee performance). The number of evaluated enterprises was 1221, which means the research sample is representative for the Slovak Republic. Since the assumption of normality was violated, the non-parametric methods (Kruskal-Wallis analysis of variance; Mann-Whitney Test) were used for evaluation of the impact of selected factors. Were needed the post hoc testing was applied.

The results confirmed the type of used planning methods depends on the size of organisation and the perception of fairness of assessment system is influenced by the work position of respondent. The impact of foreign ownership on further development and education of employees was not confirmed.

Keywords: globalization, foreign ownership, work position, planning, planning methods, Slovak enterprises

JEL Classification: M14, M16, M12

1. Introduction

The planning in Slovak enterprises is influenced by the turbulent development of the business environment ever since 1989. There were numerous capital amends of Labour Code, there were changes of tax rates and taxing system in general, there is public finance consolidation ongoing, etc.). There is also a historical context (the central planning ceased to exist in 1989 and a lot of starting entrepreneurs were lacking experience in planning since they did not need to plan by themselves in the past) which influenced and is influencing still the way of planning in many enterprises.

The planning deals with many problems: operations (Brennan et al., 1994; Nozick and Morlock, 1997; Hulthen et al., 2016), human resources (Haddock-Millar et al., 2016; Pride & Tatenda, 2016; Waheed et al., 2016), finance (Church et al., 2017; Morgan et al., 2016; Weisbrod & Duncan, 2016). We focused on the areas of a. methodology, b. development of employees and c. assessment.

2. Methods

2.1 Data

The survey was performed from September 2012 to May 2016. There were 1221 valid questionnaires from randomly selected respondents working in different business organizations. It is representative with margin of error of 3.2 % and confidence level of 95 % (total number of companies in Slovakia was 569372 in 2014).

Apart from the introductory classification items (legal form, number of employees, proportion of foreign capital, field of activities, work position of the respondent and the company seat) the questionnaire contained items divided into seven topic areas: objectives, planning process, planning of marketing, production and stock planning, HR planning, financial and investments planning, control. These topics follow the areas that the planning in a company usually focuses on (Robbins & Coulter, 2012).

The majority of questionnaire items were scaled from 1 to 7 (the Likert-type scale). Value 1 corresponded to the absolute disagreement of the respondent with the statement in the wording of the item (formulated as a positive statement), whilst value 7 corresponded to the absolute agreement of the respondent. Since all of the items were marked as "mandatory", the added value 8 enabled respondent not to comment on a given item.

2.2 Statistical Methods

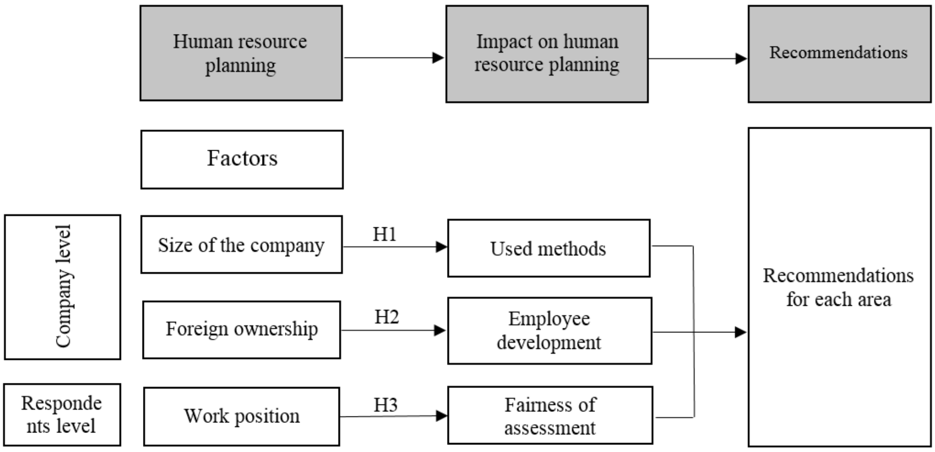
The reliability of the questionnaire was verified by means of Cronbach´s alpha (=0.863). The method of split-half measurement instrument was used as the second method of verifying the reliability (=0.855). With regard to the achieved results it is therefore possible to regard the reliability of the measurement instrument as sufficient. The construct validity was verified by means of factor analysis using the varimax rotation of factors. Varimax rotation of factors is an orthogonal method of rotation that minimises the number of variables with high loadings on a factor, thereby enhancing the interpretability of the factors (Malhotra & Birks, 2006).

The suitability of applying the factor analysis was verified on the basis of Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO test) and Bartlett´s test of sphericity. The condition of the minimum number of respondents (150) was met. The results of both testing statistical methods were satisfactory (Bartlett´s test: $p < 0.05$; KMO test > 0.7, the value reached was 0.882). The assumptions of applying the factor analysis were met. The factor analysis identified four background factors which altogether explained almost 70% of the total variance (69.4%). Based on the fact the identified factors fully correspond with questionnaire's content, we regard the construction validity of the measurement instrument satisfactory.

2.3 Research Design

The research design is as follows:

Figure 1: Research Design



Source: Own Processing

The variables were operationalised as follows:

Table 1: Operationalisation of the variables

Variable	Operationalization	Measurement
Size of the company	What is the number of employees of the company you are working for?	4 categories: 1 - 1-10; 2 - 11-50; 3 - 51-250; 4 - over 250
The share of the foreign capital in the ownership structure of the company	What is the share of the foreign capital in the ownership structure of the company you are working for?	6 categories: 1 - 0%; 2 - 1% - 20%; 3 - 21% - 40%; 4 - 41% - 60%; 5 - 61% - 80%; 6 - over 80%
Position in the company	What is your position in the company you work for?	2 categories: 1-manager; 2-worker
The use of the qualitative methods	Qualitative methods are more used for determination of needed employees.	Likert-type scale used: 1- absolute agreement; 7 - absolute disagreement, 4-neutral opinion
The use of quantitative methods	Quantitative methods are more used for determination of needed employees.	Likert-type scale used: 1- absolute agreement; 7 - absolute disagreement, 4-neutral opinion
Development and training of employees	Employee development and training is a part of the human resource planning.	Likert-type scale used: 1- absolute agreement; 7 - absolute disagreement, 4-neutral opinion
Fairness of the employee assessment system	The assessment and reward system of employees is fair.	Likert-type scale used: 1- absolute agreement; 7 - absolute disagreement, 4-neutral opinion.

Source: Own Processing

2.4 Hypotheses

There is body of literature dealing with topic of the impact of foreign ownership on employee development methods (Cheben et al., 2014; Xue, 2015), future need of employees (Ross, 2015) and perception of fairness of employee performance assessment systems (Lancaric et al., 2014; Preizer 2014). Based on previous studies we developed this set of hypotheses:

H1: The methods of assessment of the future need of employees are influenced by the size of organisation.

H2: The further education and development of employees is more of the concern in foreign owned organisation.

H3: The perception of fairness of employee performance assessment system differs with respect to work position.

3. Results and Discussion

3.1 Sample Characteristics

The sample structure regarding the size of the organisation (number of employees) is divided into size categories relatively evenly. Each size category is represented approximately by the quarter of the sample. The majority of the enterprises is domestic (55%), the rest is partially owned by the foreign entity. The highest share of the foreign capital in the ownership structure (over 81%) can be found in 14% of the sample organisations. Considering the work position of the respondents, 33% are managers, the rest are not managers.

Table 2: Sample Characteristics

Number of Employees	n	Foreign Capital	n	Work Position	n
10 or less	306	0%	672	manager	408
11 to 50	363	0.1%-20%	116	no manager	813
51 to 250	282	21%-40%	108		
over 251	270	41%-60%	106		
		61%-80%	53		
		over 81%	166		
total	1221	total	1221	total	1221

Source: Own Processing

Table 3: Difference between Group Mean and Total Mean in % - Number of Employees

	Mostly qualitative planning methods are used.	Mostly quantitative planning methods are used.	Further development of Employees is a part of HR planning.	Performance assessment system is fair.
10 or less	-16.027	9.987	20.570	-16.402
11 to 50	-3.291	2.722	-5.648	-7.371
51 to 250	5.959	-7.416	3.008	4.009
over 251	16.365	-7.232	-18.861	24.311
Total	0.000	0.000	0.000	0.000

Source: Own Processing

Note: In case of the negative difference, the attitude in group was more positive compared to total mean value. In case of positive difference, the attitude in group was less positive when compared to total mean value.

Table 4: Difference between Group Mean and Total Mean in % - Foreign Capital

	Mostly qualitative planning methods are used.	Mostly quantitative planning methods are used.	Further development of Employees is a part of HR planning.	Performance assessment system is fair.
0	-8.007	5.501	3.574	-5.192
0.1%-20%	3.543	-14.606	-3.861	-4.334
21%-40%	3.673	6.351	2.444	9.192

41%-60%	13.097	-7.440	-4.356	0.983
61%-80%	10.110	-5.215	-12.673	16.957
over 81%	15.959	-9.780	-6.530	12.025
Total	0.000	0.000	0.000	0.000

Source: Own Processing

Note: In case of the negative difference, the attitude in group was more positive compared to total mean value. In case of positive difference, the attitude in group was less positive when compared to total mean value.

Table 5: Difference between Group Mean and Total Mean in % - Work Position

	Mostly qualitative planning methods are used.	Mostly quantitative planning methods are used.	Further development of Employees is a part of HR planning.	Performance assessment system is fair.
manager	-8.690	-8.203	-5.467	-25.517
worker	4.361	4.117	2.744	12.806
Total	0.000	0.000	0.000	0.000

Source: Own Processing

Note: In case of the negative difference, the attitude in group was more positive compared to total mean value. In case of positive difference, the attitude in group was less positive when compared to total mean value.

3.2 Testing of Hypotheses

Since the assumption of normality was violated, we used non-parametric methods (Kruskal-Wallis ANOVA and Mann-Whitney Test).

The results show, that the size of the organisation has an impact on the type of methods used for assessment of the future need of employees (table 6). The larger the organisation, the more quantitative the approach (table 3, 7).

Table 6: Kruskall-Wallis ANOVA result (H1)

	Mostly qualitative planning methods are used by the assessment of the future need of employees.
p level	0.000

Source: Own Processing

Table 6: Subsets (H1)

Number of employees	N	Subset for alfa = 0.05		
		1	2	3
10 or less	273	3.19		
11 to 50	314		3.69	
51 to 250	236		4.04	
over 251	226			4.59

Source: Own Processing

We expected the companies with higher share of foreign capital in their ownership structure to be more focused on the further employees’ development, which would be reflected in their HR plans. Based on results we conclude, that the foreign ownership does not affect planning of further education and development of employees in Slovak enterprises. Our assumption that the foreign owned enterprises are more inclined to further educate and develop the work force was not confirmed (table 7).

Table 7: Kruskall-Wallis ANOVA result (H2)

	The HR planning is dealing with further education and development of employees.
p level	0.092

Source: Own Processing

We assumed the managers will perceive the performance assessment system more positively when compared to not-managers, which was confirmed by the research results (table 5, 8).

Table 8: Kruskall-Wallis ANOVA result (H3)

	The employee performance assesment system is fair.
p level	0.000

Source: Own Processing

The first evaluated factor was the size of the organisation (measured by the number of employees). We evaluated its impact on the type of methods used by the assessment of the number of employees needed. The intuitive approach is used in the micro companies, while in large companies the quantitative methods are used. This result is in line with previous studies (Lengnick-Hall & Lengnick-Hall, 1988; Schuler et al., 2011).

Our results regarding the influence of foreign ownership and its impact on planning of education activities and further development of employees differ from the previous results. Hunjira et al., 2010, McDonell et al. (2010) and Zhuang (2017) found the foreign capital has a positive effect on the number of education and development activities in the companies. In Slovakia this approach to HR planning was not confirmed.

We evaluated the perception of fairness of employee performance assessment system based on the work position of respondents. The results show managers consider the assessment systems to be fairer when compared to workers. This result is in line with findings of Frimpomaa, 2014 and Jewoola, 2014.

4. Conclusion

The results confirmed the type of used planning methods depends on the size of organisation. The larger organisations are using quantitative approach by assessing of the future need of employees while small organisations are adopting the qualitative (intuitive) approach.

The perception of fairness of performance assessment system is influenced by the work position of respondent. Managers, who are often involved in its creation are convinced the system is fair, while the workers are more inclined to disagree.

Surprisingly, the impact of foreign ownership on further development and education of employees was not confirmed.

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ROLES, RESPONSIBILITIES AND SKILLS OF GLOBAL MANAGERS IN AN INTERNATIONAL WORK ENVIRONMENT

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Abstract. The notion of a global manager is centre stage and growing in stature. A global manager is someone who knows how to conduct and manage business across borders. The global dimensions of business and management, though pervasive, pose many complications for a national or local organization to overcome. The global manager is a person who views markets, production, service and opportunities globally and who seeks higher for the firm on a global basic. The truly global manager is at home anywhere in the world and is considered open to national ideas and free of prejudices at attachments to one community, country or culture. Managers operating in a globally shifting international work environment will need a working knowledge of international relationship and foreign affairs, including global financial markets, international laws, and exchange rate movements. The aim of the paper is to define theoretically the basic characteristics of the concept of a global manager and specify a set of responsibilities, skills/abilities and competences of global managers in the theoretical level. The benefit of the article is to find out and evaluate which of the roles, responsibilities, skills/abilities and competences of global managers in the international work environment at top management level are the most important and, on the other hand, the least important. The part of article is also the comparison of the set of tasks, duties, skills/abilities and competences of the global manager, which will be specified on the base of available literature and the file, which will be compiled on the base of the results of the survey.

Keywords: global managers, globalization, international work environment, responsibilities and skills of global managers.

JEL Classification: M12

1. Introduction

Globalizácia, znalostná ekonomika, demografické zmeny, či v posledných rokoch ekonomická a finančná kríza patria jednoznačne medzi najpodstatnejšie výzvy, ktoré ovplyvňujú súčasný vývoj v ekonomickom prostredí. Všetky tieto vplyvy a zmeny majú svoje dopady aj na oblasť riadenia ľudských zdrojov, ako aj na manažérov a ich spôsoby a techniky riadenia, ktoré si častokrát vyžadujú ovládanie špecialných zručnosti a zvládanie nových situácií v globálnom pracovnom prostredí. Podľa Tomcikovej (2015b) globálne organizácie musia prejsť „novým svetom práce", ktorý si vyžaduje dramatickú zmenu stratégií vedenia, talentu a ľudských zdrojov. Buno (2015) konštatuje, že najväčšiu zmenu pre súčasné podnikateľské prostredie predstavuje práve globalizácia. Ako uvádza Sojka a kol. (2015), globalizácia značne zmenila konkurenčnú scénu, na ktorej si podniky vzájomné konkurujú. Existuje veľa pozitív, či negatív, ktoré sú sprievodným javom globalizácie, ktorá priniesla mnohé výzvy, ktorým musia manažéri firiem čeliť. Musia sa zaoberať globálnymi problémami a zároveň riešiť aj problémy v domácom pracovnom prostredí. Musia zachytávať konvergentné trendy, najmä pokiaľ sú spojené s transferom osvedčených praktík, ale zároveň musia brať v úvahu kulturálne, inštitucionálne a ďalšie tendencie a tradície, ktoré pôsobia divergentne. Heller (2005) konštatuje, že byť „globálnym“ sa nedotýka ani tak toho, kde podnikáte, ale skôr toho, ako podnikáte. Globálna spoločnosť koná vnútorne koordinovaným spôsobom, aby tak dostala do rovnováhy výhody schopnosti reagovať na miestne trhy s výhodami globálnej ekonomiky. Copus (2015) konštatuje, že súčasné spoločnosti hľadajú príležitosti na zvyšovanie svojej efektívnosti, pričom jedným z najdôležitejších prostriedkov je vhodná pracovná sila a s tým súvisiace vysoké nároky na jej výber a ďalšie formovanie. Jackova (2015) poukazuje na skutočnosť, že na to, aby boli podniky schopné reagovať na zmeny a byť tak úspešné v podmienkach globalizácie, je predovšetkým potrebné zavádzať nové metódy, nástroje a techniky, stanovovať si ambiciózne ciele, klásť dôraz na udržateľnú výkonnosť, sledovať komplexný súbor kritérií výkonnosti a neustále zdokonaľovať kľúčové kompetencie. Práve proces globalizácie môže byť vnímaný ako „vodca“ k zbližovaniu spôsobu rozvoja manažérskych zručností v porovnaní s rozmanitosťou medzi krajinami (Tomcikova, 2012).

V čase globalizácie sa čoraz viac do popredia dostáva pojem „globálny manažér.“ Existuje mnoho definícií, ktoré približujú globálneho manažéra, jeho role či funkcie, ktorými sa odlišuje od manažéra, ktorý pôsobí v domovskej krajine. Caligiuri (2006) popisuje charakteristiky, ktorými je možné bližšie predstaviť globálneho manažéra nasledovne: globálny manažér pracuje s kolegami z iných krajín, pri svojej práci musí hovoriť aj iným jazykom, ako je jeho materinský jazyk, dohliada na zamestnancov rôznych národnosti, spolupracuje s internými a externými klientmi z rôznych krajín, rozvíja strategické obchodné plány a riadi rozpočet na celosvetovej báze. Novodobý manažment zahŕňa pomerne širokú škálu techník, metód a postupov, ktoré sú určené pre podporu práce globálneho manažéra. Vedieť čo najefektívnejšie uplatniť manažérske znalosti, či schopnosti je skutočne umenie. (Stefko & Krajnak, 2013) Znalosť a uplatňovanie riadiacich praktík nazývame tvrdými zručnosťami manažéra. Vedľa týchto tvrdých skúseností však manažér potrebuje tiež zručnosti súvisiace s vedením ľudí, teda mäkké zručnosti. Presne, ako je možné naučiť sa manažérskym technikám, je možné naučiť sa aj manažérskym zručnostiam. Základným predpokladom pre získanie manažérskych zručností je sociálna zrelosť manažéra a ovládanie svojich osobností. Nadobudnutie manažérskych zručností nie je nikdy ukončeným procesom a každý manažér musí byť pripravený sa stále učiť (Lojda, 2011). Od manažéra sa vyžadujú aj špeciálne zručnosti. Musia mať tvorivú zmes profesionálnych a osobných kvalít, ktoré umožňujú vytvárať pozitívne, kultúrne uvedomelé vzťahy a musia byť skutočným kozmopolitom. Okrem uvedomenia si požiadaviek globálnej stratégie musí globálny manažér tiež vedieť rozpoznať aj dôležité „hybné“ faktory, ktoré riadia riziko a príležitosti globálneho trhu. V tomto prípade je zvlášť dôležitý internet zabezpečujúci v svojej podstate globálu „komunitu“ vzájomne prepojených strán. Nech už je stratégia akákoľvek, mala by byť starostlivo zmapovaná, zameraná na špecifické oblasti a mala by využívať všetky dostupné nástroje (Heller, 2005).

Maddy (2008) uvádza, že existuje celý rad rozdielov medzi globálnými a tradičnými manažérmi v jednotlivých krajinách. Globálni manažéri potrebujú pochopiť celosvetové podnikateľské prostredie z globálneho hľadiska, nájsť rovnováhu medzi súčasnými požiadavkami globálnej integrácie a národne na ňu reagovať. Za týmto účelom, často pracujú v centrách odborníci, ktorý predstavujú svetový zdroj v organizácií a koordinačného centra pre daný výrobok alebo službu. Globálni manažéri potrebujú byť zručný v práci s ľuďmi z mnohých kultúr súčasne. Pokiaľ ide o kultúrne zručnosti, očakáva sa že globálny manažér bude hladko a odborne komunikovať vo vnútri aj medzi krajinami, zatiaľ čo expatriate manažéri sú odborníci na jednu špecifickú kultúru. Globálny manažér by mal komunikovať zo zahraničnými kolegami ako rovný s rovným a nie v rámci jasne definovaných hierarchií štrukturálnej, alebo kultúrnej dominancie a podriadenosti ako pri krajanských manažéroch. Od globálnych manažérov sa očakáva, že prekonajú etnocentrické myslenie, rozvoj osobnosti a pochopenie ostatných perspektív selektívne zahŕňajúcich zahraničné hodnoty, a postupy do globalizácie. Pre manažérov v globálnom prostredí je veľmi dôležité poznať spôsoby, ako vytvoriť trvalo udržateľné vzťahy v organizácii (Petkevičiūtė & Balčiūnaitienė, 2016). Sekova a kol. (2016) konštatujú, že sa predpokladá, že manažéri pracujúci v rôznych hospodárskych, sociálnych, legislatívnych a kultúrnych podmienkach budú disponovať predpokladmi pre prácu nielen v národnom ale aj globálnom priestore.

Manažéri pracujúci v medzinárodnom pracovnom prostredí vo zvýšenej miere uznávajú, že ich riadenie si vyžaduje špecializované zručnosti a kompetencie (Pichanič, 2004).Požiadavky na manažérov nadnárodných spoločnosti zodpovedajú významu a dopadu ich práce. Štrach (2009) uvádza, že manažér medzinárodného podniku, ktorý označuje ako globálny, musí byť schopný riadiť svojich zamestnancov v medzinárodnom prostredí, plánovať, rozumieť dynamike daného lokálneho a svetového podnikateľského prostredia ako aj otvoriť sa novým myšlienkam a riešeniam. Podniky sa v mnohých rozvíjajúcich krajinách stretávajú s nedostatočne pripraveným a kvalifikovaným personálom, neschopným efektívne viesť rôzne zahraničné operácie. Aj z tohto dôvodu sú spoločnosti, ktoré pôsobia nadnárodne, nútené vysielať svojich zamestnancov z domácich centrál do zahraničných pobočiek. Dvojica autorov McCall a Hollenbeck (2002; In: Parker, 2005) popisujú sedem všeobecných globálnych kompetencií, ktoré sú dôležité pre manažérov medzinárodných spoločnosti. Sú to:

1. Vnímavosť a flexibilnosť v myslení a taktike.
2. Citlivosť pre kultúrne odlišnosti.
3. Schopnosť riešiť úlohy komplexne.
4. Pružnosť, vynaliezavosť, optimizmus a pozitívna energia.
5. Poctivosť a bezúhonnosť.
6. Stabilný osobný život.
7. Technické a obchodné zručnosti.

Zručnosti sú vnímané ako praktické návyky, ktoré sa dajú získať buď tréningom, alebo praxou. Pre ich získanie je potrebné mať dostatok času a úzko súvisí so schopnosťami konkrétneho človeka (Mihalcova et al., 2017). Vznik zručnosti je teda individuálnym procesom a závisí na schopnosti prijímať a obohacovať s praktickými skúsenosťami (Lojda, 2011). Podľa Lojda (2011) je pre potreby výkonu manažérskych činností potrebné zameriavať sa na nasledujúce zručnosti:

a) zručnosti osobného charakteru, ako je poznanie samého seba, schopnosť reflexie a sebareflexie, poprípade schopnosť seba riadenia,
b) zručnosti koncepčného charakteru, kam môžeme zaradiť schopnosť využívať príležitosti, plánovanie cieľov a zastavovaniu vízií organizácie,
c) zručnosti v riadení ľudských zdrojov, kde medzi dôležitými zručnosťami radíme schopnosť viesť ľudí, motivovať ich, ovládnuť techniky delegovania a vyjednávania,
d) zručnosti technického rázu, kam patrí schopnosť uplatňovať manažérskych techník, odbornosť a pod..

Manažér musí vedieť pochybnosti vysvetliť a podporiť vecnými argumentmi (Pollak, 2015). Potom nasleduje vyjednávanie, čoho cieľom by mala byť akceptácia myšlienok strategického rámca. Manažér musí vedieť s myšlienkami strategického rámca pracovať presvedčivo, aby dosiahol ich naplnenie. Strategické ciele nestačí iba dekomponovať, manažér musí byť schopný zaistiť pre ich plnenie adekvátne ľudské zdroje. Musí ich teda včas naplánovať, zaistiť, preškoliť, aby mali potrebné kompetencie pre plnenie dekomponovaných cieľov (Pilarova, 2016).

2. Materiál a metódy

Cieľom prieskumu bolo identifikovať, ktoré z úloh, zručnosti/schopnosti a povinnosti sú z pohľadu manažérov na globálnej úrovni najdôležitejšie, či naopak najmenej dôležité pri výkone ich práce v medzinárodnom pracovnom prostredí. Následne na základe výsledkov dotazníkového prieskumu zostaviť súbor zručností a zodpovednosti globálního manažéra z hľadiska ich dôležitosti pri práci. Výskumnú vzorku tvorilo 80 manažérov pôsobiacich na vrcholovej úrovni riadenia (top management). V našom realizovanom prieskume sme sa zamerali na výrobné nadnárodné podniky pôsobiace na území Slovenskej republiky.

3. Výsledky a diskusia

Každý globálny manažér by mal disponovať určitými zručnosťami a kompetenciami, mal by si plniť určité povinnosti a úlohy pri výkone svojej práce. Správne rozhodnutia manažérov zaručujú podniku úspech, stabilitu a prosperujúcu spoločnosť, ktorá dokáže konkurovať na globálnom trhu. Jedným z významných čiastkových cieľov nášho realizovaného prieskumu bolo práve zistiť *do akej miery sú pre globálneho manažéra dôležité nasledujúce zručnosti/schopnosti pri jeho práci v medzinárodnom pracovnom prostredí.* Zisťovali sme mieru dôležitosti nasledujúcich zručnosti/schopnosti: citlivosť pre rozdielne kultúry (schopnosť pochopiť kultúru a prispôsobiť jej svoje chovanie), zručnosť zohľadniť etické a kultúrne rozdiely pri výkone svoje práce, komunikačné zručnosti, jazykové schopnosti, analytické myslenie, schopnosť vysokej adaptability, schopnosť vlastnej motivácie, schopnosť preberať iniciatívu, keď ste odkázaný sám na seba, predchádzanie problémom a ich rýchle riešenie, riadenie zmeny smerujúcej k zlepšeniu výkonu, schopnosť predvídať, schopnosť odolávať stresu, schopnosť riešiť konflikty, ochota znášať riziko, schopnosť objasniť vízie, schopnosť sebadôvery, schopnosť profesionálnej odbornosti, schopnosť oceniť druhých, schopnosť priznať si chybu. Respondenti mali možnosť označiť svoje odpovede na škále 1-5, kde 1 predstavuje: najdôležitejšia zručnosť/schopnosť pri výkone práce globálného manažéra, 5 nedôležitá zručnosť/schopnosť pri výkone práce globálného manažéra.

Na základe výsledkov realizovaného prieskumu bola zostavená tabuľka priemerných hodnôt (tabuľka 1), ktorá odzrkadľuje, ktoré zo zručnosti/schopnosti globalných manažérov považujú top manažéri za najdôležitejšie pri výkone ich práce v medzinárodných podmienkach. Najnižší priemer poukazuje na skutočnosť, že daná zručnosť je pre globálného manažéra najdôležitejšia. Teda môžeme konštatovať, že práve komunikačné zručnosti považujú top manažéri za najdôležitejšiu zručnosť globálného manažéra s priemernou hodnotou 1,100. Žiadna z uvedených zručnosti nebola označovaná ako nedôležitá, teda žiaden z respondentov neoznačil škálu 5.

Table 1: Priemerné hodnoty odpovedí respondentov (miera dôležitosti zručnosti/schopnosti globalného manažéra pri jeho práci v medzinárodnom pracovnom prostredí)

Zručnosti/schopnosti globálnych manažérov	Priemerná hodnota odpovedí top manažérov
Komunikačné zručnosti	1,100
Schopnosť vysokej adaptability	1,200
Jazykové schopnosti	1,300
Citlivosť pre rozdielne kultúry	1,575
Schopnosť sebadôvery	1,600
Zručnosť zohľadniť etické a kultúrne rozdiely	1,670
Analytické myslenie	1,720
Schopnosť oceniť druhých	1,750
Schopnosť profesionálnej odbornosti	1,800
Schopnosť priznať si chybu	1,925
Ochota znášať riziko	1,950
Riadenie zmeny smerujúcej k zlepšeniu výkonu	1,975
Schopnosť predvídať	2,000
Schopnosť riešiť konflikty	2,025
Schopnosť odolávať stresu	2,125
Predchádzanie problémom a ich rýchle riešenie	2,325
Schopnosť vlastnej motivácie	2,350
Schopnosť preberať iniciatívu, keď ste odkázaný sám na seba	2,375
Schopnosť objasniť vízie	2,725

Source: vlastné spracovanie.

Môžeme konštatovať, že každá manažérska pozícia je náročná na vedomosti i na schopnosti. Vyžaduje schopnosti širokého spektra budované na teoretických poznatkoch a riadiacich skúsenostiach. Manažérske zručnosti vyplývajú zo samej osobnosti manažéra i z charakteru objektu riadenia. Základným predpokladom úspešného manažéra je vedieť prakticky rokovať s ľuďmi, vytvárať podmienky na výkon práce podriadených, aby sa dosiahol vysoký stupeň ich sebarealizácie a uspokojenia z práce. Za prioritné schopnosti Kassay (2013) považuje odborné, analytické, interpersonálne, koncepčené a diagnostické schopnosti, čo v sumáre predstavuje analytické myslenie a schopnosť adaptability.

Úlohou každého manažéra je zabezpečiť, aby ciele, ktoré definoval boli prostredníctvom zamestnancov dosiahnuté. Ide o najzložitejšiu rolu v organizácií. Je spojená s prijímaním a vyhodnocovaním myšlienok obsiahnutých v strategickom rámci. Na základe výsledkov dotazníkového prieskumu bol zostavený súbor najdôležitejších úloh, ktoré by mal každý z globálnych manažérov na vrcholovej úrovni riadenia podniku realizovať. Priemerné hodnoty zobrazuje tabuľka 2. Žiaden z respondentov neoznačil škálu 5 teda, že daná úloha je nedôležitá pre globalných manažérov, či škálu 4 - menej dôležitá úloha. Tiež Pilařova (2016) uvádza, že dlhoročným overovaním v praxi sa dospelo k štyrom kľučovým úloham manažéra, medzi, ktoré radí práve riadenie procesov, riadenie ľudí, riadenie rozpočtu a projektov. Podľa Pilařovej (2016) je následne pre výkon role manažéra potrebné analytické myslenie, schopnosť myslieť v súvislosti, schopnosť zadávať úlohy, schopnosť voliť metriky, delegovať, koordinovať, motivovať, hodnotiť výsledky a ďalšie kompetencie.

Table 2: Súbor najdôležitejších úloh globalných manažerov na základe priemerov odpovedi respondentov

Úlohy globálnych manažérov	**Priemerná hodnota**
Riadenie ľudí (vrátane motivácie a integrácie ĽZ)	1,125
Riadenie procesov	1,175
Definovanie úloh a kompetencií	1,400
Riadenie projektov	1,450
Riadenie rozpočtov	1,475

Source: vlastné spracovanie

Jedným z čiastkových cieľov bolo tiež identifikovať, ktoré zodpovednosti sú pre manažérov pôsobiacich na globalnej úrovni najdôležitejšie. Podľa výsledkov prieskumu je povinnosť riadiť a kontrolovať prácu zamestnancov najdôležitejšia. Konkrétne 60% top manažérov označilo, že považuje povinnosť utvárať priaznivé pracovné podmienky pre zamestnancov za jednu z najdôležitejších povinnosti. Povinnosť globálnych manažérov zaisťovať bezpečnosť a ochranu zdravia pri práci považuje za jednu z najdôležitejších povinnosti práve 46% respondentov. 38 respondentov uviedlo, že globálny manažéri by mali utvárať priaznivé podmienky na zvyšovanie odbornej úrovne zamestnancov, teda označili škálu 1.

Table 3: Priemerné hodnoty odpovedí respondentov (miera dôležitosti povinnosti/zodpovednosti globalného manažéra pri jeho práci v medzinárodnom pracovnom prostredí)

Povinnosti/zodpovednosti globálnych manažérov	**Priemerná hodnota**
Povinnosť riadiť a kontrolovať prácu zamestnancov	1,200
Povinnosť zabezpečovania odmeňovania zamestnancov podľa všeobecne záväzných právnych predpisov	1,400
Povinnosť utvárať priaznivé pracovné podmienky	1,405
Povinnosť utvárania priaznivých podmienok na zvyšovanie odbornej úrovne zamestnancov	1,625
Povinnosť zaisťovať bezpečnosť a ochranu zdravia pri práci	1,675
Povinnosť zabezpečenia opatrení na predchádzanie porušovania pracovnej disciplíny	1,800
Povinnosť zachovávať mlčanlivosť o skutočnostiach, o ktorých ste sa dozvedeli pri výkone zamestnania	1,925
Povinnosť vykonávať prácu v zahraničí, v prípade, že ste vyslaný na pracovnú cestu	2,050
Zabezpečenie dlhodobého pohľadu dopredu orientovaného na strategický rozvoj firmy	2,225
Povinnosť zaisťovať bezpečnosť a ochranu zdravia pri práci	2,575
Povinnosť uspokojovať sociálne potreby zamestnancov	2,600

Source: vlastné spracovanie

4. Conclusion

Príchodom 21. storočia globalizácia prináša výrazne zmeny a to hlavne pre tie podniky, ktoré pôsobia medzinárodne, ako aj pre globálne podniky (Tomcikova, 2015a). V čase globalizácie je manažérska pozícia o to viac náročnejšia na vedomosti, či schopnosti v medzinárodných podmienkach. Globálni manažéri potrebujú pochopiť celosvetové podnikateľské prostredie z globálneho hľadiska, nájsť rovnováhu medzi súčasnými požiadavkami globálnej integrácie a národne na ňu reagovať (Gallo & Mihalcova, 2016). Ako uvádza Heller (2005) úspešný globálny manažér vidí za hranice „svojho kmeňa“ a využíva postupy, ktoré prinášajú optimálny zisk pre spoločnosť.

Úspešný manažér pôsobiaci v domácom, či medzinárodnom pracovnom prostredí by mal byť predovšetkým byť vzorom pre ostatných; mal by veľmi dobre poznať sám seba (manažér môže viesť svoj tým, iba pokiaľ je schopný sebareflexie a sám dobre pozná svoje silné stránky a oblasti vhodné pre rozvoj; najprv musí porozumieť sám sebe, aby sa naučil rozumieť aj ostatným a vďaka tomu ich správne motivoval); následne sa musí sústavne vzdelávať pretože len úspešný manažér sa sebe priebežne pracuje, rozvíja svoje znalosti a zručnosti, schopnosti. To sa týka ako aj odborných oblastí, tak aj vedenia ľudí. Je dôležité, aby dokázal pripustiť, že nie je vševediaci, a vedel si priznať chybu. Je otvorený novým myšlienkam a aktívne vyhľadáva príležitosti k ďalšiemu rozvoju (Saruc et al., 2013). Úspešný manažér má potešenie zo zmeny, pretože v súčasnom meniacom sa prostredí je zmena jedinou istotou. Riadenie zmeny je neodmysliteľnou zručnosťou manažéra. Je nutné zmenu prijať a učiť sa z nej. Musí mať víziu kam jeho tím smeruje. No okrem vyššie uvedeného by mal dokázať myslieť systémovo t.j. uvedomovať si, ako fungujú jednotlivé procesy, a dokázať oddeliť príčiny od následkov. Prax ukazuje, že väčšina pracovných problémov je spôsobených nefungujúcimi systémami, nie ľuďmi. Aj výsledky prieskumu nám potvrdzujú, že práve komunikačné zručnosti považujú top manažéri za jednu z najdôležitejších zručnosti, dá sa povedať, že top zručnosť. Práve efektívna komunikácia predstavuje v práci manažéra jasné a zrozumiteľné zdieľanie alebo brilantne prezentovanie svojich názorov, a tiež budovanie vzťahov s ostatnými ľuďmi. Pozitívne myslenie a vnímanie sveta je jedna z kľúčových vlastností úspešného manažéra. Veľké množstvo manažérov ľahko prepadnú negatívnym myšlienkam a vidia všade okolo seba len problémy a dôvody, prečo nie je možné niečo dosiahnuť.

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HUMAN RESOURCES MANAGEMENT TRENDS IN ERA OF GLOBALIZATION

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Abstract. Among the most important challenges affecting the current development in the economic environment are mainly globalization, which is developing under the influence of scientific and technological progress, knowledge economy and demographic change. A changing workforce, global competition, advances in information technology, new knowledge, demands for sustainable organizational performance will increase the need for organizations to be more flexible and agile, there will be increased political and social pressures for ecological and societal responsibility, organizations will be facing and challenged by economic and demographic imbalances. All these changes have an impact on the area of human resources management; all other sources entering the reproduction process are easily imitable, only human can make an important competitive advantage. Managing organizations at the stage of globalization means managing and developing people, who are able to think, lead and act from a global perspective that must have global thinking and global skills. There is likely to be a growing mismatch between skills needed and talent available, very important is an increased need for demographic and cultural sensitivity, more work will be done by diverse work teams often at a distance from one another. Declining is loyalty between organizations and employees, managing diversity must be linked to the principles of equal treatment and fairness. The paper is focused on the analysis of the impact of the globalization process on human resources management and the current diversity management issues at the workplace.

Keywords: globalization, human resources, management, work

JEL Classification: J53

1. Introduction

Business management, management of managerial processes and the activities of individual managers depend on the environment in which the enterprise is located. The present moment is characterized by increasing dynamics of innovation in all areas of social and economic life, the development of information and telecommunication technologies, and the importance of knowledge. For the business environment, globalization and internationalization are now characteristic. These phenomena interfere with all components of society. The business environment is affected by uncertainty, instability of conditions, whether political, social, economic or legislative and technological. The external conditions of the business environment significantly affect the operation of the internal organizational units of the company. A changing workforce, global competition, advances in information technology, new knowledge, demands for sustainable organizational performance, and a host of other changes are forcing organizations to constantly examine and re-evaluate how they operate. They are using new technologies, changing their structures, redesigning work, relocating their workforces, and improving work processes to respond to an increasingly demanding, unpredictable, and global competitive environment (Lawler & Worley, 2011). All these changes impact the way of company management and especially of human resources. The success of an enterprise depends on the ability of management to focus on these conditions and to adapt to ever-changing situations. Only quick and correct decisions in terms of risk and uncertainty can lead to the prosperity of the business. Our paper deals with changes in managerial work and new trends in human resources management focusing on work diversity and its perception in praxis. As the main research method is a critical analysis of scientific literature and research data.

2. The impact of globalization on business management

Companies today are in an endless struggle to differentiate themselves from competitors. Globalization, technological development, and a great many other factors have forced these companies to compete in a complex and challenging environment. (Mohamed, 2009) Globalization is the process of international interconnection in all areas where political, social, economic, technological, cultural, environmental and other impacts are intertwined and influenced. According to Bauman (2000) globalization can be seen as an economic phenomenon characterized by rapid growth in world trade, an increase in foreign direct investment flows, an increase in the number of international companies, and the increasing integration of international financial markets. In this respect, it is the process of developing economic relations globally - globally.

2.1 Management challenges in new era

For the present time, the interconnectedness of economies, political systems and cultures has led to the emergence of new requirements for the work of managers, who must also master elements of international business practices. Under current business environment, proactive management needs to be put in place in the company's practice to reduce the negative aspects of the changes and the resulting risks on the one hand and on the other hand to help create new attractive business opportunities. We can say that changes in the external environment trigger changes in the internal environment of the enterprise; operational, management, and other processes themselves represent real-time changes while running under changing circumstances. All this also has an impact on HR manager's work in the interest of sustainable management. (Gogolova & Majerova, 2013). Managerial work becomes more challenging; modern management equipment includes modern management methods. In addition to managing change, the need to manage risks, potential crisis situations, knowledge, human resources competencies and the use of effective management practices and tools is increasing. Market globalization and resource mobility mean that people are employed in countries and cultures that are new and unknown to them. Leaders often encounter the challenging task of managing people with different cultural backgrounds and need to successfully master cultural differences in their managerial work. Foreign employees can be a valuable human potential, but there is no generally valid guidance for the development of senior staff. Cultural and national specifics can have a strong impact in many aspects. From a global perspective and in an international context, it is very difficult to achieve that each employee understands and identifies the values of the business, their key principles and strategies. (Dedina & Cejthamr, 2005) Overcoming cultural barriers requires the synergy of multiple approaches, where the development of international manager competencies also applies. Manager needs international thinking.

2.2 Globalization impact on new knowledge

In recent years, the world is increasingly the role of modern education in the development of the human capital, improving the efficiency of the economy. It is no coincidence that today the most advanced countries are betting on a new economy- the economy of knowledge and innovation. Nowadays, the national wealth of the most successful states only 15% of assets, and 20% of natural resources and 65% of knowledge, it educated people. Managing organizations at the stage of globalization means managing and developing people, who are able to think, lead and act from a global perspective and who must have global thinking and global skills and multicultural knowledge. (Huseynova et al., 2014) Organizations are globalizing, cultural sensitivity and understanding is vital to human resource managers. Globalization increases the mix of cultures, languages, perspectives as well as the number of expatriates. Effective human resource managers must therefore have knowledge of the country's legislative environment; they need to know the practices of human resource management, which differ widely in individual countries. HR practitioners should have new skills, including people analytics, Internet marketing, branding and knowledge on new technologies like virtual reality and wearables.

3. New trends in human resources management

In the past, the function of Human Resources Management was typically considered a cost centre and an administrative overhead. The HR managers focused on short-term gains and savings. They focused on administrative efficiency and compliance activities. They tended to expense investments into talent rather than capitalist and tended to raise short-term earnings. (Guthride et al., 2008) Modern HR management is focused on long-term objectives and they take a balanced approach. Human resources management responds to changes in the environment and the conditions in which businesses operate, globalization, increased use of modern technologies, economic and competitive pressures. Modern management also highlights the issue of the quality of working conditions; ability to maintain a quality workforce.

3.1 Human resources development

Human resources are crucial for enterprise because only with a quality staff background can enterprise achieve required flexibility, creativity and the ability of the enterprise to adapt to the changes that arise as a result of ever more intensive globalization and volatility of the business environment. (Koltnerova et al., 2013) According to the American Society for Training and Development, human resources management should now be focused on the improving the quality of working life, increase productivity, increase employee satisfaction, improving the development of staff as individuals and collectives and increasing the preparedness for change. (Armstrong, 2011) When assessing the effectiveness of human resources management, it does not only evaluate its accuracy and administrative performance but also needs to consider new aspects of personnel work are speed and also:

a) Implementation (make new ideas transform into actions with visible results in the form of employee behaviour or company benefits).
b) Innovation (the ability of an organization to think creatively about solving old problems, but also about finding human resources problems).

c) Integration (linking staff with strategic plans, customer goals, employee needs, and other business plan plans). (Ulrich, 2009)

3.2 New workplace trends

On workplace we can see new trends such as focusing on improving candidate and employee experiences, major trend in global workforce, the blended workforce is on the rise, generation Z in the workplace with a new outlook on business, new demands and widening the technology gap even more between younger and older workers**,** recruiting and training in virtual reality, organizations restructure is focused on team over individual performance, workplace wellness and well-being, become critical employee benefits for attracting top talent, high creative of employee benefit packages and workplace culture becomes more casual**.** Globalization, digitization and networking features into a new economic era, human resources management is directly related to the success or failure of its operation on health and long-term development has become increasingly prominent and critical role. The traditional personnel management was no longer meet the needs of enterprise development; it is moving into the era of strategic human resources management, it has been elevated to a strategic level up treatment. (Jin, 2016) Modern HR manager has more functions in organization as strategic business partner, change manager, employee champion and administration expert. Enterprise's competitive advantage and the sustainable development ability reflect the competition of "the talented persons" with traits such as decision power, management ability, technical development ability and innovation ability. Global competition is rapidly becoming the norm in which nearly all business organizations must compete in one fashion or another. The complexity and value of strategic global human resource management will continue to compound in significance as globalization becomes the predominate form of business. (Yu, 2006)

4. Work diversity management for the sustainable employment

Relating the concept of sustainability to employment implies that employers should try to organize work in such a way that their human resources are tutored. (Docherty et al., 2009; Hedge, 2008) Such sustainable employment can be considered an outcome of a sustainable human resources management approach. This sustainability relates to workers of all ages.

4.1 Work diversity

Work diversity is part of organizational diversity; and, in this context, all demographic and geographical factors. Diversity in the organization includes the personality dimension (uniqueness of the personality of each employee), internal dimension (gender, nationality, ethnicity, class, sexual orientation, age, health status, religion, values, worldview, etc.), external dimension (e.g. mother tongue, habits, geographical location, education, income, professional experience, parenting, leisure activities, performance, marital status, etc.) and the organizational dimension (status, occupation, content of work, working environment, length of occupation, place of work, membership in the working group, department, etc.). **(**Hubbard, 2004) In managing the business and every organization at present, it is necessary to respect the requirements of organizational and working diversity as values that are important for effective functioning but also for the whole society. The aim of managing diversity is to create conditions in the workplace that allow people, regardless of their individual differences, to apply and develop their personal potential, initiative, cultivate relationships, enhanced corporate culture, increases respect and understanding of their differences. These objectives are in line with the holistic concept of health and safety management. Health is, according to the World Health Organization, a state of complete physical, mental and social well-being and not just the absence of disease or disability. It involves physical, mental and social functioning and interaction with the environment - requires lifelong care, investment - responsibility is shared by both individuals and society. The right to promote, protect and restore health is one of the fundamental human rights. The key values in relation to diversity in the workplace are respect for the dignity of the individual, honesty, trust, perseverance, constantly improving, personal engagement and responsibility. (Kreitz, 2008) According to Blom and Viljoen (2016) although modernity is characterised by change, humans struggle with change as the future becomes increasingly unpredictable. Individuals react differently to changes in the status quo; have a different understanding of dilemmas and different perceptions. Diversity is a driving force for change, thereby increasing unpredictability. Therefore, leadership are increasingly faced with diversity challenges, dilemmas and opportunities. Rozkwitalska et al. (2017) means that the multicultural workplace may be recognized by employees as activating the positive potential of the individuals and organizations that makes up a society.

4.2 Perception of work diversity management in Slovak conditions

Our research of work diversity perception in the quite well developed Žilina region in 2016 has shown us that the work diversity approach is a new issue that should be developed in the interest of sustainability of human resource management. We try to diagnose basic diversity management competencies and work diversity perception. We interviewed 87managers from 56 different small and medium-sized enterprises.

Despite the fact that changes in the world of work advocate the need to accept new approaches, work diversity is not yet sufficiently understood by business managers. Only 11% of respondents have experience in managing diversity in the business; 67% of respondents did not meet the issue of work diversity in managerial work. 23% have a theoretical knowledge of diversity in the workplace, but they do not currently see a practical meaning for the enterprise. 56% of respondents prefer one-off collective before mixed, young collectives. In many cases, this is also the age of the company. 31% of respondents are aware of the link between diversity management and antidiscrimination measures required by current legislation. Cultural differences could be frustrating for 59 % of respondents. Our research showed us, that work diversity approach is a new problematic that should be developed in the interest of sustainability of human resources management.

Simulated the selection of staff management department, students of management would prefer the same conditions of applicants younger workers under the age of 40 years; among older workers (over 50 years) again appreciated the social and communication skills, experience and expertise. We can see the students' existing stereotypes about elderly people and their perception of older employees.

Due to the robotics and automation industry in Slovakia in the next ten years is expected that this will have an impact on employment, which may be more relevant to older employees in production. The administration in turn will affect the employment of older workers progressing digitization. According the employment of older workers need to respect the principle of equal treatment.

4.3 Discussion and recommendations

Although age discrimination is against the law in many industrialized countries, it is still a common phenomenon in hiring. People over the age of 50 suffer from longer unemployment periods. Organizational hiring practices have often been challenged for unfair treatment on the grounds of age. (Fasbender and Wang, 2017) Discrimination is mostly hidden in informal practices of inequality in recruitment and difficult to prove. Diversity management is the way how to eliminate this negative approach. (Koivunen et al., 2015) The number of women, older people, members of minority groups and minorities and migrants working in the European economy has increased over the last decades. Changing the composition of the workforce to the highest levels of management is increasingly clear. The fact that these groups of people are both consumers and customers also brings new challenges. An increasing diversification of consumer needs requires new and more creative strategies to maintain and innovative products. Processes, products and services need to adapt to meet these specific needs. Many managers don´t understand the need of work diversity, although they know, that discrimination is wrong, both in legal and moral terms. But more diverse workforce can increase the efficiency of society in achieving its goals. It can raise morale, improve access to new market segments, and increase productivity. Diversity may improve performance to the extent that task performance requires information-processing like creative and innovative idea generation, or problem-solving; age diversity should foster the elaboration of task – relevant information, age diverse teams have accumulated diverse organizational work or life experience, exchange and integration of diverging knowledge leads to more creative solutions. (Kunze et al., 2011; Schneider & Barsoux, 2003) indicate that adaptation of HRM policies, practices and organizational culture to local environments is seen as crucial in managing local diversity to be locally fair and bias-free. However, in terms of global HR integration, locally differing and culturally contextual HR practices, philosophies or policies can make the integration of global diversity management complex. To implement management diversity requires including a new philosophy to business strategy. Management must create the conditions for a successful implementation body that oversees, manages and links various activities and serves as a central communication point. This body is responsible for creating for example development programs for diversity management for top and middle management; team building activities related to diversity for all corporate departments. This also involves changing the performance assessment tools to develop diversity management and make it measurable, as well as changing staffing tools to hire and retain a diverse workforce, etc. (Popescu et al., 2016; Derecskei, 2015)

5. Conclusions

Changes in the world of work take place at the level of globalization; this is linked to the globalization of the economy, the globalization of the labour market and the globalization of risks and migration. Changes are also related to the fact that the population in the developed world is aging and also to an increasing level of equal opportunities and social justice at work. It is necessary to respect the increasingly stringent legislation on antidiscrimination and the elimination of social inequalities as well as the requirements for managing work diversity. Diversity, regardless of its nature, must not be a source of problems, but should lead to the creation of a synergistic effect and the creation of values that would not arise without diversity.

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CORPORATE SOCIAL RESPONSIBILIY AND ETHICAL DECISION MAKING

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Abstract. Globalization processes set off competition over consumer - his favour and loyalty. Businesses, under the pressure of competition or the public, not only increasingly streamline their processes, but are trying to improve their image in the public perception as well as their regular and potential customers. Therefore, many companies apply so-called socially responsible entrepreneurship (SRE), which adapt to the external and internal environments. The corporate social responsibility (CSR) is committed to ethical behaviour promoting ethical decision-making, especially at top management levels. It is precisely the question of CSR and ethical decision-making that becomes a burning problem of our society - in a global, national and local concept. This situation is related to the lack of space that is devoted to this issue, for example also in the education and training of future managers. The aim of the paper is to highlight the importance of corporate social responsibility as well as the need to support ethical decision-making and business ethics. The aim is also to point out the situation in the given issue in the environment of Slovak enterprises based on the real research.

Keywords: corporate social responsibility, decision, ethical behavior, manager

JEL Classification: J 71, L 25

1. Introduction

Globalizácia, zmeny podnikateľského prostredia prinášajú so sebou čoraz intenzívnejší záujem širokej verejnosti o tzv. spoločensky zodpovedné podnikanie (SZP) organizácií – o jeho aplikáciu do praxe. Organizácie samotné sa čoraz častejšie hlásia k spoločensky zodpovednému podnikaniu ako zákonom upravenej činnosti, ktorej účelom je dosahovanie zisku a poukazujú na aktivity, ktoré toto smerovanie podporujú (Peracek & Mittelman, 2015).

Aby sa SZP organizácií mohlo naplno rozvinúť, je potrebné vyzývať a podporovať na všetkých stupňoch riadenia k etickému rozhodovaniu. Etické princípy – ich dodržiavanie – musia byť prítomné v každej fáze procesu rozhodovania, s čím je nerozlučne spojený i proces komunikácie vo firme. Podchytenie a upevňovanie etického rozhodovania v organizáciách vyžaduje, aby rozvojové programy organizácií boli zamerané i týmto smerom. Podstatná je i metóda, ktorá by bude aplikovaná, nakoľko je známe, že participatívne metódy sú efektívnejšie ako len pasívne prijímanie informácií pri prednáškach (Slaba, 2015). Potrebné je, aby sa účastníci rozvojových programov naučili aktívne pristupovať k odhaľovaniu toho, čo je a čo nie etické, aby samostatne hľadali cesty aplikovania etických princípov do praxe, aby pochopili prínos SZP organizácií.

Etické rozhodovanie podporuje na všetkých stupňoch riadenia v prvom rade spravodlivosť ako hodnotu vlastnú všetkým kultúram. Ďalej podporuje aj lojalitu pracovníkov i zákazníkov, spoločensky zodpovedné konanie a trvalo udržateľný rozvoj organizácie. U radových zamestnancov má takéto správanie vplyv na ich mieru spokojnosti, ovplyvňuje aj motiváciu, čo sa následne prejaví i vo vyššej produktivite (Olsavsky, 2016). Ako uvádza Treľová a Olšavský, na to, aby podnik bol úspešný, sú potrební nielen kvalifikovaní a schopní zamestnanci, ale v ostatnom období sa zdôrazňuje spokojnosť zamestnancov. Ak organizácia očakáva zvýšenú produktivitu zamestnancov, musí venovať pozornosť pracovnej spokojnosti (Trelova & Olsavsky, 2016).

Uvedené dokazujú i výskumy Browna a Treviño. Predpokladom spoločensky zodpovedného konania a teda i etického rozhodovania je nielen hodnotový rebríček jedinca či hodnoty organizácie, ale i schopnosť rozpoznať situácie, kde sa etický problém objavuje (Brown & Treviño, 2006). Rozvojové programy pre zamestnancov tomu môžu prispieť.

2. Spoločensky zodpovedné podnikanie a etické rozhodovanie a jeho determinanty

Spoločensky zodpovedné podnikanie znamená prepojenie spoločnosti a verejnosti a podnikania k spoločenskej užitočnosti (Kunz, 2012). V podmienkach slovenského podnikateľského prostredia tento pojem nie je striktne zadefinovaný a ponúka vlastné interpretácie. Všetky definície spoločensky zodpovedného podnikania sa opierajú ale o etické princípy, ktorými sú napríklad: nestrannosť, angažovanosť, aktívna spolupráca so zainteresovanými subjektmi a transparentnosť. Podstatná je ekonomická oblasť spoločensky zodpovedného podnikania, kedy podnik okrem dosahovania zisku sa snaží minimalizovať negatívne dôsledky svojej podnikateľskej činnosti. (Hvolkova, 2015). V rámci environmentálnej oblasti sa od spoločensky zodpovedného podnikania očakáva, že si bude uvedomovať vplyvy svojej činnosti na živú ako a neživú prírodu, vrátane ekosystému, pôdy, vody a vzduchu. Tieto zložky predstavujú prírodné bohatstvo štátu, ktoré dôležitou surovinou strategického významu, nenahraditeľnou zložkou životného prostredia a všetkých živých ekosystémov, ale aj surovinou vstupujúcou do všetkých technologických procesov a limitujúcim faktorom trvalo udržateľného rozvoja regiónov a celej spoločnosti (Peracek et al., 2016,A)

2.1 Prieskum morálky na Slovensku

V prieskume morálky podnikania na Slovensku (Horbulak, 2015) z pohľadu zákazníkov, jednou z nosných otázok bolo zistiť predstavy zákazníkov o etickom podnikaní malých a stredných podnikov a o spoločensky zodpovednom podnikaní na Slovensku. Najzaujímavejšie výsledky prieskumu môžeme zhrnúť do nasledovných bodov:

- pod etickým podnikaním si zákazníci predstavovali vyhovenie ich reklamáciám: muži 3,17% a ženy 2,78%,
- seriózne podnikanie, dodržiavanie pravidiel, slušné a ústretové správanie sa ku zákazníkov, nezavádzanie zákazníka klamlivou reklamou: muži 28,57% a ženy 25,46%,
- pod etickým podnikaním si zákazníci tiež predstavovali ochranu prírody a ochranu životného prostredia to sa preukázalo aj ako motivácia zákazníka ku kúpe produktu, pričom muži na ochranu prírodu poukázali v 1,59% a ženy 3,70%,

- pod etickým podnikaním si zákazníci tiež predstavovali úctu k zákazníkovi, neokrádanie zákazníka a primerané ceny za tovar – poukázalo na to 0,79% mužov a 3,24% žien,
- pod etickým podnikaním si zákazníci tiež predstavovali kvalitu tovaru a kvalitu potravín: muži 7,14% a ženy 10,19%,
- pod etickým podnikaním si zákazníci tiež predstavovali vzor - poctivý predavač a poctivý podnikateľ: 7,94%mužov a 3,70% žien.

Pri analýze uvedenej otázky sa ukázali veľké rozdiely medzi pohlaviami. Ženy vnímali pozornejšie aktivity podniku voči životnému prostrediu, znečisťovaniu prírody, zodpovednosti za životné prostredie.

Prieskum ukázal, že zákazníci si spoločensky zodpovedné podnikanie predstavujú ako slušné a férové jednanie so zákazníkom a ako podnikanie, ktoré rešpektuje a chráni životné prostredie. Uvedené tiež požíva aj ochranu garantovanú Ústavou Slovenskej republiky (Peracek et al., 2016,B). Autor prieskumu konštatuje, že je veľmi ťažké definovať podstatu etiky a ešte ťažšie ju preniesť do spoločenského a podnikateľského života. Vilčeková je názoru, že práve prieskumami môžeme získať dôležité informácie o dianí sa v podnikateľskom prostredí ako aj správaní sa podnikov ku zákazníkom. Konštatuje tiež, že využívanie data miningu prispeje ku vylepšeniu vzťahov medzi podnikateľmi a zákazníkmi a ich vzájomnej pozitívnej komunikácii (Vilcekova, 2014).

Z daného prieskumu vyplynuli i zaujímavé zistenia vo vzťahu k vykonávaniu charitatívnej činnosti. Otázka znela: „Mali by podnikatelia prispievať na dobročinné aktivity?“ Vyhodnotenie danej otázky prinášame v tabuľke číslo 1.

Table 1: Názor respondentov na základe ich sociálneho statusu na charitatívnu činnosť podnikateľov

	áno	Nie	neodpovedal
Podnikateľ	27	10	1
Zamestnanec vo verejne alebo štátnej správe	44	13	0
Zamestnanec v súkromnej sfére	52	18	4
Študent	41	17	2
Dôchodca	18	6	0
Nezamestnaný	6	6	0

Source: Horbulak, Z. 2015. Spoločenská zodpovednosť malých a stredných podnikov, Bratislava: Iris, s.135.

Z uvedeného je zrejmé, že zásadne všetci respondenti sú názoru, v nadpolovičnej miere aj samotní podnikatelia, že by sa podnikatelia mali venovať charitatívnej činnosti. Najvýraznejšie sa s tým stotožňujú zamestnanci vo verejnej správe (77,19%) a dôchodcovia (75%) ale aj študenti (68,33%) (Horbulak, 2015).

2.2 Etické rozhodovanie

Nakoľko etické správanie a etické rozhodovanie sa manažmentu vyžaduje od podnikov nielen široká verejnosť, ale má i pozitívny dopad na pro-sociálne správanie v organizácii, na pracovnú spokojnosť, na motiváciu a lojalitu. Preto je potrebné mu venovať zvýšenú pozornosť. Avšak ešte stále nie všetky organizácie, nie všetci manažéri (vzhľadom na striktne ekonomické ciele organizácie resp. preferenciu osobných cieľov, ktoré nie sú cieľmi organizácie) akceptujú integráciu etiky do procesu rozhodovania.

Ak sa chceme pozrieť na kvalitu rozhodovania z etického hľadiska, je potrebné nielen poznať jednotlivé stupne rozhodovacieho procesu, ale i spôsob ako k nemu dochádza z pohľadu dodržiavania etických princípov. Je potrebné poznať aké faktory rozhodnutia determinujú. Nemenej dôležité je však aj to, aby rozhodovanie firiem (obchodných spoločností) bolo v súlade s právnym poriadkom daného štátu (Gregusova et al., 2016).

Pri analýze etickej kvality manažérskych rozhodnutí sa najčastejšie vychádza z analýzy miery uplatňovania etických princípov:

- Utilitarizmu – opiera sa o analýzu nákladov a benefitov a hlavná myšlienka spočíva v čo najväčšom dobre pre čo najviac ľudí.
- Práva – prístup je založený na akceptovaní myšlienky, že každý jedinec má práva, ktoré nesmú byť porušené.
- Spravodlivosti - koncentruje sa na férovosť a rovnosť – otázkou je možnosť určenia kritérií a parametrov určujúcich spravodlivosť pre všetkých.
- Osobných hodnôt – ich preferencia sa môže dostať do konfliktu s inými morálnymi princípmi, ktoré sme spomínali vyššie (Smith, 1990).

Podľa Robbinsa a Judga v prístupe založenom na princípe *dôsledkov* je v popredí záujmu profit, produktivita, efektívnosť. Pri rozhodnutiach vychádzajúcich z princípu *práva* treba rátať s problémom napr. zastúpenie menšín. Pri rozhodnutiach s dôrazom na *spravodlivosť* je citlivou témou otázka spravodlivosti v odmeňovaní, sociálna spravodlivosť (Robbins & Judge, 2007). Iné výskumy poukazujú na to, že predovšetkým ženy sa pri svojich rozhodnutiach riadia väčšmi ako muži princípom spravodlivosti, férovosti (Libby & Angelo, 2000).

To či sa a v akej miere manažér rozhodne rozhodovať eticky, vyžaduje schopnosť etickej úvahy, kontrolu verejných aktivít firiem, politiky a pravidiel firmy, poznanie preferencií jedincov (Stainer, 2004). Implikácia etických štandardov do konania ľudí predpokladá slobodnú vôľu. Autonómnosť, schopnosť samostatného rozhodovania sa je založené na: individuálnych hodnotách, adekvátnych informáciách a ich pochopení, slobode, rozume a uvažovaní (Luknic, 1994).

V procese rozhodovania pôsobia mnohé ďalšie determinanty, ktoré je jedinec nútený zohľadňovať (snaha organizácie o čo najvyššiu produktivitu, dosahovanie okamžitých cieľov, minimalizácia finančných nákladov, čas a pod.). U jednotlivcov tak často dochádza k tzv. etickej dileme, ktorá vyvoláva stres a môže sa odraziť v zníženej miere preferencií etických princípov pri rozhodovaní. Do budúcnosti, vzhľadom na globálne pôsobenie firiem, je dôležité zavedenie takých etických štandardov, ktoré budú globálne platné a uznávane pri súčasnom rešpektovaní kultúrnych diferencií.

Rozhodovanie je proces prebiehajúci v určitých krokoch. Aby bolo možné označiť výsledok rozhodnutia za etický, musia byť etické predpoklady obsiahnuté v každom kroku rozhodovacieho procesu. Preto musia byť identifikovaní stakeholderi, musia byť ujasnené dominantné hodnoty zainteresovaných strán ako i hlavné spoločenské problémy a ich dosah na organizáciu i stakeholderov.

Známym modelom, ktorý je významné dať do pozornosti v súvise s etickým rozhodovaním v organizácii, je Interakčný model etického rozhodovania v organizácii, ktorý predpokladá vplyv *individuálnych premenných* ako i *situačných premenných* na poznanie, správanie a teda i mieru etického rozhodovania v organizácii. Uvedené premenné sú v súčinnosti so *stupňom morálneho vývinu* jedinca. Morálnu úroveň/stupeň vývinu je možné ovplyvniť prostredníctvom vzdelávania (vhodne zvolenými tréningovými programami), pracovnými skúsenosťami ako i osobným príkladom nadriadených. Je predpoklad, že čim vyšší je stupeň morálneho vývoja, tým bude zohľadňovanie etického hľadiska v rozhodovaní pravdepodobnejšie (Treviño, 1986).

2.3 Osobnostné znaky a etické rozhodovanie

Správanie človeka, a teda i jeho rozhodovanie je determinované vlastnosťami. V odbornom bádaní by bolo žiaduce venovať väčšiu pozornosť práve tomu, ako využiť vlastnosti jednotlivcov na dosiahnutie cieľov organizácie. V našom prípade toho ako vlastnosti (napr. osobnostná vyrovnanosť, egocentrizmu, sebadôvera, silná vôľa, čestnosť, lojalita) a hodnoty determinujú ochotu presadzovať etické rozhodovanie u zamestnancov organizácií na Slovensku (Robbins & Judge, 2007).

Možno predpokladať, že napr. jedinec vyrovnaný, so silnými etickými zásadami je ťažšie ovplyvniteľný inými ľuďmi než jedinec nevyrovnaný. Preto s väčšou pravdepodobnosťou bude presadzovať osvojené etické princípy. Iným príkladom pôsobenia vlastnosti vplývajúcej na etické rozhodovanie je empatia. Niektorí autori uvádzajú, že napr. ženy sú považované za viac empatické a v procese rozhodovania viac analyzujú a viac sa zamýšľajú nad dôsledkami rozhodnutia pre iných. Holian uvádza kategórie charakteristík viazaných na svedomie, schopnosť vlastného úsudku, integritu ako predpoklady etického rozhodovania. Dodáva ale, že osobitne sú nepostačujúce a mali by byť previazané s odvahou konať podľa vlastného presvedčenia ako i s humánnosťou (Holian, 2002).

Aj výsledky prieskumu uskutočneného medzi študentmi na vybranej VŠ na Slovensku poukazujú na to, že etické rozhodnutia sú determinované osobnosťou jedinca – jej silou. Poukazujú na to, že či sa rozhodovať v súlade s etickými princípmi výrazne ovplyvňuje i miera závislosti na iných. Významnú úlohu však zohráva aj organizačná kultúra (Hulmanova, 2017). Na základe výsledkov výskumu v slovenskom podnikateľskom prostredí môžeme konštatovať, že správanie sa jednotlivca v súlade s etickými princípmi je významne determinované správaním sa pre neho významných osobností - jeho nadriadeným. Za veľmi významný faktor to považovalo 93,97 % respondentov (Remisova et al., 2015). Tu je potrebné zdôrazniť priamu súvislosť s tým, že ak neetické rozhodnutia prijímajú nadriadení, je pravdepodobnosť šírenia sa takéhoto správania sa i u podriadených, keďže nadriadení sú modelom správania sa pre svojich podriadených.

Ďalší - rovnako významný faktor, ktorý napomôže etickému rozhodovaniu v organizáciách je organizačná kultúra podporujúca otvorenú komunikáciu, oceňujúca správanie v súlade s hodnotami organizácie. Z toho vyplýva, že ak organizácie, ktoré sú právnickými osobami chcú, aby ich manažéri rozhodovali v súlade s etickými princípmi, musia vybudovať silnú organizačnú kultúru, ktorá tieto princípy bude rešpektovať a u každého manažéra vyžadovať. Etický kódex organizácií by nemal byť len súhrnom pravidiel správania sa na papieri, ale by mal nájsť svoj odraz v reálnom každodennom živote (Kajanová, 2015).

3. Conclusion

Spoločensky zodpovedné podnikanie, presadzovanie etických princípov v konaní organizácií, v správaní sa jej zamestnancov je zákazníkmi i širokou verejnosťou čoraz viac oceňované. Takáto organizácia sa stáva atraktívnejšou nielen v očiach zákazníkov ale i kooperujúcich partnerov. Svojím pôsobením tiež určuje mantinely etického podnikania a zároveň k nemu tlačí aj iné organizácie. Spoločensky zodpovedné, etické podnikanie sa v dlhodobom horizonte môže stať konkurenčnou výhodou organizácií. Naopak nedodržiavanie etických zásad naštrbuje imidž firmy, stráca sa dôvera zákazníkov, čo má pre organizáciu negatívne ekonomické dôsledky. Je potrebné tiež vyzdvihnúť význam rozvojových programov zameraných na etické správanie pre jeho implementáciu do praxe.

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SUGGESTIONS ON THE INTEGRATION OF THE EUROASIAN ECONOMIC UNION COUNTRIES EXCHANGES

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Abstract. Globalization and international integration are processes that affect every aspect of human life. The main point of integration is that it represents not only the unification of national economies, but also their subordination to a single whole based on intrasystem and intersystem connections and interactions between the economic and political systems of member states. When integrating, the main role is assigned to the market; the market is based on the voluntary participation of the parties, the subsidiary nature of supranational institutions, on a benevolent attitude and mutual consideration of the interests of the member states.

Integration processes are quite popular nowadays. The most striking examples are the European Union, the Commonwealth of Independent States and the North Atlantic Alliance. All these alliances contribute to the development of international relations, the elimination of intercountry barriers and, as a result, simplification and improvement of the quality of citizens‘ life in different countries.

The article suggests considering possibility of exchanges integration of the countries that make up the Eurasian Economic Union. The work structure of given exchanges has been analysed. The tasks necessary for carrying out integration of the exchanges are described. The advantages of such an association are disclosed.

Proceeding from the analysis, the conclusion is drawn that the idea of the EAEU exchanges integration into a single trading platform is realizable, logical and necessary for the further development of the stock markets and economies of the countries participating in the EAEU.

Keywords: globalization, integration, stock exchange, market.

JEL Classification: F15, F47, G20

1. Introduction

Globalization and international integration are processes that affect every aspect of human life. These processes are quite widespread nowadays. This can be judged by the presence of many unions and cooperatives of countries. The most striking examples are the European Union, the Commonwealth of Independent States of the CIS and the North Atlantic Alliance. All these alliances contribute to the development of international relations, the elimination of intercountry barriers and, as a result, simplification and improvement of the quality of citizens‘ life in different countries (Nitoi & Pochea, 2016).

The main point of integration is that it represents not only the unification of national economies, but also their subordination to a single whole based on intrasystem and intersystem connections and interactions between the economic and political systems of member states (Sukumaran et al, 2015). When integrating, the main role is assigned to the market; the market is based on the voluntary participation of the parties, the subsidiary nature of supranational institutions, on a benevolent attitude and mutual consideration of the interests of the member states (Paramati et al, 2016).

International development demonstrates that integration is a regularity of time and history. Integration helps to unite efforts of states in solving global problems of the world community (Sheryazdanova, 2010).

Important union, particularly, for Russian Federation, is the Eurasian Economic Union of the EAEU, which will be discussed in present research.

2. Methods

In accordance with the agreement on Eurasian Economic Union, EAEU is defined as an international organization of regional economic integration with international legal personality, ensuring the freedom of movement of goods, services, capital and labour, and coordinated or unified policies in the economic sectors.

The agreement on the establishment of the EAEU was signed in Astana on May 29, 2014, and entered into force on January 1, 2015. The member states of the Eurasian Economic Union are the Republic of Armenia, the Republic of Belarus, the Republic of Kazakhstan, Kyrgyzstan and the Russian Federation.

The main purpose of the EAEU is comprehensive modernization, cooperation, increasing of the national economies competitiveness level among the member countries of the Union, as well as creating conditions for improving the living standards of the population of the member countries. The goals and principles of the Union can be traced in the Treaty on the Eurasian Economic Union.

The most important article for our research is Article 70 "The Goals and Principles of Financial Markets Regulation".

Member States within the Union carry out coordinated regulation of financial markets in accordance with the following objectives and principles:

a) economic integration development in order to create a joint financial market and ensuring of non-discriminatory access to the financial markets of member states within the Union;

b) guaranteed and effective protection of the rights and legitimate interests of consumers of financial services;
c) creation of conditions for mutual recognition of licenses in the banking and insurance sectors, as well as in the securities market sector, issued by the authorized bodies of one member state, in the territories of other member states;
d) identification of approaches to risk management in financial markets of member states in accordance with international standards;
e) determination of requirements for banking, insurance and securities market activities;
f) determination of the procedure for supervising the activities of participants in the financial market;
g) transparency in the activities of financial market participants.

In order to create conditions for the free movement of capital, the following main forms of cooperation are applied, including:

a) exchange of information, including confidential information, between the authorized bodies of the Member States on regulation and development of banking, insurance and securities market activities, control and supervision in accordance with the international treaty within the Union;
b) coordinated activities to discuss current and possible problems arising in financial markets and to develop proposals for their solution;
c) mutual consultations on the regulation of banking, insurance activities and activities in the securities market by the authorized bodies of the Member States ".

This article of the agreement specifies the main and most important premises for the integration of the member countries stock markets.

It indicates that the Union is legally ready for the exchange integration processes of the member countries.

Based on the conducted studies, we recommend to unite the exchanges of the EAEU member states into a single exchange group.

The Treaty on the EAEU already has clear requirements for the integration of markets and, accordingly, the exchanges, and therefore it will not be difficult to unify the legislation in this sector, and to appoint a single regulator for such an exchange group.

As the studies have shown, the exchanges of the EAEU countries are at different levels of development (Darushin et al., 2016). The analysis of the exchanges work structure allowed us to provide data on the activities of these exchanges (Tab. 1).

Each of the exchanges is similar in its work structure; each exchange is aimed at integration into the international exchange space and reaching a competitive level.

Table 1: Work structure of the countries - participants of the Eurasian Economic Union exchanges

Name	Date of establishment	Number of issuers	Number of traded equity securities	Trading mode	Regulator
PJSC "Moscow Exchange"	December 19, 2011	720	2723	T+2	Central Bank of the Russian Federation
NASDAQ OMX Armenia	February 2001	No data	28	No data	Central Bank of the Republic of Armenia
JSC "Belarusian Currency and Stock Exchange"	March 4, 1993	No data	5100	T0 T+n	National Bank of the Republic of Belarus
JSC “Kazakhstan Stock Exchange”	November17, 1993	149	564	T0, T+2 transition planned	Committee for Control and Supervision of Financial Market and Financial Organizations of the National Bank of the Republic of Kazakhstan
Kyrgyz Stock Exchange	1994	No data	27	No data	The National Bank, the Ministry of Finance, the State Commission for the Securities Market and the State Commission for Financial Reporting and Auditing Standards

Source: Compiled by the author

As seen from Table 1, the exchanges are rather heterogeneous in terms of the number of issuers and traded securities. In contradiction to the Russian stock exchange, which discloses its reporting in accordance with IFRS standards, other exchanges do not always provide a full list of their work. Therefore there is a statement "no data" in some parameters in the table. Let's pay attention to the number of traded securities in Belarus, which is one and a half times higher than this parameter of the Moscow Exchange. It is worth noting that this number of securities is due to the prevalence of government securities over corporate bonds. Almost all traded securities on the Belarusian Exchange are bonds issued by the state.

The Kyrgyz and Armenian exchanges are characterized by the smallest number of traded securities, which indicates that markets are underdeveloped and that there is no interest in it from both business, government and investors.

Table 1 also shows that most of the exchanges have moved or are in the process of switching to bidding in the T + n mode. This fact positively affects the possibility of integration of the above exchanges, because technically the exchanges are ready to unify the technology of work and to trade in a single T + n mode (Dobre et al, 2015).

Attention should be given to the regulators of the stock market in each of the five countries. Despite the fact that the national or Central Bank of the state is the market regulator in each country, the legislation in the part of the securities market can certainly differ. Therefore, when trading platforms are integrated into a single exchange group, unification of legislation in the securities market and the creation of a single supervisory and regulating body for all five countries of the EAEU are necessary (Caloian et al, 2012). This problem is the main obstacle in the issue of creating a single exchange platform. The Eurasian Economic Commission plans to establish a supranational body to regulate the stock market (Kodzasova,2008).

3. Results

The creation of a united exchange platform primarily involves the solution of the following tasks:

a) Harmonization of national legislation in the sphere of the securities market;
b) mutual recognition of licenses of professional market participants;
c) creation of conditions for unhindered circulation of foreign securities;
d) creation of a system of information transparency for participants of the securities market;
e) the establishment of a supranational body for the regulation of the stock market.

Based on the studies, it is possible to outline the main directions of the EAEU exchanges integration, which include the following set of measures:

a) Unification of national legislation in the field of the securities market and rules of exchange trade;
b) Harmonization of the activities of the stock market institutions;
c) Technological cooperation and standardization of methods and schemes of stock exchanges work;
d) Development of post-trading infrastructure;
e) Creation of new markets and business diversification;
f) Information and analytical support of the exchanges integration process.

4. Discussion

A number of scientists believe that described actions are not enough to integrate exchanges into a single trading platform (Guidi & Gupta, 2013). For example, it is not enough just to unify the legislation in the field of the stock market, because it is densely inscribed in economic and political structure of the country.

Development of integration at the initial stage will be determined mainly by the political will and promptness of the introduction of business-friendly financial instruments (Tischenko, 2016).

It is necessary to highlight the main advantages in the integration of exchanges of the EEA countries.

The most obvious advantage is the possibility for a merged stock exchange to enter the world arena, the emergence of competition with the leading stock exchanges in the world (Tilica et al., 2012). Moscow Exchange has already reached a competitive international level, but, nevertheless, it can not yet compete with the leading American and Asian exchanges due to the less developed market. When integrated with exchanges of the EAEU countries, Moscow Exchange will receive additional "sales markets" for assets, attract more capital and increase trade turnover and market liquidity (Chiyachantana, C. N. et al, 2006). These indicators directly characterize work of the exchange in the international aspect. As for other exchanges, joining a strong market player will give them opportunity to become part of the world stock market, while having much smaller capital, turnover and opportunities (Bhattacharya & Spiegel, 1998).

The presence of constant competition with the leading exchanges will send a significant amount of exchanges activity to improve the quality and technological indicators of their work.

News about the EAEU stock exchanges integration will be positively received by market participants. Therefore, another advantage from such exchange integration is a favorable news background. Hence the following advantage is an increase in the issuers number.

With increase in the number of issuers, inflow of capital, both national and foreign, will also increase. Trust in stock market is growing, companies see a real opportunity in attracting additional capital to business through the issuance of securities, investors have a much greater choice of investment instruments. Competitiveness among issuers increases. It contributes to improving the quality of the core business of issuers and increasing the transparency of business. After all, one of the main rules of investing is investing in assets of clear, transparent companies.

As a result of all the above advantages, the overall state of the national economy improves. Moreover, the market becomes more resistant to crisis phenomena. This characterizes not only EAEU member countries economy, but economy of any country with a developed stock market.

5. Conclusion

Despite the presence of negative moments in the proposed integration of exchanges and the seeming unrealizability of this event (Gupta & Lin, 2013), the EAEU states are already taking steps towards consolidation in different sectors of the economy. For example, on February 19, 2015, a round table "Development of Exchange Trade in Agricultural Products in the Eurasian Economic Union" was held in Moscow. The event discussed possible approaches to the creation of an organized agricultural commodity market, the prospects for exchange trade between the EAEU member countries, the role of exchanges in the world trade in agricultural commodities.

Also in April 2015, the EAEU and Vietnam agreed on important issues related to creation of a free trade zone. Among the priority tasks, countries also emphasize the strengthening of cooperation, which guarantees investments of capital for the implementation of energy projects (Frolova T.A., 2007). With the development of partnership relations with Vietnam, the unified exchange of the EAEU will also be able to cooperate with a functioning exchange group in Vietnam (Niblock et al, 2014), which will open up mutual access for investors to the stock markets of the EAEU and Vietnam.

Proceeding from the analysis, we can conclude that the idea of integrating of the EAEU exchanges into a single trading platform is realizable, logically sound and, moreover, necessary for the further development of the stock markets and economies of the EAEU member countries.

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NEW TRENDS WITHIN SOCIAL HOUSING MANAGEMENT

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Abstract. The paper provides an overview of trends and processes of change affecting social housing management in the EU countries. While it is clear that the rationale behind and mechanisms by which social housing is provided and managed varies greatly between the countries, due to globalization some common trends may be distinguished, e.g. limiting the scope of government intervention in the sphere of housing, as well as cutting public expenditures in this segment. The consequence is a progressive decentralization of housing policy and privatization of tasks related to housing. In many European countries, there is a notion that the system of new social housing provision should not only be socially, but also financially effective. Therefore, social housing actors are challenged to market-orient their statutory tasks in the light of rising constraints: dwindling financial backup, growing needs for affordable housing, and very often lack of cost recovery. The study focuses on the Swedish social housing system as it is a model that is undergoing extensive changes, i.e. "marketisation" of the social housing sector. The paper presents changes to the model and discusses whether they map a different trajectory for the future of social housing in Sweden.

Keywords: social housing, public housing, Sweden, housing market

JEL Classification: R31, R38

1. Introduction

There is a great diversity of social housing models in the European Union with respect to:

a) tenure and legal status - social dwellings are mainly rental units, sometimes with prospects for purchase or conversion into ownership. In countries with very limited social housing stocks the units serve as an emergency measure, the so called "safety net" for those in greatest housing need);
b) housing providers – ranging from local self-governments or the state, through non-profit or limited-profit organizations, to cooperatives and commercial actors;
c) beneficiaries - eligibility thresholds for social housing are set on the basis of numerous allocation criteria – in few countries the systems are universal and open for all inhabitants, while in most countries they are targeted at the vulnerable households;
d) financing methods – ranging from countries that finance social housing production from public money, to fully commercial financing.

The heterogeneity of systems is expressed in the lack of universal, one size fits all definition of social housing. Harloe (1995) describes the notion through three features:

a) it is provided by actors whose primary goal is not profit,
b) allocation is politically charged and administrative. It is based on the criterion of housing need,

c) it is subject to state intervention.

In the previous research on social housing (Suszyńska, 2016, Rataj & Suszyńska, 2017) the author employed the following definition: Social housing is a form of satisfying housing needs of low-income and vulnerable households. It is characterised by using allocation policy, it is strongly dependent on local politics and provides broader tenancy law in comparison to the private rental dwellings.

Taking into account demographic trends (e.g. ageing), economic tendencies (e.g. pauperization) and the changing structure of households (dynamic increase in the number of single households), the demand for social housing on a global basis is constantly growing. The reverse trend is observed, however, within the supply of social housing – privatization (still ongoing in many states although on a rather small scale) and scarce production of new units affect the total number of social dwellings. In the European Union in 2009-2012, social housing production fell in the UK, the Netherlands, Austria, Italy, Denmark, Ireland and Spain (Housing Europe, 2015). In the meantime, the number of people waiting for the allocation of public housing increased significantly over this period in many countries.

The changes in European housing systems are not only of quantitative nature - they also take place in the field of management of the existing stocks. This is due in large part to the forced "marketization" of social housing organizations and the ever growing expectations of users (Lennartz et al., 2012; Czischke, 2012). The shift is particularly visible in the new methods and tools applied in the process of managing the social housing stock, i.e. relying on techniques and knowledge developed on the basis of modern commercial property management concepts. Social landlords have to become more self-reliant and operate business-like. In some countries, such as the Netherlands, this was nothing less than a culture shock for people working in the non-profit housing sector (Boelhouwer, 1999). The biggest challenge that the traditional organisations face is the dilemma how to carry out social tasks in a more and more privatised policy through a modern form of housing management (Tang et al., 2017).

The analysis of changes in the management of social housing resources is conducted on the basis of observations of transformations taking place in Sweden. The choice of the country is due to the fact that Sweden boasts one of the largest social housing stock (measured as a share in total housing stock), and the management model applied to the stock in question is recognized worldwide as socially and economically efficient.

2. Social housing in the EU – premises for transformation

The divergence of housing policy models and the ways of solving housing problems of low-income and vulnerable households in the European Union hark back to the cultural and historical conditions of the member states (Strączkowski & Suszyńska, 2012). Hence, the Union does not regulate directly the legislative and conceptual framework of the housing markets, enforcing only the obedience of some underlying rules. These principles cover e.g. equality of business entities, freedom of competition and movement of persons, equality of all citizens before the law, public aid rules and the antidiscrimination law.

The freedom in shaping the social housing stock has led to an increasing number of conflicts between commercial developers, social housing providers and the European Commission. In 2005, the European Property Federation filed a complaint with the European Commission against the Swedish government's aid to municipal companies providing social housing. The complaint concerned the violation of the principle of equality of business entities and the freedom of competition - municipal companies could obtain a competitive advantage over private companies due to receiving public aid. Taking into account the use-value system in Sweden at that time, the equilibrium in the Swedish housing market was shaken. Consequently, the Swedish government liberalized the social housing sector in 2007, and withdrew the remaining subsidies (severely cut in 1990s) for housing organizations operating in this segment.

The Swedish case encouraged similar actions against the Dutch government. As a response to the filed complaints of commercial rental housing actors, The European Commission lodged objections concerning the state intervening in the social housing system by paying excessive compensations to the social housing providers for carrying out public tasks. A consensus was reached between the Dutch government and the Comission in 2009 stating that 90% of the Dutch social housing should be allocated to households of maximum income at the level of € 33.000. Such concerns were also expressed as to the Belgian and French models (Mosca, 2011; Gruis & Priemus, 2008).

The steps undertaken by the European Commission undoubtedly aim to bring diversified housing systems in Europe into a unified structure based on the dualist model as described by Kemeny (1995). He differentiates housing models by the criterion of scope and importance of social rental housing to the country's housing stock (Table 1).

Table 1: Housing models by J. Kemeny

	Unitary rental system	Dualist rental system
Countries	Denmark, Sweden, Germany, the Netherlands, Belgium, Austria, Switzerland, France	Great Britain, Ireland, the USA, Canada, New Zealand, Italy
Size of the rental sector	relatively small; public and private rental housing markets compete with each other	relatively big; public and private rental housing markets do not compete with each other
State economy	mixed, industry-based	service-based
Key driver behind the market economy	society	market and customer-oriented
Tax system	high burden	relatively low burden
Centralization of power	high	relatively small or decentralized
Subsidies	independent from tenure form (although social housing received more financial aid)	ownership favoured
Rent levels	based on replacement cost or use value	set with no reference to the replacement cost
Social housing allocation	open for everybody	low-income households

Source: Kemeny (1995).

Due to the pressure from the European Commission, as well as the constantly decreasing stream of public subsidies, social housing markets have consistently been shrinking in most European countries.

3. New trends within social housing management – the case of Sweden

Social housing in Sweden is managed institutionally by approx. 330 municipal housing organizations, mainly operating in the form of limited liability companies. Most of them (about 95%) belong to the umbrella organization of municipal housing companies SABO. The Swedish rental market is a unitary system, so the private and social housing sectors are the competing parts of the same housing market on which housing subsidies for new investments are neutral with respect to tenure. With a 2011 law change, rents traditionally controlled in both public and private markets have theoretically been „freed". In practice, the rents in both segments are still dependent on each other.

The tendencies that are most vividly reflected in the management of social housing as performed by the Swedish municipal companies are:

a) increasing power of tenants who in the new market reality are perceived as clients rather than beneficiaries of the social system. Thus they demand securing their rights to participating in the management processes;
b) reorienting companies' mission – the once prevailing principle of social responsibility is giving place to greater autonomy (the public funding system was initially replaced by partial financing by the commercial market; now the state does not financially support housing organizations, and government grants for that purpose give way to discounts and exemptions, which are considered a less "invasive" assistance);
c) continuous decrease in the number of social dwellings as opposed to other tenures (mainly ownership);
d) polarization and social stigmatization as a consequence of the migration of middle-income and high-income residents from the social housing stock. As a result, a problem of excessive concentration of vulnerable households appears - families requiring state assistance (e.g. refugees, immigrants, seniors, single parents or the unemployed) outnumber self-reliant tenants;
e) ensuring that tenants have a real impact on resource management processes;
f) differentiation and professionalisation of services provided to tenants (e.g. facility management services, quick repairs etc.) [1];
g) performing under severe internal competition between housing providers and between the two housing rental sectors (social and commercial) (Suszyńska, 2016).

The most important change in the functioning and organization of the management by social housing companies is undoubtedly the placement of tasks. This translates into greater freedom in the interpretation and implementation of the doctrine of social mission, but poses new challenges in the need to maintain the economic profitability of these organizations without the support of the state (Gruis & Nieboer, 2004).

These changes also translate into increased emphasis on democratization and the philosophy of social responsibility in managing the resources in question. While the high attendance of the Swedish tenants stems from the centuries-old tradition of participating in social life, in continental Europe this practice is a breakthrough. Many authors point to the measurable

[1] More on the management techniques inspired by the commercial market (e.g. benchmarking, performance management, hybryd management) and used within social housing management: (Suszyńska 2016).

benefits of inclusion of tenants in decision-making processes (e.g. Fensicl, 1993; Cooper, 2000). Such improvements include:
- lower operating and maintenance costs,
- optimizing the use and functionality of residential space,
- greater job satisfaction for managers,
- increased satisfaction of residents from living in a given housing estate and community,
- increased attention paid to the cleanliness and aesthetics of the building / estate,
- decreased vacancy rate,
- lower tenant turnover,
- shortening the process of finding new tenants.

Furthermore, it is worth mentioning that tenant participation in housing management helps reinforcing social bonds, fosters increased sense of responsibility and belonging to the community. By this, it also helps to eliminate social problems that are particularly visible within the Swedish social housing stock due to the large diversity of tenant profile. The key to the successful tenant involvement is, however, providing tenants with real power on the selection and management services.

4. Conclusion

The changing environment in which social housing companies are operating nowadays entails reshuffling the organizational structures of the companies in question, reorienting their goals, and attitude towards tenants. The extent of the change is so vast that it is certainly possible to talk about the development of a new paradigm of social housing management in the EU. The most visible change is the shift of social housing companies towards the commercial sector (Llop, 2016). In many cases, this is not an independent choice of social housing operators, local or state authorities, but it is rather driven by the obligation to adapt the systems to the requirements set by the Community. Experts point out the numerous dangers of such a transformation, which will inevitably increase the price of accessing social housing, and thus reinforce the problem of exclusion (Lind, 2016; Andersson & Magnusson Turner, 2014). The outcome of withdrawing public money from the social housing sector and making it operate on market conditions may be reverse to the planned one. In Sweden, in order to meet the profitability requirements set by the municipalities on the basis of the performance of commercial housing companies, many social housing companies increase income thresholds for applicants. In addition, they more often sell rental assets in central urban locations to make a quick profit and avoid the stringent rent control. As Holmqvist and Magnusson Turner (2014) along with Christophers (2013) point out, the Swedish welfare state model in which housing traditionally functioned as a core value, the link between income and housing outcome has been weakened. Deregulation and liberalization have fundamentally changed the special features on the Swedish housing market. In particular, the rental sector is decreasing in favor of increased ownership and greater speculation (Malpass, 2008).

In addition to the changes that may raise concerns about the future role of social housing, there are some positive signs too. This is, for example, the growing importance of tenants in management processes – such empowerment has already been legally guaranteed in many European countries (Haworth & Manzi, 1999).

The success of a social housing organization today is more and more dependent on the ability to continuously tailor its offer to the changing needs of the tenants in terms of the level and scope of services, along with the flexibility of the housing contract.

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THE RISE OF DIGITALISATION IN THE GLOBAL LABOUR MARKET AND IN HUMAN RESOURCES MANAGEMENT

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Abstract. Globalisation is a social phenomenon in the labour market environment which can be characterised by the start of the 4th Industrial Revolution and strengthening effects of digitalisation and increased industrialisation in production processes. Its most significant socio-economic impact, according to the well-known Freya and Osborne study, is putting under threat more than 54 % of all the jobs in the European Union, while in the United States more than 50 % of all the jobs are expected to be replaced with new production technologies in the upcoming 10 or 20 years. The most vulnerable work positions (a substitution potential) include those occupied by the dominant population group, i.e. work positions of the employees with an elementary or a secondary level of education (administrative work, workers with a high fluctuation rate). There is a potential risk of social conflicts due to a rising unemployment rate; provided there is no solution to re-entry of such workers into the working process (introduction of a higher degree of production digitalisation also has a secondary impact on sustainability of the social system and the social network for the whole population). The subject of this article is to identify the potential threats and socio-economic impacts of globalisation and its effects on the Slovak labour market, focusing especially on the requirements for changes in the system of labour law and social security in the Slovak Republic based upon the authors´ theoretical background and practical experience.

Keywords: globalisation, digitalisation, industrialisation, jobs, social impacts

JEL Classification: J21, J64, K31, M12, M54

1. Introduction

The continuous start of the 4th Industrial Revolution (also referred to as „Industry 4.0) in the global market economy is having an imminent impact on the field of employment relationships in the labour market, notably on the human resources management. Long-term and considerable predominance of job vacancies in contrast to a low number of applicants available results in their growing demand for higher remuneration, better working conditions and more sophisticated working environment. The present situation in the labour market is causing significant fluctuation of the workforce which amounts to 30% in certain fields of industry and services (e.g. the banking industry, IT industry, etc.). The employment is also being influenced by the start of the 4th Industrial Revolution due to digitalisation and introduction of modern technologies in the manufacturing as well as labour processes resulting not only in a physical loss of work positions but also significant changes to their features (Dubravska et al., 2015). The demands placed on workers combined with a substitution potential (as described later) will differ completely and meeting higher standards will also require a future worker to have higher intellectual capacity, i.e. better professional and technical skills. Consequently, countries are considering changes in relevant national statutes in the field of regulation of employment relations along with changes in the HR management on a business level, e.g. in the field of selection of new candidates, modification of a fringe benefit system or overall organisation of the working process (Krajcovic, 2015).

In the paper presented, the authors are trying to define basic tendencies influencing a new setting of the national and global labour market including those changes which will have to be implemented in the HR management due to massive digitalisation in the course of the 4th Industrial Revolution.

2. Digitalisation as a determinant of the labour market

To lead disputes on how the phenomenom of digitalisation will influence regulation of employment relationships and HR management is out of question for several reasons. Introduction of new technologies including further evolution and development will have a considerable impact on the working environment as such. Automatic working tools such as assembly lines and production machines will become more effective, multi-purpose, reconfigurable and transformable, which will increase their autonomous management. IoT will enable these production lines to be interconnected through a wireless connection, which will bring about new possibilities of a mutual interaction of different systems, their new management and implementation of more sophisticated services in relation to physical production of final products. Thanks to other useful technologies such as digital business, digital robots, an endless number of data, mechanical education or artificial intelligence, the production process may acquire an ability of self-management and self-organisation. It can be turned into a system with a decentralised management and an autonomous decision-making process (an intelligent factory) which is often referred to as *cyber-physical system* (Meyer, 2015). Sensors will help to collect a great deal of data, process them and use them when creating new knolwedge, and that is not only in the field of industry.

Digitalisation as a part of the Industrial Revolution 4.0 (Industry 4.0)[1] had originally aimed at bringing the industrial production back into the EU countries in order to compete with the dumping prices of labour force in the countries out of Europe and create new working opportunities for European employers. However, it has become a basic (counterproductive) element having caused a considerable loss of working opportunities within the EU member states´ industries (Bowles, 2014). Even though this negative influence on the national (local) or the global labour market could only be roughly estimated, some studies can provide us with further details despite their conclusions being rather contradictory. The given studies tend to draw their conclusions only in relation to selected working positions without considering tasks and duties of current workers. These are more relevant with regard to forecasts of impacts of digitalisation (formal description of working positions differs in particular countries or

[1] The main technologies of the new revolution are as follows: cyber-physical systems, a communication network, IoT, communication interface, Big Data and Cloud computing; artificial intelligence, robotics, sensorics, a digital business, virtual reality, vision sensors; a virtual factory, a digital factory.

businesses or working positions have a similar description with different working tasks, which renders their comparability impossible).[1 2]

Various authors of the studies to be published use different statistical data while studying jobs without having a closer look at work duties. A human activity can be divided into analytical, cognitive and manual non-routine tasks and manual repetitive or routine tasks while the second category can be replaced with digital technologies or digital technologies managed by tools (Hughes et al., 2007). Other examples to be stated are accounting, classification of goods, ordering of goods and many others. Digitalisation, however, may have a completely different use in case of activities requiring soft skills, creative and social thinking where new and modern technologies still have to face certain barriers.

We may assume that digitalisation will have a different impact on various working positions. By the conclusions of the study in impact of digitalisation on the labour market in the United States of America (hereinafter referred to as „USA“) by Frey and Osborne, a half of working positions in the USA will be replaced by tools or intelligent robots in the next 10 to 20 years. European states could feel the same or even worse impact of digitalisation as more than 54% of all the working positions in Europe are being put under threat (Frey & Osborne, 2013).

In most cases, digitalisation and automatisation of production and working processes threaten those positions with the elementary or secondary education, e.g. secretaries, technical and administrative staff, CNC workers, assembly line workers, sellers and shop assistants (Jerabek & Caposova, 2016). Based upon the research by Frey and Osborne, we have to consider a so-called substitution potential to have been calculated for market conditions in the German Federal Republic (hereainfer referred to as „Germany“) where Dengler and Matthes cast doubt about its results to be directly implemented from USA into Germany.[23] A substitution potential is expected to drop with growing requirements for a specific position. The outcomes of the study by Dengler and Matthes indicate that both secondary works with no education requirements or professional production works with a minimum two-year long specialised study demonstrate the same substitution potential up to 45%. It says that up to 45% of the activities in the field of secondary work positions or specialised production positions could be substituted by machines (Dengler & Matthes, 2015). The two studies show that the highest substitution potential can be found in the field of manufacturing and production work positions and that is sup to 70%. Technical jobs can be substituted up to 65% while other jobs face less than a 50% risk of substitution by intelligent robots. Jobs in culture and social services record the lowest risk of substitution.

The expert literature refers to various studies into a digitalisation potential and its impact on the number of working positions. The results of the research by Wolter into effects of transfer into the industry 4.0 as an important part of digitalisation of work suggest that the market economy shall be not stressed by any dramatic effects on its employment figures. As Wolter says demand for people with a higher qualification will certainly grow to the detriment of people with primary or secondary education. As a result, in 2030 Germany will cancel 490.000 working positions to create the new 430.000. In total approximately 60.000 working positions

[2] After having applied the principle of relevancy from the point of view of a researcher, the authors decided to state the papers by Frey and Osborne, Dengler and Matthes, Wolter, McKinsey, etc.

[3] The German cases are presented mainly for a basic orientation (theoretical and empiric) in the 4th Industrial Revolution. We have to point out that it started in the early 90s´ when the German Government firstly introduced their concept of promotion of digitalisation and automatisation in industries in order to relaunch industrial production in the EU member states (mainly in the Federal Republic of Germany).

could be cancelled (Wolter, 2015). Neverthless, the growth in new working positions is directly linked to implementation of changes in specific industries with a clear vision of increase in productivity of a production process (work productivity included) with faster implementation of a product finalisation process. As stated by McKinsey 91% of German businesses expect a 20% productivity growth but still only 6 out of 10 German businesses are ready for the 4th Industrial Revolution and implementation of digitalisation into production and working environment. As futher stated in McKinsey´s study, up to 40-50% of all industrial parks (production factories) will have to be rebuilt due to implementation of new technological methods and new technological equipment (McKinsey, 2015). We may say that German businesses will invest only 14% of their annual financial turnover to adjust their technological, production and management processes to digitalisation in contrast to American businesses with almost a double.

Two basic conclusions can be drawn from the outcomes of the above mentioned studies. At present it is unlikely to forecast the real impact of digitalisation and the 4th Industrial Revolution on the local (national) and the global labour market. Providing the continual implementation of modern technologies in production processes and a maximum rate of outsourcing of those activities which are mostly dependent upon workers, we are convinced that working positions will be lost without any proper substitution.[14]

3. Digitalisation as a determinant of the employment law and working conditions of employees

The above mentioned changes in the labour market along with the start of the 4th Industrial Revolution are paving the way for considerable changes in the field of legal regulation of employment relationships and human resources management. Looking back at any previous industrial development and its logical consequences, we may anticipate that those work positions, which had not been cancelled due to implementation of modern technologies, will be substituted by licences or non-standard forms of employment relationships. In a broader sense, such development will certainly have a considerable impact on employment law as well as national systems of social insurance.

Social insurance systems within the EU member states are mostly based upon accumulation of funds from any contractual employment relationships, notably dependent work under the traditional employment agreement (Laclavikova & Olsovska, 2015). A growing number of licences/trade agreements at the expense of standard employment relationships is leading towards the overal volatility of the social insurance system with the basic social network collapsing and negative pathological phenomena emerging across the whole society. Growing popularity of microworking as an alternative to a „more burdensome and more administrative" standard employment relationship will also add to disbalance of the overall insurance system. As opposed to traditional work duties which used to be carried out by one natural person, microworking can be defined as dividing work tasks into smaller units which are executed by different natural persons by their qualifications or with a higher added value the specific work may generate (Glaeser & Xiong, 2017).

[4] For the purpose of the study, the percentage number of businesses considering outsourcing ranged between 30 to 50%. For further details please see all the studies and research below.

All the above mentioned changes to a legal framework of standard employment relationships (contracts of indefinite duration and weekly part-time contracts) will certainly influence working conditions of employees. There will be a huge gap between remuneration of those employees working in the regional manufacturing and service sectors as there is a zero substitution by machines (a low substitution potential) and the technological field where work tasks from an employer (a contractor) are not limited by territory. Consequently, work performance will have different flexibility in time and space.

Allocation of working time will undergo considerable changes as well. New and flexible employees will be able to fulfill their work duties at any place in the world and they will not be restricted by any traditional limitations of working time, e.g. lunch breaks. The outcome and performance will come first. Such a form of individual time allocation will mostly suit the people with a university degree who are hungry for self-fulfillment and specialists in scientific and intellectual work (Vlacsekova & Mura, 2017). The given flexible employment enables juggling between working and private life. As a result, new modern working positions will be mostly occupied by natural persons with university education, which will contribute to inequal income distribution and may emphasize social differences, though.

Unlimited flexibility of new forms of employment can also generate certain risks representing a challenge for new and modern human resources management. Employees will be available almost anytime thanks to e-mail communication, smartphones, digital transmission or permanent Internet connection. Separating the place of work from the employer will lead to higher individuality of the staff in contrast to teleworking or home office, which are so popular nowadays. Certain features will cease to exist, e.g. face-to-face intepersonal communication, general participation of employees in the company management by trade unions or joint decision-making on the company level.

4. Digitalisation as a catalyst for change

All the above mentioned changes in the labour market as well as the risks we have identified will also contribute to amendments in the field of employment law or human resources management. Since the employment law and the social insurance system are based upon concluding standard employment relationships, it will be crucial to introduce new legal principles which will provide for untypical forms of employment to be incorporated into the Labour Code and the social insurance system (regardless of their legal regulation). In Germany, for instance, persons in a so-called parallel employment (in the Slovak theoretical legal context referred to as dependent work/sole traders) are also included in the social insurance system with selective application of the Labour Code statutes (only certain legal provisions are applied when governing employment rights and obligations, e.g. remuneration, responsibility...).

Employers will also have to be prepared to solve the issue of personal interviews. Modern work positions will require a more „complex person“ with higher demands to be placed upon an employee especially as far as mental load is concerned (Bencsik & Machova, 2016). Therefore the emphasis will be placed on examining psychological and mental capability of an employee in relation to a particular work position. Personality and psychology tests will certainly undergo considerable modifications in order to become more complex and study not only employee´s mental capability for a particular work position, but also the core of his/her personality (temper, qualities, personality traits, etc.).

In addition, employees´ personal data protection will become an issue, as well. Big data and technological development will enable much simpler and more effective collection of data on employees so as an employer could have a better control over staff performance and behaviour. The collected data are processed and evaluated on a regular basis (Lacko & Meyer, 2016). Consequently, the employer is able to assess which of the employees is not a good return on investment or which one (an employee or a candidate) represents a potential risk. An amendment to the international legal regulation on personal data protection will create an ambivalent relation between the principles of the 4th Industrial Revolution and digitalisation to strengthen the powers of an employer when collecting personal data by way of new technologies. The Directive of the European Parliament and the European Council Nr. 2016/679 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data (hereinafter referred to as „general directive on data protection“), however, shall reinforce the legal position and protection of a natural person – an employee (Zulova et al., 2015). We may assume that combining the two principles will represent a considerable challenge for both the science and the employment legislation on the one hand (at least within the EU member states) and the business practice on the other one.

A completely new legal framework will partially reflect on weak legal protection of employees´ personal data with regard to digitalisation while defining a new concept of rights of natural persons in relation to simpler transferability of their personal data or information on natural persons outside the EU borders. The general regulation on personal data protection will replace the current directive hereon while maintaining the common legal framework for personal data protection across all the EU member states (Daubler, 2016). They focus on implementation of functional mechanisms to enable natural persons to be explicitely competent when dealing with their own personal data. Within the territory of the European Union natural persons shall be provided a better control over their own natural data in the digital environment, i.e. use of digital services regardless of residence of a provider, use services provided by smartphones, social networking sites or internet banking services (Hajdu et al., 2014). The key mechanisms are as follows: the right to be acquired, a better control over one´s personal data, the right to transfer one´s personal data to another service provider, the right to provide information in a comprehensible and simple language, limitation of profiling of natural persons, special protection for children or new mechanisms for implementation of new regulations.

Limitation of profiling without prior consent of a person will certainly have the most significant impact on internal business processes, especially in the framework of personal interviews. Profiling is currently being used when analysing and forecasting performance of a natural person in relation to work, his/her health condition, future economic situation, personal preferences or client´s record at a bank upon approval of a mortgage (Meyer & Klasen, 2013). Current profiling is being used when providing digital services with a direct connection to social networking sites offering various products and services (Mendelová & Zaušková, 2015). Within a new legal framework profiling of natural persons shall be subject to their prior excplicit consent. There are only two exceptions to the regulation: the prior consent shall not be required unless given by the national legislation (e.g. for the purpose of protection of public health or security) or such an activity shall only be used for fulfillment of the existing obligation. The Regulation shall enter into force and effect on May 25, 2018, i.e. two years after its publication in the Official Journal of the European Union. The Directive shall be implemented into the national legislation within a two-year transition period after its publication.

5. Conclusion

Even though the paper we are submitting is based upon current and available international research into the 4th Industrial Revolution, digitalisation as well as current knowledge of the authors from the field of industrial revolution to be applied in the automotive industry, their conclusions, observations or recommendations are solely subjective. In addition, it is worth noting that forecasting any impact in a highly volatile labour market or any amendments to the relevant statutes on the national and international level could be really difficult. On the other hand, we may assume that businesses, parliamentary deputies or the whole society are not necessarily ready for swift implementation of modern technologies into the production and working processes. We are lagging behind in creating legal and social barriers in order to ensure respect of human rights and freedoms as a basic imperative of the democratic society. The loss of human dignity or a lack of legal protection of workers due to implementation of new technologies into businesses (e.g. mystery shopping, use of biometric data in employment relations, etc.) are only a few of the negative examples to mention.

Digitalisation and its branches directly interfere with physical and psychological integrity of natural persons (employees) the society is not ready for from the legal or business point of view. Let´s only hope that the more sophisticated technologies will be implemented into working or business processes, the more engaged the society will become to implement corresponding legislative changes on both the national and international level.

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THE DIFFERENCES IN THE LEVEL OF GLOBALIZATION AND ITS CHANGES IN T-HE WORLD

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Abstract. The main goal of this paper is to show the changes that have taken place in the level of globalization in the world. These considerations are preceded by a short presentation of the essence of globalization, its measurement (the main indices) and the methodology for measuring the degree of globalization by KOF. The KOF index of globalization is in fact the basis for describing the level of globalization of individual countries and its changes in the world economy in the years 1990-2016. The paper presents the general KOF Index of Globalization and its three dimensions: economic, social and political. It presents the most and the least globalized countries. It shows the changes on the continents and in the EU countries, mainly in the EU-11 (the new EU countries – the former socialist countries). The main conclusions of the study are as follows: 1. Globalization has covered all the countries, although their level is varied; 2. The most globalized countries are European medium-sized countries; 3. Europe dominates in all dimensions of globalization; 4. The higher the level of development, the higher the degree of globalization is; 5. The rise in the level of globalization has occurred on all continents in the past quarter century, the largest in Europe (mainly in the new Member States of the EU – the former socialist countries) and Asia, and to a lesser extent in other continents.

Keywords: globalization, the measurement of globalization, changes in the level of globalization

JEL Classification: F60

1. Introduction

Globalization is certainly one of the major socio-economic processes of recent decades. It undoubtedly influences the changes taking place in the world, the character of the modern world economy, its growth rate, changes in its structure, etc.

Globalization is a very broad and complex process relating to the economic, social and political spheres. These are the three main dimensions of globalization. Globalization is the inevitable fate of the world, an irreversible process that affects all of us (Bauman, 2000). There is no agreement in the literature on the concept of globalization. "It means different things to different people" (Martens et al., 2010). According to A. Scholte, globalization can be understood as: internationalization, liberalization, universalisation and westernisation (Scholte, 2008).

Although globalization was originally treated as something new, it was eventually recognized as a higher, more advanced and complex stage in the process of economic internationalization, and hence the continuation of what had already happened. Globalization is only – as most economists think – accelerating the long-standing internationalization of the economic process. Some add that this is an exceedance of a certain threshold. If internationalization meant the development of economic relations between independent national economies, then globalization would mean such intensification of relations that all global national economies become more or less interdependent (Flejterski & Wahl, 2003). Globalization is also often referred to as the growing integration of national economies (through international trade and foreign direct investment). Markets and production become increasingly interdependent. Globalization can also be defined as the process of an ever closer integration of national economies (Budnikowski, 2000). This is because it is a process of eliminating border barriers to market functioning. The consequence of this is the process of integrating the world economy (Szymański, 2004).

Globalization – due to its essence – is the subject of interest of representatives of many scientific disciplines. They are interested in the essence of globalization, its characteristics, causes, consequences, who is its beneficiary and who loses because of it, etc. Over time, they became interested in its measurement. This aspect will be the starting point for our further consideration. The aim of this paper is to show the differentiation of the degree of globalization between continents and countries (which are more and less globalized) and the changes that have occurred in its level in recent decades (where the process is slower and faster). The paper pays particular attention to the European Union (EU) countries, especially to the new EU Member States – the formerly socialist countries (EU-11).

These issues have been explored with the advent of various measures of globalization. The degree of globalization and changes in its level in various countries on the basis of the Maastricht Globalization Index (MGI) show, among others, P. Martens and M. Raza (Martens & Raza, 2009) and L. Fige and P. Martens (Fige & Martens, 2014). However, they refer to a short period of time and cover a limited number of countries. Changes in the level of globalization are also shown on the example of the KOF Globalization Index (Dreher et al., 2009). This index was used to present the level of globalization of single countries, e.g. Turkey (Sen-Tasbasi, 2014). Moreover, there are comparisons of the globalization level of a narrow group of countries, e.g. the Baltic States (Pekarskiene & Susniene, 2011) or the BRIC (Prelipcean & Cozorici, 2013). In this study – based on the KOF ranking – efforts were made to capture the changes that have taken place in the level of globalization over a longer period, and additionally accounting for the most recent data for some 200 countries.

2. Measuring globalization

Numerous measures of globalization have emerged in the literature. The first was the globalization index developed by A.T. Kearney and the “Foreign Policy” in 2001. It was published only until 2006. A small number of countries were surveyed. The authors of the above index identified 12 indicators that have become the basis for measuring globalization (Measuring, 2001). In 2002, the Globalization Index was developed by the Centre for the Study of Globalization and Regionalization (CSGR) at the University of Warwick in the United Kingdom. It was published between 2002 and 2004. The authors of this index adopted slightly more (16) indicators (Lockwood 2004; Lockwood & Redoano, 2005). In 2008, a new, based on 11 indicators, the Maastricht Globalization Index (MGI) (Figge & Martens, 2014) was released and two years later, built on 21 indicators, the New Globalization Index (NGI) by P.Vujakovic

(Vujakovic, 2010). In recent years, other indices of globalization have also been developed (Martens et al., 2014).

The basis for considering the changes in the level of globalization in the last decades will be the KOF Index of Globalization developed in 2002[1]. Its name derives from the name of the research institute (Konjunktforschungsstelle) where it was constructed by A. Dreher (Dreher, 2006; Dreher et al., 2008). It is developed and published annually. It covers a much higher number of indicators. Its advantage is that it covers almost all countries in the world (over 200). In addition, the above index has been developed for earlier years. The formerly mentioned globalization indices do not have these features[2].

KOF Index of Globalization defines globalization to be the process of creating networks of connections among actors at multi-continental distances, mediated through variety of flows including people, information and ideas, capital and goods. Globalization is conceptualized as a process that erodes national boundaries, integrated national economies, cultures, technologies and governance and produces complex relations of mutual interdependence[3].

The KOF index has three dimensions, namely: economic globalization, social globalization and political globalization. As a result, in addition to the global index of globalization, 3 sub-indices were created. Each of them is calculated on the basis of several indicators. In addition, each is assigned a specific weight.

The share of economic globalization is 36%, of which 50% is attributed to "actual flows" and the other 50% to "restrictions." As far as the first group is concerned, the level of globalization is calculated on the basis of the following indicators: Trade (its share is 22%), Foreign Direct Investments, stocks (27%), Portfolio Investment (24%) and Income Payments to Foreign Nationals (27%). Each of them is calculated as a percentage of GDP. On the other hand, the level of restrictions is calculated on the basis of Hidden Import Barriers (23%), Mean Tariff Rate (28%), Taxes on International Trade (26%) and Capital Account Restrictions (23%).

Social globalization (its share is 37%) is calculated on the basis of three groups of indicators, namely: Data on Personal Contact (33%), Data on Information Flows (35%) and Data on Cultural Proximity (32%). The first group includes such indicators as: Telephone traffic, Transfers (percent of GDP), International Tourism, Foreign Population (percent of total population) and international letters (per capita). The other – Internet Users (per 1000 people), Television (per 1000 people) and Trade in Newspapers (percent of GDP), number of McDonald‘s Restaurants (per capita), Number of IKEA (per capita) and Trade in books GDP).

To calculate the level of political globalization, which share in the global index is 27%, the following indicators have been used: Embassies in Country, Membership in International Organizations, Participation in U.N. Security Council Missions and International Treaties[4].

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[1] KOF Index of Globalization was also used to exam the relations between globalization and human development (Bednarova et al., 2011), competitiveness (Bednarova, 2013) and economic freedom (Bednarova, 2015).

[2] This does not mean that this measure does not have any weaknesses. It is well-regarded in the extensive literature on the advantages and disadvantages of globalization measurement (Caselli, 2008; Samimi et al., 2012).

[3] The above definition is the starting point for discussing KOF research methodology. See: (KOF).

[4] Detailed information on the methodology for calculating the index see: (KOF).

1. The differences in the level of globalization

The latest KOF globalization index (2016), as well as sub-indices, for the top twenty of the ranking is given in Table 1.

Table 1: 2016 KOF Index of Globalization.

Globalization Index		Economic Globalization		Social Globalization		Political Globalization	
Netherlands	91.70	Singapore	96.06	Austria	91.30	Italy	97.53
Ireland	91.64	Ireland	93.08	Singapore	91.15	France	97.29
Belgium	90.51	Luxembourg	91.80	Switzerland	91.10	Belgium	96.51
Austria	89.83	Netherlands	90.89	Ireland	90.98	Austria	96.37
Switzerland	87.01	Malta	90.28	Netherlands	90.77	Spain	95.99
Singapore	86.93	UAE	88.39	Belgium	90.45	UK	94.95
Denmark	86.44	Hungary	86.85	PuertoRico	90.36	Sweden	94.65
Sweden	85.92	Estonia	86.11	Canada	89.26	Brazil	94.31
Hungary	85.78	Belgium	85.95	Cyprus	88.21	Netherlands	94.01
Canada	85.67	Bahrain	85.51	Denmark	87.29	Switzerland	93.41
Finland	85.47	Mauritius	85.23	France	87.14	Canada	93.17
Portugal	85.08	Slovak Rep.	86.63	UK	86.08	Egypt	93.01
Norway	84.24	Austria	83.25	Portugal	85.59	Argentina	92.88
Cyprus	84.07	Cyprus	83.11	Norway	85.49	Turkey	92.53
Spain	83.73	Czech Rep.	82.89	Sweden	84.63	Norway	92.26
Slovak Rep.	83,62	Georgia	82.56	Germany	84.53	USA	92.19
Czech Rep.	83.60	Finland	82.23	Finland	83.84	Denmark	92.12
Luxembourg	83.55	Malysia	81.46	Australia	83.43	Russian Fed.	92.10
France	82.61	Portugal	81.35	Spain	83.23	Greece	92.05
UK	81.97	Denmark	81.17	Slovak Rep.	82.63	Germany	91.94

Source: (KOF)

The Netherlands is the most globalized country according to KOF (2016), followed by Ireland and Belgium. The top twenty are dominated by European countries. There are 18 of them, of which 16 are the EU Member States. Most of them are medium and small countries. From the so-called “the Big Four,” there are included only France and the United Kingdom (2 last ranks). Italy occupied 24th place and Germany 27th place. At the top “20” there are 3 former socialist countries and now the new EU Member States (EU-11) – Hungary, Slovakia and the Czech Republic. Poland came in 23rd place, followed by Estonia (26), Lithuania (29), Bulgaria (30), Slovenia (32), Croatia (35) and Romania (36). The lowest place in this group of countries was taken by Latvia (40).

Singapore is ranked first in economic globalization. However, European countries dominate here (14 at the top “20”). Mostly these are the same countries (12). Poland was only on 36th place and was overtaken by six EU-11 countries (4 of them at the top “20”). The worst in this ranking was Romania (55). The countries of “the Big Four” occupied the following places: the United Kingdom 59th, Italy 62nd, France 63ed and Germany 81st.

The ranking of social globalization is very similar to the general ranking, where Austria took the first place. The composition of the first six is identical (slightly different order), and at the top "20," there are as many as 17 countries from the top "20" of the main ranking. There are also 16 European countries, including only one of the EU-11 group – Slovakia. Right behind it was the Czech Republic, Lithuania and Hungary, and Poland was 34th. The remaining countries have occupied places from 40th (Estonia) to 47th (Romania).

More diverse – compared to the earlier sub-indices – is the top "20" ranking of political globalization. European countries also dominate here (15). Large countries ("the Big Four") are visible here. Italy is the first, the second is France and the sixth is the United Kingdom. Germany as well as Russia are also at the top "20." There are non-European countries such as the USA and Canada as well as Brazil and Argentina. Poland had a relatively high place (31st). Before Poland came, from the EU-11 group, Hungary and Romania. Much further is the Czech Republic and Slovakia, which in the previous rankings were in the lead. The Baltic States have long been in distant position (the last Latvia was only in 128th place).

At this point one should mention the least globalized countries. The 2016 KOF Index of Globalization closes the Solomon Islands in the 192nd place, before Eritrea, Equatorial Guinea and Micronesia Fed. Sts. (less than 30 points). In the ranking of economic globalization are: Burundi (the last 160th place), Ethiopia and Iran (also below 30 points). In terms of social globalization: Congo Dem. Rep. (ranked 200), Myanmar, Ethiopia, Afghanistan and Central African Republic (below 18 points). In the political globalization ranking, where 207 states and dependent territories were classified, the latter – which is apparently obvious – came in the final places (in the last Chanel Islands – 1 point). Of the fully independent states 191st place was taken by the Marshall Islands (18.23 points).

The positions of individual countries – with the indicators underlying the construction of indices – should not raise more doubts. There are not many surprises here. This is also the case for EU-11. Their place in individual rankings can be explained by geographic and demographic differentiation as well as historical and cultural conditions of this group of countries.

3. The changes in the level of globalization

The KOF provides us with information that allows us to identify the changes that have taken place in the level of globalization over a longer period (since 1970). However, earlier data does not cover all countries. Therefore, the subject of our considerations will be the years 1990-2013 (data from recent years are not fully comparable with earlier ones).

The increase in the level of globalization in this period took place on all continents. The index of globalization has increased most in Europe (by more than 25 points). In percentage terms, it was also one of the biggest increases (it was only higher in Asia). As a result, Europe remained the most globalized continent. In the analyzed period the globalization index for this continent increased from 40 to almost 67 points. The biggest jump occurred in the early 1990s. Since 2008, the growth of the index has been slowing down, and even a slight decline has occurred. The economic crisis of 2008-2009 certainly affected this change[1].

Only on a slightly lower scale – in terms of points – the index of globalization in Asia increased. However, in terms of percentage, it was the biggest increase (by 80%). Hence Asia,

[1] A slight decrease or slowdown in growth has also been recorded on other continents.

in a relatively short period, from a low globalized continent (in 1990, the lower level of globalization only had Oceania) became a highly globalized one (second only to Europe). The index of globalization increased from less than 30 to more than 53 points. A detailed analysis of the above indicator shows that it increased sharply – as in Europe – in 1991. Higher growth occurred in the 1990s, and slightly lower at the turn of the first and second decade of the 21st century.

Definitely smaller changes occurred on other continents, both in points (10-15 points) and in percentage (31-47%). The smallest change (in this last listing) took place in North America, which fell from second to third place (the index of globalization in 2013 slightly exceeded 50 points). In the analyzed period, the growth of the globalization index was more balanced on this continent. The bigger jump followed by its decline was recorded in 1995, and its slight decline in 2008. South America also fell by one place, with a slight increase in the percentage of globalization (the index for globalization in 2013 was slightly below 50). Major changes occurred in the 1990s and in the first years of the 21st century. Since 2006 this indicator has not changed. Africa has also fallen one place, although the increase in globalization has been highest in terms of both points and percentages. As a result, the index of globalization increased from 31 to 45 points. Its growth was more balanced compared to other continents. In the last place in this ranking – despite the growth of the globalization index – was Oceania. Its index of globalization was 25.7 and 36.4 points, respectively. The growth of the index was, with the exception of 2002 and 2006, even.

We are now going to have a closer look at the indices of globalization in EU countries. The level of globalization of the EU-11 countries between 1990 and 2016 is shown in Table 2.

Table2: KOF Index of Globalization (EU-28)

Country	1990*	1995	2000	2005	2010	2016
Bulgaria	38.34	54.15	63.72	67.32	71.40	77.16
Czech Republic	65.77	70.83	78.49	84.07	84.27	83.60
Estonia	42.56	61.96	72.48	76.60	78.82	78.46
Croatia	39.64	42.73	62.57	73.23	75.53	75.59
Hungary	58.82	75.13	81.07	85.48	87.07	85.78
Lithuania	35.17	49.10	62.51	70.19	72.06	77.26
Latvia	37.18	48.23	57.22	67.42	69.33	70.97
Poland	49.24	66.69	72.51	78.51	80.10	79.90
Romania	34.13	50.98	62.07	67.13	73.62	75.09
Slovak Republic	56.85	63.83	74.29	82.90	84.75	83.62
Slovenia	38.44	51.35	66.24	75.19	76.87	76.24

*Estonii, Croatia and Slovenia – 1991, Czech Republic andi Slovak Republic – 1993

Source(KOF).

During this period, the largest changes occurred in this group of countries. In the “new” EU Member States (former socialist countries), in the period of centrally planned economy, the level of globalization was much lower than in the “old” EU countries. Their opening up to the world and joining the EU caused such a big jump. In the years 1995-2016 (no complete data for earlier years), the biggest jump was made by Croatia and Lithuania (about 30 points), followed by Slovenia, Romania, Bulgaria and Latvia (slightly below 25 points). Slovakia (slightly below 20 points) followed by Estonia, Poland, the Czech Republic and Hungary – slightly below 10 points. In most of the other EU countries, these changes were significantly lower. The largest in Cyprus and Malta, so also in the "new" EU Member States, then in Greece, Portugal and Ireland. These changes were much smaller in other countries. The smallest in Sweden, Belgium and United Kingdom (below 2 points), then in Denmark, France, the Netherlands and Austria (below 5 points). These are the countries in which the globalization index was high at the starting point. In summary, the largest increase in globalization in the EU has been observed in the countries with the lowest globalization index, the smallest in the EU countries with the highest index. This reflects the convergence of those countries which increasingly embraces the real sphere in the EU, the sphere of regulation and – as you can see – the level of globalization.

4. Conclusion

Globalization with its range extended to all countries, but the level of their globalization is not identical. The most globalized are the highly developed European countries of medium size. European countries dominate in all dimensions of globalization (economic, social and political). Small and medium-sized European countries are more prominent in the ranking of economic globalization and large – political. It can be seen that countries that are at a lower level of development are less globalized. The rise of globalization in the past quarter century has occurred on all continents. The largest increase took place in Europe, mainly in the new EU Member States (former socialist countries), which in the past – compared to the capitalist countries – were much less open to the world. Significant growth also occurred in Asian countries. Other continents have experienced less change in the level of globalization.

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THE IMPACT OF DRIVING RESISTANCES OF A VEHICLE ON GLOBAL POLLUTIONON

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Abstract. Road transport in the period of globalization is well developed and helps in the process of international connection. Together with road transport are some negatives connected such as increase of non-renewable resources' consumption and emissions. Vehicles are major petroleum consumers and contributors of greenhouse gas and criteria pollutants emissions in many countries around the world. Road transport is the biggest producer of carbon dioxide that affects the greenhouse effect at the most. Combusting of 1 litre of petrol means production of 2.5 kg of carbon dioxide. At the same time, to combust 1 kg of petrol, approximately 15 kg of air is consumed. The amount of fuel consumed affects the environment, status of health of human population as well as the financial costs that are associated with vehicle operation. The article is focused on the issues of driving resistances that affect a vehicle. Every vehicle breaks driving resistances during a drive. These resistances are air resistance, acceleration resistance, rolling resistance and gradient resistance. The engine must perform certain work in order to break the driving resistances. The value increase of some of the resistances results in the increase of the work needed for its breaking. For such work it is necessary to consume certain amount of fuel and the result is seen in the form of harmful emissions. The article describes the mechanism of formation of particular driving resistances and factors that affect them.

Keywords: driving resistance, emissions, fuel consumption, global pollution

JEL Classification: L920

1. Introduction

Road transport vehicles are considered to be one of the major pollutants of the environment due to the production of solid waste, the possible spillage of hydrocarbons and the subsequent pollution of ground and surface water, but mainly due to the production of greenhouse gases and other emissions from the exhaust gases (Gnap et al, 2015). These, in fact, contain the unintended compounds of nitrogen with oxygen – NO_x nitrogen oxides, unburnt HC hydrocarbons (Sarkan et al, 2017). They also contain the results of incomplete combustion of carbon, CO carbon monoxide as well as CO_2 greenhouse gas (Sarkan et al, 2017). Thanks to the use of catalysts and the optimization of preparing the working mixture and the process of burning, modern vehicles discharge these gases into the air substantially less than in the past (Rievaj & Synak, 2017).

2. Emission limits and their production

This part contain the impact of the engine efficiency on fuel consumption and the impact of driving resistance on produce emissions.

2.1 The comparison of emission limits

Concerning the situation, there is also a constant pressure exerted on vehicles to consume less amount of fuel and thereby produce less amount of CO_2 greenhouse gas (Szabo et al, 2013). The changes in the preparation of working mixture led to the increase of efficiency of the combustion engines and thereby to the reduction of fuel consumed (Janosko et al, 2010). If the truck Avia A 30 made in the 1970s had had specific fuel consumption of 245 $g.kWh^{-1}$, its modern version Avia A 75 EL made at the turn of the century had specific fuel consumption of 225 $g.kWh^{-1}$ and the truck Mercedes Benz ATEGO 815 from the beginning of the century has already reached a specific fuel consumption of 183 $g.kWh^{-1}$. Via these data, it can be determined the efficiency of the utilization of thermal energy from the fuel that is shown in the Table 1. The calculation was conducted for calorific power of diesel of 41,840 $kJ.kg^{-1}$ and its specific mass, ρ = 0.84 $kg.dm^{-3}$ (Awad et al, 2017). Assuming that a constant power of 30 kW to overcome the driving resistances is needed and that the vehicle is driving at the speed of 60 $km.h^{-1}$, it is possible to compare the consumption of vehicles per 100 km as well as the amount of CO_2 produced (Skrucany & Gnap, 2017). The results are summarized in the Table 1.

Table 1 Impact of the engine efficiency on fuel consumption and CO2 production at the constant engine power of 30 kW

Vehicle	Specific consumption $g.kWh^{-1}$	Utilization of fuel energy %	Consumption $l.100\ km^{-1}$	Amount of CO_2 Kg
Avia A 30	245	35.1	14.58	47.41
Avia A 75 EL	225	38.2	13.93	45.29
Mercedes Benz ATEGO 815	183	47.0	10.89	35.40

Source: (author)

The production of harmful emissions from the exhaust gases of road vehicles has been significantly reduced. Such reduction was achieved thanks not only to tightened legislation but also to technical progress which has brought higher efficiency of the combustion engines (Adams et al, 2010). However, reduction of driving resistances can also contribute to the reduction of emissions (Keller & Aliukov, 2015). Therefore, we will pay attention to the impact of driving resistances on the fuel consumption of vehicles in the next part of the article.

2.1 Driving resistance

While driving, the vehicle engine must overcome driving resistances that hamper the vehicle motion. These resistances are air resistance and rolling resistance that always act against the direction of the vehicle motion. The gradient resistance changes the direction of its action depending on whether the vehicle is moving uphill and thus increases its potential energy, or it is moving downhill. The inertia resistance attempts to maintain the motion state of the vehicle. If the vehicle accelerates, it prevents the vehicle from increasing the speed. If the vehicle slows down, it changes its action and attempts to maintain the motion speed for the vehicle (Szabo et al, 2013).

2.1.1 Air resistance

The air resistance always acts when the vehicle is in motion. It is designated in N and for determination of its intensity the following equation is used:

$$O_v = \frac{\rho \cdot c_x \cdot v^2 \cdot S}{2} \tag{1}$$

O_v is the air resistance [N]

ρ is the specific air mass [kg.m^{-3}]. This one changes with its pressure and temperature (Skrúcaný et al, 2017). With temperature of 0°C and pressure of 1,013.25 hPa, the specific air mass is according to (Matějka, 1990) of 1.29 kg.m^{-3}. If the pressure is increased up to 1,020 hPa and temperature up to 15°C, the specific air mass is 1.231 kg.m^{-3}. Assuming that other parameters do not change, the air resistance will decrease by 4.6 %. The change in the altitude by 1,219 m will be reflected in the form of reduction of the air resistance by 17 %. The summary of the impact of air temperature change with stable pressure on fuel consumption of truck is provided in the Table 2.

Table 2 The impact of air temperature on the fuel consumption of a truck

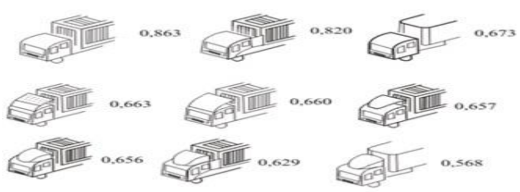
Air temperature [°C]	-20	-5	+5	+20	+35
Specific air mass ρ [kg.m^{-3}]	1,392	1,314	1,267	1,202	1,143
Air resistance [N]	2715,4	2563,3	2471,6	2344,8	2229,7
Consumption to overcome air resistance [l.100 km^{-3}]	18,96	17,90	17,26	16,37	15,57
CO2 produced [kg]	61,63	58,18	56,10	53,22	50,60

Source: (Author)

From the Table 2 it is evident that if the temperature changes from -20 °C to +35 °C, the fuel consumption to overcome a distance of 100 km will be reduced by 3.39 l and the amount of CO_2 produced will be reduced by 11.03 kg.

c_x is the resistance coefficient [-]. It is a dimensionless quantity and depends on the shape and length of the body which attempts to penetrate through the air. Even a small change in shape and size can greatly affect the change of air resistance of the vehicle or combination of vehicles. The Figure 1 shows the impact of modifications on overall air resistance coefficient of the vehicle. It is possible to convert the impact of its change to vehicle consumption and to production of CO_2 greenhouse gases. The producer of MAN trucks has made an experimental combination of vehicles with air resistance coefficient seen as c_x = 0.35. The summary is provided in the Table 3.

Figure 2 The change of air resistance coefficient for combination of vehicles depending on shape modification.



Source: (Wong, 1991)

Table 3 The impact of air resistance coefficient on the truck fuel consumption V = 90 km.h^{-1}; S = 9.18 m^{2}; mpe = 190 g.kWh^{-1}; ρfuel = 0.84 kg.m^{-3}; ρair = 1.29 kg.m^{-3}; ηp = 90 %

Air resistance coefficient cx [-]	0.863	0.673	0.657	0.568	0.35
Air resistance [N]	3193.7	2490.6	2431.4	2102.0	1295.2
Consumption to overcome air resistance [l.100 km^{-1}]	22.30	17.39	16.97	14.67	9.04
CO2 produced [kg]	72.48	56.53	55.18	47.71	29.40

Source: (author)

v is relative air speed in relation to the vehicle [m.s^{-1}]. The quantity is squared in the relation to determine the air resistance intensity. Therefore, it is the most important part that influences the air resistance. The Table 4 provides information about changes of the air resistance intensity depending on the speed.

Table 4 The impact of driving speed on the air resistance and fuel consumption of the truck

Vehicle speed [km.h^{-1}]	90	80	70	60	50
Air resistance [N]	2516.5	1988.3	1522.3	118.4	776.7
Consumption to overcome air resistance [l.100 km^{-1}]	17.57	13.88	10.63	7.81	5.42
CO2 produced [kg]	57.11	45.13	34.55	25.68	17.63

Source: (author)

S is the size of vehicle front face [m^2].

Following from the Table 2, 3 and 4, the air resistance is a parameter that can significantly affect the vehicle consumption and thus, also its impact on the environment. Not inconsiderable parameter is also the impact on business economy, since the vehicles in long-distance transport overcome up to 100 times of distances shown in the Tables 2 to 4.

2.1.2 Rolling resistance

Rolling resistance is another resistance that acts against the vehicle motion. Its intensity can be determined by following equation:

$$O_f = m.g.f.\cos\alpha \tag{2}$$

m is the mass of vehicle [kg]. This parameter has significant impact on the fuel consumption. Any unnecessarily transported mass affects the consumption. The Table 5 displays the fuel consumption to overcome the rolling resistances together with the impact on the environment.

Table 5 The impact of mass on the rolling resistance and fuel consumption of the truck

Vehicle mass [kg]	1000	5000	15000	25000	40000
Rolling resistance [N]	62.7	313.9	941.8	1569.6	2511.4
Consumption to overcome rolling resistance [l.100 km^{-1}]	0.44	2.19	5.92	9.86	15.78
CO2 produced [kg]	1.43	7.13	20.83	32.06	51.29

Source: (author)

It is evident from the Table 5 that each added ton of mass leads to the increase of fuel consumption by 0.44 l per 100 km. It is needed to point out that such increase relates only to stable driving at a flat surface, but in the case of monthly vehicle’s driving performance represents the increase in costs for propellants by up to 44 €. The increase in fuel consumption will be substantially higher when taking into consideration the energy that is needed for overcoming gradient and inertia resistances. Other important information from the Table 5 is that the air and rolling resistances are comparable in size at the mass of 40 tons and at the speed of 90 km.h^{-1}.

g is the acceleration due to gravity. For our latitude it is assumed to be g = 9.81 m.s^{-2}.

f is the rolling resistance coefficient. This parameter depends on several factors. It changes with driving speed, road surface quality, type of a tyre and its inflation pressure (Duez, 2016). Under the EU Directive, tyres must be labelled providing information about their energy intensity with regard to their rolling resistance coefficient (EC, 2009). The Table 6 shows the change of rolling resistance together with the fuel consumption and the amount of carbon dioxide produced.

Table 6 The impact of the change of rolling resistance coefficient on the combination of vehicles' fuel consumption

Tyre category according to the label	A	B	C	D	E
Rolling resistance coefficient f [-]	0.004	0.005	0.006	0.007	0.008
Rolling resistance [N]	1569.6	1962.0	2354.4	2746.8	3139.2
Consumption to overcome air resistance [l.100 km^{-1}]	9.86	12.33	14.79	17.26	19.72
CO2 produced [kg]	32.1	40.1	48.1	56.1	64.1

Source: (author)

Following from the Table 6, the difference in fuel consumption to overcome rolling resistance when using tyres of A and E is up to 9.86 l of fuel per 100 km of driving at flat surface with stable speed of 90 km.h^{-1} and with 40-tonne combination of vehicles. The difference in consumptions will be reflected not only in higher production of greenhouse gases but also in the direct operating costs. It is the difference of 21,692 € per tyre lifetime when the fuel cost is of 1.1 €/l and specific tyre lifetime is of 200 thousand of kilometres.

2.1.3 Gradient resistance

The gradient resistance acts in the case when the running plane is not horizontal but has a certain inclination. At that time, the gravity of vehicle is taken into two pieces; the first one is perpendicular to the running plane and secures the pressure of vehicle to the running place, the second one is parallel to the running plane. If the vehicle moves uphill, it acts against the direction of vehicle motion. If the vehicle moves downhill, it attempts to accelerate the vehicle. That is the reason why the stopping distance of vehicle when driving downhill is longer. The gradient resistance intensity can be defined as:

$$O_s = m.g.sin\alpha$$

m is the mass of vehicle [kg],
g is the acceleration due to gravity [m.s^{-2}].
α is the inclination of running plane (Skrúcaný et al, 2017).

The Table 7 provides information about the impact of the inclination of running plane on the fuel consumption. The calculation has been made for 10 km of gradient, since longer distances are rare in the practice.

Table 7 The impact of air-cooling of the cabin by air-conditioning and open window on fuel consumption

Inclination of running plane [%]	1	2	3	4	5
Gradient resistance [N]	3924.0	7848.0	11772.0	15696.0	19620.0
Consumption to overcome gradient resistance [l.10 km^{-1}]	2.74	5.48	8.22	10.95	13.69
CO2 produced[kg]	8.9	17.8	26.7	35.6	44.5

Source: (author)

The consumptions listed in the Table are necessary to be added to the fuel consumption to overcome the air and rolling resistances. It can be seen that the inclination of running plane of even 1 % leads to the increase of the fuel consumption by 2.74 litres per 10 km. Such inclination of the running plane cannot be noticed by human sensory perception. Of course, there could be also a suggestion that on the basis of overcoming certain gradient, a vehicle can reach appropriate potential energy that will get back when moving downhill and so the consumption does not need to be taken into consideration. The suggestion is real but only partially. Reaching of potential energy is done by mechanical transmissions, and through them is the energy getting back again, so the loss in the transmissions will reduce the energy twice. It is necessary to consider that retrieve energy is done only when the vehicle is moving at the flat surface. Concerning the gradient with higher inclination, the road is usually accompanied with curves where there is the loss of energy in brakes when slowing down before curves, in retarders to maintain the driving speed as well as due to decomposition of centrifugal forces.

2.1.4 Inertia resistance

Each moving body reaches a certain kinetic energy that corresponds to the speed of the vehicle. Concerning the cars, it is necessary to add the energy accumulated in rotating parts of the engine, gearbox and wheels to the kinetic energy of the body's linear motion. The inertia resistance changes for particular gears and its intensity can be defined via following equation:

$$O_a = m.a.\delta \tag{3}$$

m is the mass of vehicle [kg],

a is the acceleration of vehicle [m.s-2],

δ is the coefficient of the impact of rotating masses je [-] (Kuchar et al, 2016). This value changes depending on gear used. For the calculation a combination of vehicles has been selected as before. The coefficient varies from 1.956 at the lowest gear up to 1.022 at the highest gear used with the mass of 120 kg of one vehicle. For simplification it is considered a suggestion that for reaching the needed speed, a driver will use each gear for the same length of time. Based on this, it is possible to determine the average coefficient as δ = 1.239. The Table 8 shows the fuel consumption to reach the selected speed for 40-tonne combination of vehicles per one starting.

Table 8 Inertia resistance and fuel consumption

Acceleration from 0 up to final speed [$km.h^{-1}$]	50	60	70	80	90
Consumption to reach the speed [litres]	0.33	0.48	0.65	0.85	1.08
CO2 produced [kg]	1.1	1.6	2.1	2.8	3.5

Source: (author)

The consumption in the Table 8 is set for one starting of the combination of vehicles to reach the required speed. If the vehicle is forced to stop repeatedly due operational conditions, the increased consumption is also repeated.

3. Conclusion

As stated above, it is obvious that driving resistances affect the fuel consumption of a vehicle. The exact choice of route and driving technique of drivers can significantly influence the fuel consumption. It is also directly linked not only to transport costs but also to production of greenhouse gases and therefore affects the global warming (Skrúcaný et al, 2017). The transport even negatively affects the environment by producing of other noxious substances such as particulate matter in the exhaust gases, dust swirling, noise production, production of hard-biodegradable waste and slicks from oil products (Rievaj et al, 2008).

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