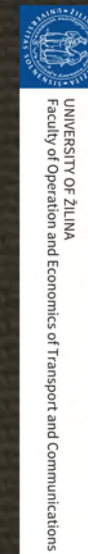


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17th International Scientific Conference

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Proceedings Part IV.



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The Faculty of Operation and Economics of Transport and Communications,
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QUALITY AS A COMPETITIVE ADVANTAGE OF CAMPSITES

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Abstract. In the camping industry, globalization is bringing about changes in technology, enhancing the liberalization of goods and services, and enabling greater mobility. It is about being present on the global market and developing competitive strategies in which quality represents a strategic basis for understanding the management of campsite services. Accordingly, this paper examines European and Croatian campsite quality evaluation systems as well as the elements of quality and competitive advantages of campsites. According to the ADAC, the best campsites in Croatia hold second place in the European ranking by quality. Most of these campsites are located in Istria and the Kvarner region. The research focuses on two target groups. The first target group comprises campsite guests and the other, campsite managers. The first target group was surveyed using a structured questionnaire, while the interview method was applied to study the second target group. Research results show that the quality of camping services for guests is related to the selection of campsites and that there is a correlation between campsite quality and the quality of the tourist destination. The core competitive advantages of Croatian campsites are the beach and the sea, safety, and staff kindness. Research results are followed by recommendations for increasing the competitiveness of camping services in Croatia through the implementation of quality evaluation systems. In this respect, the paper provides guidelines for the development of national campsite quality evaluation systems based on institutional and non-institutional standards, with the aim of increasing the competitive advantage of campsites.

Keywords: globalization, competitive advantage, quality, standards, models

JEL Classification: M21, L15, L83, Z32

1. Introduction

Globalization is the biggest economic and social change since the industrial revolution. Today this phenomenon is being explored by experts of various disciplines, not only in terms of economics but also in terms of policy, culture, communication and the environment (Antalova, 2016). To the European camping industry, however, globalization may also mean an opportunity to enter the world market and compete with other types of accommodation facilities. This is supported by the fact that Croatia, through its strategic development

orientation, is seeking to improve its accommodation structure and quality because the entire tourism industry in Croatia is faced with the same problem, which is that private accommodations (including campsites) have the lowest occupancy rates. (Cerovic et al., 2009). Hence, the priority development activities of the camping product are focused on improving the quality of the campsite accommodation offering and on positioning and branding facilities, because of the exceptional importance that camping tourism has in the Croatian tourism industry. (Government of the Republic of Croatia, 2013) In the overall tourism accommodation offering, the camping offering represents an important segment of many European tourist destinations' carrying capacities. In 2016, campsites in Croatia realized 17,484,000 overnight stays (2,601,000 arrivals). Compared with 2015, this represents an increase of 1.9% in overnight stays and 1.8% in arrivals. In relation to other accommodation facilities in Croatia, campsites account for 23% of capacities and realize 22.4% of overnight stays (Ministry of Tourism, 2016; Croatian Bureau of Statistics, 2017)

The great importance of camping accommodation relative to overall accommodations in hospitality facilities in Croatia points to the crucial influence of quality in gaining and sustaining competitive advantages in the Croatian camping industry and, indirectly, in fostering overall tourism development in Croatia. This paper seeks to answer the research questions by accomplishing its primary objectives, which are: to analyse the key elements of quality that make up the competitive advantage of campsites; to establish campsite quality evaluation systems; to identify the role of campsite quality and its importance in campsite selection and to determine the correlation between campsite quality and tourist destination quality. The paper presents quality standards and puts forward guidelines for the development of national campsite quality evaluation systems based on institutional and non-institutional standards, with the aim of increasing the competitive advantage of campsites.

2. Competitive advantage and campsite quality

In order to sustain its competitive edge and continue to attract visitors, there is a growing urgency for a destination to ensure that tourists are not just satisfied but extremely satisfied with whole experience as well as with each element that makes up the destination's tourism offering. (Smolcic & Soldic, 2011).

2.1 Competitive advantages

Competitive advantages are the answer to the question: How can you improve your position with regard to the competition in the future? It represents the degree to which company has used market opportunities, neutralized threats and reduces costs. (Newbert, 2008). A competitive advantage must be substantial, meaning that an organization must have the capability of creating vital differences. (Ceptureanu, 2016). Competitiveness is measured and monitored because it gives an objective image of our strengths and weaknesses that can, when working hard and being willing to change, be both raised and increased and, in that way, the company, country or region management can be improved and can make some progress. (Pudic et al., 2015)

Managers play a crucial role in ensuring and sustaining the competitiveness of campsites by developing camping products/services that are competitive with regard to their environment as well as with regard to other forms of hospitality accommodation. (Milohnic & Cvelic-Bonifacic, 2015). Competitive advantages are not created of their own accord. Mostly they are created by the tourism companies that possess the strength and capacities to rapidly transform

the products or services they offer. The key to success is to ensure complete guest satisfaction, achieved by developing skills, knowledge and processes which can easily be adapted to changing demands. Increasingly today, the focus is on a modern approach to tourism companies that makes use of real challenges such as innovations, smart specialization and creating smart competitive advantages. (Borsekova et al., 2016.). A competitive advantage is gained by possessing or building special features that guests are looking for and are willing to accept.

2.2 Quality of campsites

Efforts focused on achieving quality as a significant precondition to gaining competitive advantages have resulted in the standardization of tourism and hospitality services. Quality standards and marks include accommodation classification schemes, adopted in differing forms; ISO standards; Eco-labels; and Quality Systems (Q Mark – Spain, Quality 1000 - Finland). (European Parliament, 2007) The aim of defining and testing quality is to rank quality, and this ranking is commonly carried out through institutional and non-institutional campsite categorization systems. In Croatia, as in most European countries, a five-star quality rating system is the institutional way of measuring campsite quality. It is mandatory for all campsites in Croatia to demonstrate their quality using stars. According to the Regulations on the classification and categorization of hospitality facilities in the group Campsite (Official Gazette 54/16), the quality of campsites is expressed using two to five stars, while camping rest areas are not categorized. As of March 2017, Croatia has a total of 173 categorized campsites, with 72,763 accommodation units and a capacity of 213,252 guests. Fifty-eight campsites (34%) belong to the two-star category, 63 (36%) to the three-star category, 51 (29%) to the four-star category and one campsite (1%) to the five-star category (Ministry of Tourism, 2017). In Croatia, a number of non-institutional frameworks of campsite quality evaluation are also used alongside the institutional framework. The most important is the initiative of the Croatian Camping Association, known as Croatia's Best Campsites, which is aimed at raising the quality of camping service, and based on which the national "Tourism Flower – Quality for Croatia" award is granted. In addition to this project, an evaluation system for small campsites, united under the OK Camp brand, is also in place (Croatian Camping Union, 2017, A).

Because a unique system for the evaluation, classification and control of campsite quality does not yet exist at the European level, leaving it to national state organizations to set up quality systems, the role of the protector of consumers/campers in Europe has been taken up by automobile organizations, publishers and travel organizers. The ADAC (Allgemeine Deutsche Automobil Club), in particular, has developed a powerful and consistent evaluation system, the results of which are published in the ADAC Camping & Caravaning Führer (ADAC, 2017). According to the ADAC guidebook, the results of the largest survey of campsite quality in Croatia show that 30% of accommodation capacities in Croatian campsites have the highest level of quality and that the best quality campsites with above-average ratings are located in Istria and the Kvarner region (4.01 and 3.58, respectively). The year 2017 also saw a 2.3% increase in Croatian campsite quality levels (the average rate, based on the number of stars, rose from 3.5 to 3.6). (Croatian Camping Union, 2017, B). In addition to ADAC, non-institutional systems for testing campsite quality have been put in place by ANWB, with results published in the guidebook ANWB Campinggids (ANWB, 2017) and ACSI, with results published in the guidebook Campingführer Europa (ACSI, 2017). Croatian campsites are also evaluated in the ANWB campsite guidebook and in 2017 the ANWB awarded the high level of quality in eight camps with the "Top Campings 2017" recognition (ANWB, 2017).

Quality standards can also be ensured through the implementation of a quality management system like ISO 9001, whose application and positive effects have been confirmed in the tourism sector as well. Research results reveal the positive impact ISO has on improving the quality and competitiveness of the tourism sector and that the longer an organization has been certified, the greater its satisfaction with the certificate. (Djofack & Camacho, 2017). Results also indicate that quality has a significant impact on the measure of overall efficiency (Arbelo – Perez et al., 2017).

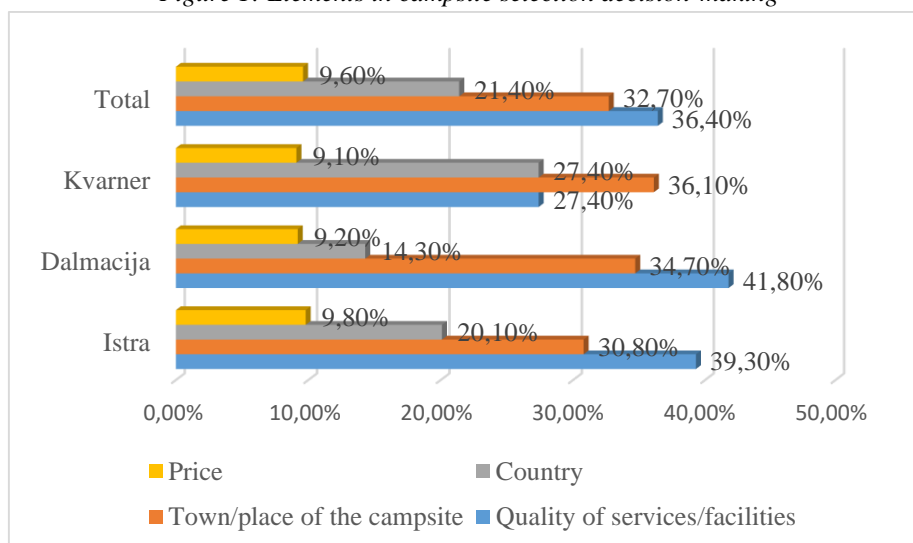
2.3 Methods

For the purpose of this paper, research was conducted on two target groups. Camping guests, the first target group, were surveyed during 2014 and campsite managers, the second target group, during June 2017. Research for the first target group was based on a questionnaire in English, German, Italian and Slovenian, distributed to 1,000 camping guests. The sample of campsites where the questionnaire was administered was chosen based on the proportion of overnight stays in different regions relative to the overall number of overnight stays in Croatia, as well as on the size of campsites in different regions. The campsites included in this study are located in Istria, the Kvarner region and Dalmatia and all of them are members of the Croatian Camping Association. A total of 840 questionnaires were collected (84% response rate). The questionnaire consisted of the following five components: 1) general information, 2) features of camping travel and stay, 3) financial spending of campers, 4) habits and relationship with competitors, and 5) socio-demographic profile of the camper. For the needs of this paper, the responses to the fourth part of the questionnaire were used, in which guests were asked to state what was the key factor (the country, the town/place of campsites, the quality of services/facilities or the price) in choosing the campsite, using a Likert scale (1 – not important, 2 – low importance, 3 – important, 4 – very important, 5 – most important). The sample for the other target group was formed with respect to the share of accommodation units of campsites in a certain cluster (region) in the total accommodation capacity of the Republic of Croatia. The survey involved 22 managers of accommodation facilities that make up 18.7% of accommodation units in Croatian camps. For the purpose of this research, a special structured questionnaire was prepared for interviews (a total of five questions, of which one was a dichotomous question, while a Likert scale was used for the remaining four).

2.4 Results and discussion

This section presents the results of the survey, focusing in particular on the important elements of campsite quality and competitive advantage as defined by the guests, as well as on the opinions of managers with regard to providing guidelines to improve the campsite evaluation system. In accordance with the defined objectives of the study, the results show that the quality of services/facilities is a crucial element for guests when choosing a campsite. This is the element based on which the largest number of guests (36.4%) choose a campsite. In addition to service quality, the town/place of the campsite is also an important element for 32.7% of guests in making a selection. A slightly smaller number of guests (21.4%) base their campsite selection on the country, while the campsite selection of the smallest number of guests (less than 10%) is based on prices. These results indicate that the quality of camping services is related to the selection of campsites. This is further confirmed by results obtained per individual regions (Istria and Dalmatia) where service quality, as an element of campsite selection, was ranked first by 40% of the surveyed guests. The Kvarner region is an exception in this respect, as the destination was ranked first, followed by service quality and country, in equal percentages.

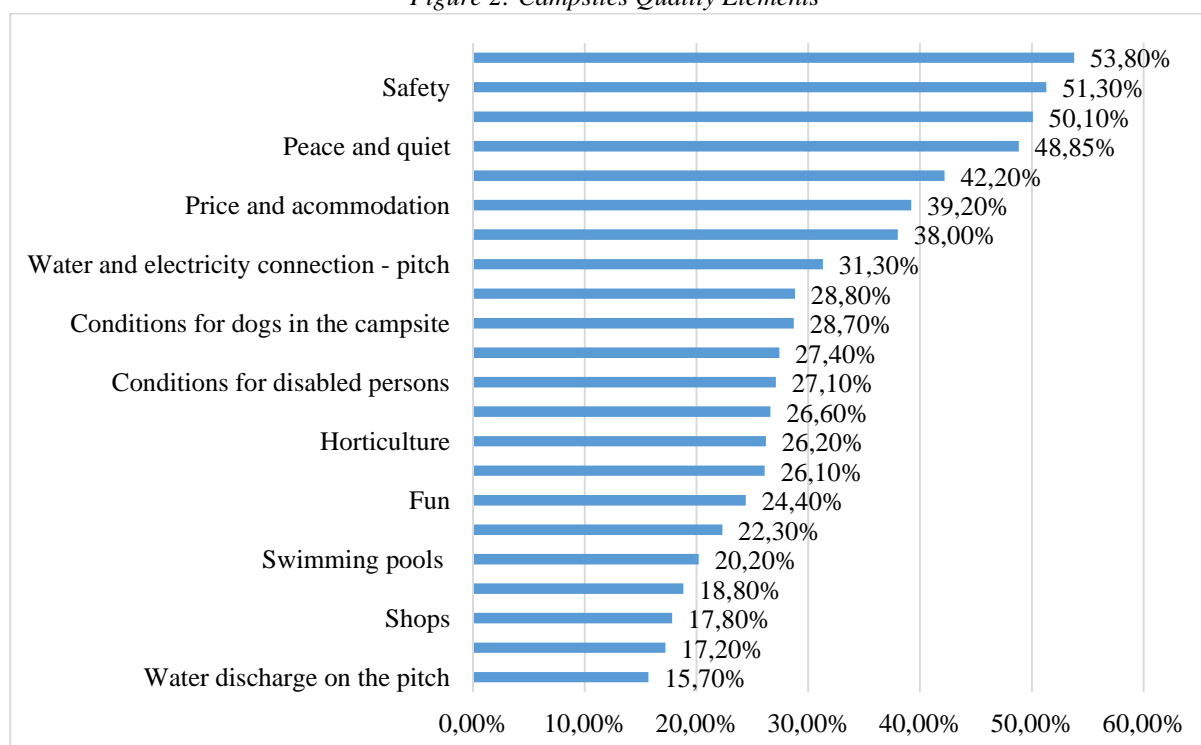
Figure 1: Elements in campsite selection decision-making



Source: Author's research

These results confirm the importance of quality as both a key factor in campsite selection and a major source of competitive advantage for a destination and campsite, relative to the competitive circle. Hence, it is in the interest of the destination to foster the improvement of the quality of campsites in its region, and in the interest of campsites to promote the quality of the destination. Research results also present the ranking of quality elements by importance, according to the percentage of respondents who rated a specific quality element as being the most important to them. (Figure 2)

Figure 2: Campsites Quality Elements



Source: Author's research

The results of the survey, conducted on the second target group comprising campsite managers, point to a correlation between the quality of campsites and the quality of the destination. The managers gave campsite quality a slightly higher rating (3.55) over destination quality, which received an average score of 3.1. More than 50% of respondents stated that campsite quality has a very strong impact on destination quality and that the enhancement of campsite quality could significantly increase tourist spending in the destination (85%) as well as the number of overnights in the destination (65%). Limitations of the research can be linked to the subjectivity of ratings by the respondents (campsite managers) who gave a higher score to campsite quality relative to the destination.

3. Conclusion

The task of campsite managers is to manage change in campsite services. This implies being knowledgeable of trends and capable of implementing innovative solutions in designing innovative camping services. The research shows that 36.4% of guests consider the quality of campsite services to be linked to campsite selection, making quality the primary factor of campsite selection. Quality elements of special importance are the beach and sea, safety, and staff kindness, so these components of the camping offering need to be further developed and improved upon, together with other quality elements important to guests. Survey results confirm that campsite quality is correlated to destination quality. Fully 85% of managers believe that improving campsite quality helps towards increasing the number of overnights, while 65% of managers consider that enhanced campsite quality can help to generate more tourist-spending in the destination.

The applicative conclusion, resulting from the literature review and the survey conducted, suggests the need of making research results available to all management levels. The implications of this survey refer to enhancing campsite competitiveness, enabling the greater implementation of quality standard and ensuring an active approach to implementing quality evaluation systems. Guidelines for the further development of a national system of campsite quality evaluation are tied to the need for changes to existing legislative platforms (institutional frameworks), as outlined below:

1. In line with the trends of change on the tourism market and the needs of modern camping guests, amendments are proposed to the Regulations on the classification and categorization of hospitality facilities in the group Campsites, with particular emphasis on amendments with regard to quality (size of campsite plots, amenities, services) and taking care to ensure harmonization with quality standards currently in force in the EU setting (ADAC and others).
2. Changes to institutional frameworks are proposed, involving the implementation of uniform quality criteria and uniform standards prescribing quality for all campsites, regardless of their form, size, ownership. Quality standards would be unified for all campsites in Croatia, thus enabling the enhancement of quality in all campsites (large campsites, family-run campsites and campsites on private family farms).
3. The introduction of a quality sign (Q) for campsites is proposed, which would further emphasize the quality of individual camps through the implementation of additional quality standards. In this respect, it would be necessary to define the criteria for assigning quality signs to camps (following the lead of hotels), which would contribute to the branding of campsites in Croatia.

The implications of the research conducted are relevant to strategic management development in the macro environment.

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References

- [1] ADAC (2017). *ADAC Camping & Caravaning Führer 2017*. [Online]. Available: <https://campingfuehrer.adac.de/produkte-angebote/camping-und-stellplatzfuehrer.php>.
- [2] ACSI (2017). *ACSI Campingführer Europa*. [Online]. Available: <https://webshop.acsi.eu/de/campingfuhrer/acsi-campingfuhrer-europa-app-2017.html>.
- [3] Antalova, M. (2016). Impact of globalization on the quality of life in the SR. *16th International Conference Globalization and Its Socio-Economic Cosequences*, Rajecke Teplice, Slovakia. pp. 41-49.
- [4] ANWB (2017). *ANWB Campinggids 2017*. [Online]. Available: <http://webwinkel.anwb.nl/webwinkel/anwb-voordeel-campinggids-2017.html>.
- [5] Arbelo-Perez, M. A. A. and Prez-Gomez, P. (2017). Impact of quality on estimations of hotel efficiency. *Tourism Management*, vol. 61, pp. 200-208.
- [6] Borsekova, K., Vanova, A. and Vitalisova, K. (2016). Smart specialization for smart development: Innovative strategies for building competitive advantages in tourism in Slovakia. *Socio-economic Planning Sciences*, vol. 58, pp. 39-50.
- [7] Cerovic, Z., Milohnic, I. and Smolic, J. D. (2009). Characteristics of private accomodation in Primorsko-goranska country. *Economic Research/Ekonomska istraživanja*, vol. 22, no. 3, pp. 73-85.
- [8] Ceptureanu, S. I. (2016). Sources and factors in ensuring the competitive advantage of the company. *Quality – Access to Success*, vol.17, no. 154, pp. 110-112.
- [9] Croatian Bureau of Statistics (2016). *First release Tourist Arrivals and Nights in 2016*. [Online]. Available: https://www.dzs.hr/Hrv_Eng/publication/2016/04-03-02_01_2016.htm.
- [10] Croatian Camping Union (2017, A). *OK Mini Camps*. [Online]. Available: <http://www.camping.hr/ok-mini-camps>.
- [11] Croatian Camping Union (2017, B). ADAC 2017 - Iznadprosječne ocjene kampova u Istri i na Kvarneru. *Stručna Revija za Ugostiteljstvo i Turizam*, pp. 62-65.
- [12] Djofack, S. and Camacho, M. A. R. (2017). Implementation of ISO 9001 in the Spanish tourism industry. *International Journal of Quality & Reliability Management*, vol. 34, no. 1, pp. 18-37.
- [13] European Parliament (2007). *Standardization and Quality Labels for EU Tourist Services*. [Online]. Available: [http://www.europarl.europa.eu/RegData/etudes/etudes/join/2007/279230/IPOL-TRAN_et\(2007\)379230_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/etudes/join/2007/279230/IPOL-TRAN_et(2007)379230_EN.pdf).

- [14] Government of the Republic of Croatia (2013). *Croatian Tourism Development Strategy until 2020*. [Online]. Available: <http://www.mint.hr/UserDocsImages/Strategija-turizam-2020-editfinal.pdf>.
- [15] Milohnic, I. and Cvelic – Bonifacic, J. (2015). Sustainable camping management: A comparative analysis between campsites and hotels in Croatia. *Proceedings of Tourism in Southern and Eastern Europe 2015 – Sustainable Tourism, Economic Development and Quality Life*, Opatija, Croatia, pp. 211- 222.
- [16] Ministry of Tourism Republic of Croatia (2017). *Categorization*. [Online]. Available: <http://www.mint.hr/default.aspx?id=371>.
- [17] Ministry of Tourism Republic of Croatia (2016). *Tourism in Figures 2016*. [Online]. Available: http://www.mint.hr/UserDocsImages/170605_TUB-HR_%20016.pdf.
- [18] Newbert, S. L. C. (2008). Value, rareness, competitive advantage, and performance: a conceptual level empirical investigation of the resource-based view of the firm. *Strategic Management Journal*, vol. 29, no. 7, pp. 745-768.
- [19] Official Gazzete (54/2016). *Regulations on the classification and categorization of hospitality facilities in the group Campsite*. [Online]. Available: http://narodne-novine.nn.hr/clanci/sluzbeni/2016_06_54_1409.html.
- [20] Pudic, D., Pozega, Z. and Martinovic, M. (2015). Challenges of development of the Croatian economy and competitiveness. *Proceedings of 4th International Scientific Symposium Economy of Eastern Croatia – Vision and Growth*, Osijek, Croatia, pp. 750-757.
- [21] Smolcic, J. D and Soldic, F. D. (2011). Specific issues of coastal destinations sustainable development – empirical study. *Proceedings of 1st Interantional Scientific Conference Tourism in South East Europe 2011 - Sustainable Tourism: Socio-Cultural, Environmental and Economics Impact*, Opatija, Croatia, pp.315-326.

THE INTERCULTURAL EDUCATION AT FACULTY OF MANAGEMENT OF COMENIUS UNIVERSITY IN BRATISLAVA

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Abstract. Globalization has not only economic, social, cultural and political impacts, but it also has the influence on education and adaptation of education to economic activities. Nowadays, with respect to changed and changing conditions of global economic, social and cultural life, it is the task of pedagogical theory and practice to modernize goals and content structure of education. The ongoing economic globalization has also influenced the socio-educational process at Faculty of management, Comenius University in Bratislava, which under the framework of the programme international management provides education, where the focus is on the professional education in french and german language, what could be called as the intercultural education. This education has also been influenced by the arrival of foreign investors from Germany and France to Slovakia. The arrival of each foreign investor is connected to the creation of new working positions and therefore many students from the mentioned programme work in foreign companies. The aim of the education is the acquisition of managerial, professional competencies and skills that contribute to intercultural dialogue, the prevention of conflicts or to the understanding of other cultures. The intercultural education is the important part of the globalization process that breaks down stereotypes and respects the differences of other cultures. The aim of the paper is the analysis of the system of educational process with the focus on employability of the graduates operating in this major.

Keywords: intercultural education, international management, international investors, multinational corporations, investments.

JEL Classification: A12, A13, A20, D83, E22, F21, F62, I23.

1. Introduction

Stále rastúce tempo globalizácie svetového hospodárstva prináša významné zmeny, ale aj nové výzvy pre všetky národné ekonomiky. V dôsledku zmien v štruktúre globálneho hospodárstva ako aj hospodárstva Európskej únie sa stali investičné vzťahy prioritnou záležitosťou, pretože podporujú hospodársky rast, rozvoj obchodu a regionálny rozvoj. Dňom nadobudnutia účinnosti zmluvy o pristúpení Slovenskej republiky do EÚ k 1. máju 2004 nadobudli účinnosť aj nové zákony o daniach. Zavedenie rovnej dane pozitívne vplývalo na podnikateľské prostredie, vyšší prílev zahraničných investícií a rast zamestnanosti. Daňové prostredie v SR sa vďaka novej koncepcii zdaňovania príjmov rozhodne stalo lákavé aj pre zahraničných investorov. Firmy okrem výhodnejších daní lákajú na Slovensko aj nižšie výrobné a mzdové náklady. Samozrejme, že zahraničných investorov zaujíma aj stabilita politického systému, infraštruktúra, transparentnosť, miera korupcie a vymožitelnosť práva (Stolicna, 2012).

Medzinárodný pohyb investícií je významným javom, ktorý ovplyvnil globalizáciu, posilnil a prehĺbil väzby, ktoré navzájom prepájajú ekonomiky štátov sveta (Novackova et al., 2016). Téma globalizácie má v kruhu vedcov a odborníkov svojich zástancov aj odporcov. Nadšenie z pozitív, ktoré priniesla globalizácia, sa postupne začalo vytrácať a začali sa objavovať kritické názory odhaľujúce jej negatíva (Kajanova, 2016). Vplyvom globalizačných procesov nastáva mnoho významných zmien na trhu. Jednou z významných zmien je aj rastúci vplyv a množstvo start-upov, ktoré lákajú aj študentov. Rozdiel medzi start-upom a malou spoločnosťou je viditeľný v charaktere cieľov spoločností. Malé spoločnosti sa zameriavajú na ziskovosť a stabilnú dlhodobú hodnotu. Start-up si zakladá na rastovom potenciáli a príjmoch. Oba síce chcú byť nakoniec ziskoví, no start-up podnikatelia musia ako najdôležitejší procesný krok prilákať investorov. Zisková spoločnosť následne nepotrebuje už žiadneho investora, ak nepremýšľa o expanzii. Zahraniční investori sú pre start-upy veľmi dôležití (Rentkova & Rostarova, 2016).

Vplyvom globalizačných procesov sa menia aj požiadavky na pracovnú silu, ako aj štruktúra pracovného trhu. Akákoľvek investícia realizovaná na Slovensku si vyžaduje aj ľudský kapitál, ktorý z pohľadu obchodného práva predstavuje osobnú zložku podniku (Peracek & Mittelman, 2015). Pojem ľudského kapitálu sa stal predmetom záujmu už v dobe Adama Smitha. Najprv A. Smith a neskôr napr. K. Marx alebo A. C. Pigou začali do svojich ekonomických teórií premietiť fakt, že medzi výrobnými faktormi patria tiež znalosti a zručnosti vlastnené určitou osobou. Ďalší autori, napríklad Lisy (1999) a Vetrakova (2001), označujú pojmom ľudský kapitál „súhrn vrodenej a nadobudnutých schopností a vedomostí, ktorými ľudia disponujú“. Podľa nášho názoru ľudský kapitál predstavujú ľudia - pracovníci, ktorí sú schopní sa učiť, inovovať, podnecovať, realizovať zmeny a kreatívne myslieť. Pojem kreativita je odvodený od latinského slova creatio, čo v preklade znamená tvorbu a v širšom zmysle slova ide o schopnosť človeka vytvárať akékoľvek nové a pôvodné myšlienky, ktoré ich pôvodca skôr nepoznal (Peracek & Mittelman, 2015). Vysoké školy v dôsledku spoločenských, politických a ekonomických zmien museli zmeniť aj štruktúru vzdelávania a hlavne sa zamerať na vzdelávanie takého typu, aby absolventi po ukončení štúdia boli schopní vykonávať prácu v európskom hospodárskom priestore. Ďalej je potrebné popri odbornom profile absolventa vysokej školy vyšpecifikovať aj jeho prípravu zameranú na dopĺňujúce, najmä všeobecné vzdelanie. Ako najvýraznejšia profilácia sa ukazuje predovšetkým oblasť práva a to nielen práva verejného (trestné právo, správne právo, ústavné či finančné právo) ale tiež aj práva súkromného, kde patrí napr. pracovné, občianske, či obchodné právo (Gregusova et al., 2016).

Keďže na Slovensku pôsobí vysoký počet vysokých škôl, práve Fakulta managementu Univerzity Komenského v Bratislave sa zamerala na vzdelávanie študentov, pričom kladie dôraz na odborné vzdelávanie v jazyku nemeckom a francúzskom. Dôvodom bol príchod zahraničných investorov z Nemecka a Rakúska. Vo vedeckom príspevku systémovou analýzou poukazujeme na nastavený systém vzdelávania, ktorý je založený na získavaní kompetentnosti a zručností v rámci interkultúrneho vzdelávania potrebného pre výkon kvalifikovanej práce manažéra pôsobiaceho v multikultúrnej spoločnosti. V tomto smere sa aj Nemecko snaží získať vyškolené kvalifikované pracovné sily aj štúdiom na nemeckých vysokých školách. (Wefersova, 2017).

2. Pôsobenie zahraničných investorov na Slovensku

Od roku 1995 zaznamenala Slovenská republika príchod zahraničných investorov, avšak od roku 2004, kedy sa Slovenská republika stala členským štátom Európskej únie, boli odstránené právne prekážky pohybu kapitálu. Voľný pohyb kapitálu ako aj nadradenosť právnych predpisov Európskej únie voči slovenskému právu je zakotvený aj v ústave Slovenskej republiky (Gregusova et al., 2016). V dôsledku odstraňovania bariér voľného pohybu kapitálu začali na Slovensko prichádzať zahraniční investori najmä z členských štátov EÚ. Priame zahraničné investície sú kľúčovým zdrojom ekonomického rastu ako aj rastu inováčnej výkonnosti. Vo všeobecnosti možno konštatovať, že prílev zahraničných investícií prispieva k poklesu miery nezamestnanosti, rastu životnej úrovne a spotreby zo strany domácností, čo priťahuje nových investorov z oblasti poskytovania služieb (Novackova, 2014).

S pôsobením zahraničných, najčastejšie nadnárodných spoločností na Slovensku, sa dostáva do popredia ich spoločenskej zodpovednosti alebo prístupu k zamestnancom z pohľadu ich diverzity na pracovisku. Zo zistení však vyplýva, že medzinárodné a zahraničné firmy pôsobiace na Slovensku nemajú tendenciu prakticky preukazovať svoju podporu v zmysle zvyšovania účasti žien v rozhodovacom procese (Mitkova & Kottulova, 2016). Základným predpokladom pre príchod zahraničných investorov na Slovensko je okrem infraštruktúry, európskej meny – euro a politickej stability aj ekonomická podpora najmä vo forme odpustenia daní. Avšak k týmto predpokladom patrí aj flexibilná pracovná sila. Od zamestnancov sa očakáva ochota a najmä schopnosť vykonávať široké spektrum úloh a prác, čo vyžaduje viacstranné zručnosti zamestnancov. S otázkou flexibility úzko súvisí vzdelávanie (Trelova, 2016). Ako ďalej uvádzajú Trelova a Olsavský (2017), aplikačná prax ukazuje, že v súčasnosti nároky zamestnávateľov na vzdelanie svojich zamestnancov neustále rastú. Úlohu zohráva modernizácia spoločnosti, využívanie inovácií, informačných a komunikačných technológií aj v pracovnom prostredí.

Ekonomika Slovenskej republiky je integrovaná do rámca globálneho hospodárstva. Podmienky podnikateľskej činnosti sú silne ovplyvňované vývojom ekonomiky. Z makroekonomického hľadiska možno konštatovať, že Slovenská republika patrí medzi krajiny, ktoré sú zaujímavé pre investovanie. Aj keď sa investori mohli obávať dopadu a pôsobenia dlhovej krízy v eurozóne, perspektívny makroekonomický vývoj Slovenskej republiky mal, na základe údajov Štatistického úradu Slovenskej republiky a Ministerstva financií Slovenskej republiky, pozitívny vplyv na investorov. V podmienkach Slovenskej republiky pôsobia spoločnosti vo vysoko konkurenčnom prostredí. Je nepravdepodobné, že voľný obchod alebo trhoví mechanizmus by mohli mať negatívny vplyv na vyrovnávanie regionálnych rozdielov, tzn. že chudobné regióny by mohli byť ešte chudobnejšie. Z tohto dôvodu sa zdá, že plánovanie a programovanie regionálneho rozvoja je dôležité aj vo vzťahu k podpore malých a stredných podnikov, ktoré na Slovensku prevládajú. Regionálna podpora podnikov by mala byť zameraná na rozvoj a zlepšenie hospodárskej štruktúry a vytvárania, stabilizácie ohrozených pracovných miest v regiónoch pomocou štátnej podpory alebo inej štrukturálnej pomoci (Rentkova & Rostarova, 2015). Slovenská republika z hľadiska regionálneho rozvoja podporuje príchod zahraničných investorov do zaostalých regiónov a požaduje od investorov, aby predovšetkým vytvárali nové pracovné miesta. Príchodom zahraničného investora sa zvyšuje regionálne HDP a vznikajú nové subdodávateľské vzťahy. Zahraničný obchod v súčasnosti patrí k najdynamickejšie sa rozvíjajúcim faktorom svetovej ekonomiky. Zahraničný obchod je tiež jedným z kľúčových odvetví slovenskej ekonomiky, pretože v posledných rokoch má export tovarov a služieb značný podiel na hrubom domácom produkte (Paskrtova, 2016).

Súčasný výsledky zahraničného obchodu Slovenskej republiky nasvedčujú tomu, že zahraniční investori sa pozitívne podieľajú na zahraničnom obchode. Existujú rôzne názory na pôsobenie zahraničných investorov na Slovensku, avšak v konečnom dôsledku patria k najväčším zamestnávateľom na Slovensku. Ako príklad uvádzame nemeckú obchodnú spoločnosť Volkswagen Slovakia a. s. s obrátom 7,6 mld. EUR a investíciami 550,7 mil. EUR, ktorá zamestnáva vyše 12 300 pracovníkov v závodoch v Bratislave, Martine, Košiciach a Stupave (Volkswagen Slovakia, 2017). Uvedená spoločnosť patrí medzi najvýznamnejšie na Slovensku. Na Slovensku pôsobí podľa údajov Slovensko-nemeckej obchodnej a priemyselnej komory viac ako 450 nemeckých spoločností s ročným obrátom 22 mld. EUR a 94.000 pracovníkmi. Spolková republika Nemecko je však podľa údajov NBS až piatym najvýznamnejším investorom na Slovensku. Spoločnosti Volkswagen, Deutsche Telekom, Allianz, RWE, E.ON, Gertrag, INA a Continental patria k najvýznamnejším zamestnávateľom a prispievateľom do štátneho rozpočtu na Slovensku.

Francúzsko patrí taktiež k najvýznamnejším zahraničným investorom na Slovensku. Od roku 2000 francúzske podniky preinvestovali viac ako 5 mld. eur a vytvorili okolo 50.000 pracovných miest. Na Slovensku v súčasnosti pôsobí približne 400 francúzskych spoločností, pričom k najvýznamnejším francúzskym investorom na Slovensku patria PSA Peugeot - Citroën, Orange, Dalkia, Alcatel, Plastic Omnium, Faurecia, Vinci, Décathlon a ďalšie. Poslednou významnou investíciou francúzskej strany bola investícia PSA Peugeot Citroën za viac ako 120 mil. EUR. Na Slovensko vstúpila v roku 2014 nová investícia najväčšieho európskeho predajcu potrieb pre športové aktivity a voľný čas – francúzska firma Décathlon (MZV, 2016).

3. Vzdelávanie

Vzdelávanie je zamerané na získanie kompetencií (spôsobilosti) smerujúce k iniciatívnosti a podnikavosti. Učebný plán študijného programu Medzinárodný manažment vychádza z potrieb hospodárskej praxe a potrieb pracovného trhu, vzhľadom na to, že na území Slovenskej republiky pôsobia viacerí zahraniční investori. Východiskom je požiadavka komplexnosti ekonomického a manažérskeho vzdelávania pre potreby medzinárodného podnikania. Absolventi magisterského programu Medzinárodný manažment sú schopní vykonávať všetky výkonné, prípadne manažérske funkcie v predmetnej oblasti, poznajú metódy realizácie zahraničnoobchodných a iných medzinárodných operácií, sú schopní kreovať a tvorivo aplikovať svoje poznatky pri riešení konkrétnych ekonomických problémov súvisiacich s medzinárodnými podnikateľskými aktivitami SR, ovládajú vedecké metódy v predmetnej oblasti výskumu, sú schopní vedecky analyzovať problémy a formulovať riešenia konkrétnych situácií firiem a ich adaptácie na vývoj vo vonkajšom ekonomickom prostredí.

Jednotlivé kľúčové kompetencie (spôsobilosti) sa navzájom prelínajú, prepájajú a majú aj nadpredmetový programový charakter. Získavajú sa ako produkt celkového procesu vzdelávania a sebazvdelávania, t. j. kompletného vzdelávacieho programu a ďalších rozvíjajúcich aktivít. Spôsobilosti (kompetencie) sú koncipované ako plánovaný cieľový výstup dosahovaný procesom ich rozvíjania.

Absolventi francúzskeho alebo nemeckého programu dokážu kriticky zhodnotiť informácie a ich zdroj, tvorivo ich spracovať a prakticky využívať, dokážu využívať všetky dostupné formy komunikácie pri spracúvaní a vyjadrovaní informácií rôzneho typu, majú adekvátny ústny a písomný prejav situácii a účelu uplatnenia, sú schopní používať matematické modely logického a priestorového myslenia a prezentácie (vzorce, modely, štatistiky, diagramy, grafy, tabuľky),

vedia algoritmicky myslieť a využívať tieto schopnosti v reálnom živote, dokážu konštruktívne a kooperatívne riešiť konflikty, vyvážené chápu svoje osobné záujmy v spojení so záujmami širšej skupiny, resp. spoločnosti, sú otvorení kultúrnej a etnickej rôznorodosti, na základe sebareflexie si svoje ciele a priority stanovujú v súlade so svojimi reálnymi schopnosťami, záujmami a potrebami, sú flexibilní a schopní prijať a zvládať inovatívne zmeny, rozumejú princípom podnikania a zvažujú svoje predpoklady pri jeho plánovaní a uplatnení. Prevažná väčšina absolventov odboru Medzinárodný manažment úspešne pracuje pre renomované nadnárodné korporácie, ktoré si vyžadujú okrem angličtiny (tá sa stáva už samozrejmosťou) aj druhý cudzí jazyk – v našom prípade francúzština resp. nemčina.

3.1 Vzdelávanie v odbore Medzinárodný manažment nemecký program

Štruktúra vysokoškolského štúdia je založená na kľúčových spôsobilostiach (kompetentnostiach), ktoré zahŕňujú komplex vedomostí a znalostí, spôsobilostí a hodnotových postojov so zreteľom na rozvíjanie jazykových kompetencií z nemeckého jazyka. Štúdium je koncipované tak, aby bolo kompatibilné so vzdelávacími programami renomovaných univerzít nemecky hovoriacich krajín s cieľom uznania dokladu o vzdelaní v zahraničí. Do výchovno-vzdelávacieho procesu sú zaradené nasledujúce predmety umožňujúce poznať medzinárodné aspekty podnikania: Vnútny trh a hospodárska politika Európskej Únie, Európska ekonomická integrácia, Podnikanie v Európskej únii, Medzinárodný manažment, Medzinárodný obchod, Medzinárodné financie, Medzinárodné ekonomické vzťahy, Podnikanie v nemecky hovoriacich krajinách, Hospodárska politika v nemecky hovoriacich krajinách, Interkultúrny manažment, Obchodné rokovania a Medzikultúrna komunikácia. Odborní pedagógovia, ktorí vyučujú v rámci odboru Medzinárodný manažment v nemeckom programe, spolupracujú aj s odborníkmi z praxe - so Slovensko-nemeckou obchodnou a priemyselnou komorou so zastúpením v Bratislave a s veľvyslanectvami Spolkovej republiky Nemecko a Rakúskej republiky, organizujú exkurzie do medzinárodných inštitúcií (OSN vo Viedni, Európsky parlament v Bruseli) a na renomované univerzity v Rakúsku (Geisteswissenschaftliche Universität Wien, Universität Salzburg, Karl-Franzens-Universität Graz) a organizujú medzinárodné študentské konferencie a workshopy s úspešnými podnikateľmi na Slovensku ako aj úspešnými absolventmi Fakulty managementu Univerzity Komenského. Fakulta organizuje navyše aj študijné pobyty v zahraničí v rámci Programu EÚ Erasmus, v rámci ktorých sa študenti bakalárskeho a magisterského štúdia zúčastňujú na študijných pobytach na popredných nemeckých, rakúskych a švajčiarskych univerzitách, kde vďaka svojim výborným znalostiam nielen nemeckého jazyka dosahujú reprezentatívne výsledky. Učebným plánom prestupuje aj požiadavka podnikovej praxe ako odraz reálneho trendu podnikových procesov. Študenti realizujú prax podľa vlastného výberu. Spostením pedagogického procesu sú aj exkurzie do rôznych organizácií, napr. do nemeckého závodu Volkswagen Slovakia a. s. v bratislavskej Devínskej Novej Vsi, francúzskej automobilky PCA Slovakia, s.r.o. (Peugeot Citroën Automobiles Slovakia) v Trnave, rakúskej čokoládovne Franz Hauswirth Ges. m.b.H. v rakúskom Kittsee, či rodinnej firmy a výrobné topánok na mieru Scheer GmbH. vo Viedni. Študenti majú možnosť realizovať odbornú prax v nadnárodných korporáciách, napr. Volkswagen Slovakia a. s., DELL s. r. o., Amazon s. r. o., Slovenská sporiteľňa a. s., Raiffeisen Bank, OMV Slovensko s. r. o., , Swiss Re Europe S.A., OVB Allfinanz Slovensko a. s., UNIQA Group Service Center Slovakia spol. s r. o., SAS Automotive s. r. o. a mnohé iné nielen na Slovensku, ale aj v zahraničí (napr. v Rakúsku).

3.2 Vzdelávanie v odbore Medzinárodný manažment francúzsky program

Štruktúra štúdia je koncipovaná v súlade s nemeckým programom, pričom sú do výchovno-vzdelávacieho procesu zaradené nasledujúce predmety umožňujúce poznať medzinárodné aspekty podnikania: Francúzsky jazyk pre manažérov, Francúzske ekonomicko-geografické a politické reálie, Francúzske obchodné právo, Hospodárska politika vo Francúzsku, Interkultúrny manažment, Obchodné rokovania, Obchodné právo, Právnická francúzština, Medzikultúrna komunikácia, Obchodná francúzština, Európska ekonomická integrácia, Medzinárodný manažment a Vnútorný trh a hospodárska politika EÚ. Študenti majú možnosť získať na Slovensku magisterský diplom vydávaný francúzskou univerzitou v oblasti finančného riadenia (predmety vyučované odborníkmi z univerzít v Nancy, Lille, Paríži). Rozšírená je aj prax v zahraničných korporáciách, napr. PSA PEUGEOT CITROËN Slovakia, Orange, L'Oréal, ISK, VEOLIA, Schneider Electric, Célio, Yves Rocher, Décathlon, KONE, Renault, Gefco, Henkel, Mazars, DELL, Amazon, IBM, Accenture a v ďalších 400 pobočkách francúzskych firiem na Slovensku. Už počas bakalárskeho štúdia existuje možnosť pracovať na čiastočný úväzok, čím študenti získajú praktické skúsenosti v odbore. Po ukončení bakalárskeho/magisterského štúdia firmy študentov zvyknú zamestnať na plný úväzok. Študenti francúzskeho programu ďalej vykonávajú prax alebo stáž v zahraničí v pobočkách zahraničných firiem (zvyčajne vo Francúzsku).

FMUK spolupracuje s Francúzsko-slovenskou obchodnou komorou a veľvyslanectvami Francúzskej republiky, Kanadskej republiky, Švajčiarskej konfederácie a Belgického kráľovstva, ktoré ponúkajú možnosť získať štipendium a prax. Študenti majú ďalej možnosť uchádzať sa o štipendium organizácie Agence universitaire de la Francophonie na štúdium alebo prax v niektorej z frankofónnych krajín. Odborní pracovníci a pedagógovia z francúzskeho programu každoročne organizujú aj podujatie „Pracovný veľtrh Študenti – Podniky - Univerzity“, ktorá je vynikajúcou príležitosťou nadviazať osobný kontakt so zástupcami firiem a potenciálnymi zamestnávateľmi. Podstatnou súčasťou štúdia Medzinárodného manažmentu vo francúzskom programe je aj získanie jazykovej kompetencie prostredníctvom výučby odbornej francúzštiny s ekonomickým zameraním, analýzy prípadových štúdií, tréningy komunikačných zručností, prípravy na rokovania, sprostredkovania interkultúrnych kompetencií v súvislosti s manažmentom. Doplnkové vzdelanie predstavujú aj študijné pobyty cez mobilitu Erasmus na renomovaných francúzskych univerzitách v Paríži, Nancy, Nice, Grenoble a Amiens.

4. Conclusion

Dnešný globalizovaný svet má podobu mnohých kultúrnych spoločenstiev, ktoré nežijú izolovane, naopak, dochádza ku stretu kultúr, pričom každá má svoje špecifiká a odlišnosti. V profesionálnom živote hrá veľmi dôležitú úlohu komunikácia medzi kultúrami. Študenti Fakulty managementu UK v Bratislave sa nielen dozvedajú o odlišných normách a zvláštnostiach iných kultúr, ale aj trénujú používanie vhodných komunikačných prostriedkov. Cieľom je senzibilizácia vnímania odlišných kultúr (Milosovicova, 2013).

V 90-tych rokoch minulého storočia patrilo Slovensko medzi tranzitívne ekonomiky a bolo považované za problematické z hľadiska zahraničných investorov. Slovenská ekonomika od tej doby prešla značnými zmenami a v poslednom období dosiahla vyšší rast reálneho HDP v porovnaní s priemerom EÚ. Otvorenosť slovenskej ekonomiky sa podpísala pod prílev zahraničných podnikateľských subjektov a investorov, ktorým tiež môže vďačiť za svoj rozvoj (Milosovicova & Paskrtova, 2015). Zahraniční investori ponúkajú značné množstvo

pracovných príležitostí aj pre absolventov FMUK, pre ktorých je interkultúrne vzdelávanie kľúčové. Interkultúrne vzdelávanie si vyžaduje zo strany vyučujúceho neustálu dynamiku a kreativnosť. Okrem klasického rozvíjania jazykových zručností tu ide najmä o senzibilizáciu v zmysle zvyšovania „autenticity“ cudzieho jazyka a hlavne o schopnosť vycítiť situatívnosť. Jazykovo zdatný účastník hospodárskej, ekonomickej, manažérskej, ale aj kolegiálnej a tímovej komunikácie sa musí naučiť tiež adekvátne reagovať na iné kultúrne normy a konvencie. Tie potom zasadzujeme do aktuálnych udalostí, tematizujeme, interaktívne prezentujeme na rôznych nosičoch, simulujeme možné situácie, čím mnohako formujeme svojich poslucháčov.

References

- [1] Gregusova, D. et al. (2016). Execution of the public authorities' competencies electronically in the Slovak republic. *Political Sciences, Law, Finance, Economics and Tourism*, Sofia, Bulgaria, vol. 2, pp. 612.
- [2] Gregusova, D. et al. (2016). Safeguarding obligations through securities. *Political Sciences, Law, Finance, Economics and Tourism*, Sofia, Bulgaria, vol. 2, pp. 770.
- [3] Kajanova, J. (2016). Globalization and its impacts on chemical enterprises performance in Slovakia. *16th International scientific conference Globalization and Its Socio-Economic Consequences 2016*, Rajecke Teplice, Slovakia, pp. 808-815.
- [4] Lisy, J. (1999). *Makroekonómia 1. Výkonnosť ekonomiky a ekonomický rast*. Bratislava, Slovakia, pp. 21.
- [5] Milosovicova, P. and Paskrtova, L. (2015). Development of Slovak-german economic relations. *15th International scientific conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovakia, pp. 439-448.
- [6] Milosovicova, P. (2013). Medzikultúrne vzdelávanie budúcich manažérov na Fakulte managementu UK v globalizovanom multikultúrnom svete. *13th International scientific conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovakia, pp. 203.
- [7] Ministerstvo zahraničných vecí a európskych záležitostí SR: Ekonomické informácie o teritóriu. Francúzsko. [Online]. Available: <https://www.mzv.sk/documents/10182/620840/Franc%C3%BAzsko++ekonomick%C3%A9+inform%C3%A1cie+o+terit%C3%B3riu+Apr2016.pdf>.
- [8] Mitkova, L., and Kottulova, J. (2016). Globally valued, locally irrelevant? Gender equality in the multinational companies operating in Slovakia. *16th International scientific conference Globalization and Its Socio-Economic Consequences 2016*, Rajecke Teplice, Slovakia, pp. 1411–1418.
- [9] Novackova, D. (2014). Odstránenie obmedzení pohybu kapitálu na Slovensku. *Hradecké Ekonomické dny*, Hradec Kralove, Czech Republic, pp. 331-339.
- [10] Novackova, D., Saxunova, D. and Strazovska, L. (2016). Global investment projects implemented in public interest in Slovakia. *16th International scientific conference Globalization and Its Socio-Economic Consequences 2016*, Rajecke Teplice, Slovakia, pp. 1521-1529.

- [11] Paskrtova, L. (2016). Dependence of Slovak economy growth on foreign trade. *16th International scientific conference Globalization and Its Socio-Economic Consequences 2016*, Rajcke Teplice, Slovakia, pp. 1642-1648.
- [12] Peracek, T and Mittelman, A. (2015). The legal regulation of television and radio broadcasting content and the control of administrative bodies with the particular reference to the protection of juveniles. *SGEM conference on arts, performing arts, architecture and design*, Sofia, Bulgaria, vol. 1, pp. 746.
- [13] Peracek, T. and Mittelman, A. (2015). The current trends in the development of the right of intellectual property (not only) in the conditions of Slovak republic. *SGEM conference on arts, performing arts, architecture and design*, Sofia, Bulgaria, vol. 1, pp. 721.
- [14] Rentkova, K. and Rostarova, M. (2015). Using of venture and equity capital in financing of SMEs in the Slovak republic. *European financial systems 2016*, Brno, Czech Republic, pp. 661-668.
- [15] Stolicna, Z. (2012). *Vývoj hospodárskej politiky SR od transformačného obdobia 1989 až po súčasnosť*. Bratislava Kartprint, Slovakia. pp. 72.
- [16] Trelova, S. and Olsavsky, F. (2017). Investment in education and training of employees of the company – legal and financial aspects. *Education excellence and innovation management through Vision 2020: From regional development sustainability and competitive economic growth*, IBIMA.
- [17] Trelova, S. (2016). The requirement of flexibility and labour mobility as a result of globalization. *16th International scientific conference Globalization and Its Socio-Economic Consequences 2016*, Rajcke Teplice, Slovakia pp. 2228-2235.
- [18] Vetrakova, M. et al. (2011). *Ľudské zdroje a ich riadenie*. Banská Bystrica, Slovakia, Univerzita Mateja Bela, Ekonomická fakulta, pp. 4
- [19] Volkswagen Slovakia, a. s. (2017). *Profil Volkswagen Slovakia*. [Online]. Available: http://sk.volkswagen.sk/sk/Podnik/Cisla_a_fakty.html.
- [20] Wefersova, J. (2017). Problems of the German labour market. *Hradecké ekonomické dny*, Hradec Kralove, Czech Republic, vol. 7, no.1, pp. 919-924.

INSTITUTIONS AND DEVELOPMENT OF INTERNATIONAL BUSINESS IN RUSSIA

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Abstract. Globalization affected the development of international business in Russia. Foreign TNCs accounted for 28,4 % of 500 large business companies in Russia in 2016. Consumer services, heavy industry and extraction of natural resources were the most important TNCs' sectors in 2000-2016, while their share in banking sector was decreasing and in high added value branches was growing. More than 70% of the largest Russian companies in production of electronics, consumer goods, alcohol and tobacco are foreign. Institutional factor played a significant role in attraction of foreign TNCs and FDI in Russia in 2000-2016. Economic-statistical analysis revealed that the legislative reforms in Russia led to a sharp increase of FDI inflows in 2006-2013, privileges for international business - to a rapid development of import substitution in automotive and food industries, pharmaceuticals, telecommunications, and creation of special industrial economic zones defined their regional priorities. Institutional barriers (introduction of sanctions against Russia in 2014 and retaliatory sanctions, sharp decline of oil prices) weakened the international business position: a number of foreign multinationals left the country, FDI inflows significantly reduced in 2014-2016. Globalization reflected the development of foreign tobacco companies in Russia, three of which control about 90% of the cigarette market in Russia for the past 10 years. Russia's excise policy due to global trends is aimed at raising excise taxes on less quality cigarettes which resulted in profits decrease of those TNCs as well as in the revival of the shadow market of cheap domestic cigarettes.

Keywords: globalization, international business, Russia, foreign TNCs; institutional factor; foreign direct investment (FDI).

JEL Classification: F23, K23, O25

1. Introduction

TNCs are treated as an example of globalization of the world economy, which determines the development of international business. Foreign TNCs influence the economy of host countries: they are the main source of FDI, experience and skills handover, budget income, unemployment rate decrease and integrate in world economy promotion via export-import relations, impetus for local manufacturers to increase their competitiveness, etc. (Forsgren, 2017), (Rodionova, 2014), (Ozawa, 2011), (Zahra & Covin, 1993).

All the above-mentioned contributed to their involvement in Russia. The relevance of the topic is related to the fact that the level of activity of TNCs has been changing depending on the conditions for their expansion into the Russian market.

The objective of the study is to determine the specific features of the activities of TNCs in Russia under the influence of institutional factors in 2000-2016. The main tasks are to analyze the role of international business in the country's economy, identify trends in attracting FDI and assess the nature of institutional measures in TNCs' performance. Economics and statistics analysis, comparison of dynamic series of indicators and changes in institutional factors, system analysis and other general scientific methods have been used in the study.

2. Foreign TNCs in Russia development institutions

2.1 The influence of institutions on international business

According to the institutional theory, the behavior of corporations is mainly determined by institutions – a system of society with established ways of responding (political, economic, etc.) to some incentives in the current structure of economic life (North, 1989), (Dunning, 1998), (Porter, 1998), (Rodrick et al., 2004). The spatial advantage of economic development is based on three key factors: "division" - institutions that promote the penetration of goods, services, innovations, companies, "density" – agglomeration effect, "distance" – economic distance (Bank, 2009). There are mechanisms through which firms create production capacities in the largest regions to reduce transportation costs and achieve economies of scale. (Fujita et al., 1999), (Porter, 2003).

Institutions became the most important reference point for deciding on expansion into Russia and its specific regions for TNCs. The course on liberalization of the economy and the need for FDI during the period of «perestroika» aroused interest in international cooperation and determined the creation of institutions that stimulate its development.

Legal regulation is the main institutional factor that has positively influenced the development of foreign TNCs in the 2000s, especially laws regulating the flow of FDI in accordance with international norms and the creation of special economic zones (SEZ). Later, external institutional factors that had a negative impact on their functioning came to the fore: the world economic crisis of 2009, the Crimean conflict and international sanctions, as well as the decline in oil prices and the collapse of the ruble exchange rate in 2014. (Tab.1)

Table 1: Institutional factors of foreign TNCs in Russia

Internal factors		External factors	
Foreign TNCs regulation development level: transparent laws	1999 – Federal Law № 160 on foreign investment; 2005 – an amendment was made on transferring the regulation of customs privileges for foreign TNCs in the SEZ to directly 2005 – Federal Law №116 on SEZ in Russia	International economical and geopolitical environment	2009 – world economic crisis; 2014 – conflict with Ukraine (Crimea); 2014 – the fall in oil price;
Preferable business terms: SEZ creation, customs privilege	2005 – industrial SEZ were founded	Supranational institutions	2014 – economic sanctions imposing
Socio-political environment in the country	2014-2015 - high inflation and a drop in consumer demand	Currency exchange rate	2014 – fall in the exchange rate of ruble

Source: Authors' elaboration based on Consultant Plus (<http://www.consultant.ru>) and reference portal "Calculator" - (<https://www.calc.ru>)

2.2 The role of industrial-production zones in attracting foreign TNCs

Such SEZs have been most intensively formed in Russia since 2005 with the aim of developing manufacturing industry, focused on import substitution and satisfaction of the growing in the middle of the 2000s consumer demand. The two most effective were the first two. The priority areas of their activity were the production of automobiles, instruments, petrochemical products, composite and construction materials and consumer goods - Alabuga in the Republic of Tatarstan, equipment (including energy and medical), nano and biomaterials, household electrical appliances (refrigerators of washing machines), etc. - "Lipetsk" in the Lipetsk region. This increases the range of manufactured goods, the concentration of production in these regions and increases migration flows from the "periphery", which corresponds to the theory and practice in Russia (Buckley & Ghauri, 2004), (Pilyasov, 2011), (Chasovsky, 2015).

In 2016 Alabuga had 53 residents registered, providing more than 5,000 jobs, including 22 foreign multinationals such as Ford, Rockwool, Kastamonu, 3M, Armstrong, Air Liquide, Preiss-Daimler, RRDDonnelley, Saint-Gobain and others (SEZ Alabuga). SEZ "Lipetsk" had 48 residents from more than 15 countries, 3000 jobs have been created (SEZ Lipetsk). In 2015 the SEZ "Lipetsk" was recognized as the best for large residents in the region, as it managed to attract such giants of the world industry as Yokohama, Lanxess - a producer of rubber and plastic and the American PPG (chemical industry), in 2016 a similar place in the ranking was awarded to SEZ "Alabuga" according to FDI Intellenges.

2.3 External institutions and international business

The imposition of sanctions against Russia by the EU and the US disrupted many projects with Western partners. Shell stopped working in a joint venture with Gazpromneft on shale deposits development in Khanty-Mansiysk Autonomous Okrug, and Total refused to create a joint venture with Lukoil for development of the Bazhenov suite, ExxonMobil froze many projects in the Russian Federation, closed the construction of locomotives Caterpillar, Carlsberg and Siemens reduced their activities, and so on (Frumkin, 2016).

The price of Brent oil, which began to decline since July 2014, reached its minimum in January 2016, by the end of the year it was twice lower than June 2014. At the same time the USD exchange rate grew and by February 2016 it was already 223% to the level of July 2014. (Tab.2) Economic recession (GDP growth rates in 2015 were -3.7%, in 2016 - -0.8 %) is mainly due to the decrease of the oil price, as Russia has a raw material model of economic development (in 2015, the share of fuel and energy in the countries of the Far Abroad in the total export structure was 66.4% according to Rosstat.

Table 2: Crude oil Brent price dynamics (USD/barrel.) and USD exchange rate (RUB.) for the period Jan '14 - Aug '17.

Month	2014		2015		2016		2017	
	USD/ barrel	RUB	USD/ barrel	RUB	USD/ barrel	RUB	USD/ barrel	RUB
Jan	107.75	32.65	49.15	56.23	34.73	72.92	55.58	60.66
Feb	108.85	35.18	60.75	68.92	35.97	76.36	55.56	60.31
Mar	107.66	36.18	55.18	61.27	38.66	74.05	52.74	58.38
Apr	108.08	35.02	66.75	58.35	48.14	67.14	51.71	55.96
May	110.02	35.72	65.59	51.13	49.67	64.33	51.75	56.98

Jun	112.5	34.73	63.02	52.82	49.72	66.62	47.91	56.69
Jul	105.6	34.23	53.43	55.48	42.49	64.02	52.65	59.39
Aug	102.95	37.29	48.52	60.35	47.04	65.96	52.36	60.06
Sep	94.77	37.29	47.98	65.35	49.05	65.95	-	-
Oct	86.02	39.66	48.7	65.03	48.00	63.4	-	-
Nov	70.15	41.96	44.17	64.37	53.62	63.2	-	-
Dec	57.35	51.81	37.6	66.26	56.14	63.68	-	-

Source: Reference portal "Calculator" (<https://www.calc.ru/dinamika-Brent.html>)

In the period under review, high inflation was noted (2014 - 11.4%, 2015 - 12.9%) and the consumption was shrinking twice as much as the fall in the incomes of the population (Zubarevich, 2015). This caused a noticeable decline in the production of goods of long-term demand, for example, revenues of automobile companies declined by almost 29% according to RA Expert. Therefore, the SEZ in Vladivostok, focused on the production of Toyota cars, was closed ahead of schedule, the list of foreign TNCs that left the Russian market in 2015 included Mercedes-Benz, Opel, Chevrolet, SsangYong, etc.

In 2015 the number of joint ventures in the country decreased 1.4 times compared to 2013, including more than 1.6 times in trade and repairs (from 8,425 to 5,039 units) and agriculture (from 743 to 463) according to Rosstat.

3. The influence of institutions on foreign TNCs activities in Russia

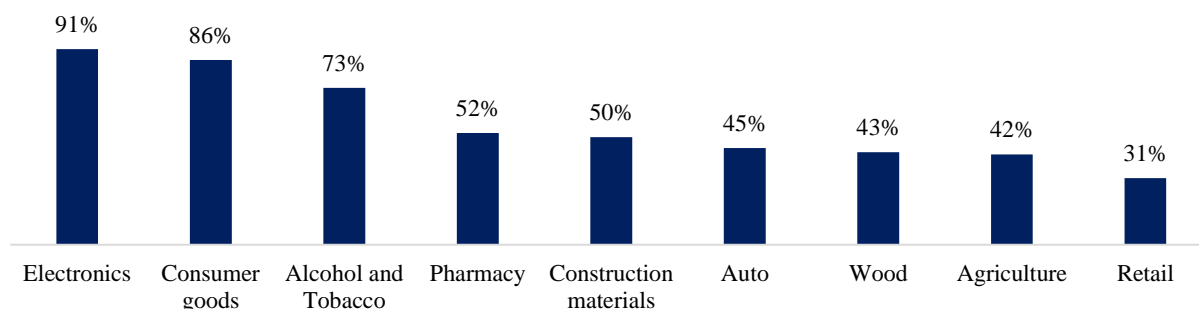
3.1 Foreign TNCs in the country's economy in 2000-2016

Among the 500 largest companies in Russia in 2016, the total revenue of which amounted to 63.7 trillion. (about 74% of the country's GDP), there were 142 foreign multinationals, including joint ventures. The largest of them are commercial and automobile: Auchan, Metro Cash & Carry, Toyota Motor, Volkswagen Rus group, Mercedes-Benz Rus, Leroy Merlin East.

According to RBC in 2000 foreign TNCs in Russia were mainly focused on consumer goods (32%) and financial services industries (27%). In 2016, the division into areas of activity has changed somewhat, new industries have appeared, for example, pharmaceuticals and electronics (9% and 7% of their total number of companies), which are placed in separate categories. The share of foreign companies in the sphere of heavy industry and construction (from 13% to 20%) and consumer services (up to 40%) has noticeably increased, financial services (up to 6%), telecommunications and information technologies (from 8% to 3%). International business has made a significant contribution to the development of Russian telecommunications and network trade, assembling plants of Western European, American and East Asian concerns have greatly transformed the domestic automobile industry.

TNCs have a significant impact on the economy of the countries in which they operate, they also represent stiff competition for local and national companies (Forsgren, 2017). This is typical for electronics companies (91% of the 500 largest companies in Russia in 2016), consumer goods (86%), alcohol and tobacco (73%), as well as pharmaceuticals, construction materials, cars, etc. due to low competitiveness of local producers or their total absence (Fig. 1).

Figure 1: Share of foreign TNCs in Russia by industries in 2016, %



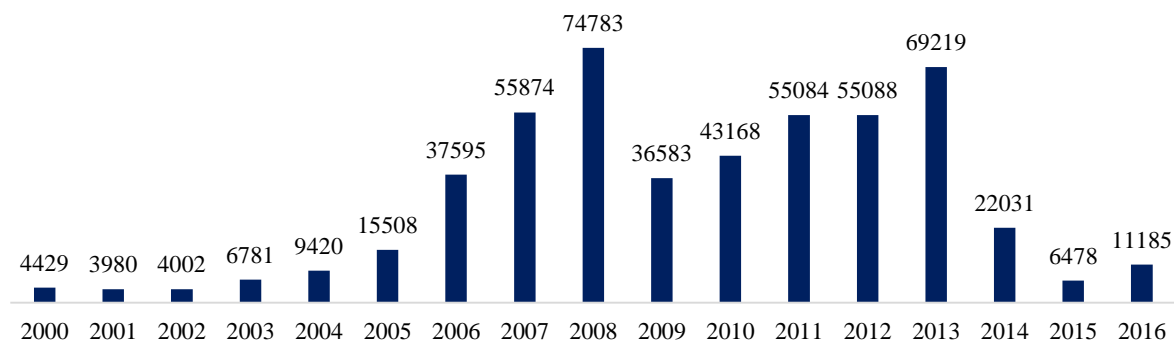
Source: Authors' calculations based on RBC 500 (<http://www.rbc.ru/rbc500/>)

Foreign business has made a significant contribution to the development of Russian telecommunications and network trade, assembling plants of Western European, American and East Asian concerns have greatly transformed the domestic automobile industry

3.2 TNCs as a subject of FDI in the economy

The inflow of FDI is provided by the activities of TNCs in the context of globalization and is associated with foreign trade operations for the import of equipment, components and export of finished products in particular Russian regions (Kuznetsova, 2016). The impact of institutions on the dynamics of their volumes in Russia is obvious: the legal regulations of 2005 explain the rapid development of foreign multinationals and a significant increase in FDI (4.8 times in 2005-2008). Besides, the economic crisis in 2009 caused their two-fold decline for the year, and the imposition of sanctions and a change in ruble exchange rate in 2014 caused the collapse (more than 10 times in 2013-2015). (Fig. 2)

Figure 2: Dynamics of FDI raising in Russia, mln.USD, 2000-2016



Source: Authors' calculations based on Rosstat data (<http://www.gks.ru/>)

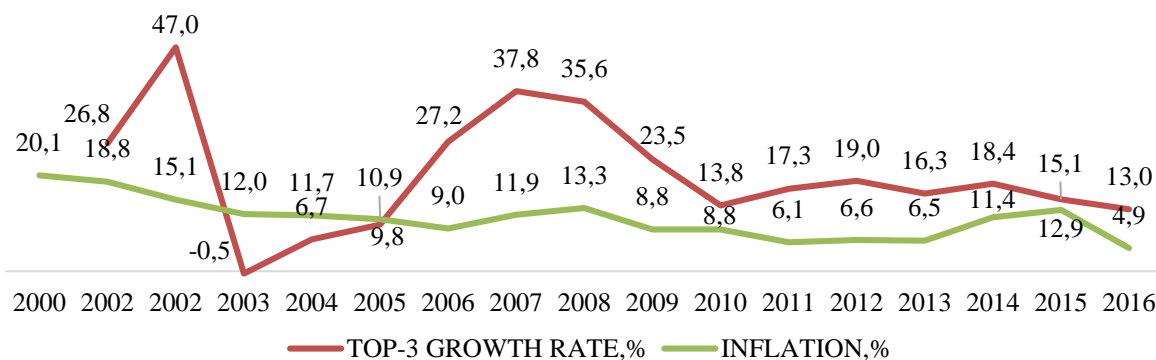
More than 50% of executives of the companies surveyed said they did not want to invest in Russia because of growing geopolitical tensions and sanctions (Sterkin & Kuvshinova, 2015). All this caused the unfavorable dynamics of the volume of attracted FDI in the economy of the country: according to the statistics of the Central Bank of Russia, in 2013, FDI totaled \$ 193.7 billion, 2014 - \$ 146.4 billion, in 2016-only 83.4 billion dollars. The share of the country in the global inflow of foreign direct investment, according to UNCTAD, significantly decreased from 3.7% in 2013 to 0.6% in 2015.

3.3 Foreign tobacco TNCs functioning under the influence of excise policy

Over the last 10 years, about 90% of the Russian tobacco market has been controlled by foreign tobacco TNCs, the largest of which are JTI (32.7 % of the market in 2016), PMI (27.2 %), BAT (22.5 %). Their cumulative share increased since 2007 from 80,7 % to 82,4 in 2016. The only significant local manufacturer – Donskoy Tabak augmented its share almost twice since 2007 thanks to low segment cigarettes sales according to AC Nielsen. In addition to the huge sales market and steadily large demand, for them institutions are the most important factor of development: they are set by unified technical regulations, the law on advertising and excise regime. The excise policy of Russia is characterized by relatively low excise rates in comparison with Europe. Following Forbes ranking, 3 major tobacco TNCs in Russia perform much better than other foreign TNCs in Russia в 2013-2015 гг.

Combined excise launch and its calculation from MRSP (not the manufacturer price) in 2003 impacted 3 foreign TNCs income straight away (-0,5 % in 2003, +47 % in 2002). Net profit of tobacco TNCs was impacted by 2003 changes as well (Fig. 3). Enacted in 2009 the «National strategy against tobacco for 2009-2013» and in 2010 – the «Concept of government policy against tobacco consumption in 2010-2015» were implying the growth of tax burden, restriction of tobacco consumption and advertising, so, that was resulted in significant reduction of income growth rates of TNCs (2010-2016: 13-19 %). But they were still higher than inflation, as cigarettes prices grow faster than any other consumer goods and consumption level is not declining significantly, but income growth rates were higher than the excise rates (for low segment cigarettes especially) and that drove down net profits growth rate since 2015.

Figure 3: Income growth rate of TOP-3 Tobacco manufacturers in Russia, %, in 2000-2016



Source: Authors' calculations based on RA Expert. Rating of 600 biggest Russian companies. (<http://raexpert.ru/ratings/expert400/2016/>)

Significant increase in ad valorem rate in 2015 (from 9 % to 11 %) caused upsurge in local manufacturers' activity at illicit market, who have grown more than twice (from 1.0 % in 2015 to 2.2 % in 2016 according to AC Nielsen. Foreign tobacco TNCs do not have anything to do with illicit market, as suggested by their net profit decline in в 2015-2016. Excise income in the budget of Russia have positive dynamics, but they could have been even more by 3,7 billion RUB in 2015 and 10,1 billion RUB in 2016 provided there was no illicit trade.

3.4 Prospects for foreign TNCs development

The modern economy of the country is under pressure due to unfavorable external and internal conditions. International business, especially focused on the sharply reduced consumer demand of the population, as a whole reacts negatively to the situation. Reduction of its

presence in Russia is due to a less open economy and the adoption of counter-sanctions that restrict the import of a large range of consumer goods, which provides protectionism for domestic companies specializing in import substitution (for example, the agro-industrial complex). All this confirmed the need to change the consumer-raw material model of economic development.

Russia, like many countries (the United States) or the unions of countries (European Union), belongs to the category of "large spaces". And its economic self-sufficiency is in desire to ensure the growth of national welfare, concentration of capital, resources and production capacities on its territory in order to fully satisfy internal needs and not depend on imports of critically important categories of goods. Therefore, the current situation, contrary to the processes of globalization, will restrain the development of foreign TNCs in the country, although it limits external funding for the creation of a new sustainable multi-sectoral economy that requires significant investment.

4. Conclusion

The key institutional factors in the development of international business in Russia: in the 2000s. - internal (legal), which provided its activation, in 2010 – external, which determined its passivation. The role of foreign TNCs in Russia is mainly related to the market of consumer goods and services that are not available in the country or are not competitive in the years of perestroika. Therefore, federal laws on the creation of SEZs helped to attract branches of foreign TNCs mainly in the territory where they were created, for example, in Tatarstan and the Lipetsk region. At the same time, the influence of institutions is also traced at the level of individual economic sectors: so excise policy and the adoption of anti-smoking programs in the country directly correlate with the growth rates of profits of tobacco foreign multinationals. Changes in the inflow of FDI into the Russian economy are largely related to the activities of foreign TNCs aimed at organizing production. After a steady growth, the volume of FDI declined significantly during the economic crisis of 2009 and the present time. The imposition of sanctions by the EU and the US, the unfavorable dynamics of the cost of oil and the ruble exchange rate, the drop in consumer demand sharply reduced the presence of international business in the country and contributed to the realization of the need to change its economic development model.

Acknowledgment

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References

- [1] AC Nielsen Retail Audit. [Online]. Available at: <http://www.nielsen.com/ru/ru.html>.
- [2] Bank, W. (2009). *World development report 2009: Reshaping economic geography*. (2009) Washington, DC: The World Bank.
- [3] Buckley, P. and Ghauri, P. (2004). Globalisation, economic geography and the strategy of multinational enterprise. *Journal of International Business Studies*, vol. 35, no. 2, pp. 81-98.
- [4] Chasovsky, V. (2015). Key directions of sectoral and spatial changes in the Russian industry. *Baltic Region*, no. 3, pp. 121-134.

- [5] Dunning, J. H. (1998). Location and the multinational enterprise: A neglected factor? *Journal of International Business Studies*, vol. 29, no. 1, pp. 45-66.
- [6] FDI Intelligences. *Global Free Zones of the Year*. [Online]. Available at: <http://www.fdiintelligence.com/Rankings>.
- [7] Forsgren, M. (2017). *Theories of the multinational firm: a multidimensional creature in the global economy*, Cheltenham, UK: Edward Elgar Publishing Ltd.
- [8] Frumkin, K. (2016). Count of drowned people. Which projects fell apart through sanctions. *Kompaniya*. [Online]. Available at: <http://ko.ru/arhive/item/132464>.
- [9] Fujita, M., Krugman, P. and Venables, T. (2001). *The Spatial Economy: Cities, Regions and International Trade*, Cambridge, MA: MIT Press.
- [10] Kuznetsova, O. (2016). Differences in Russian regions attractiveness for foreign and domestic investors. *Voprosy ekonomiki*, no. 4, pp. 86-102.
- [11] North, D. C. (1989). Institutions and economic growth: An historical introduction. *World Development*, vol. 17, no. 9, pp. 1319-1332.
- [12] Ozawa, T. (2011). The (Japan-born) “Flying-geese” theory of economic development revisited — and reformulated from a structuralist Perspective. *Global Policy*, vol. 2, no. 3, pp. 272-285.
- [13] Pilyasov, A. N. (2011). New economic geography (NEG) and its potential for studying the distribution of productive forces in Russia. *Regional Studies*, no. 1, pp. 3-13.
- [14] Porter, M. E. (1998). Clusters and the new economics of competition. *Harvard Business Review*, vol. 76, no. 6, pp.77-90
- [15] Porter, M. E. (2003). The economic performance of regions. *Regional Studies*, vol. 37, no. 6-7, pp. 549-578.
- [16] RA Expert (2016). Rating of 600 biggest Russian companies. (in Russian) [Online]. Available at: <http://raexpert.ru/ratings/expert400/2016/>.
- [17] RBC (2016). Rating of 500 biggest Russian companies. (in Russian) [Online]. Available at: <http://www.rbc.ru/magazine/2016/10>.
- [18] Rodionova, I. A. (2014). World industry in post-industrial society: tendencies and regional shifts. *Miscellanea Geographica*, vol. 18, no. 1, pp. 31-36.
- [19] Rodrick, D., Subramanian, A. and Trebbi, F. (2004). Institutions rule: the primacy of institutions over geography and integration in economic development. *Journal of economic growth*, vol. 9, no. 2, pp. 131-165.
- [20] Russian Federal State Statistics Service (Rosstat). [Online]. Available at: <http://www.gks.ru/>.
- [21] SEZ Alabuga. [Online]. Available at: <https://alabuga.ru>.
- [22] SEZ Lipetsk. [Online]. Available at: <https://sezlipetsk.ru>.
- [23] Sterkin, F. and Kuvshinova, O. (April 2015). Foreign investors do not want to invest in Russia for the second year in a row. *Vedomosti*. [Online]. Available at: www.vedomosti.ru/economics/articles/.

- [24] Zahra, S. A. and Covin, J. G. (1993). Business strategy, technology policy and firm performance. *Strategic Management Journal*, vol. 14, no. 6, pp. 451-478.
- [25] Zubarevich, N. V. (2015). Regional dimension of the new Russian crisis. *Voprosy ekonomiki*, no. 4, pp. 37-52.

SECURITY MANAGEMENT AND COMPETITIVENESS OF ENTERPRISES IN A NEW PHASE OF GLOBALIZATION

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Abstract. Managerial competences and responsibilities include everything that affects business performance and economic performance. Individual aspects are found in its internal or external environment, whether it is under the control of an enterprise or outside its control. It is, therefore, obvious that the quality and results of the company have, among other major and supportive activities, a significant impact security as well. In order to ensure the company's sustained and sustainable security, which is necessary to protect all its interests and the interests of all stake-holders, it is important that a systematic management mechanism is implemented and maintained. Only such a condition will ensure the proper functioning of the company and its development, in accordance with all security requirements, such as the safety management system. In the period of globalization, the future will have only those companies that will pay attention to the different areas of activity. For these reasons, the issue of security aspects is very topical. The paper discusses the issue from the perspective of globalization changes. Changes in different areas of the economic and social environment imply the need to deal with security as individual activities of the enterprise. The paper discusses the issues of safety management, whose role is to create the system and its impact on the quality and competitiveness of the company. Security, sustainability and competitiveness constitute the core priorities of modern enterprise policies in the period of globalization.

Keywords: Business competitiveness, quality, security aspects, security management

JEL Classification: D20, L26, O25

1. Introduction

V súčasnom globalizovanom svete sa konkurencieschopnosť stáva jednou z najsledovanejších charakteristík národných ekonomík, ako aj súkromnej sféry. Otázka konkurencieschopnosti na makroekonomickej úrovni sa dostáva do pozornosti v súvislosti s rozvojom globalizačných procesov vo svetovej ekonomike, a to vzhľadom k rastu konkurencie medzi jednotlivými krajinami, resp. svetovými ekonomickými centrami. Zaujímavá je väzba medzi medzinárodnou konkurencieschopnosťou a ekonomickým rastom, alebo životnou úrovňou obyvateľov. Globalizácia, rýchle technologické zmeny a rozsiahla výmena informácií charakterizujú súčasný čas, ktorý je obdobím novej, postindustriálnej alebo znalostnej ekonomiky.

V organizáciách existuje značný počet hlavných podporných aktivít. Tieto činnosti umožňujú výkonnému manažmentu dosiahnuť svoje stanovené ciele vo výrobe alebo poskytovaní služieb, keďže riadiaci pracovníci riadia organizáciu dobre. Rozsah týchto aktivít sa líši v každej organizácii. Určité aktivity, ktoré sú veľmi špecifické, môžu byť aplikované výhradne v určitých organizáciách (napríklad v oblasti výroby), hoci mnohé sú všeobecnou súčasťou takmer každej organizácie. Riadenie bezpečnosti je jednou z aktivít, ktoré by mali byť brané do úvahy každým výkonným manažmentom, pretože oblasť manažérskych zodpovedností je vo všetkých aspektoch, ktoré ovplyvňujú výkonnosť a ciele organizácie.

Súčasný riadiace postupy a procesy v mnohých organizáciách zahŕňajú prvky riadenia bezpečnosti, avšak v mnohých prípadoch nemajú zmysel systematického prístupu. Zavedenie "oficiálneho" procesu riadenia bezpečnosti poskytuje príležitosť kriticky preskúmať existujúce procesy a postupy v oblasti bezpečnosti.

2. Konkurencieschopnosť a aktíva

Podniky sa snažia vyrovnáť s novou situáciou, keď globalizácia má vplyv na všetky podniky a snažia sa udržať si konkurencieschopnosť na globálnom trhu (Marsalek, 2007). Podniky preto sú nútené vytvárať priaznivé podmienky pre rozvoj ľudského kapitálu a pre zrýchlenie inovačného cyklu vo výskume a vývoji. (Ponisciakova, 2015) Politika zameraná na zvyšovanie konkurencieschopnosti sa vyznačuje tým, že jej ciele predstavujú dlhý časový horizont a nie je možná ako politika orientovaná na krátkodobé ciele. Inovácie a konkurencieschopnosť sú dva dôležité faktory, ktoré sa dopĺňajú a podmieňujú. (Kral & Bartosova, 2016)

Globalizácia je realitou, ktorú nie je možné ignorovať. Zvlášť podnikateľské subjekty majú v podstate dve možnosti, ako sa s touto skutočnosťou vyrovnáť:

- dôsledne monitorovať všetky vplyvy globalizácie a prispôbovať im svoju stratégiu,
- aktívne sa zapojiť do globalizačného diania. (Veber et al., 2000).

V súvislosti s meraním konkurencieschopnosti na úrovni štátov sa vynára otázka, či má vôbec zmysel posudzovať súťaž a konkurenciu medzi národmi. (Meiliene et. al., 2015) Odpoveď možno odvodiť na základe logiky otvorených konkurenčných svetových trhov, ktoré boli sformované podľa skúsenosti z obdobia veľkej hospodárskej recesie a multilaterálneho, či regionálneho inštitucionálneho rámca vzniknutého po 2. svetovej vojne. Mohutný rozvoj globalizácie v podobe od 80. rokov 20. storočia prinútil k posudzovaniu a vo väčšine prípadov k rozvíjaniu atraktívnosti daného prostredia pre domáce i zahraničné subjekty, ktoré prostredníctvom svojich aktivít generujú ekonomický blahobyt. (Butek & Stofkova, 2016)

Významným teoretickým základom výskumu konkurencieschopnosti je prístup, ktorý rozvinul Michael E. Porter. V jeho poňatí je pre pochopenie konkurencieschopnosti dôležité poznať jej zdroje. Skutočná konkurencieschopnosť je opäť meraná prostredníctvom produktivity, pretože táto umožňuje rast životnej úrovne, miezd, alebo má vplyv na menový kurz, výnosnosť kapitálu a pod. Najčastejším cieľom politik založených na tomto poňatí je potom vysoké tempo ekonomického rastu (rastové teórie), rast príjmov obyvateľstva, vysoká miera využitia výrobných faktorov, predovšetkým ľudského kapitálu v podobe miery zamestnanosti. (Porter, 1990)

Regionálna konkurencieschopnosť súvisí s globalizáciou, ktorá spája jednotlivé ekonomiky a trhy a ktorá prináša rastúci význam regiónov a tiež nárast ich zodpovednosti za vytváranie podmienok pre konkurencieschopnosť. (Taylor et al., 2008) Stále viac sa ukazuje potreba uvažovať o možnostiach zvyšovania konkurenčných výhod. (Tvrdon & Suranova, 2007)

Viacerí autori, ktoré sa zaoberali otázkami regionálnej konkurencieschopnosti sa zhodujú s názorom, že konkurencieschopnosť regiónu ako schopnosť regiónu produkovať tovary a služby, ktoré obstoja na medzinárodných trhoch, pričom je potrebné zabezpečiť udržanie vysokých a stabilných výnosov pre svojich obyvateľov. (Chlebikova, 2016)

V súčasnej ekonomike je cieľom zvyšovať hodnotu podniku a dosiahnuť maximálny zisk pri vynaložení minimálnych nákladov. Na dosiahnutie tejto tendencie si organizácie stanovujú svoje ciele. Dosahovanie cieľov organizácií je však závislé od množstva faktorov, z ktorých do popredia patria aj:

- zhodnocovanie aktív s využitím nepretržitého, efektívneho a účinného manažérstva aktív,
- posúdenie a modifikácia rizík s využitím manažérstva rizika,
- predchádzanie a včasné a účinné riešenie incidentov s využitím manažérstva incidentov.

Informačné a komunikačné technológie umožňujú rýchly transfer know-how, zvyšujú globálnu dostupnosť trhov a možnosť riadenia prakticky všetkých činností (produkcia, obchodné transakcie, inovačné a informačné procesy a pod.). Prístup podnikov na nové trhy urýchľuje proces inovácií. (Kvasnicova et al., 2016)

Reálny život v organizáciách prináša množstvo rôznych problémov, a teda aj rizík. Tie súvisia najmä s aspektmi vyplývajúcimi z globalizácie trhu, požiadavkami na bezpečnosť práce, snahou o ochranu životného prostredia a ďalšími, ktoré sú často podporené prísnyimi právnymi požiadavkami. (Siser et al., 2016) Požiadavky kladené na manažment organizácie vo vzťahu k ochrane človeka, životnému prostrediu, zodpovednosti voči verejnosti a zákazníkom sú štandardizované v úsilí o vytvorenie rovnováhy medzi rozvojom a ochranou spoločnosti.

Silné konkurenčné prostredie generuje na jednej strane hľadanie príležitostí, ale na druhej strane priestor na znižovanie nákladov s cieľom zvyšovať zisk. Tento aspekt dlhodobej (niekedy aj krátkodobej) úspešnosti má však svoje hranice, ktoré nie sú vždy jasne definované a ak sú, tak sa im neprikladá požadovaný význam. Výsledkom môžu byť finančné a environmentálne straty a podobne. (Majernik et al., 2016) Z toho dôvodu sa základnou zásadou stáva požiadavka na posudzovanie rizík v komplexnom ponímaní pri zohľadnení špecifických úrovní riadenia organizácie. Na základe posudzovania rizík je založené aj zhodnocovanie aktív (majetku) organizácie.

Manažérstvo aktív (majetku) organizácie predstavuje koordinované aktivity počas ich celého životného cyklu (dlhodobé), súvisiace so stanovenou víziou a cieľom organizácie splniť očakávania zainteresovaných účastníkov (stakeholders). Získanie výstupov (realizácia cieľov) možno definovať ako hodnotu vytvorenú efektívnym využívaním aktív (majetku). Veľkosť tejto hodnoty, teda úspešnosť dosiahnutia stanovených cieľov, je závislá najmä na vyhodnotení vonkajších a vnútorných rizík, ktoré existujú v prostredí, kde sa aktíva zhodnocujú.

3. Architektúra bezpečnostného manažmentu

Riadenie bezpečnosti predstavuje systematický a neustále sa opakujúci súbor vzájomne prepojených aktivít s cieľom vytvoriť systém riadenia bezpečnosti v organizácii. Hlavným účelom systému je zabezpečenie bezpečnosti všetkých operácií, ktoré sú nevyhnutné na dosiahnutie celkových organizačných cieľov, ako aj predchádzanie hrozbám pre bezpečnosť, ktoré môžu spôsobiť zdravotné a bezpečnostné problémy, straty na životoch, poškodenie hmotného majetku a škody na životnom prostredí.

Zabezpečenie úspešnosti organizácie prostredníctvom rôznych systémov manažérstva podľa medzinárodne uznávaných štandardov sa v dnešnej zložitej ekonomickej situácii stáva čoraz viac samozrejmosťou. Na stanovenie postupnosti procesu manažérstva bezpečnosti je možné využiť všeobecnú normu, predpísanú pre systémy manažérstva, vytvorenú s cieľom priniesť zhodné a kompatibilné normy pre systémy manažérstva. (Kubas & Stofkova, 2016)

Proces manažérstva bezpečnosti organizácie je potom možné názorne zobrazit' s využitím PDCA cyklu, ktorý je vhodným modelom pre všetky typy manažérskeho zlepšovania procesov, kvality výrobkov, služieb, aplikácií, dát, prebiehajúci formou opakovaného vykonávania štyroch základných činností. (Stofkova et al., 2015)

Podľa tejto prílohy sa budú riadiť všetky nové manažérske systémy a všetky aktuálne manažérske systémy budú na tento model prechádzať. V budúcnosti by všetky manažérske systémy mali byť konzistentné a kompatibilné - všetky budú mať rovnaký základ a prostredie, čo by mohol byť začiatok konca konfliktov, duplikácie, zmätkov a nepochopenia medzi rôznymi systémami. (Lovecek et al., 2016) Toto pomôže zabezpečiť súdržnosť medzi budúcimi a revidovanými normami systémov manažérstva a umožní užívateľom normy ľahšie pochopiť. Bude tiež jednoduchšie a efektívnejšie na tomto základe integrovať viac noriem v rámci jednej organizácie. (Misik et al., 2016, A)

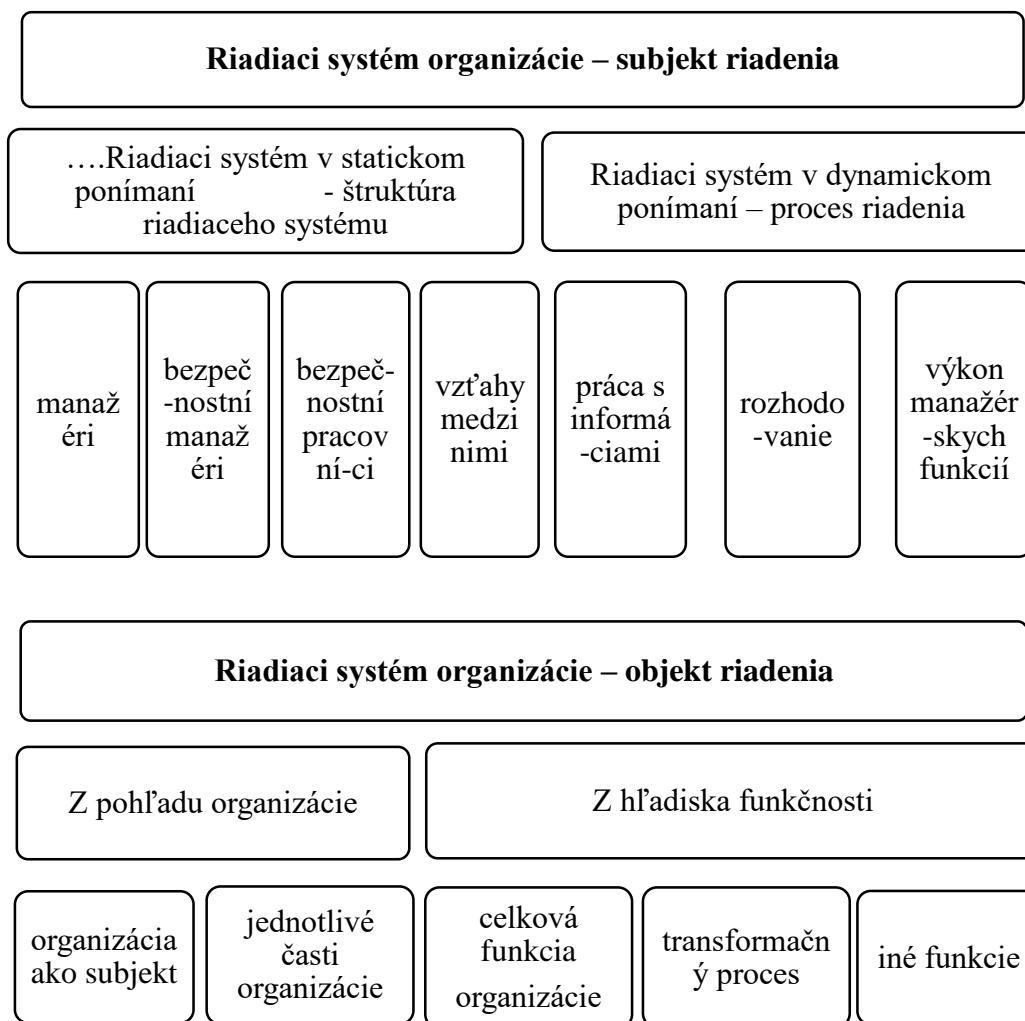
Základom pre pochopenie riadenia bezpečnosti v organizácii je systematické myslenie. Aplikácia systematického prístupu k riadeniu bezpečnosti v organizácii umožňuje integráciu rôznych nálezov do tohto holistického pohľadu s cieľom optimalizovať riadenie bezpečnosti v organizácii. (Soltes & Stofkova, 2016)

Každý systém pozostáva z dvoch vzájomne prepojených subsystémov, ktoré sa v určitých vzťahoch považujú za systémy - riadenie subsystému (subjekt riadenia) a riadeného subsystému (objekt riadenia) - obrázok 1. (Misik et al., 2016, B)

Aby mohla každá organizácia úspešne dosiahnuť svoje poslanie, víziu a účel, vytvorí organizačnú štruktúru. Jadro štruktúry organizácie predstavuje základné prostredie pre výkon všetkých hlavných a podporných operácií a procesov v rámci organizácie. Základný organizačný rámec uľahčuje úspešnosť plnenia povinností vykonávaných zamestnancami, ktorí pracujú pod dohľadom zodpovedných manažérov. (Belan, 2015)

Organizačná štruktúra by mala byť podľa vytvorená na základe určitej logickej schémy, ktorá bude zahŕňať nielen všetky hlavné oblasti alebo operácie, ale aj všetky podporné oblasti alebo operácie. Každý rozsah hlavných a podporných operácií tvorí v celej organizácii nezávislý sektor. (Seenewald, 2003)

Figure 1: Riadiaci systém organizácie



Source: (Misik, 2016, B)

Súhrn jednotlivých zložiek organizačného bezpečnostného rámca, ktorý je založený na jeho celkovej bezpečnostnej politike, predstavuje bezpečnostný sektor v organizácii. Predstavuje bezpečnostné subjekty alebo súbor bezpečnostných predmetov (rozsahov), ktoré sú vytvorené špeciálne na účely ich hlavného účelu zabezpečenia dosiahnutia a zabezpečenia pretrvávajúcej bezpečnosti personálu, majetku a životného prostredia v organizácii. Bezpečnosť jednotlivých zložiek v bezpečnostnom sektore je viazaná na normatívne bezpečnostné normy.

Podľa predmetu bezpečnosti môže byť bezpečnostný sektor v organizácii rozdelený do niekoľkých podsektorov. Tieto podsektory sa vo všeobecnosti nachádzajú vo všetkých typoch organizácií, hoci s rôznou intenzitou:

- bezpečnosť personálu a majetku.
- bezpečnosť životného prostredia (environmentálna bezpečnosť).
- bezpečnosť podniku (obchodná bezpečnosť). (Misik, 2016, B)

4. Conclusion

Hlavnou tendenciou súčasnej ekonomiky je dosiahnuť maximálny zisk pri vynaložení minimálnych nákladov. Na dosiahnutie tejto tendencie si organizácie stanovujú svoje ciele.

Dosahovanie cieľov organizácií je však závislé od množstva faktorov, z ktorých do popredia patria zhodnocovanie aktív s využitím nepretržitého, efektívneho a účinného manažérstva aktív, posúdenie a modifikácia rizík s využitím manažérstva rizika, predchádzanie a včasné a účinné riešenie incidentov s využitím manažérstva incidentov.

Reálny život v organizáciách prináša množstvo rôznych problémov, a teda aj rizík. Tie súvisia najmä s aspektmi vyplývajúcimi z globalizácie trhu, požiadavkami na bezpečnosť práce, snahou o ochranu životného prostredia a ďalšími, ktoré sú často podporené prísnyimi právnymi požiadavkami. Požiadavky kladené na manažment organizácie vo vzťahu k ochrane človeka, životnému prostrediu, zodpovednosti voči verejnosti a zákazníkom sú štandardizované v úsilí o vytvorenie rovno-váhy medzi rozvojom a ochranou spoločnosti.

Riadenie bezpečnosti predstavuje trvalý a opakujúci sa súbor prepojených organizačných aktivít pre plánovanie, implementáciu, prevádzku, monitorovanie, hodnotenie a trvalé zlepšovanie systému riadenia bezpečnosti v organizácii.

Zavedenie bezpečnostného systému v organizácii umožňuje napr. efektívne úsilie bezpečnostného personálu, využitie organizačných zdrojov, dosiahnutie cieľov organizačnej bezpečnosti vo všetkých individuálnych oblastiach bezpečnostného sektora, pridelenie zodpovednosti za jednotlivé oblasti bezpečnostného sektora podľa zásad, noriem a bezpečnostných pravidiel, vytvorenie komplexného bezpečnostného systému na ochranu zdravia a bezpečnosti, majetku, životného prostredia a iných dôležitých záujmov jednotlivcov i organizácie, zníženie bezpečnostných incidentov atď.

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References

- [1] Belan, L. (2015). *Bezpečnostný manažment*. Žilina: UNIZA, pp. 200.
- [2] Butek, M. and Stofkova, Z. (2016). Relocalisation trends in the context of globalization. *Int. Conference on Information and Business Management (ISSGBM-IB 2016)*. Hong Kong, Singapore: Lecture Notes in Management Science, vol. 61, pp. 33-38.
- [3] Chlebkova, D. (2016). Slovak clusters in the global market. *16th international scientific conference proceedings Globalization and its socio-economic consequences*, Rajecké Teplice, Slovakia, pp. 719-725.
- [4] Kral, P. and Bartosova, V. (2016). Importance of company early warning system in globalizing market environment. *16th international scientific conference proceedings Globalization and its socio-economic consequences*, Rajecké Teplice, Slovakia, pp. 1054-1060.
- [5] Kubas, J. and Stofkova, Z. (2016). Application of some research methods to determine the level of safety in municipalities. *7th Int. Conference EDUHEM. University Almeria. Procedia Social and Behavioral Sciences*, vol. 237, pp. 242-248.
- [6] Kvasnicova, T., Kremenova, I. and Fabus, J. (2016). From an analysis of e-services definitions and classifications to the proposal of new e-service classification. *Procedia - Economics and finance*, vol. 39, pp.192-196.

- [7] Majernik, M., Daneshjo, N. and Stofkova, Z. (2016). *Integrované posudzovanie vplyvov rozvojových zámerov a stratégií*. Kosice: Typopress, Slovak Republic, pp. 226.
- [8] Meiliene, E., Neverauskaite, S. and Aidis, R. (2015). Methodological aspects of compiling country's competitiveness through the aspect of Technology-Intensive Innovative Enterprises Index. *Procedia Social and Behavioral Sciences*, vol. 213, pp. 173-178.
- [9] Lovecek, T. et al. (2016). Research of competencies of crisis and security managers. *Economic, business management and educational innovation (EBMEI 2016)*. 3rd Int. conference, Prague, Czech Republic, pp. 172-177.
- [10] Marsalek, I. (2007). Změny podnikatelského prostředí a inovační aktivity v kontextu globalizace a specifických podmínek regionů. *2nd C. European Conf. In Regional Science – CERS*, Kosice: TU, Slovak Republic, pp. 690 –700.
- [11] Misik, J., Kubas, J. and Belan, L. (2016, A). Systém manažérstva bezpečnosti organizácie. *Požární ochrana 2016*, Ostrava: SPBI, Czech Republic, pp. 257-258.
- [12] Misik, J., Stofko, S. and Belan, L. (2016, B). Architecture of security management in organizations. *Interdisciplinarity in theory and practice: journal for presentation of interdisciplinary approaches in various fields*, no. 11, pp. 9-13.
- [13] Ponisciakova, O. (2015). New nature of globalization - new character of a manager in 21st century. *Procedia Economics and Finance*, vol. 23, pp. 915-919.
- [14] Porter, M. E. (1990). *The Competitive Advantage of Nations*. New York: Free Press Edition.
- [15] Sennewald, Ch. A. (2003). *Effective Security Management*. Elsevier-Science, pp. 395.
- [16] Siser, A., Soltes, V. and Kubas, J. (2016). Crime prevention in to the education process at high schools. *EDULEARN16, Proceedings 8th international conference on Education and new learning technologies*, Barcelona, Spain, pp. 5803-5808.
- [17] Soltes, V. and Stofkova, Z. (2016). Security as an aspect of the quality management in local self-government in age of globaliaztion. *16th international scientific conference Globalization and its socio-economic consequences*, Rajecke Teplice, Slovakia, pp. 2060-2067.
- [18] Stofkova, J., Maris, L. and Soltes, V. (2015). To the problem of information security within the local government. *EDULEARN15, Proceedings 7th Int. conference on Education and new learning technologies*, Barcelona, Spain, pp. 6629-6635.
- [19] Taylor, J., Ffowcs-Williams, I. and Crowe, M. (2008). Linking desert businesses: the impetus, the practicalities, the emerging pay-offs, and building on the experiences. *Rangeland Journal*, vol. 30, no. 1, pp. 187-195.
- [20] Tvrdon, J. and Suranova, J. (2007). Teoretické a praktické otázky vyjadrenia regionálnej konkurencieschopnosti v ekonomike Slovenska. *2nd Central European Conference in Regional Science – CERS*, Kosice: TU, Slovak Republic, pp. 1089 –1098.
- [21] Veber, J. et al. (2000). *Management*. Praha: Management Press, pp. 656.

THE MEDICAL CARE AND LIFE IN HEALTH EXPECTANCY IN AGING EUROPE

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Abstract. The demographic changes in the European Union, that have been observed for many years, clearly highlighted the global aging process, which has a huge effect on reproduction, mortality and migration. In an aging society the health care system plays an important role. Due to the increasing number of elderly population the demand for care services and medical care is increasing, and thus increase of medical personnel, number of places in hospitals, sanatoriums, health resorts and hospices. Nowadays, it is important to prolong life in good health, which is not accompanied by disability or limitations of life-related activity due to health conditions. The main objective of this paper is spatial analysis of medical care system development and life in health expectancy assessment of the European Union countries population. The application of spatial analysis to investigate this process will allow to establish existing relationships between the studied regions with respect to this phenomenon. To estimate changes in health status of the population will use summary measures of population health that divided into the measure of the health expectancies and measures of health gap. All calculations and maps were made in the statistical program R CRAN and Microsoft Excel. The real data from Eurostat was used for the analysis.

Keywords: health care system, life in health expectancy, population aging, spatial autocorrelation of residuals.

JEL Classification: I19, J19, C49

1. Introduction

A complete picture of changes in the number and structure of the population of the EU can be observed on the basis of observations of real growth of population and factors: total fertility rate and gross reproduction, for which a decreasing trend has been evident for many years. In an aging society, the health care system plays an important role. Due to the increasing number of elderly population is increasing the demand for care services and medical care, and thus increase the number of medical personnel, the number of places in hospitals, sanatoriums, health resorts and hospices.

In recent years, spatial analysis methods have become increasingly important in socio-economic analyzes (Kopczewska, 2013). These methods are applied in the study of phenomena influenced by localization and spatial interactions (e.g. (Mastalerz-Kodzis & Pospiech, 2016, A), (Mastalerz-Kodzis & Pospiech, 2016, B), (Zeug-Zebro & Miskiewicz-Nawrocka, 2017),

(Warzecha & Wojcik, 2015), (Wolny-Dominiak & Zeug-Zebro, 2012)). These also include demographic processes.

The aim of the paper is spatial analysis of medical care system development and life in health expectancy assessment of the European Union countries population. All calculations and maps were made in the statistical program R CRAN and Microsoft Excel. The data was obtained from the Eurostat database.

2. Summary measures of population health

The most common measure of human life is life expectancy (LE). LE represents the average number of years that a person at age x is likely to live on the assumption, that the current mortality trends will not change. The life expectancy indicator shows only the life span.

The Healthy Life Years (HLY) indicator also called Disability-Free Life Expectancy (DFLE) indicator allows to identify two features of a healthy population: life expectancy and quality of life in relation to health. The HLY indicator is estimated based on the observation, that not all the years determined by the expected life expectancy are lived/survived in full health (Trzpiot & Orwat-Acedanska, 2016). A population with a high life expectancy does not mean that it is healthy. HLY is estimated by the method of Sullivan used since the 70s of the last century. This method is based on the frequency of disability in a given age population and mortality. HLY is calculated on the basis of mortality tables and self-perceived disability determined using standard questionnaires. Mortality data are widely available in all EU countries and come from public statistics systems, but disability is measured by means of unified tools for income and living conditions in Europe (EU-SILC). (Burzynska et al., 2008), (Chan et al., 2016)

Another measure of the population health is Disability Adjusted Life Years (DALY), which determines the number of years lived due to the incomplete efficiency of the particular disease and / or premature death due to the particular disease. 1 DALY means 1 year of lost life in a full health. The disadvantage of DALY is the lack of data needed to calculate it, ie the occurrence of diseases by age and sex, the number of disability incidences, the average age of disability in the population, the duration of disability, the number of disabilities. (Burzynska et al., 2008), (Schroeder, 2017). The alternative to DALY is disability adjusted life expectancy (DALE). DALE is the number of years lived in health. WHO replaced the DALE indicator by a measure of healthy life expectancy (HALE) in 2001. The HALE indicator measures the average number of years that a person in a given population is likely to live in health (in various states of health) (Burzynska et al., 2008).

3. Perkal synthetic measures

The One method of assessing the potential of the studied phenomenon (the level of medical care of the region) is a method of Perkal, which based on the construction of synthetic measure m_i . This measure based on the presentation of the variability the group of traits in a set of different objects in one year.

The higher value of the synthetic indicator means better position the object in terms of level of development. The Perkal indicator is estimated as the arithmetic mean of traits x'_{ij} , where x'_{ij} is the standardized value of j - the features for the i - th object.

4. Spatial statistics

There are two types of indicators of spatial associations (ISA): global and local measures of autocorrelation. The global autocorrelation follows from the existence of correlations across the spatial unit test. The local measure shows a spatial dependency the variable with neighboring units in a particular location. The most commonly used global and local measures are: the Moran statistics I (Moran, 1950) and the Geary statistics C (Geary, 1954), (Anselin et al., 1996). The spatial autocorrelation occurs when a certain phenomenon in a single spatial unit alters the probability of occurrence of this phenomenon in the neighboring units (Bivand et al., 1980). In general, the positive spatial autocorrelation occurs when we observe the accumulation, in terms of the location, high or low values of observed variables. In the case of negative autocorrelation, high values adjacent to low, and low to high, creating a kind of checkerboard (Suchecki, 2010). The lack of spatial autocorrelation means the spatial randomness, i.e. the high and low values of observed variables are distributed independently.

The Moran statistics I is one of the most widely used measures in the study of spatial autocorrelation. This statistic takes values ranging from $[-1,1]$: positive, when tested objects are similar, negative, when there is no similarity between them and approximately equal to 0 for a random distribution of objects (Kopczewska, 2011). Cliff and Ord (Cliff & Ord, 1973) have shown that the distribution of Moran statistics is asymptotically normal.

The Local Moran determines clusters of spatial units and studies whether the unit is surrounded by neighboring units with similar or different values of the variable studied in relation to the random distribution of these values in the studied space (Wolny – Dominiak & Zeug – Zebro, 2012). In the case of non-standardized values of the variable and row-standardized spatial weight matrix the local Moran is given by (Arbia, 2006).

5. Empirical analysis

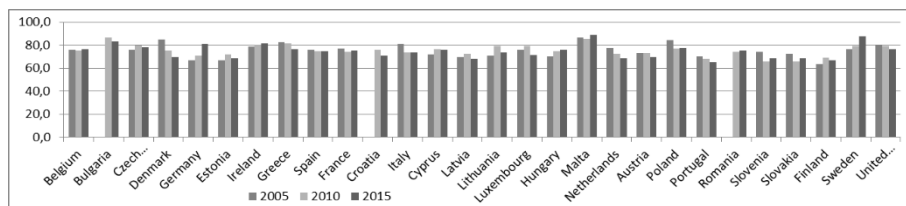
The object of the study were all EU countries in 2005, 2010 and 2015. The data used in the analysis comes from the Eurostat database. All calculations and maps were made in the statistical program R CRAN and Microsoft Excel.

Analyzing the data contained in Eurostat for the healthy life years, it can be seen that in all the studied years highest value of HLY for women characterized Malta (74.6 years in 2015) and Sweden (73.8 years in 2015). The shortest healthy life years for women were recorded in Lithuania (54.1 years in 2015), Portugal (55 years in 2015) and Slovakia (55.1 years in 2015). For men, the highest HLY value in 2005-2015 was recorded in Sweden (74 years in 2015) and Malta (72.6 years in 2015), while the lowest values were recorded for Latvia (51.8 years in 2015), Estonia (53.8 years in 2015) and Lithuania (54.1 years in 2015).

Observing the dynamics of the HLY index for women in 2005-2015, it is clear that the most favourable situation is in Germany and Sweden, where in the study period the HLY value increased by 12.7 and 10.6 years, respectively. The worst situation is in Denmark, where healthy life years for women have decreased by 10.8 years. Similar conclusions can be drawn by observing changes in HLY values for men between 2005 and 2015. The most favourable situation can be noted in Germany (growth of 10.8 years) and Sweden (growth of 9.5 years), while the worst situation is in Denmark (down by 8 years).

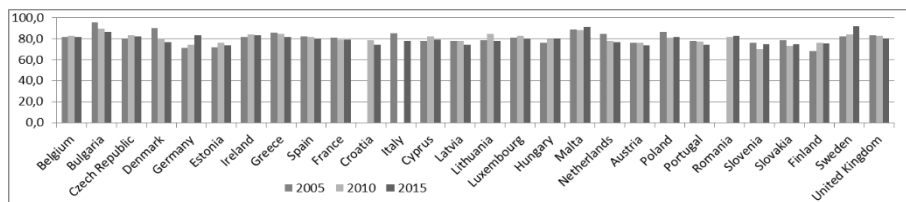
Figure 1-2 shows the dynamics of changes in estimated years of life in health in EU countries respectively for men and women.

Figure 1: The share of the expected years of life in the expected life expectancy of women at birth



Source: own elaboration

Figure 2: Share of the expected years of life in the expected life expectancy of men at birth

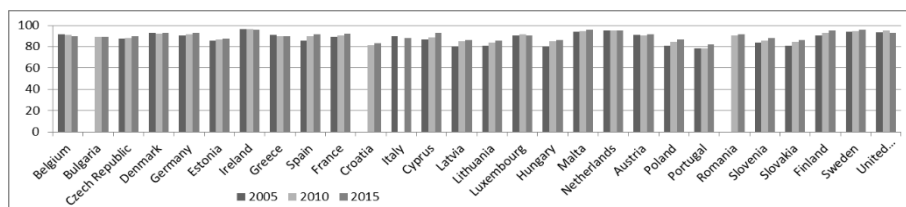


Source: own elaboration

Comparing 2005 with 2015 (Figure 1), it can be said that the share of years of life in health in relation to the average life expectancy of women in most countries has decreased. This means that the increase in the expected life expectancy of women is not accompanied by an increase in the number of years of health. Similar conclusions can be drawn in the case of men (Fig. 2) - a decrease in healthy life years for men in most EU countries in 2005 compared with 2015. It should also be noted that the percentage of HLY in the expected life expectancy of women is lower than that of men. The reason for this may be the longer expected life expectancy of women.

Figures 3 and 4 show the dynamics of changes in life expectancy adjusted for life expectancy in EU countries, respectively for men and women.

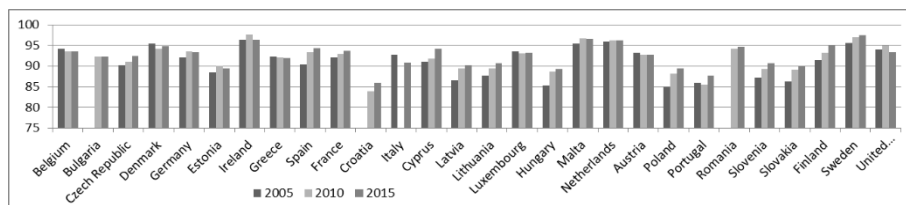
Figure 3: Participation of DALE in expected life expectancy of women at birth



Source: own elaboration

Comparing 2005 with 2015 (Figure 3), it can be said that disability-adjusted life expectancy in relation to the average life expectancy of women in most countries has increased. It means, that from year to year we observe an improvement in the expected life expectancy adjusted for health reasons. The same situation applies to men (Figure 4) - the increase in the DALE indicator of men in most EU countries comparing 2005 to 2015.

Figure 4: Participation of DALE in expected life expectancy of men at birth

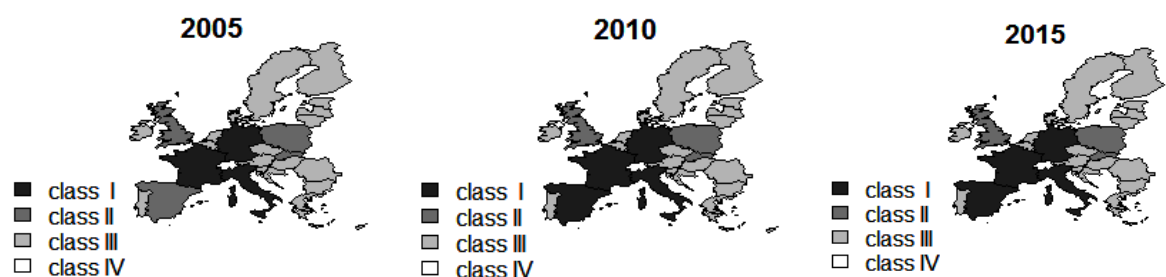


Source: own elaboration

In the second stage of the study estimated a Perkal synthetic measure and tidied countries due to the level of the development of the health care system. The set of diagnostic features taken into account in the study, assuming division between stimulants (S) and anti-stimulants (D) is following: in-patient average length of stay in days (D), consultation of a medical doctor (D), life expectancy in absolute value at 65 – females (S), life expectancy in absolute value at 65 – males (S), available beds in hospitals per 1000 population (S), available beds in nursing and residential care facilities per 1000 population (S), medical doctors per 1000 population (S), nurses and midwives per 1000 population (S), dentists per 1000 population (S) and pharmacists per 1000 population (S).

Based on the estimated values of the Perkal indicator it can be concluded, that the most advanced development of health care system (first place in the ranking) in all studied years is in Germany, while France ranks second and next position – Italy. The least favorable situation can be noted in the following countries: Estonia (2010), Croatia (2005), Lithuania (2005 and 2010), Hungary (2005 and 2010), Cyprus (2015), Finland (2015), Latvia (2015), which in the analyzed years occupied one of the last three places in the ranking. Estimated value of Perkal measure also shows, that in the studied years most variable rankings were for Hungary (coefficient of variation 0.3) and Sweden (0.25). While the lowest variability in health care system was recorded for the countries, that in the analyzed period remained at the same place in the ranking, ie. Germany, France, Italy, Spain and the United Kingdom. Comparing the data obtained in 2005 and 2015 year it can be observed that over the 10 years the most beneficial changes, ie. the improvement of health care system (much higher in the ranking), occurred in the Czech Republic and Hungary. On the other hand, the worst deterioration of the situation (much lower ranking) took place in Cyprus.

Figure 5: The classification of EU countries due to the value of the Perkal's synthetic measure in years: 2005, 2010 and 2015



Source: own elaboration

In the next stage, the total interval of measures variability were divided into four classes, to which countries are assigned according to the following rules: class I (high levels of the studied phenomenon), class II (medium levels of the studied phenomenon), class III (low levels of the studied phenomenon), class IV (very low levels of the studied phenomenon). The results of obtained classes spatial distribution for Europe territorial division into countries in 2000, 2010, 2015 due to the level of health care system development is shown in the following maps (Fig. 5).

Based on the above maps, it can be observed that the level of health care system development in EU countries is unchanged. In subsequent years, almost all countries belong to the same groups. The exception is Spain, which in 2005 belonged to Group II and in 2010 and 2015 to Group I. Such a change means improvement of health care system in that country.

In the second stage of research it was examined the spatial autocorrelation of health care system development process in the EU in 2005, 2010 and 2015. Calculated values of global Moran global Geary for the Perkal's measure are presented in Tables 1 and 2.

Table 1: Global Moran for the Perkal indicator in the years 2005, 2010 and 2015

year	Global Moran	$E(I)$	$Var(I)$	p -value
2005	0,1081	-0,0400	0,0279	0,1878
2010	0,1123	-0,400	0,0284	0,1830
2015	0,0990	-0,0400	0,0289	0,2069

Source: own elaboration

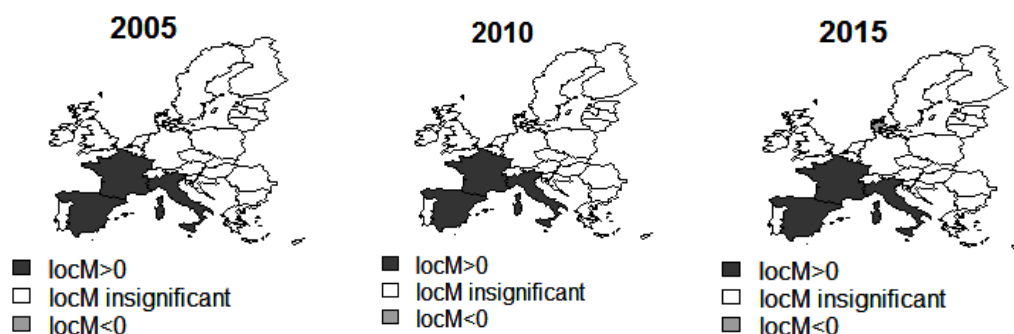
Table 2: Global Geary for the Perkal indicator in the years 2005, 2010 and 2015

year	Global Geary C	$E(C)$	$Var(C)$	p -value
2005	1,2842	1,0000	0,0403	0,9215
2010	1,2702	1,0000	0,0399	0,9120
2015	1,2605	1,0000	0,0394	0,9054

Source: own elaboration

Analyzing the data contained in Tables 1 and 2, it can be concluded that the values of Moran's and Geary's global statistics are positive and statistically significant. This means no spatial autocorrelation. Every observed level of health care development can appear in any country with equal probability. It can be seen too that the values of I and C are higher than their expected values, which indicates weak positive spatial correlation.

Figure 6: The classification of EU countries due to the value of the local Moran for Perkal synthetic measure in years 2005, 2010 and 2015



Source: own elaboration

The next stage of research was to estimate the Moran's local statistics for all EU countries in order to identify the spatial structure. The graphical interpretation of calculated statistics is shown in Figure 4. The darkest color indicates important and positive Moran's local statistics, gray - significant and negative statistics, and white - insignificant statistics.

On the basis of above maps (Fig. 6) it can be seen that the values of Moran's local statistics for almost all EU countries are statistically significant. In the studied period, significant and positive values of local Moran obtained only for France, Italy and Spain. This means that these countries are clusters, that is, they are surrounded by units with significantly similar level of health care system development.

The significant and negative values of local Moran statistics can be observed in all the studied years for Luxembourg and only in 2015 for Denmark. This means that mentioned countries have been called local outliers, because they have been surrounded by counties with a relatively lower level of health care system development.

6. Conclusion

The average life expectancy in EU countries is among the highest in the world. Expected life expectancy has been increasing for many years. There are many factors behind this: improved nutrition, increased detection and treatment of diseases, and social change associated with improved living conditions and improved hygiene. The study shows that the life expectancy of women is higher than for men, which is the result of excess male mortality. Comparing the expected years of life in health (HLY and DALE) with average life expectancy, we can say that women live on average longer, but unfortunately less than in the male population part of their lives is in good health, without restriction and disability.

The analysis showed that the most favorable changes in healthy life years concern German residents, which was confirmed in the ranking of EU countries due to the level of development of the health care system. Germany occupies first place in every year. Due to the high level of development of the health care system in Germany in the years 2005-2015, the healthy life years have increased significantly in both women and men. In addition, based on the estimated values of the measure, Lithuania, Latvia and Estonia took the lowest positions in the ranking, which also explains the low values of HLY and DALE in these countries.

References

- [1] Anselin, L., et al. (1996). Simple diagnostic tests for spatial dependence. *Regional science and urban economics*, vol. 26, pp. 77-104.
- [2] Arbia, G. (2006). *Spatial Econometrics: Statistical Foundations and Applications to Regional Growth Convergence*. Springer, New York.
- [3] Bivand, R. S., Pebesma, E. J. and GomezRubio, V. (2008). *Applied Spatial Data Analysis with R*. Springer, New York, United States.
- [4] Burzynska, M., et al. (2010). Life expectancy i healthy life years jako podstawowe miary oceny sytuacji zdrowej ludności. *Problemy Higieny i Epidemiologii*, vol. 91, no. 4, pp. 530-536.
- [5] Chan, A., Saito, Y. and Robine, J. M. (2016). International perspectives on summary measures of population health in an aging world. *Journal of Aging and Health*, vol. 28, no. 7, pp. 1119-1123.
- [6] Cliff, A. and Ord, J. K. (1970). Spatial autocorrelation: A review of existing and new measures with applications. *Economic Geography*, vol. 46, pp. 269-292.
- [7] Geary, R. (1954). The Contiguity Ratio and Statistical Mapping. *The Incorporated Statistician*, vol. 5, pp. 115–145.
- [8] Kopczewska, K. (2011). *Ekometria i statystyka przestrzenna z wykorzystaniem programu R Cran*. CeDeWu, Warszawa.
- [9] Kopczewska, K. (2013). The spatial range of local governments: does geographical distance affect governance and public service? *Annals of Regional Science*, vol. 51, no. 3, pp. 793-810.
- [10] Mastalerz-Kodzis, A. and Pospiech, E. (2016, A). Socio-economic consequences of globalization - spatial analysis of economic characteristics in European Union countries.

- 16th International Scientific Conference Proceedings Globalization and its socio-economic consequences*, Rajecké Teplice, Slovakia, pp. 1313-1321.
- [11] Mastalerz-Kodzis, A. and Pospiech, E. (2016, B). Dynamic and spatial analysis of economic and labour market characteristics in European countries. *Proceedings of 34th International Conference Mathematical Methods in Economics*, Liberec, Czech Republic, pp. 546-551.
- [12] Moran, P. A. P. (1950). Notes on Continuous Stochastic Phenomena. *Biometrika*, vol. 37, no. 1, pp. 17–23.
- [13] Schroeder, S. A. (2017). Value Choices in Summary Measures of Population Health. *Public Health Ethics*, vol. 10, no. 2, pp. 176-187.
- [14] Suchecki, B. (2010). *Ekonometria przestrzenna. Metody i modele analizy danych przestrzennych*, C.H. Beck, Warszawa.
- [15] Trzpiot, G. and Orwat-Acedanska, A. (2016). Spatial quantile regression in analysis of healthy life years in the European Union countries. *Comparative Economic Research*, vol. 19, no. 5, pp. 179-199.
- [16] Warzecha, K. and Wojcik, A. (2015). Analysis of the availability of internet access for young people in schools of Silesia Province based on spatial statistics. *Proceedings of 33th International Conference Mathematical Methods in Economics*, Cheb, Czech Republic, pp. 912-918.
- [17] Wolny-Dominiak, A. and Zeug-Zebro, K. (2012). Spatial statistics in the analysis of county budget incomes in Poland with the R CRAN. *Proceedings of 30th International Conference Mathematical Methods in Economics*, Karvina, Czech Republic, pp. 992-998.
- [18] Zeug-Zebro, K. and Miskiewicz-Nawrocka, M. (2017). Spatial analysis of the population aging phenomena in European Union. *Proceedings of 35th International Conference Mathematical Methods in Economics*. Hradec Kralove, Czech Republic, pp. 866-872.

REGIONAL PATTERNS OF GENDER INEQUALITY IN S&T ACROSS THE EU IN THE CONTEXT OF THE INCREASING INTERNATIONALISATION OF RESEARCH

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Abstract. Science & Technology (S&T) strongly benefit from the globalisation processes enabling the cross-border mobility of researchers and exchange of knowledge. One of the most important aspects of the increasing internationalisation of science is the possibility to explore the talents wherever they are. This search for the talents doesn't have only the geographical dimension, it also focuses on how to eliminate the barriers to the involvement of groups that are underrepresented in research such as women. This leads to an increasing emphasis on removing gender inequality in research. However, the patterns of this inequality can be very different across the countries. While in some countries the main problem is the low representation of women in STEM disciplines and in S&T in general, in others it is their concentration in the lower paid positions and their absence in the increasingly important industrial research and development. Using the cluster analysis of the data available through EUROSTAT and "SHE figures" reports, this paper aims to identify the differences in regional patterns in the gender (in) equality in the S&T across the EU countries. The paper also examines the relationship between the position of women in the national S&T systems and level of their internationalisation. The conclusions of the paper can help to identify effective context-sensitive strategies to strengthening gender equality in S&T.

Keywords: internationalisation of S&T, gender equality, human resources in research

JEL Classification: O39

1. Introduction

The patterns of women participation in R&D differ across the career stages and disciplines. The proportion of women and men among the PhD graduates is close to gender parity in many EU countries and women create the majority of PhD students in the increasing number of cases (Eurostat, 2017). However, disciplinary gender segregation is visible on this level already. Women dominate in the fields like education, health and welfare research, agriculture and veterinary research or humanities and arts. On the other hand, they are underrepresented among the scientists in the field of engineering in which only one third of PhD graduates are women (European Commission, 2016). Persisting gender stereotypes on both explicit and implicit level that discourage girls to engage in science and technology are among the main reasons of this uneven distribution. Science is still associated with what is perceived as male abilities and

behaviours (Miller et al., 2014; Nosek et al., 2009). While the explicit stereotypes weaken with the increasing proportion of women in the field, the implicit stereotypes persist (Smeding, 2012) but they no longer reflect disciplines' gender composition, but, rather, are correlated with disciplines' scientific intensity (Nosek et al., 2009).

Women start dropping out from research on the later career stages and they leave at higher numbers as their male colleagues (Committee on Maximizing the Potential..., 2007). Those who stay have a lower probability of reaching the grade A or decision-making positions. This leads to the well-known “scissors” effect. The exit rate is higher for the STEM disciplines and especially for engineering but the “leaky pipeline” phenomenon does not avoid fields which are perceived as more “female” either. The study of Ceci (2014) shows that the effect of the leaky pipeline on the gender composition of researches might even be stronger in the fields in which women are already prevalent (psychology, life science, social science) than in the math-intensive fields in which they are underrepresented but proportion of women holding higher level positions is similar to that of men. On the other hand, a positive workplace experience and workplace support increase the probability that women remain in the research profession (Ayre et al., 2013; Bystydzienski et al., 2016; Fouad et al., 2016; 2017).

The scholars offer different explanations of why women leave research and do not climb up the career ladders. The parenthood and lacking institutional support that would enable reconciliation of caring responsibilities and highly demanding research job remains the most important factor, but there are many other. Hunt (2016) in her study focusing on engineering fields suggests that women leave primarily because of dissatisfaction with pay and promotion opportunities for women in the male-dominated fields. Rosser (2004) on the other hand links the promotion dissatisfaction to the lack of mentoring or isolation in the field where women are in minority (Jackson & O’Callaghan, 2011). The uneven distribution of teaching duties might hinder the career growth of women in academia (Kiczkova et al., 2009; Probert, 2005). The empirical data also show that women receive less research funding than men (European Commission, 2016). They also tend to be less mobile on later career stages which might affect their access to networks and collaborations that are crucial in the production of internationally recognised scientific publications and other outcomes (Jons, 2011; Cameron et al., 2013; Nielsen, 2016). Both success in the competition for funding and international collaborations and publications constitute the main elements of currently dominating research metrics systems used to assess the quality of researchers work and therefore determining the chances for further promotion (O’Brien & Hapgood, 2012). These metrics are then again used in the evaluation of the funding proposals and the circle of consequences closes.

While the phenomenon described above can be observed across all EU countries, their extent differs from one national R&D system to another. The following analysis aims to capture those differences and interpret them in the broader context of the overall attractiveness of national R&D systems.

2. Methods

The main aim of the paper is to explore regional patterns of gender (in) equality in research and to identify groups of EU countries with similar characteristics in this area. We used simple K-means clustering method carried out in the Microsoft Excel (Solver add-on) program for this purpose. The Figures 2015 (European Commission, 2016) report and Eurostat database (2014, 2017) were used to collect the necessary data. Six indicators selected for the analysis are described in the following Table 1.

Table 1: Indicators included in the analysis

Indicator	Description	Data source
Proportion of women researchers	The share of women researcher on the total population of researchers across all sectors and disciplines.	Eurostat 2014
Dissimilarity index	The percentage of either women or men who would have to move across different scientific fields to ensure that the proportions of women and men were equal in each scientific field (EC 2016). As data for the overall R&D sector were not available, index for HE sector was used as it covers the whole spectrum of disciplines.	She figures 2015
Proportion of women researchers in business sector	The share of women researcher on the total population of researchers working in the business sector.	Eurostat 2014
Gender pay gap in science and technology	Difference between the average gross hourly earnings of men employees and women employees, expressed as a percentage of the average gross hourly earnings of men employees in the field of 'Scientific research & development'. (EC 2016)	She figures 2015 (The last data available from 2010)
Proportion of women on boards	Share of women members of scientific and advisory boards, R&D commissions, councils, committees, foundations, academy assemblies and councils, which usually hold a large degree of decision-making power.	She figures 2015
Gender difference in the share of „grade A” staff	Difference between the proportion of men employees holding the grade A positions expressed in % and proportion of women employees holding the grade A positions expressed in %.	Own calculation based on the data from She figures 2015

Source: by authors

The data were edited and scaled for better comparability. Initial cluster centres for four clusters were selected and values for all selected indicators were assigned manually. In the next step distance of each data point with all cluster centres was calculated and minimum distance of each point from among the four cluster centres was determined. The sum of the minimum distances for all data points was then optimized using the Solver add-on. Descriptive statistics were calculated for each cluster.

3. Results and discussion

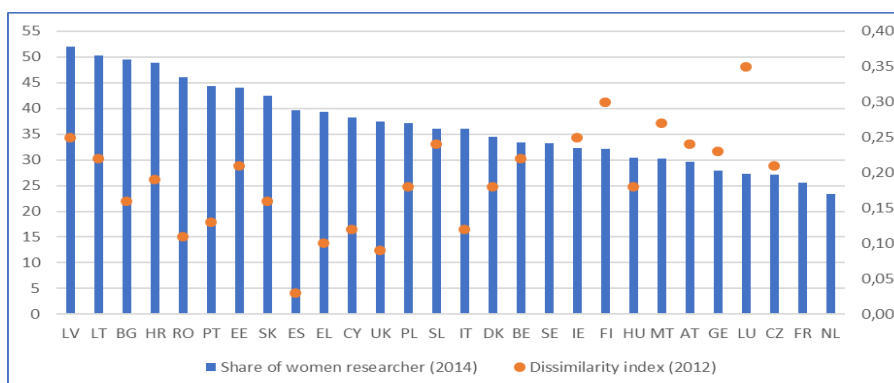
Before presenting the results of the cluster analysis and interpreting them, it might be useful to provide the overview of how EU member states perform in the areas included in the analysis. We split the analysed indicators into three dimensions for this purpose. These dimensions include (1) participation of women in R&D workforce, (2) access to economic resources and opportunities and (3) access of women to decision making positions and promotion opportunities.

To evaluate the participation of women in the R&D workforce we looked at the proportion of women in the overall researchers' population and their distribution across different disciplines. As showed in the following Figure 1, mainly the countries in Western Europe still struggle to attract and retain more women to research. On the other hand, proportion of women is relatively high in majority of the post-communist countries.

High share of women researchers in Eastern Europe can be partially attributed to the fact that women were encouraged to enter these professions during the communist era. On the other hand, She Figures report (2016) offers also an additional explanation of this pattern. The share of women in research is high in the countries with lower level of funding in research and vice versa. Men dominate in research in the countries, where working in this sector is related to higher societal prestige and better access to resources. Countries with lower share of women among researcher also show a relatively high level of disciplinary gender segregation,

represented by the dissimilarity index in our analysis. There is no clear pattern for the distribution of women researchers across disciplines in the countries with higher share of female researchers.

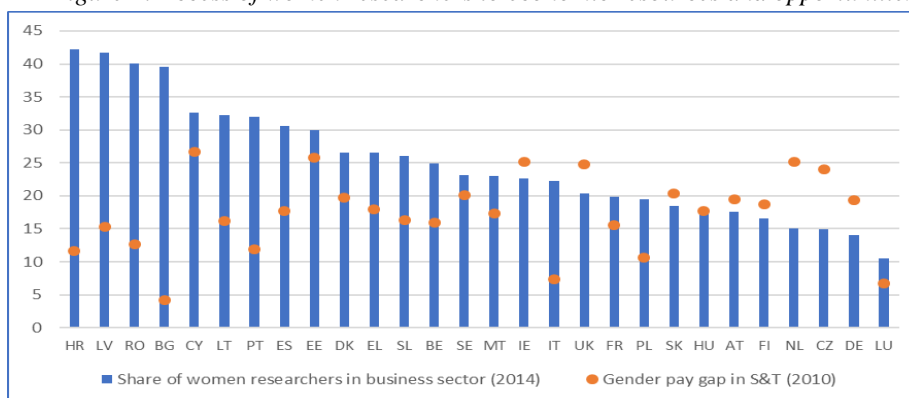
Figure 1: Participation of women in R&D workforce *



Source: Eurostat, 2017; European Commission, 2016* For BE, DK, DE, IE, EL, FR, LV, AT, LU, SE the data on share of women from 2013 were used

For the second dimension, we looked at the gender pay gap in science and technology sector. Information about the share of women researchers in the business sector R&D was also included in the analysis with regard to the rising number of opportunities this sector generates and increasing support it receives also from the public resources (see Figure 2).

Figure 2: Access of women researchers to economic resources and opportunities

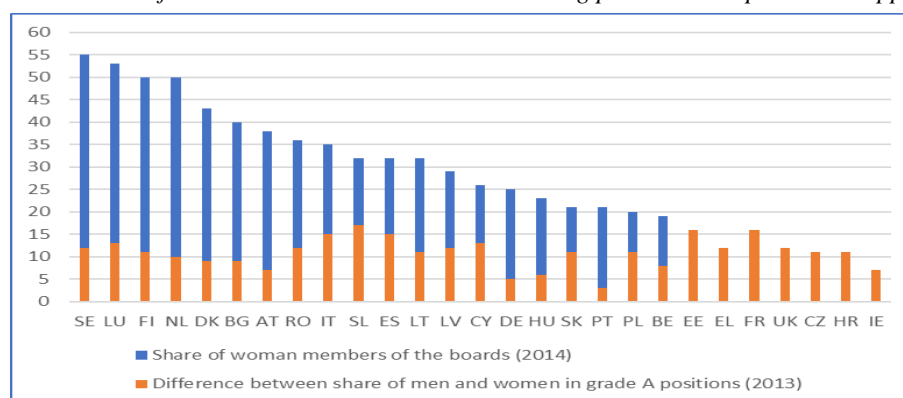


Source: Eurostat, 2017; European Commission, 2016

Both indicators reveal the considerable differences in the group of the post-communist countries that were visible within the previous dimension. While there is a low share of women working in the business sector and larger pay gap in the Visegrad region countries, situation in the “new” member states in the south-eastern Europe is exactly the opposite. Concerning the “old” member states, the share of women in business sector is lowest in the central Europe countries with the strong tradition of industrial research and innovation, which might also be one of the factors that contribute to relatively high gender pay gap in this region.

To evaluate the access of women in R&D sector to decision making positions and promotion opportunities we focused on the proportion of women among the members of bodies with decision making power and proportion of women holding grade A academic positions (Figure 3).

Figure 3: Access of women researchers to decision making positions and promotion opportunities

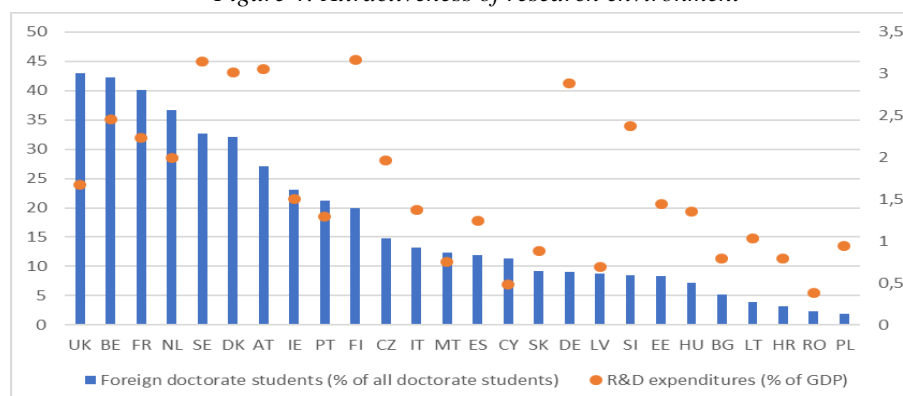


Source: European Commission, 2016*Data on share of women members of boards are not available for EE, EL, FR, UK, CY, HR, IE and MT

The impact of the gender equality policies is clearly visible in this dimension. Northern Europe countries with established equality support programmes have the highest proportion of women in bodies with decision making power in academic sector and they even hold a majority of these positions in some of these countries. Eastern Europe countries lag behind despite the higher overall share of women researchers. The gap between the proportion of men and women in grade A positions is relatively small in all EU countries, but only in case of Malta the proportion of women in grade A positions is higher than a proportion of men (difference is 11%, information is not captured in the Figure 3), which can be however explained by the overall low number of women in research.

To put these information into the broader context, that will help us interpret the results of cluster analysis we also briefly focused on the national research environments. Two simple indicators tell a lot about the state of the national R&D systems. Level of R&D funding (right axis) indicates what is the extent of the support is for R&D and what the overall conditions for doing research are. Proportion of foreign PhD students (left axis) reflects the attractiveness of the country for the research talents searching for the stimulating research environment and following the best opportunities to pursue their career (Figure 4).

Figure 4: Attractiveness of research environment*



Source: Eurostat, 2017; European Commission, 2017

3.1 Results of the cluster analysis

The following text presents the outcomes of the cluster analysis, which uses all six indicators described above to propose a classification of EU member states according to how they perform

in different dimension of gender equality in R&D. The analysis generated four clusters, which are described in the Table 2 (below).

Table 2: Clusters characteristics

Cluster	Countries	Basic characteristics
Cluster 1	Bulgaria, Croatia, Latvia, Lithuania, Romania	High share of women in the research, high share of women in the business sector research, average (compared to other countries) level of disciplinary gender segregation, average proportion (compared to other countries) of women board members, lower gender pay gap.
Cluster 2	Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Ireland, Luxembourg, Sweden, Cyprus, Hungary	Low share of women in the research, very low share of women in the business sector research, slightly higher (compared to other countries) level of disciplinary gender segregation, higher proportion (compared to other countries) of women board members (excluding HU and CZ), higher gender pay gap.
Cluster 3	Estonia, Greece, Italy, Poland, Portugal, Slovakia, Slovenia, Spain, United Kingdom,	Higher share of women in the research, low share of women in the business sector research, lower (compared to other countries) level of disciplinary gender segregation, low proportion (compared to other countries) of women board members, higher gender pay gap.
Cluster 4	Malta	Low share ow women in the research, low share of women in the business sector research, high level of disciplinary gender segregation.

Source: by authors

The average values of the indicators for all four clusters are summarised in the following Table 3.

Table 3: Average values of indicators included in the analysis

Indicator	Cluster 1	Cluster 2	Cluster 3	Cluster 4	Total
Proportion of female researcher	48,50 %	29,74 %	38,93 %	30,30 %	36,74 %
Dissimilarity index	0,18	0,21	0,14	0,27	0,18
Proportion of female researchers in business sector	37,97 %	18,63 %	25,13 %	23 %	25,02 %
Gender pay gap in R&D	12,00 %	18,96 %	18,64 %	NA	17,31 %
Proportion of women on boards, 2014	31,66 %	37,66	24,55	NA	31,95
Gender difference in the share of „grade A” staff	9,67 %	9,58 %	13,56 %	-11,00 %	10,14 %

Source: calculations by authors

The analysis clearly demonstrates that while all EU countries face the gender inequality in R&D sector, patterns of this inequality differ considerably. Western European countries perform better with regard to the participation of women in the higher positions but they struggle to attract more women to research, despite the active gender equality policies that most of them have. On the other hand, there are more women in research in eastern and southern Europe countries but they are unrepresented in decision making positions (Felt (2009) reveal more about the sociological framing of gender differences in the “old” and “new” member states academic environments in their study from 2009). It is also interesting, that “new” member states do not form a coherent group despite their common past and are distributed in three different clusters (CZ and HU moved to the cluster two, when the analysis was carried with slightly different set of indicators but allocation of other countries to clusters 1 and 4 was stable). The overall look on the countries in the cluster 1 indicates that they perform better than other countries in the majority of indicators covered in the analysis. However, when interpreting this fact, it is necessary to consider that these countries also invest the least into R&D and what seems to be the manifestation of gender equality at the first sight might be consequence of the

overall low attractiveness and underfunding of the R&D sector in these countries. Continuous growth in the level of funding and increasing internationalisation might contribute to improving the quality of research system and higher attractivity of research careers in these countries. This should however not lead to overtaking the strongly competitive models of research careers that push women out of the R&D sector. Instead, these countries should search for the policies that provide necessary support to all talents regardless of their backgrounds and career paths they follow.

4. Conclusion

Position of women in R&D is in the focus of the EU for a long time already. The reason for this is not idealistic only: demand for highly qualified researchers is increasing and no talents should be wasted. Number of projects has therefore been supported to introduce the measures that would improve the position of women in R&D sector and prevent them from leaving careers in research. To ensure that these measures will be effective, the variety of patterns that gender inequality takes in different EU countries should be considered. This paper points out some of these differences and links them to wider R&D environment. Further in-depth research is necessary to explore the factors that cause these differences and their development in time.

References

- [1] Ayre, M., Mills, J., and Gill, J. (2013). 'Yes, I do belong': The women who stay in engineering. *Engineering studies*, vol. 5, no. 3, pp. 216-232.
- [2] Bystydzienski, J. et al. (2016). The leadership role of college deans and department chairs in academic culture change. *Studies in Higher Education*, pp. 1-15.
- [3] Cameron, E. Z., Gray, M. E., and White, A. M. (2013). Is publication rate an equal opportunity metric? *Trends in Ecology & Evolution*, vol. 28, no. 1, pp. 7-8.
- [4] Ceci, S. J. et al. (2014). Women in academic science: A changing landscape. *Psychological Science in the Public Interest*, vol. 15, no. 3, pp. 75-141.
- [5] Committee on Maximizing the Potential of Women in Academic Science and Engineering U.S. (2007). *Beyond bias and barriers: fulfilling the potential of women in academic science and engineering*. Washington, D.C: National Academies Press.
- [6] European Commission. (2016). *She Figures 2015*, Luxembourg: Publications Office of the European Union.
- [7] European Commission. (2017). *European Innovation Scoreboard 2017*, Luxembourg: Publications Office of the European Union.
- [8] Eurostat database. (2014, 2017). Available: <http://ec.europa.eu/eurostat/data/database>.
- [9] Felt, U. (Ed.). (2009). *Knowing and living in academic research: convergences and heterogeneity in research cultures in the European context*. Prague: Institute of Sociology of the Academy of Sciences of the Czech Republic.
- [10] Fouad, N. A. et al. (2016). Comparison of women engineers who persist in or depart from engineering. *Journal of Vocational Behavior*, vol. 92, pp. 79-93.
- [11] Fouad, N. A. et al. (2017). Women's reasons for leaving the engineering field. *Frontiers in Psychology*, vol. 8.

- [12] Jackson, J. F. L., and O'Callaghan, E. M. (2011). Understanding employment disparities using glass ceiling effects criteria: An examination of race/ethnicity and senior-level position attainment across the academic workforce. *Journal of the Professoriate*, vol. 5, no. 2, pp. 67–99.
- [13] Jons, H. (2011). Transnational academic mobility and gender. *Globalisation, Societies and Education*, vol. 9, no. 2, pp. 183-209.
- [14] Kiczkova, Z., Szapuova, M. and Zezulova, J. (2009). *Na ceste k rodovej rovnosti. Ženy a muži v akademickom prostredí*, Bratislava: IRIS.
- [15] Miller, D. I., Eagly, A. H., and Linn, M. C. (2015). Women's representation in science predicts national gender-science stereotypes: Evidence from 66 nations. *Journal of Educational Psychology*, vol. 107, no. 3, pp. 631.
- [16] Nielsen, M. W. (2016). Gender inequality and research performance: moving beyond individual-meritocratic explanations of academic advancement. *Studies in Higher Education*, vol. 41, no. 11, pp. 2044-2060.
- [17] Nosek, B. A. et al. (2009). National differences in gender–science stereotypes predict national sex differences in science and math achievement. *Proceedings of the National Academy of Sciences*, vol. 106, no. 26, pp. 10593-10597.
- [18] O'Brien, K. R. and Hapgood, K. P. (2012). The academic jungle: ecosystem modelling reveals why women are driven out of research. *Oikos*, vol. 121, no.7, pp. 999-1004.
- [19] Probert, B. (2005). 'I just couldn't fit it in': Gender and unequal outcomes in academic careers. *Gender, Work & Organization*, vol. 12, no. 1, pp. 50-72.
- [20] Rosser, S. V. (2004). *The science glass ceiling: Academic women scientists and the struggle to succeed*, Psychology Press.
- [21] Smeding, A. (2012). Women in science, technology, engineering, and mathematics (STEM): An investigation of their implicit gender stereotypes and stereotypes' connectedness to math performance. *Sex roles*, vol. 67, no. 11-12, pp. 617-629.

ETHICAL ASPECTS OF NEUROMARKETING RESEARCH AS PART OF A CORPORATE SOCIAL RESPONSIBILITY FROM THE PERSPECTIVE OF GLOBALIZATION

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Abstract. The article provides a theoretical apparatus about the area of neuromarketing, represent a major neuromarketing techniques used in the development of marketing research (MRI, electroencephalography, magnetoencephalography, eye-tracking, etc.) and describes the ethical aspects neuromarketing research from the perspective of globalization process. Furthermore, the article paid to the issue of corporate social responsible enterprises and their communication and also examines whether neuromarketing techniques should be incorporated into their communications portfolio. The article describes the current situation of neuromarketing research abroad (USA – study of Coca Cola vs. Pepsi, 2014) and in the Slovak Republic (the company Oriflame, 2012), presented a study in which they are used neuromarketing research techniques and highlights the role of the instrument itself on understanding consumer behaviour. In addition to that was in the article the method of analysis, deduction, induction, comparison and marketing survey conducted on the territory of the Slovak Republic in the period October 2016 to January 2017. The article provides empirical evidence on how neuromarketing techniques through the process of consumer purchasing decisions, if not a threat to the personal freedom of the individual. Regarding corporate social responsibility in the context of the article, it is considered that socially responsible businesses in implementing neuromarketing methods must be based on the Code of Ethics approved Neuromarketing Scientific and Business Association. Based on the research questions, we concluded that CSR enterprise should work with neuromarketing techniques extreme caution if using them to follow the methodology described at the end of the article.

Keywords: neuromarketing, techniques and principles of neuromarketing, ethical aspects of neuromarketing research, corporate social responsibility

JEL Classification: M14, M31, M37

1. Introduction

Human brain fascinates experts from time immemorial. Through long-lived interest in science has found the functioning of the human brain for the last few decades, more than in all of previous history (Segota et al., 2017; Wang, 2017) With the rapid development of information available in the field of neuroscience, diverse medical disciplines concerned with the study of the brain and nervous system is developing and marketing staff attempt to use this knowledge to better estimate consumer behaviour. Neurokultúra concept in the 21st century

spread to other areas than the area of health. One of them became the marketing area as their combination was created neuromarketing, relatively young discipline applying neuroscientific methods for analysing and understanding consumer behaviour related to market environment (Lee et al., 2007; Laudan et al., 2016)

2. Literature review

Neuromarketing is an area of marketing that works on the research of human behaviour, decision making when purchasing a product or service and is based on psychology and neurology (Bakardijeva & Kimmel, 2017). It is important to note the fact that, based on recent studies is realized in the consumer buying process automatic, t. j. based on the traditions and customs and influenced by social context. Consumer choice and behaviour is, however, more closely controlled unconsciousness as our consciousness, as it involves unconscious memories, experiences, pictures, or stories (Rodriguez & Montiel, 2008). But the question is how can marketers insight into the awareness of consumers at a time when the economic world resonate terms hypercompetition, economic recession, the crisis of confidence in the brand of the product, in addition, if current marketing activities based on the modernist approach to the world that is clear, structured and based on economic models (Jorge & Garcia-Rondon, 2016). It follows that it is necessary to extend the scope of the marketing communication of the science-marketing, it means neuromarketing.

Neuromarketing term originates from the late 90s of the 20th century, at a time when Gerry Kovac and Kuhn (2016) suggested a number of possibilities for the use of neuroscience technologies aimed at brain imaging for the purpose of marketing communication. These were the beginnings of the synthesis of neuroscience and marketing that have become attractive not only in theory but also in practice. The very concept neuromarketing was defined only in 2002 by Ale Smidts professor, Nobel laureate in economics as the use of certain techniques specific mechanism of the brain that help to understand the behaviour of consumers and thus help to improve marketing strategies (Segota et al., 2017; Mussa et al., 2017)

Neuromarketing with the study of mental, implicit and explicit processes, consumer behaviour in different contexts of marketing, as well as the process of evaluation, decision-making, memory, or consumed, which is based on the paradigm and knowledge of neuroscience (Gutman, 2017)

Authors Lee et al. (2007), define neuromarketing from aspect of marketing as applying neuroimaging techniques for sale of the product for testing communication or research may be a deeper context and course of purchasing behaviour. It follows that the aim of neuromarketing as a relatively young scientific discipline is to answer questions about what happens in the human brain at a time when the consumer is subject to specific marketing activities.

3. Methods

Complex business, intensifying competition in the market, substitution products, shorter customer response are the reasons why businesses are looking for new techniques, how to understand the behaviour of their target consumers.

Today, companies use market research methods to market easier management, management of the target consumer segments and their specific requirements. Marketing research activities are divided into the categories of qualitative and quantitative research. Qualitative research

focuses on the detailed stories, and adds quantitative research to measure results and can be predicted (Corejova & Weick, 2009). Both methods of marketing research may overlap and complement, as well as traditional research methods to new research neuromarketing techniques that are used in the category of qualitative research. Neuromarketing that has revolutionized the creation of promotional campaigns. (Lantos, 2002; Pava & Krausz, 1996).

In addition to that was in the article the method of analysis, deduction, induction, comparison and marketing survey conducted on the territory of the Slovak Republic in the period October 2016 to January 2017.

4. Neuromarketing methods and techniques in marketing research

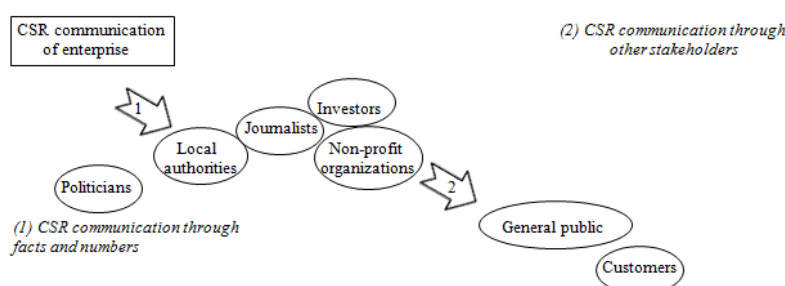
Neuromarketing looks in a consumer awareness, that are in the process creating consumer choices. The consumer's decision is influenced by rational (10%) and irrational (90%) component. Methods of marketing research, market research, polling, opinions, product testing, can detect just the 10% that the consumer has knowingly. The remaining 90% is the responsibility of neuromarketing research who consult the consumer subconscious through brain imaging techniques, collectively called Neuroimaging. These might include, for example. Functional magnetic resonance imaging - fMRI, eye - tracking (used for Website Optimizer), flash test (measures the time for which the elements of marketing communications penetrated the consciousness of the people) and others. (Saxby & Varbanov, 2016)

5. Communication activities of corporate social responsibility

Marketing communication of socially responsible enterprise is accompanied by activities serving to creating awareness about them. This is a communication method in which first involves an employees as key actors of CSR (Burianova & Paulik, 2014). Subsequently, the process extends towards the local community and transnational level. Without their involvement would remain in the public believe that corporate social responsibility is a matter only for top management (Moravcikova et al., 2015)

Marketing communication relating to customers should introduce the enterprise to handle their integrated corporate responsibility into daily practice t. j. produce safe and quality products consistently satisfy customers, adhere to marketing and advertising ethics and consumer rights (Fernandez-Guadano, 2015)

Figure 1: Model CSR communications



Source: own processing according Morsingova, M. & Schultz, M. (2008).

From the picture it shows that the necessity of socially responsible enterprises is that CSR activities inform customers. Therefore, an important part of CSR communication is the annual report, which aims to objectively describe everything that enterprises do, or could do so that his

enterprise positively contribute to the development of the environment, sustainable development and the protection of society. Annual Report socially responsible enterprise should include items relating to vision and strategy profile organization, corporate governance and management systems and performance indicators (Morsingova & Schultz, 2008)

Annual report on corporate social responsibility activities of the enterprise is not only for themselves but also important are the views of stakeholders, as the annual report has become a focal point for mutual communication (Majerova, 2015).

6. Applications neuromarketing research abroad and in the Slovak Republic from the aspect of social responsibility

During the 20th and 21st centuries it was realized several dozens of studies aimed at understanding consumer behaviour using neuromarketing techniques (Gladden, 2016; Guo & Yang, 2017). The most famous case studies from abroad and the Slovak Republic are described in the following text.

Technology and neuroscience itself progressing in foreign conditions much faster than in the Slovak Republic. Among the international agencies peaks in neuromarketing research can be classified as a House Neurostrategies Group, Focus Groups or EMSSENS. Their aim is to contribute to the development of science as neuromarketing techniques employing fMRI, EEG, eye-tracking, or a combination thereof so as to accommodate socially responsible businesses in order to comply with ethical considerations (Boboc & Orzan, 2016; Sroka, 2015)

Neuromarketing research in abroad

The birthplace of modern tool neuromarketing is the United States. The most famous experiment in neuromarketing research is Coca-Cola vs. Pepsi. The essence of the experiment was to find the answer to the puzzle as to why the sale of products Coca-Cola rolled taste of Pepsi.

The experiment was conducted in 2003 by Ready Montague to test the 27 respondents through fMRI techniques and consists of two parts. The first part was totalled of blind test, where respondents were asked to give priority to drink Coca-Cola, Pepsi, or neither of them. More than half of the test subjects tasty drinks Pepsi and confirmed by the activity in their brains. The second part of the experiment was carried out, provided that the test subjects knew that the beverage drink. Result, 75% of respondents preferred Coca-Cola drink. The involvement of both parts represents the fight between the rational and emotional aspects, the force Coca-Cola outdraw what respondents saying their palate. The study demonstrated that the combination of branding with neuromarketing.

From the above it can be argued that when the respondents name the drink known activity in the human brain played in favour of Coca-Cola. Despite CSR activities aimed at protecting the environment, you must realize that unhealthy sweetened drinks containing artificial colours and harmful substances have nothing to do with a healthy lifestyle. Although Coca-Cola Company continually invests amount of resources to build the brand through various forms of marketing communication and neuromarketing research, its value dropped between 2010 - 2014 by 5.1 billion. dollars. It was mainly due to the fact that despite the upward sales of products with a reduced sugar content, many MVO mentioned it in a negative light because of the production of unhealthy drinks, which attracted negative media attention.

Neuromarketing research in Slovak Republic

Slovak neuromarketing research is still in its infancy. Its essence is given to only a few agencies, such as DICIO marketing or Slovak Academy of Sciences.

The company DICIO marketing is neuromarketing agency that is considered a pioneer in the said area by implementing experiments relating to changes in skin conductance. These experiments have created a platform for the cosmetics company Oriflame, which has been implemented for neuroresearch whose task was to optimize the elements on the Billboard via flash test. Neuroresearch essence consisted in projecting micro bursts a duration of 0.04 seconds respondents who had subsequently define what all to see. After three consecutive respondents were unable to name anything new, the experiment was terminated. Results neuroresearch created a platform for a new concept of marketing communication processing of advertising agency B.M.A. Marketing communications company Oriflame has been enriched by fresh green colour and natural elements that magnify the perception of the attribute "natural cosmetics". Mainly due to the fact that your natural cosmetics, not explaining attribute (DICIO Marketing, 2012).

The company DICIO Marketing further explore the use of neuromarketing in socially responsible enterprises, and the research sample was composed of 1,464 respondents aged 18 to 79 years. Research question concerned the findings of the feasibility of using neuromarketing technique enterprise with the concept of CSR.

One of the questions concerned the questioning of whether *the respondents thought that the ethical consumer's subconscious to work as a tool for increasing sales in a company focused on CSR*. The results were divided into two groups of respondents. The first group of respondents (41%) opted for the fact that the use neuromarketing techniques bordering on ethics and the final consumers' decisions to purchase consumer made on the basis of its own arguments. The remaining 59% of respondents are strongly opposed to the use of the subconscious mind of the consumer as a marketing tool.

Another question was aimed at determining whether *advertising subconsciously creates hidden emotions that influence consumers' purchasing*. 62% of respondents believes that advertising, as well as other means of communication have an impact on consumers' purchasing decisions. The remaining 38% respondents are not influenced by advertising when buying products or services.

7. Results and discussion

As the investigation of consumer behaviour through neuroscience sounds like science fiction, especially careful should companies exhibiting socially responsible behaviour.

The analysed case and studies and surveys of the foreign and Slovak Republic we can say that socially responsible businesses should part of its marketing communications use neuromarketing and its technology very carefully, because corporate social responsibility for the economic, social and environmental (Tokarcikova et al., 2015). It follows that the use of neuromarketing as a marketing communication tool is contrary to the concept of CSR - Corporate Social Responsibility.

Should socially responsible businesses want to make use of neuromarketing as part of their marketing communication, increased attention should be given responsibility to all stakeholders to, t. j. optimize their communication activities using neuromarketing of application neuroethics

to the concept of corporate social responsibility (Mussova, 2016). Socially responsible businesses should be primarily concerned with the interests of consumers, as business objectives are not always compatible, and it is necessary to establish ethical standards that each employee must follow in the area of neuromarketing (Gonzalez-Rodriguez, Fernandez & Simonetti, 2016).

It follows that as soon as a socially responsible company wants to apply in their communication activities neuromarketing research and technology, it should follow the following methodology:

- *ethical laws* - within neuromarketing research should marketers socially responsible enterprise based on the code of practice set Neuromarketing scientific and trade associations,
- *commitment to respect laws* - behaviour researchers must be neuromarketing during all phases of research ethics in order to comply with the concept of CSR,
- *the consent of the participants in the research* - although the cooperation bodies takes place on a voluntary basis, there must be a document confirming the consent of stakeholders to neuromarketing research,
- *privacy* - personal data obtained during the implementation neuromarketing techniques may not be used for any other purpose,
- *transparency and objectivity* - the role neuromarketing staff to ensure documentation, transparency and objectivity of the research,
- *The results of the research and the public* - it is a direct access to the results of the research conducted through neuromarketing techniques extent that the researcher protects personal data of consumers, with clear rules must be published in order to increase the credibility of research in the public eye.

For possible use neuromarketing techniques in a socially responsible business, it is possible to propose the following solutions to optimize communication within CSR selection and realization of lectures undertakings operating neuromarketing or enterprises whose subject of business lies in the realization neuromarketing research (DICIO marketing) in terms of CSR, neuromarketing disclosure practices by foreign and Slovak enterprises on the Internet portal, implementation of the so-called exchanges in international companies with the concept of CSR.

8. Conclusion

The paper aimed to highlight the issue neuromarketing ethical aspects of research in international and Slovak conditions as part of the concept of CSR.

It is undeniable that the use of techniques neuromarketing businesses leads to the division of the public into two groups - supporters and critics pointing to deficiencies and barriers of morality in neuromarketing. From an ethical point of view brings to socially responsible enterprises wishing to these techniques as part of optimizing your marketing communication uses, certain risks (deterioration in the perception of the company in the public eye, the possibility of misuse of data gained in the research neuromarketing competition, etc.). Despite the urgency of selected neuromarketing ethical aspects of research, there is the possibility of using techniques neuromarketing socially responsible enterprises. That is, although the ethical problems can act as a barrier in the concept of CSR, to some extent, there are regulatory measures as a major potential benefit of neuroethic socially responsible enterprises.

Neuromarketing techniques are relevant for SMEs over to customers, as based on them can understand their behaviour. In terms of CSR, these techniques are relevant for the customer because of the perception of an undertaking in the eyes of the customer.

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References

- [1] Bakardijeva, E. and Kimmel, A. J. (2017). Neuromarketing research practices: Attitudes, ethics and behavioral intentions. *Journal of Ethics & Behavior*, vol. 27, pp. 179-200.
- [2] Boboc, A. L. and Orzan, G. (2016). Neuromarketing based online marketing research: Critical review and future practice. *Proceedings of 28th International Business Information Management Association*, Seville, Spain, pp. 3917-3923.
- [3] Burianova, L. and Paulik, J. (2014). Corporate social responsibility in commercial banking – A case study from the Czech Republic. *Journal of Competitiveness*, vol. 6, no. 1, pp. 50-70.
- [4] Fernandez-Guadano, J. (2015). Measuring the economic performance of socially responsible companies. *Proceedings of Rijeka Faculty of Economics: Journal of Economics and Business*, Rijeka, Croatia, pp. 207-233.
- [5] Gladden, M. E. (2016). Neuromarketing applications of neuroprosthetic devices: an assessment of neural implants capacities for gathering data and influencing behaviour. *Proceedings of 9th Annual Conference of the EuroMed Academy of Business*, Warsaw, Poland, pp. 905-918.
- [6] Gonzalez-Rodriguez, M., Fernandez, M. and Simonetti, B. (2016). Corporate social responsibility perception versus human values: a structural equation modelling approach. *Journal of applied statistics*, vol. 43, pp. 2396-2415.
- [7] Gutman, J. (2017). Decoding the irrational consumer: how to commission, run and generate insights from neuromarketing data. *International Journal of Market Research*, vol. 59, pp. 139-142.
- [8] Guo, Y. and Yang, D. C. (2017). Does the 2010 SEC climate change idsclosure guidance change firms' corporate social responsibility reporting? *International Journal of Business*, vol. 22, no. 1, pp. 25-40.
- [9] Jorge, A. C. and Garcia-Rondon, I. (2016). Prospective of marketing, neuromarketing and neuro linguistic programming. *Journal of Ciencia Unemi*, vol. 9, pp. 99-105.
- [10] Kovac, K. and Kuhn, M. M. (2016). Neuromarketing: The effect of attitudes on the perception of external business communication. *Proceegings of 18th Academy of Marketing Science*, Bari, Italy, pp. 95-96.
- [11] Lantos, G. P. (2002). The ethicality of altruistic corporate social responsibility. *Journal of Consumer Marketing*, vol. 19, no. 2-3, pp. 205-230.

- [12] Laudan, D., Nica, E. and LazaroIU, G. (2016). Structural and functional abnormality in particular brain regions and connections in subjects with internet gaming disorder (IGD). *American Journal of Medical Research*, vol. 3, no. 2, pp. 195–200.
- [13] Lee, N., Broderick, A. and Chamberlain, L. (2007). What is neuromarketing? A discussion and agenda for future research. *International Journal of Psychophysiology*, vol. 63, pp. 199-204.
- [14] Majerova, J. (2015). E-marketing as a promising part of the concept of CSR and its specific features of pricing policy in a global context. *Proceedings of 15th International Scientific Conference on Globalization and its Socio-Economics Consequence*, Rajecke Teplice, Slovakia, pp. 393-399.
- [15] Moravcikova, K., Stefanikova, L., and Rypakova, M. (2015). CSR reporting as an important tool of CSR communication. *Proceedings of WCBEM 4th World Conference on Business Economics and Management*, Ephesus, Turkey, pp. 332-338.
- [16] Morsingova, M. and Schultz, M. (2008). The Catch 22 of communicating CSR: Findings from a Danish study. *Journal of Marketing Communication*, vol. 14, pp. 97-111.
- [17] Musa, H. et al. (2017). Gender equality and corporate governance in Slovakia. *E&M Ekonomie a management*, vol. 20, no. 1, pp. 98-110.
- [18] Markova, V. and Lesnikova, P. (2015). Strategic level of sustainable development of enterprises. *Ekonomicko-manazerske spektrum*, vol. 9, no 1, pp. 9-15.
- [19] Pava, M. L. and Krausz, J. (1996). The association between corporate social-responsibility and financial performance: The paradox of social cost. *Journal of Business Ethics*, vol. 15, no. 3, pp. 321-357.
- [20] Rodriguez, L. and Montiel, I. (2008). Managerial Thinking and Corporate Social Responsibility. *Proceedings of 19th Annual Meeting of the International Association For Business and Society*, Tampere, Finland, pp. 289-294.
- [21] Saxby, P. and Varbanov, S. (2016). Marcus Aurelius on suicide. *American Journal of Medical Research*, vol. 3, no. 2, pp. 53–58.
- [22] Segota, A., Tomljanovic, M. and Hudek, I. (2017). Contemporary approaches to measuring competitiveness – the case of EU member states. *Journal of Economics and Business*, vol. 35, no. 1, pp. 123-150.
- [23] Sroka, W. and Lorinczy, M. (2015). The perception of ethics in business: analysis of research results. *Procedia Economics and Finance*, vol. 34, pp. 156-163.
- [24] Tokarcikova, E., Bartosova, V. and Durisova, M. (2015). Corporate social responsibility of public administrations employees. *Proceedings of Innovation Vision 2020: from regional development sustainability to global economic growth*, Amstredam, Netherlands, pp. 1437-1445.
- [25] Wang, W. et al. (2017). Corporate social responsibility and employee outcomes: A moderated mediation model of organizational identification and moral identity. *Frontiers in Psychology*, vol. 8.

THE ELECTRONIC RECORDS OF SALES IN THE LIGHT OF THE CURRENT BUSINESS WORLD DEVELOPMENT

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Abstract. The Czech Republic has been introducing the system of the electronic records of cash sales of goods and services – in four phases since 2016. E-sales are modern way of prompt communication between the entrepreneurs and the Financial Administration. These records concern legal persons with business activity and natural persons with business activity with tax residency in the Czech Republic. This contribution describes the legal and regulatory requirements for electronic records of sales in the Czech Republic, describes the reasons for the introduction of electronic records of sales in the Czech Republic, defines the expected benefits (especially in public budget revenues and to society in general) and pitfalls (considered by its opponents to be great risks), compares the advantages and disadvantages of technical means for recording sales and assesses the electronic records of sales in the global context. The electronic records of sales should increase the efficiency of tax audits and serve as a mean of combating the direct taxes evasion and should reduce the negative impact on the business conscience – the real impact estimation based on the historical experience in different states is the target of this paper. This article is a partial result of the research conducted under the CULS FEM IGA granting project No. 20171032 – Czech tax gap as a consequence of profit shifting quantification and its factors identification.

Keywords: electronic sales reporting, profit tax, entrepreneurs, online evidence, tax evasion, income tax gap

JEL Classification: H26, M21, M48

1. Introduction

The main aim of the sales register is acquiring information, which ensures better tax administration, mostly income tax and also value added tax. Reasons for implying EET (electronic sales register) arise from tax loss from concealed income of entrepreneurs. It is presumable, that the limit which determines the subject to obligatory VAT registration is one of the factors leading to an increase in by devices registered sales, mainly by wage earners. However, the primary aim of EET is registration of income and taxes connected with it, such as income tax, social and health insurance. The impact on VAT revenue can be considered as secondary.

Last but not least, it is presumed that the electronic sales reporting will lead to reductions of employing workers in the sector of public boarding and retail without labour contract. It is also important to see the significance of employer's protection against dishonest employees who can enrich themselves by cutting the sales in their advantage to the detriment of their employer. As the topic of electronic sales reporting is one of the mail topics in the field of taxes currently, the aim of this article is to evaluate the impact of EET on legal framework of the Czech Republic and to evaluate benefits and detriments for state administration and foreign experience of this method of recording obligation.

2. Materials and methods

A method called Desk research has been used for processing of this article. It is based on comparative analysis of data mainly from the Ministry of Finance of the Czech Republic, but sources from Slovakia and Croatia have been used as well. Authors focused first on which scientific work has been done in the area of electronic records of sales up to today. Comparison of source published in the database Web of Science and Scopus is shown below:

Table 1: Relevant publications on electronic records of sales

Author	Study area	Type of survey	Goal
Kolarova, Eva; Podolska, Eva	Electronic revenue registry and the impact of its introduction on small businessman, natural persons and micro legal entity.	Questionnaire survey	To identify the attitude of surveyed subject on the Electronic Records of Sale implementation.
Cimler, Petr	Burden for businesses connected with electronic sales registration.	Desk research	To analyse actual technical and administrative burden for businesses.
Kamal et al.	Authenticity of an electronic record	Desk research	To develop the authenticity parameter of electronic business records and how it applies to SMEs.
Milovanovic, Slavoljub	Application of information and communication technology, in selling business processes	Analysis of data, empirical investigation	To analyse level of internet technology and e-business implementation in Serbia.
Blackburn, Keith; Bose, Niloy; Capasso, Salvatore	Relationship between the underground economy and income disclosure	Empirical observation	Verifying the hypothesis: the marginal net benefit of income disclosure increases with the level of financial development.
Stehlikova, Ivana	Legislation, administrative offences and misdemeanours within Registration of Sales	Desk research	To present a new Act and related obligations of taxpayers
Zidkova, Hana; Tepperova, Jana	Measure of Impact Registration of Sales on Tax Revenues	Desk research	To create tax revenue estimation methods in relation to revenue records
Borisovic, Melnikov et al.	Carrying out the analytical optimization of tax control procedures and increasing transaction costs of dishonest taxpayers.	Modelling	To develop an economic - mathematical model to estimate the level of tax discipline across industries.
Machova, Zuzana; Kotlan, Igor	Tax avoidance and evasion	dynamic panel data analysis for OECD	To determine how tax fairness manifests itself in the society of developed countries.
Christian, Cary	Taxpayer rationales for evasion and theft in a sales tax environment.	Analysis of 375 criminal investigation case files	To approach to rehabilitation of a substantial number of non compliant taxpayers

Hruska, Zdenek; Dvorakova Lilia	Awareness about taxation of households and businesses	Questionnaire survey	To identify the impact of taxes on the economy and competitiveness
Nerudova, Danuse; Bohusova, Hana	Tax base harmonization	Desk research	To identify barriers and design a tax harmonization model

Source: own processing, 2017

From above it is clear that the area of registration of sales and tax avoidance on the level of sales is being solved by a number of Czech and foreign authors. The method of desk research prevails in all research methods.

3. Results and discussion

The following chapter contains description of particular problems connected with electronic sales registration with the comparative analysis.

3.1 Legal and regulatory requirements for electronic records of sales in the Czech Republic

Fundamental legal regulation is the Act number 112/2016 on Sales records, which has been valid since April, 13 2016 and has come into effect since December, 12 2016. This law adapts rights, obligations and methods for sales records and method related to them. It also defines schedule of gradual implementation of electronic records of sales for single subjects of national economy. This law was approved together with an accompanying Act number 113/2016, which changes some laws in connection with approval of law on sales records Changes concern: Act on Income Tax, Act on Value Added Tax, Act on Administration Fees. In relation to registry obligation of tax subject the current amendment contains of a number of norms which order obligatory subject obligations connected to registration of selected aspects of their individual activity or other obligations being in essence similar to obligations described in the act on sales records. It concerns mainly:

- Act number 280/2009, tax order, which obliges the tax subject to keep rolling record about realized payment in case that similar records are not being kept due to another legal regulation.
- Act number 563/1991 on Accounting, which obliges accounting units to collect facts being subject of the accounting, accounting documents and record them on the basis of provable accounting records in accounting books, including turnover.
- Act number 586/1992 on Income Tax, which describes ways of income and costs records of natural persons with business activity who are not an accounting unit.
- Act number 643/1992 on Consumer Protection, which claims that if asked by the purchaser, the seller is obliged to issue a receipt about purchasing a product or being provided with service with further characteristics.
- Act number 455/1991 on Business obliges the businessman in article 31, paragraph 14 to issue documents about sales of goods and providing services with required details if being asked by the customer.
- Act number 526/1990 on Prices claims the obligation of the seller to keep records about prices. Apart from prices stated by administration and prices under regulation this amendment refers to prices of goods that is sold to the consumer.

3.2 Expected benefits and pitfalls of electronic records of sales implementation

This chapter focuses on benefits and pitfalls on the side of the state and tax administration. The main expected benefit lies in higher tax collection and reduction of employment without labour contract, especially in the sector of retail, particularly in the public boarding operation. The charts below show estimated fiscal income according to the Ministry of Finance of the Czech Republic for 2015 and following:

Table 2: Impact of EET implementation according to the sector

Impacts of EET implementation according to the sector	Presumed sales increase (in %)	Presumed sales increase (in billion CZK)
Retail except for vehicles with engine	9.3	104.5
Catering and boarding	27	16.1

Source: MFČR published in RIA, 2015

Table 3: Current annual impact of EET in billion CZK

Impact on/Year	Amount of impact of EET			
	2015	2017	2018	2019
Value added tax	5.5	4.5	2.7	0.6
Income tax of legal persons	2.0	1.7	1.0	0.2
Income tax of natural persons	5.0	3.4	3.3	0.5
EET TOTAL	12.5	13.4	9.2	1.8

Source: Calculations of MFČR published in RIA, 2015; MF ČR, 2017

In connection with realization of electronic records of sales we can expect also costs. The Ministry of Finance of the Czech Republic (RIA, 2015) has calculated initial costs of building IT system in the total of 370 billion CZK (hardware, software, module for potential receipt lottery, etc.) and costs for operation and maintenance of the IT system on the side of the state in the total of 170 billion CZK annually. Further costs deal with following supporting activities in the total of 130 billion CZK. They include costs for public service, which means PF and a call centre. The Ministry of Finance of the Czech Republic expects these costs mainly in the first two years of the project, though. Turnovers of territorial administrative units are excluded from the record obligation, so we do not expect impact on these subjects. Further costs will be spent in the connection with receipt lottery implementation. According to Vlkova (2017) the Ministry of Finance of the Czech Republic is planning to provide this lottery with 8 million Czech crowns in 2017 and to finance 1.25 million CZK for every month for services of receipt lottery from the company Diebold Nixdorf private limited company.

3.3 Comparative analysis of advantages and disadvantages of technical means for records of sales and assessment of sales records

The choice of technical device is not determined legislatively. The project of this system has been designed with open choice for software and hardware. The device must have such technical features that it is able to send immediately via internet required information about the sales to the system of the Financial Administration and print a receipt including fiscal identification code about the transaction for the customer. Basic possibilities include:

- a) Smart phone + wireless printer: Advantages: low purchasing costs. Disadvantages: not produced for similar purpose, only consumer device, low service life, little stabile technology, needs frequent service, software can have limited functions, usually low battery durability.

- b) Tablet + wireless printer: Advantages: low purchasing costs, presumably convenient offers from the side of the suppliers including possibility of borrowing, user comfort due to internet portal (assessment of sales, item setting), ensured continuity/ saving data for possible loss/ defect of the device. Disadvantages: not produced for similar purpose, usually only consumer device, low service life, low battery durability.
- c) Compact transportable device without cloud service: Advantages: stabile operation, easy service. Disadvantages: limited functions, not suitable for big operation companies, low user comfort, lacks the possibility of sophisticated assessment and easier setting and ensurance of continuity/ saving data for possible loss/ defect of the device.
- d) Compact transportable device with cloud service: Advantages: stabile operation, easy service, possibility of assessment and individual setting with the help of internet portal, ensurance of continuity/ saving data. Disadvantages: limited functions, not suitable for bigger operation companies, lower user comfort – numeral buttons only.
- e) All-in-one compact device: Advantages: low purchase costs, integrated receipt printer and card reader for identification of customers, user comfort due to internet portal, ensurance of continuity/ saving data, possibility of connection of a weigh, scanner of the barcode, etc. Disadvantages: not suitable for big operation companies, medium resistance.
- f) PC Cash registers: Advantages: possibility to set the system according to operation needs, wide possibilities of peripherals, possibility to connect different cash register software, range of advanced cash register software, professional functionality. Disadvantages: higher price as compared with registration cash register, service costs.
- g) Single purposed cash register: Advantages: high system stability, high hardware lifetime, the ability to build a system according to traffic needs, advanced cashier software, professional functionality, durability.
 Disadvantages: higher price than registration and PC cash registers, the impossibility of uploading other cash software.
- h) Cash register suitable for operation of EET: Advantages: stabile operation, easy service. Disadvantages: limited functions, suitable only for smaller operation companies.

3.4 Electronic records of sales in different EU states

European Union states implementing records of sales include, e.g.: Italy, Hungary, Slovakia, Poland, Belgium, Latvia, Lithuania, Malta, Sweden, Romania, Bulgaria, Greece, Cyprus and Croatia. Since 2016 Austria and Slovenia have implemented records of sales, too. According to Simek (2016), Germany uses records of sales for the segment of taxi services.

Most cases deal with off-line systems (cash register). On-line system has been working in Croatia since January 2013 and since 2016 in Slovenia. Hungarian system is indicated as “hybrid one”, as Hungarian government approved in 2012 connection of cash registers to online system of National tax and customs administration. A system similar to the Hungarian one is used in Romania. Another hybrid system is the Slovak one, which recorded sales of business subjects via cash registers with fiscal memory and since April, 1st 2015 has implemented virtual cash registers (VRP), which work on the basis of online. VRP implementation was followed by widening of services and activities obliged with cash register generally. The highest level of similarity with the Czech system is shown in the cash records in Croatia. EET was implemented in three phases here (the first phase – 1/2013: medium and large corporations in boarding, 4/2013: wholesale and retail of wage earners in service area, 7/2013: other subjects). The

differences include mainly the fact that the simplified regime is not electronic – it is based on numbered effect notebooks, which are registered in advance by the Tax Administrator. Other differences between Czech and Croatian EET is shown below:

Table 4: Differences between sales records in the Czech Republic and Croatia

Parametre	Czech Republic	Croatia
Simplified electronic mode (off-line)	Yes	No
Regulation of cash situation in the cash register	No	Yes
Obligation of the customer to accept and keep the receipt	No	Yes
Acquiring details about cashiers	No	Yes
Fee for digital certificate	No	Yes
Maximal penalty	500 000 CZK	500 000 Kuna, it is about 1 750 000 CZK
Bill lottery	No	Yes

Source: own processing in accordance with MFČR, 2015; Zakon o fiskalizaciji u prometu gotovinom, 2016

Main drawback affecting the functionality of EET in the Czech Republic can be in comparison to Croatia seen in the lacking obligation of the consumer to be connected to the system of checking the sales. If the consumer is offered the possibility to refuse the receipt a space for restriction of grey economy is decreased significantly, mainly in the long-term horizon, when motivation efficiency of the consumer in relation to the check of the seller over the bill lottery decreases, as can be deduced from experience in Slovakia. Apart from Slovakia and Croatia Slovenia implemented bill lottery with the aim to motivate customers to accept receipts from businessmen. Experience in these countries shows that after implementing of the lottery the interest was huge (Slovakia registered in the competition according to the company Tipos more than ten million cash register receipts in a month), while in January 2015 it had not been a half of this number. So the Slovak government increased the number of the rewarded and also started jackpot. The highest lottery win was according to lottery company Tipos (Tipos, 2017) 8846 euros, last jackpot was 7501.21 euros. Bill lottery is supposed to be implemented in the CZ as well for more effective usage of state currency. The first draw is taking place on November, 15th 2017 from the receipts issued in October this year.

4. Conclusion

Electronic record of sales differs from the first intended implementation of so called cash registers. Generally, on-line records of sales stay to be one of the tools of the finance administration for potentially effective fight against taxes evasion. Secondly, the outcomes of EET are usable for analytics aimed at money laundering, mainly as a result of wide data base, where it is possible to identify abnormalities, for example atypical fluctuation of turnover without reference to seasonal aspects or on the other side non-standard regularity of turnover. Then, reasons of discrepancies matter, although they can be fully rational and reasonable.

The Czech Republic enables to present the receipt in an electronic way, but minor proportion of this way is presumed. This is another possible direction of the research of seller and consumer behavior with EET aimed at concurrent negative externalities. A sad fact of the solution is that EET in its current form in the Czech Republic theoretically favours such group of subjects that are working outside the system completely, in other words the black economy. This aspect is suitable to be expressed in numbers and possible realized important impacts should be solved

by consecutive measurements. One of them could be expanding of the responsibility for records of sales on the consumer.

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References

- [1] Blackburn, K., Bose, N. and Capasso, S. (2012). Tax evasion, the underground economy and financial development. *Journal of Economic Behavior & Organization*, vol. 83, no. 2, pp. 243-253.
- [2] Melnikov, B. A. et al. (2016). Tax instruments to counteract the economic activity in the shadow economy. *Turkish Online Journal of Design Art and Communication*, vol. 6, pp. 2586-2594.
- [3] Christian, C. (2016). A typology of sales tax noncompliance: Targeting enforcement to diverse intentions. *E Journal of Tax Research*, vol. 14, no. 1, pp. 119-147.
- [4] Cimler, P. (2015). Electronic sales registration – for whom is it an opportunity, and for whom a threat? *International Scientific Conference on Opportunities and Threats to Current Business Management in Cross-Border Comparison*, Pilsen, Czech Republic, vol. 28, pp. 11-18.
- [5] Hruska, Z. and Dvorakova, L. (2013). Theoretical and practical problems of environmental taxation in conditions of the Czech Republic. *E&M Ekonomie and Management*, vol. 16, no. 1, pp. 18-32.
- [6] Kamal, S. et al. (2015). Developing the authenticity framework of electronic business records in SMEs Companies. *International Accounting and Business Conference (IABC) 2015, Procedia Economics and Finance*, Putrajaya, Malaysia, vol. 31, pp. 834-838.
- [7] Kolarova, E. and Podolska, E. (2016). The electronic record of sales and impact on the reduction of tax evasion. *Proceedings of the 13th International Scientific Conference*, Brno, Czech Republic, pp. 357-364.
- [8] Machova, Z. and Kotlan, I. (2016). The influence of tax fairness on tax evasion in developed countries. *14th International Scientific Conference: Economic Policy in the European Union Member Countries*, Petrovice, Karvine, Czech Republic, pp. 408-415.
- [9] MF ČR. (April 2017). Konvergenční program ČR. [Online]. Available: <http://www.mfcr.cz/cs/zahranicni-sektor/pristoupeni-cr-k-eurozone/konvergenčni-program>.
- [10] Milovanovic, S. (2015). Application of internet technology and electronic business concept in Serbia. *Economies of Balkan and Eastern Europe Countries in the Changed World (EBEEC 2014), Book Series: Procedia Economics and Finance*, Nis, Serbia, vol. 19, pp. 278-286.

- [11] Nerudova, D. and Bohusova, H. (2007). SMEs on the internal market – tax and accounting aspects. *5th Scientific International Conference on Hradec Economical Days 2007*, Hradec Kralove, Czech Republic, pp. 77-81.
- [12] RIA, MFČR. (August 2015). *Závěrečná zpráva hodnocení dopadů regulace (RIA) - návrh zákona o evidenci tržeb*. [Online]. Available: <http://docplayer.cz/5495275-Zaverecna-zprava-hodnoceni-dopadu-regulace-ria-navrh-zakona-o-evidenci-trzeb.html>.
- [13] Stehlikova, I. (2017). Registration of sales in the Czech Republic – a few months after the effectiveness of the act. *4th International Baltic Conference on Financial Law - the Financial Law towards Challenges of the 21st Century*, Gdynia, Poland, vol. 580, pp. 214-223.
- [14] Simek, B. (2016). *Elektronická evidence tržeb v České republice*, 1st ed. Plzeň, Czech Republic: Spreved.
- [15] Tipos. (July 2017). *Národní bločková loterie*. [Online]. Available: <https://narodnablockovaloteria.tipos.sk/sk/titulna-stranka>.
- [16] Vlkova, J. (July 2017). *Účtenkovou loterii chce ministerstvo stihnout ještě před volbami*. [Online]. Available: ekonomika.idnes.cz/uctenky-loterie-uctenkova-loterie-ministerstvo-financi-pilny-babis-eet-1o5-/ekonomika.aspx?c=A170718_141207_ekonomika_hm1.
- [17] Zákon č. 280/2009 Sb. *Daňový řád*. Sbírka zákonů, částka 87/2009. [Online]. Available: <http://zakony.centrum.cz/danovy-rad/>.
- [18] Zakon o fiskalizaciji u prometu gotovinom. (2016). [Online]. Available: <https://www.zakon.hr/z/548/Zakon-o-fiskalizaciji-u-prometu-gotovinom>.
- [19] Zákon č. 113/2016 Sb., *Zákon, kterým se mění některé zákony v souvislosti s přijetím zákona o evidenci tržeb*. Sbírka zákonů ze dne 13. 4. 2016, částka 43. [Online]. Available: <https://www.sbirka.cz/POSL4TYD/NOVE/16-113.htm>.
- [20] Zákon č. 112/2016 Sb., *o evidence tržeb*. Sbírka předpisů. Sněmovní tisk č. 513/0. [Online]. Available: <http://www.sbirka.cz/POSL4TYD/NOVE/16-112.htm>.
- [21] Zidkova, H. and Tepperova, J. (2017). Registration of sales. How to measure its impact on tax revenues? *Proceedings of the 21st International Conference Current Trends in Public Sector Research. Book Series: Current Trends in Public Sector Research*. Slapanice, Czech Republic, pp. 231-238.

THE SOCIAL-ECONOMIC IMPORTANCE OF FAMILY BUSINESSES IN THE PROCESS OF GLOBALIZATION

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Abstract. The process of globalization has become a world phenomenon that affects the economic as well as the social environment of countries all over the world. Family businesses, as one of the oldest form of business, are seen as the driving force of the global economy. They have been an important part of the economic health of many countries, especially these that are established on the principles of the market economics. It is important to emphasize that these enterprises bring a lot of socio-economic benefits to the family as well as to the whole society. The aim of this paper was to point out the importance and irreplaceable position of family businesses in the global economy and at the same time to underline the specificity of the social function of these enterprises, which significantly influence the whole society and help to fight against the one of the biggest global problem – the growth of poorness. In this article, it was declared the importance of these enterprises in the global economy from the quantitative evaluation of family businesses through the key macroeconomic indicators. A proposed model that highlights the benefits of family businesses for the whole of society was the result of our research. It is expected that a comprehensive view on the benefits of family businesses, whether in the economic or social sphere, will help to highlight the issues of family business and their significant impact in the global environment.

Keywords: family businesses, globalization, social-economic function, global economy

JEL Classification: D21, E24, E29, M21

1. Introduction

Ekonomický a sociálny rozmer globalizácie zobrazuje jej vplyv na život a prácu ľudí, ich rodiny ako aj celú verejnosť (Uramova et al., 2012; Musa et al., 2017). V oblasti pracovného života, globalizácia významne ovplyvňuje zamestnanosť obyvateľstva, pracovné príležitosti a podmienky, príjem a sociálne zabezpečenie. Globalizácia ovplyvňuje aj život ako taký, našu bezpečnosť, kultúru, identitu, rodiny a komunity. V globálnom podnikateľskom prostredí sa v posledných desiatich rokoch veľká pozornosť začala venovať rodinným podnikom. Rodinné podniky (RP) sa stali dôležitou skupinou v segmente malých a stredných podnikov, ale zároveň sú súčasťou ekonomického zdravia mnohých krajín, zvlášť tam, kde je podporovaná podnikateľská iniciatíva. Je nutné zdôrazniť, že patria vo svete medzi storočiami overený spôsob podnikania, ktorý prináša rodine, ale aj celej spoločnosti veľa sociálno-ekonomických výhod (Bekeris, 2012; Bencikova et al., 2013; Musa et al., 2015; Bikar et al., 2016; Mastalerz-

Kodzis et al., 2016). Cieľom predloženého príspevku bolo poukázať na dôležitosť a nezastupiteľnú pozíciu RP v globálnej ekonomiky a súčasne na osobitosť ich sociálnej funkcie pomocou zostaveného modelu, nakoľko RP významným spôsobom ovplyvňujú celú spoločnosť a pomáhajú bojovať proti jednému z najdôležitejších globálnym problém, rastu chudoby.

2. Materiál a metodika

2.1 Materiál

V odbornej literatúre je možné stretnúť sa s mnohými pokusmi o formuláciu koncepčnej a operatívnej definície RP. Jadrom viacerých z nich bolo zadenovanie RP tak, aby ho bolo možné odlíšiť od nerodinného podniku. Akokoľvek, žiaden z týchto pokusov nevyústil do všeobecne akceptovanej definície, či už v rozvinutých trhových ekonomikách alebo bývalých socialistických krajinách. (Hudakova et al., 2015)

Pri vymedzení RP odborníci vychádzajú z rôznych kritérií. Medzi najčastejšie kritéria môžeme zaradiť percentuálny podiel rodiny na majetku, zapojenie viacerých generácií do strategického rozhodovania o podniku, úmysel postúpenia podniku ďalším generáciám (Salvato et al., 2008). Spoločným rysom týchto spoločností je rodinný rozmer, kde podnikanie a vlastníctvo sú vzájomne prepojené. RP môžu byť malé, stredné alebo veľké, ktoré buď zverejnia fakt, že ide o RP alebo ho utaja (Evert et al., 2016). Autori, ktorí sa RP zaoberajú dlhodobo vytvorili systém definovania RP podľa stupňa angažovanosti rodiny na podniku. Rozlišujú tak tri stupne definovania rodinných podnikov (Solomon, 2015):

1. **široká definícia** – je nutná efektívna kontrola strategických rozhodnutí rodinou a úmysel o zachovanie vzťahu medzi rodinou a podnikom,
2. **stredná definícia** – zakladateľ, alebo jeho potomok vlastní kontrolný balík akcií podniku a je teda právoplatným hlavným prijímateľom rozhodnutí v podniku,
3. **úzka definícia** – v RP sú zúčastnené viaceré generácie danej rodiny, rodina priamo vedie a vlastní podnik, a viac ako jeden člen rodiny má významné manažérske právomoci.

Každý podnik má *sociálnu štruktúru*, ktorá je tvorená formálnymi a neformálnymi skupinami. Je veľmi ťažké stanoviť hranicu medzi týmito dvoma rovinami štruktúry podniku, pretože sa navzájom prelínajú. Spoločenskú zodpovednosť podnikov možno nazvať aj „trojitá zodpovednosť“, nakoľko sa odvíja z troch základných oblastí – ekonomickej, environmentálnej a sociálnej výhod (Alshammari, 2015; Crowther et al., 2008).

2.2 Metodika

Výskum prebiehal v štyroch kľúčových etapách. V *prvej etape riešenia* bolo potrebné na základe *analýzy sekundárnych zdrojov* realizovať *literárnu rešerš* s cieľom definovať RP. V *druhej etape* bola pozornosť venovaná porovnávaniu významnosti RP pre vybrané krajiny prostredníctvom vybraných makroekonomických indikátorov (podiel RP na HDP, zamestnanosti a ich zastúpenie v súkromnom sektore). V týchto etapách boli použité metódy vedeckej práce, ako *sumarizácia*, *syntéza poznatkov* a *metóda analógie*. V *tretej etape* bol zostavený model, ktorý poukazuje na špecifickosť RP, kde sociálna funkcia podniku a rodiny tvorí jeden celok. Model bolo možné navrhnuť za pomoci využitia *systémového prístupu*. V *záverečnej fáze* boli *metódou sumarizácie* zhodnotené dosiahnuté výsledky a definované prínosy modelu pre vedu, teóriu a prax.

3. Výsledky a diskusia

3.1 Ekonomický vplyv rodinných podnikov na národné ekonomiky

RP celkovo v Európe predstavujú 70 % až 80 % zo všetkých podnikov pôsobiacich v súkromnom sektore (Bekeris, 2012). Najvyšší podiel týchto podnikov (Tabuľka 1) je vo Francúzsku, Nemecku, Holandsku, Portugalsku, Belgicku, Veľkej Británii, Španielsku a Taliansku. V USA RP predstavujú väčšinu podnikov, konkrétne 96 %. Absolútnym dominantom v počte RP je Mexiko. Podľa výskumov v Strednej Amerike je podiel RP až na úrovni 92 % až 100 % (Johansson et al., 2009). V Ázii najvyšší podiel RP, podľa tabuľky 1, môžeme vidieť v Indii (90 %) a Japonsku (90 %). V Austrálii predstavujú rodinné podniky 75 % zo všetkých podnikov podnikajúcich na území tohto štátu. Z vyššie uvedeného môžeme jednoznačne konštatovať, že RP predstavujú majoritnú časť zo všetkých podnikov na celom svete. Štatistiky uverejnené spoločnosťou Family Firm Institute uvádzajú, že celkový podiel RP vo svete sa priemerne pohybuje v rozmedzí 60 % až 80 % .

Podiel RP na HDP a zamestnanosti je vo všeobecnosti priemerne o 10 % až 30 % menší, ako ich celkový počet v danom štáte (IFERA, 2003). V Európe sa podiel RP na HDP (Tabuľka 1) pohybuje v rozmedzí 35 % (v Poľsku) až takmer 80 % (v Taliansku). Všeobecné pravidlo o vzťahu medzi počtom RP a HDP podľa získaných údajov platí vo väčšine sledovaných krajín Európy, napr. Cyprus 50 % (-30 %), Poľsko 35 % (- 45 %). Na druhej strane, existujú aj krajiny, kde tento rozdiel je miernejší, ako napr. v Taliansku 79 % (- 14 %), Nemecku 55 % (- 5 %), Francúzsku 60 % (- 6 %). Na Americkom kontinente najvyšší podiel RP na HDP má Mexiko, a to až 90 %. Podobná situácia je aj vo zvyšku sveta. V Ázii a Austrálii RP sa podieľajú minimálne 50 % podielom na tvorbe HDP, pričom maximálne na úrovni 76 % na Filipínach.

Podobne je to pri podiele RP na zamestnanosti v jednotlivých štátoch. Takmer vo všetkých krajinách uvedených v tabuľke 1 sú RP významným zamestnávateľom vo všetkých sledovaných národných ekonomikách. Čísla sa významne odlišujú od takmer 35 % podielu na zamestnanosti populácie krajiny vo Švédsku, 50 % v Austrálii, 63 % v USA, 79 % v Indii až po 94 % zamestnanosť ľudí v RP v Taliansku. Zo všetkých sledovaných krajín práve talianske RP sú najväčším zamestnávateľom tejto národnej ekonomiky. (Klein, 2000; Bekeris, 2012)

Table 1: Podiel rodinných podnikov na HDP, zamestnanosti a ich zastúpenie v súkromnom sektore v národných ekonomikách

Krajina	Definícia RP	% RP	HDP	Zamestnanosť	Krajina	Definícia RP	% RP	HDP	Zamestnanosť
Afrika					Austrália				
Južná Afrika	Široká	80 %	-	-	Austrália	Úzka	75 %	50 %	50 %
Amerika					Európa				
Argentína	Široká	71 %	30 %	68 – 70 %	Belgicko	Úzka	70 %	55 %	45 %
Brazília	Stredná	90 %	85 %	50 %	Cyprus	Široká	80 %	50 %	40 - 50 %
Čile	Široká	75 %	50 % - 70 %	60 %	Dánsko	Stredná	-	45 %	-
Kanada	Široká	-	45 %	-	Fínsko	Úzka	80 %	40 - 45 %	50 %
Kolumbia	Stredná	70 %	60 %	65 %	Francúzsko	Široká	60 - 66 %	60 %	45 %
Kostarika	Stredná	90 %	60 %	70 %	Holandsko	Stredná	69,3 %	53 %	49 %
Mexiko	Široká	92 – 100 %	90 %	79 %	Grécko	Široká	80 %	-	-
Paraguaj	Široká	80 %	-	-	Island	Široká	70 – 80 %	60 - 70 %	70 %
Uruguaj	Široká	80 %	50 %	70 %	Írsko	Stredná	75 %	-	40-50 %
USA	Široká	96 %	57 %	63 %	Taliancko	Široká	93 %	79 %	94 %
Ázia					Nemecko	Stredná	60 %	55 %	58 %
Čína	Úzka	85 %	65 %	-	Nórsko	Úzka	74 %	54 %	43 %
Filipíny	Široká	80 %	76 %	-	Poľsko	Široká	50-80 %	35 %	-
India	Široká	90 %	66 %	79 %	Portugalsko	Široká	70 %	60 %	50 %
Indonézia	Široká	58 %	72 %	-	Slovenská republika	Široká	80 – 95 %	-	-
Japonsko	Široká	90 %	-	-	Španielsko	Úzka	75 %	65 %	75 %
Libanon	Stredná	85 %	-	85 %	Švédsko	Úzka	79 %	-	34,7 %
Malajzia	Široká	70 %	67 %	65 %	Veľká Británia	Stredná	70 %	70 %	40 - 50 %

Source: (vlastné spracovanie podľa: Klein, 2000; IFERA, 2003; Johansson et al., 2009; Hudakova et al., 2015)

3.2 Sociálna funkcia rodinného podniku a model prepájajúci sociálnu funkciu podniku a rodiny

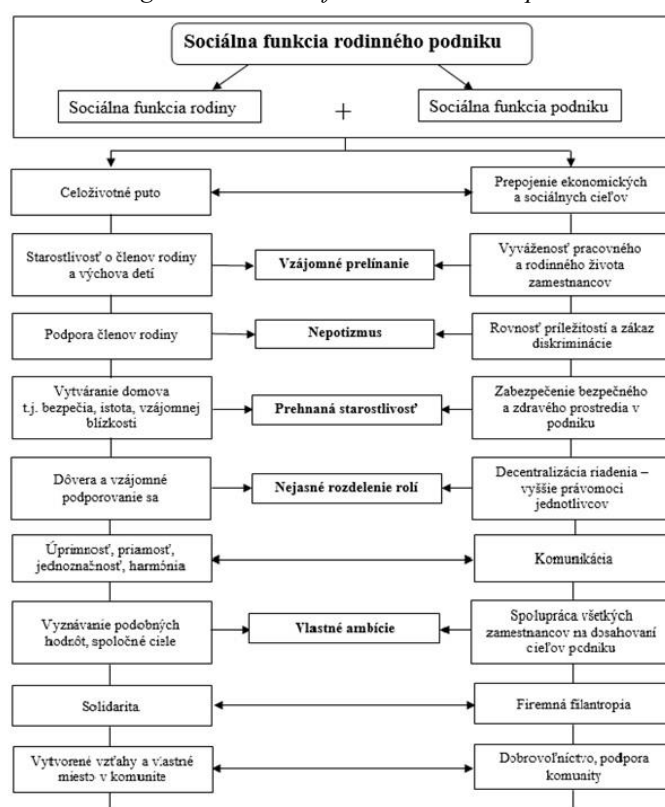
Pri RP sa nám prelína sociálna funkcia rodiny a podniku (Schmidts et al., 2015). Niektoré štúdie uvádzajú, že vplyv rodiny prináša do podnikania určité pozitívne sociálne prvky, napr. priateľské vzťahy medzi vlastníckmi, manažermi a zamestnancami, čo má priaznivý vplyv na manažment a šírenie znalostí vo firme. Medzi faktormi, ktoré môžu priaznivo ovplyvňovať výkonnosť RP, patrí pozitívny imidž u verejnosti, rýchle a flexibilné rozhodovanie alebo stabilita a zdieľanie spoločných cieľov a hodnôt (Laguir et al., 2014). Na druhej strane sú s vplyvom rodiny spojené faktory, ktoré môžu potenciálne výkonnosť podniku znižovať. Medzi tieto faktory patrí hlavne konzervativizmus a nie príliš strategické plánovanie, nepotizmus, autokracia zakladajúceho člena, nejasné rozdelenie rolí alebo rivalita medzi členmi rodiny, hlavne medzi súrodencami (Zachary, 2011). V roku 2014 bol realizovaný prieskum medzi RP, ktorý sa úzko dotýkal aj ich sociálnej funkcie. Z výsledkov prieskumu vyplynulo, že podnikatelia z RP cítia väčší záväzok voči zamestnancom a spoločnosti ako takej. Na základe tohto silnejšieho pocitu zodpovednosti vyvíjajú oveľa väčšie úsilie, než ostatné spoločnosti, aby zamestnanosť vo svojej firme udržali aj v ťažkých časoch. Táto skutočnosť sa premieta do vyššej vernosti a pocitu záväzku od tých, ktorých zamestnávajú (Elbaz et al., 2014; Laguir et al., 2014).

Z modelu na obrázku 1 vyplýva, že prepojením sociálnej funkcie podniku a rodiny sa vytvára špecifické sociálne prostredie RP. V určitých prípadoch prepojenia sociálnej funkcie podniku a rodiny, dochádza k ich vzájomnej podpore, ako napr. úprimnosť, priamosť, harmónia v rodine podporujú komunikáciu na pracovisku so všetkými zamestnancami. Niekedy však vzniká výrazný rozdiel medzi sociálnou funkciou podniku a rodiny. Ako prvý môžeme spomenúť nepotizmus. V RP sa často prejavuje uprednostňovanie členov rodiny, či už na manažérskych

postoch alebo všeobecne v podniku. V tom momente je skôr uplatňovaná sociálna funkcia rodiny a nie podniku. O tomto probléme hovoríme najmä vtedy, keď súčasťou podniku sú aj nerodinní zamestnanci. Ďalší konflikt môže vzniknúť v podobe prehnanej starostlivosti, ak sa manažér alebo vlastník obáva o zdravie člena rodiny a preto prácu zverí nerodinnému zamestnancovi. Autori ako Laguir et al. (2014) a Schmidts et al. (2015), uvádzajú tiež, že problémom RP je konzervativizmus. Typickým znakom rodiny je, že sa uzatvára dovnútra, avšak v prípade podniku to má byť opačne.

Dôvera, ktorá je medzi členmi rodiny v RP sa často prejavuje aj v decentralizácii riadenia, tá je prejavom SZP – sociálnej funkcie podniku (Cox et al., 1997; Zachary, 2011). Avšak, niekedy sa môže stať, že z dôvodu nejasného rozdelenia rolí v podniku sa stráca efektivita riadenia a vzniká chaos. Problém môže tiež nastať ak člen rodiny má vlastné ciele, ktoré nie sú zhodné s cieľom RP alebo rodiny. Na druhej strane práve zapojenie rodiny do podnikania predstavuje značnú výhodu. Solidarita, ktorá je typickým znakom rodiny môže priamo podporiť podnikovú filantropiu. Nespornou výhodou RP je hlavne ich vzťah s okolím. Rodina sama o sebe si vytvára svoje vlastné prostredie v spoločnosti, ktoré následne môže využiť v podnikaní. RP patria hlavne medzi mikro a malé podniky. Ich podnikateľské aktivity sú zamerané na miestny trh, ktorý poznajú a teda môžeme konštatovať, že podnikajú v „domacom prostredí“. (Cox et al., 2003; Laguir et al., 2014)

Figure 1: Sociálna funkcia rodinného podniku



Source: (vlastné spracovanie)

Každý podnik má lepšie predpoklady sa rozvíjať, ak vzdeláva svojich zamestnancov, deleguje na nich kompetencie a zabezpečuje im vhodné podmienky participovania na vzostupe firmy (Schmidts et al., 2015). Zároveň aj Martinez-Ferrero et al. (2016) uvádza, že úsilie podniku rozvíjať sociálnu oblasť života je podstatou a zmyslom jeho sociálnej funkcie, ktorá

má v ekonomickej teórii svoje stabilné miesto popri ostatných tradičných funkciách podniku. Na druhej strane, podľa Bergamaschi et al. (2016), v odbornej literatúre chýba jednoznačné vymedzenie obsahu a zložiek sociálnej funkcie podniku a neexistujú ani presne vypracované kritériá na jej uplatňovanie v praxi. Alshammari (2015) a Kumar et al. (2016) upozorňujú na skutočnosť, že kým efektívnosť podnikateľskej funkcie je možné merať napr. veľkosťou dosahovaného zisku, výrobná funkcia objemom produkcie alebo obchodná funkcia úrovňou obratu podniku, pre sociálnu funkciu neexistujú takéto jednoznačné kvantitatívne ukazovatele. V posledných rokoch sa však rozvíjajú viaceré hodnotiace modely sociálne, resp. spoločensky zodpovedného správania podniku. Avšak ako uvádza Bergamaschi et al. (2016), len malá pozornosť, sa venuje sociálnej funkcii rodinného podniku. Z výsledkov štúdie autorov Elbaz et al. (2014), Laguir et al. (2014), Schmidts et al. (2015) sa zistilo, že v RP sa prelínajú vzťahy rodiny a podniku z čoho vzniká oveľa kvalitnejšia vnútorná klíma v podniku. RP sa angažujú aj v externom prostredí v miestnych regiónoch kde pôsobia. Dobrovoľníckymi aktivitami, podporou komunity, poskytovaním pracovných miest, vzdelávania, inovácií pomáhajú rozvíjať miestne regióny a odstraňovať tak globálny problém prehlbovania sociálnych rozdielov medzi obyvateľstvom. Na základe vyššie uvedeného je ľahké pochopiť, prečo stále viac a viac vedcov a akademikov, či politikov začína čoraz väčšiu pozornosť venovať rodinným podnikom.

4. Conclusion

Do budúcnosti je dôležité, aby bola prijatá jednotná definícia RP vo svete. Predovšetkým inštitúcie, ktoré poskytujú štatistické údaje, ako napr. EUROSTAT, by mali prijať definíciu RP a priebežne zhromažďovať informácie o nich. V súčasnosti existuje takmer 90 definícií RP. Jednotlivé štúdie a štatistiky pracujú s rôznymi definíciami, a potom je veľmi ťažké, až nemožné, tieto údaje porovnávať. Súčasne politici v jednotlivých štátoch by mali venovať väčšiu pozornosť rodinným podnikom nakoľko sú pre ich ekonomiky „krvným obehom“. Mimoriadnym príkladom je Španielsko. Počas niekoľkých posledných rokov si politici uvedomili významnosť rodinného podnikania pre ich ekonomiku a vláda reagovala na situáciu zmenou daňových zákonov o rodine, ale aj zjednodušením prevodu podniku na ďalšiu generáciu. Zároveň vznikol inštitút na podporu rodinného podnikania. Španielsko by sa teda mohlo stať inšpiratívnym príkladom nie len pre Slovensko, ale aj ostatné štáty sveta.

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References

- [1] Alshammari, M. (2015). Corporate social responsibility and firm performance. *International Journal of Business and Management*, vol. 10, pp. 15-28.
- [2] Bekeris, R. (2012). The impact of macroeconomic indicators upon SME's profitability. *Ekonomika*, vol. 91, pp. 117-128.
- [3] Bencikova, D., Mala, D. and Minarova, M. (2013). How culturally intelligent are Slovak small and medium business. *7th International Days of Statistics and Economics*, Prague, Czech Republic, pp. 109-121.

- [4] Bergamaschi, M. and Randerson, K. (2016). The futures of family businesses and the development of corporate social responsibility. *Futures*, vol. 75, pp. 54-65.
- [5] Bikar, M. and Vavrova, K. (2016). Global movements of major world indices: The performance comparison. *16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp.191-198.
- [6] Cox, M. J. and Paley, B. (1997). Families as systems. *Annual Review of Psychology*, vol. 48, pp. 243-267.
- [7] Cox, M. J. and Paley, B. (2003). Understanding families as systems. *Psychological science*, vol. 12, pp. 193-196.
- [8] Crowther, D. and Aras, G., (2008). *Corporate social responsibility*, 1 st ed. Ventus Publishing ApS, Denmark: Fredriksberg.
- [9] Elbaz, J. and Laguir, I. (2014). Family businesses and corporate social responsibility (CSR) orientation: A study of Moroccan family firms. *The Journal of Applied Business Research*, vol. 30, pp. 671-688.
- [10] Evert, R. E., Martin, J. A., McLeod, M. S. and Payne, G. T. (2016). Empirics in family business research. *Family Business Review*, vol. 29, pp. 17-43.
- [11] Hudakova, et al. (2015). *Rodinné podnikanie*. Wolters Kluwer, Slovenská republika: Bratislava.
- [12] International Family Enterprise Research Academy (IFERA) (2003). Family Businesses Dominate. *Family Business Review*, vol. 16, pp. 235-240.
- [13] Johansson, D., Sjogren, H. and Bjuggren, C. M. (2009). Family business, employment and GDP. *Journal of Family Business Management*, vol. 6, pp. 1-25.
- [14] Klein, S. B. (2000). Family businesses in Germany: Significance and structure. *Family Business Review*, vol. 8, pp. 157-181.
- [15] Kumar, P. and Zattoni, A. (2016). Family business, corporate governance, and firm performance. *Corporate Governance an International Review*, vol. 24, pp. 550-551.
- [16] Laguir, I. and Elbaz, J. (2014). Family firms and corporate social responsibility (CSR): Preliminary evidence form the French stock market. *The Journal of Applied Business Research*, vol. 30, pp. 971-988.
- [17] Martinez-Ferrero, J., Rodriguez-Ariza, L. and Garcaa-Sanchez, I. M. (2016). Corporate social responsibility as an entrenchment strategy, with a focus on the implications of family ownership. *Journal of Cleaner Production*, vol. 135, pp. 760-770.
- [18] Mastalerz-Kodzis, A. and Pospiech, E. (2016). Socio-economic consequences of globalization – spatial analysis of economic characteristics in European Union countries. *16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 1313-1321.
- [19] Musa, H., Debnarova, L. and Musova, Z. (2015). The level of disclosure in corporate governance in Slovakia. *15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 469-476.
- [20] Musa, H., Debnarova, L. Musova, Z. and Kristofik, P. (2017). Gender equality and corporate governance in Slovakia. *E & M Ekonomie a Management*, vol. 20, pp. 98-110.

- [21] Salvato, C. and Melin, L. (2008). Creating value across generations in family-controlled businesses. *Family Business Review*, vol. 21, pp. 259-276.
- [22] Schmidts, T. and Shepherd, D. (2015). Social identity and family business: Exploring family social capital. *Journal of Family Business Management*, vol. 5, pp. 157-181.
- [23] Solomon, G. (2015). Entrepreneurship in family firms, business families, and family business groups. *Journal of Small Business Management*, vol. 54, pp. 386-393.
- [24] Uramova, J., Kubina, M., Segec, P. and Paluch, P. (2012). Viro the online support tool for IP network oriented courses. *10th IEEE International Conference on Emerging eLearnin Technologies and Applications (ECETA)*, Stara Lesna, Slovak Republic, pp. 338-343.

THE FINANCIAL SUPPORT FOR SLOVAK SMALL AND MEDIUM-SIZED ENTERPRISES IN THE ERA OF GLOBALIZATION

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Abstract. Small and medium sized enterprises (SMEs) in Slovakia are facing various barriers in their business, while access to finance is the dominant factor in the development of these. Development of SMEs is closely related to the development of national and world economy, because they are the main source of economic growth. The contribution deals with financial support for SMEs in Slovakia. It focuses on opinions of entrepreneurs and their perceptions of non-refundable, but also repayable forms of financial support. The objective of the paper is to examine and to assess the conditions for the use of financial support for small and medium enterprises in Slovakia and to propose a set of recommendations for improving its effectiveness. The empirical data were gained by the survey realized by the end of 2016 at the sample of selected small and medium-sized enterprises operating in Slovakia, which in the past received financial support from public sources and used it to raise their business in the global environment. The research have reached to assess the awareness of entrepreneurs on financial support, identifying key factors and barriers of gathering of financial support and to draft recommendations for the effective use of funding and improving the business environment. Based on primary and secondary research we set out recommendations to simplify the process of obtaining and receiving financial support for SMEs in Slovakia with the aim to increase their competitiveness in the era of globalization.

Keywords: SMEs, corporate funding, non-refundable financial support, repayable financial support

JEL Classification: G30, M20

1. Introduction

Malé a stredné podniky (MSP) sú vo vyspelých ekonomikách významnými trhovými subjektami, ktoré majú dôležitú ekonomickú a stabilizačnú úlohu a pozitívne vplyvajú na hlavné ukazovatele národných hospodárstiev. V Európskej únii bolo podľa Európskej komisie registrovaných 22,4 milióna podnikov v nefinančnom sektore, ktorých MSP predstavujú 99,8%, pričom 92,5 % z nich sú mikropodniky. MSP zamestnávajú v EÚ 66,8 % ekonomicky aktívnych obyvateľov, podieľajú sa 57,9 % na celkovej pridanej hodnote, ktorá je súčtom HDP jednotlivých krajín EÚ. Podľa Štatistického úradu SR z celkového počtu podnikateľských subjektov tvoriacich hospodárstvo SR tvorili v roku 2015 MSP 99,9 % pričom 96,9 % z nich

boli mikropodniky. Podiel MSP na zamestnanosti a HDP bol na Slovensku porovnateľný ako v EÚ (Mala et al., 2017; SBA, 2016).

Veľký význam MSP, osobitne v období globalizácie, spočíva v tom, že sa ľahšie a rýchlejšie prispôsobujú a reagujú na zmeny, čím vyplňajú prázdne miesto na trhu, o ktoré veľké podniky nemajú záujem a sú nositeľom inovácií a pokroku, pretože vyhľadávajú nové príležitosti. Ako ďalej uvádza Klimova (2007), MSP zohrávajú dôležitú úlohu pri tvorbe pracovných miest a zabezpečovaní vyváženého regionálneho rozvoja. Markova (2003) ešte uvádza ich konkurenčný a protimonopolný význam, protikrizový, akceleračný a exportný význam.

Napriek mnohým prínosom sa však MSP v praxi stretávajú s mnohými bariérami, ktoré musia prekonávať. Vo všeobecnosti za najdôležitejšie sa považujú nasledovné (Veber & Srpova, 2012; Belas et al., 2015; Virglerova et al., 2017):

- náročnejší a nákladnejší prístup ku kapitálu, z čoho vyplýva obmedzovanie rastu podniku;
- slabé postavenie v súťažiach o verejné zákazky,
- inovácie nižších významov, keďže tieto podniky nedisponujú potrebnými zdrojmi v porovnaní s veľkými spoločnosťami,
- komplikovanejší prístup k dostupným informáciám a znalostiam,
- vysoká konkurencia veľkých nadnárodných firiem využívajúcich dumpingové ceny.

V slovenských podmienkach ešte môžeme hovoriť o bariérach súvisiacich s podnikateľským prostredím, ktoré sa v ostatných rokoch výrazne zhoršilo a stalo nepriaznivejším, osobitne pre živnostníkov a malých a stredných podnikateľov. Ide hlavne o vysoké daňové a odvodové zaťaženie, neustále legislatívne zmeny, zlú vymožiteľnosť práva a nedôsledné uplatňovanie rovnosti pred zákonom (www.alianciapas.sk). Z ďalších problematických faktorov sa vo viacerých hodnoteniach (Globálny index konkurencieschopnosti, Index podnikateľského prostredia) objavujú aj korupcia, neefektívna byrokracia, nedostatočne kvalifikovaná pracovná sila, či nedostatočná infraštruktúra (Schwab, 2016). Zo subjektívnych prekážok MSP negatívne ovplyvňujú chýbajúce manažérske a ekonomické vzdelanie riadiacich pracovníkov, sociálne a psychologické bariéry zamestnancov či strach z rizika a neúspechu (Veber & Srpova, 2012).

Podľa viacerých autorov (Mrva & Stachova, 2014; Sobekova-Majkova et al., 2015) majú a čiastočne strední podnikatelia pociťujú ako významnú prekážku v rozvoji podnikania práve nedostatok finančných zdrojov resp. obmedzený prístup k nim, osobitne k cudzím zdrojom (najmä bankovým úverom). Podľa Leeho et al. (2015) je získavanie finančných prostriedkov výrazne ovplyvnené fázou životného cyklu, v ktorom sa podnik nachádza. Preto je pre začínajúce a mladé podniky takmer nemožné získať úver, alebo iný finančný inštrument od finančných inštitúcií (najmä z dôvodu neexistencie ich podnikateľskej histórie). Ďalším dôvodom je vysoká rizikovosť podnikateľských zámerov u inovatívnych podnikov. Belanova (2014) tiež uvádza skutočnosť, že MSP majú väčšinou menšiu kapitálovú silu a nedisponujú dostatočným majetkom na ručenie.

Z hľadiska klasifikácie finančných zdrojov podniku sa s ohľadom na zameranie nášho príspevku prikláňame k členeniu podľa prameňa/pôvodu (externé a interné zdroje) a podľa vlastníctva (vlastné a cudzie zdroje) (Mura & Buleca, 2012; Vinczeova, 2015). V rámci cudzích zdrojov financovania majú pre malé a stredné podniky význam najmä alternatívne zdroje financovania, z nich okrem iných aj štátna finančná pomoc a pomoc Európskej únie prostredníctvom štrukturálnych a komunitárnych fondov (Musa et al. 2016).

Podporný systém Európskej únie, ktorý prerozdeľuje finančné prostriedky na základe stanovených priorít pre dané programové obdobie, môže byť jednou z možností preklenutia nedostatku finančných zdrojov aj pre MSP (Toth & Mura, 2014; Misankova & Chlebkova, 2013). Podpora môže podnikom plynúť ako finančná podpora (priama a nepriama), nefinančná alebo informačná podpora (poradensko-právne služby) (Fabova et al., 2011). Finančnú podporu MSP z EÚ je možné čerpať na základe Komisiou uverejňovaných výziev. Momentálne sa nachádzame v druhom programovom období 2014 – 2020. Finančná podpora MSP napomáha rozvoju týchto podnikov a zavádzaniu inovácií. Európska komisia si uvedomuje ich význam a zavádza opatrenia pre zníženie byrokratickej náročnosti, lepší prístup k financiám alebo na zrýchlenie podporného systému. Napriek tomu sa MSP stretávajú s ďalšími prekážkami, napr. zložitým získavaním informácií, administratívnou náročnosťou, korupciou a klientelizmom, náročnosťou vypracovania projektov.

2. Materiál a metodika skúmania

Príspevok sa zaoberá finančnou podporou malých a stredných podnikov (MSP) na Slovensku. Naším cieľom bolo preskúmať a zhodnotiť proces získavania a využívania finančnej podpory pre MSP na Slovensku a navrhnúť súbor odporúčaní na jej zlepšenie.

Sekundárny výskum sme realizovali preštudovaním a analyzovaním dostupných literárnych zdrojov z oblasti financovania malých a stredných podnikov, ich finančnej štruktúry, ako aj ich podpory formou využívania vybraných alternatívnych zdrojov financovania. Zdrojom informácií boli aj materiály vybraných slovenských a európskych inštitúcií, ktoré sa venujú malým a stredným podnikom a ich finančnej podpore. Na základe dostupných informácií sme spracovali stručný teoretický úvod do skúmanej problematiky. Teoretické východiská boli predpokladom pre realizáciu primárneho skúmania.

Empirické údaje sme získali vlastným prieskumom, ktorý bol realizovaný on-line formou koncom roka 2016 vo vzorke vybraných malých a stredných podnikov pôsobiach na Slovensku. Subjektom skúmania boli malé a stredné podniky, ktoré už v minulosti získali finančnú podporu z verejných zdrojov a využili ju na zlepšenie svojho podnikania v globálnom prostredí. Predmetom skúmania bolo okrem iného hodnotenie informovanosti podnikateľov o finančnej podpore, identifikácia kľúčových faktorov a bariér pri získavaní finančnej podpory a prípadné návrhy na efektívne využívanie finančných prostriedkov a zlepšenie podnikateľského prostredia (otázky boli rozdelené tematicky do niekoľkých sekcií). V úvode dotazníka boli zaradené aj povinné identifikačné otázky.

V dotazníkovom prieskume sme zo základného súboru všetkých podnikov, ktoré získali nenávratnú finančnú podporu z verejných zdrojov v období rokov 2007 – 2013, zostavili podľa zvolených kritérií výberový súbor 1151 malých a stredných podnikov. Z nich bolo ochotných zapojiť sa do dotazníkového prieskumu len 69 podnikov (5,9 percentná návratnosť). Podľa veľkosti sa prieskumu zúčastnilo najviac malých podnikov (10 – 49 zamestnancov) – 66,77 %. Stredných podnikov (50 – 249 zamestnancov) bolo vo vzorke 18 (26,09 %) a mikropodnikov (do 9 zamestnancov) 10,14 %. Z hľadiska právnej formy v našej vzorke dominovali spoločnosti s ručením obmedzeným (viac ako 72 %) a akciové spoločnosti (17,39 %). Podľa dĺžky podnikania väčšina našich respondentov uviedla, že podniká dlhšie ako 10 rokov (82,61 %), resp. od 5 do 10 rokov (13,04 %).

Na základe našich zistení z primárneho a sekundárneho výskumu navrhujeme niekoľko opatrení a postupov na zjednodušenie procesu získavania a prijímania finančnej podpory pre MSP na Slovensku s cieľom zvýšiť ich konkurencieschopnosť v období globalizácie.

3. Výsledky a diskusia

V úvode sme sa respondentov pýtali, či majú dostatok informácií o možnostiach finančnej podpory MSP na Slovensku. Väčšina respondentov (57 %) si myslí, že majú dostatok informácií (odpovede určite mám a skôr mám). Naše zistenie bolo prekvapivo v rozpore s výsledkom prieskumu realizovaného SBA v roku 2015 o názoroch MSP vo vzťahu k využívaniu podporných opatrení. Tento rozdiel podľa nášho názoru súvisel s charakteristikami vzoriek respondentov. Informovanosť našich respondentov sme si overili v ďalšej otázke, ktorou sme zisťovali, či a aké programy finančnej podpory respondenti poznajú, resp. už o nich počuli. Väčšina respondentov (71 %) prirodzene označila nenávratné finančné príspevky z operačných programov (zároveň je otázkou, prečo túto formu neoznačili všetci respondenti, vzhľadom na to, že s ňou v minulosti mali osobnú skúsenosť). Rovnako, po 40 % respondentov uviedlo príspevky z ministerstiev a ÚPSVaR a komunitárne programy v prvom programovom období 2007 – 2013. Len 14,5 % uviedlo programy návratnej finančnej pomoci. Slabé povedomie MSP – našich respondentov – sme zaznamenali aj v prípade komunitárnych programov súčasného programového obdobia 2014 – 2020. Z hľadiska zdrojov informácií o možnostiach finančnej pomoci označovali naši respondenti najčastejšie osobné zdroje informácií (referencie a skúsenosti priateľov, známych, obchodných partnerov – 28 podnikov), poradenské/projektové spoločnosti – 27 podnikov, rovnako ako informácie na internete.

Ďalšia časť prieskumu bola zameraná na skúmanie prekážok pri získavaní nenávratných finančných príspevkov pre MSP z verejných zdrojov na Slovensku. Ako najväčšiu bariéru vnímali naši respondenti administratívnu náročnosť. Nasledovala časová náročnosť, zložitosť verejného obstarávania, nedostatok a nezrozumiteľnosť informácií, zmena podmienok a korupcia.

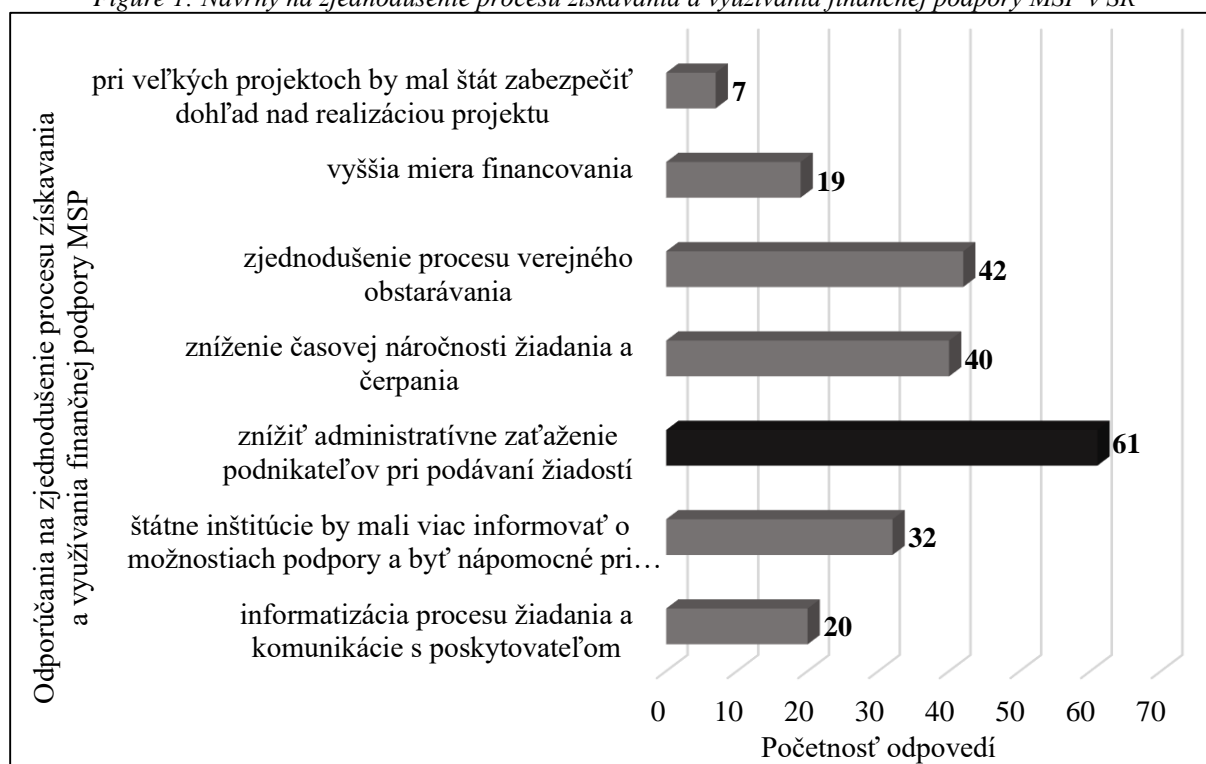
S ohľadom na vyššie uvedené prekážky nás zaujímalo, či respondenti využili pri vypracovaní žiadosti o nenávratnú finančnú pomoc a pri realizácii projektu poradenskú/projektovú spoločnosť. Najväčšia časť respondentov takúto možnosť využila v prípravnej fáze pri vypracovaní projektu a žiadosti o nenávratný finančný príspevok (78 % opýtaných). Služby projektovej spoločnosti vôbec nevyužilo len 7 % našich respondentov. Na základe uvedených výsledkov konštatujeme, že externé poradenstvo a projektová príprava je významným faktorom pri získavaní nenávratných finančných príspevkov z verejných zdrojov. Využitie tejto možnosti môže súvisieť s nevedomosťou podnikateľov vypracovať taký projekt, ktorý by bol schopný uspieť v procese posudzovania žiadostí o príspevok, ako aj s časovou náročnosťou vypracovania projektu. Z tých podnikov, ktoré služby poradenskej/projektovej spoločnosti využili, väčšina (84 %) prejavila spokojnosť.

Pri hodnotení využívania nenávratných finančných príspevkov z verejných zdrojov nás zaujímali jednak názory respondentov, ako aj merateľné ukazovatele, ktorými sa tento typ projektov hodnotí v praxi. Jedným z nich je napríklad udržateľnosť novovytvorených pracovných miest. Pozitívne bolo zistenie, že v 45 podnikoch z našej vzorky tieto pracovné miesta stále udržiavajú, takže môžeme považovať vynaloženie finančných prostriedkov z verejných zdrojov za efektívne. V 28 % podnikov doba udržateľnosti projektu stále plynie, takže na túto otázku nemohli odpovedať. Pri hodnotení ukazovateľov finančného charakteru

(napr. nárast tržieb, nárast pridanej hodnoty) len 19 % opýtaných uviedlo, že nedosiahli plánované výsledky z projektu. Z hľadiska vplyvov realizácie projektov spolufinancovaných z nenávratného finančného príspevku na jednotlivé podniky dominovalo zavedenie inovatívnych technológií a procesov (v 39 prípadoch), posilnenie postavenie podnikov na trhu (28) a podpora expanzie podniku (17).

Z hľadiska požiadaviek, návrhov a odporúčaní našich respondentov na zjednodušenie využívania finančnej podpory MSP v SR (posledná časť nášho prieskumu) dominovala odpoveď „zníženie administratívneho zaťaženia pri podávaní žiadostí“. Ďalšie uvádzané návrhy prezentujeme v obrázku 1 (respondenti mali možnosť označiť viaceré odpovede).

Figure 1: Návrhy na zjednodušenie procesu získavania a využívania finančnej podpory MSP v SR



Source: Vlastné spracovanie výsledkov prieskumu

V odpovediach sa objavili aj „iné“ možnosti, napríklad eliminácia korupcie, či zvýšenie kvalifikovanosti a odbornosti úradníkov.

Nadväzujúc na výsledky nášho skúmania sme uvažovali o opatreniach, ktoré by prispeli k zlepšeniu procesov súvisiacich so získavaním a využívaním finančnej podpory MSP z verejných zdrojov. Najväčšia časť našich respondentov poukazovala na vysoké administratívne zaťaženia podnikateľov v počiatočnej fáze procesu získavania finančnej podpory a jeho zložitosť. Jednou z možností, ako tento problém riešiť, je informatizácia procesu žiadania a komunikácie s príslušnými úradmi. Okrem časových úspor pre podnikateľov by toto riešenie podľa nášho názoru mohlo aspoň čiastočne prispieť aj k riešeniu problémov s korupciou (tiež sa objavila medzi bariérami, ktoré MSP vnímajú v súvislosti so získavaním a čerpaním finančnej podpory). K zníženiu zložitosti skúmaných procesov by mohla pomôcť väčšia osвета zo strany relevantných inštitúcií (napr. SBA, príslušné ministerstvá), kvalitnejšie poradenstvo pre MSP a intenzívnejšie vzdelávanie v oblasti možností financovania podnikateľských aktivít.

Okrem vyššie uvedeného, respondenti všeobecne kritizovali aj vysoké odvodové a daňové zaťaženie, niektoré komplikované a časté legislatívne úpravy, vysoké úrokové zaťaženie pri návratných formách a pod. Rovnako kritike podliehali rozdiely v podmienkach podpory pre domácich resp. zahraničných investorov. Odporúčaním je presnejšie vymedzenie, ako aj zjednotenie podmienok pre podnikateľov, ktoré musia spĺňať pri získavaní finančnej podpory. Zameranie podpory na inovatívne a začínajúce podniky je už v súčasnosti čiastočne zabezpečené. Odporúčame zaradiť medzi cieľové skupiny finančnej podpory aj rodinné podniky. Zvýšenie informovanosti MSP, zlepšenie dostupnosti finančnej podpory rovnakým spôsobom pre všetky MSP, zavedenie dôslednejších opatrení na elimináciu korupcie sú spôsobmi, ktoré by mohli prispieť k rozvoju malého a stredného podnikania a tým aj zlepšeniu podnikateľského prostredia v našich podmienkach.

4. Conclusion

Malé a stredné podniky sú motorom rozvoja národných ekonomík, sú hlavným zdrojom ich ekonomického rastu, tvorcom HDP a zamestnávajú väčšinu obyvateľstva. Napriek týmto prínosom sa však často stretávajú v praxi s rôznymi prekážkami, ktoré ich rozvoj obmedzujú. Jednou z často označovaných prekážok je nedostatočný prístup k finančným zdrojom. Osobitne treba spomenúť prístup k štátnej pomoci, ktorý je aj podľa indexu podnikateľského prostredia hodnotený negatívne. Nie všetky, v súčasnosti poskytované a realizované programy a formy podpory, sú dostatočne a efektívne využívané, čo vnímajú aj mikro, malí a strední podnikatelia.

Podobné názory a postoje potvrdil aj náš dotazníkový prieskum. Finančná podpora malých a stredných podnikov je nimi samotnými vnímaná ako nedostatočná, s negatívnym vplyvom na prirodzené konkurenčné prostredie. Tieto názory môžu čiastočne vychádzať aj z nedostatočnej informovanosti podnikov o niektorých programoch a formách finančnej podpory. Ich zameranie a podmienky získavania by sa však mali upraviť tak, aby boli dostupné pre všetkých podnikateľov v rovnakom rozsahu. Jednou z možností je vytvoriť opatrenia na elimináciu diskriminácie niektorých skupín podnikateľov, zamedzenie korupcie, či väčšiu transparentnosť procesov získavania aj využívania finančných prostriedkov z verejných zdrojov.

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References

- [1] Belanova, K. (2014). Debt financing to small and medium – sized enterprises in Slovakia. *Role of Financial Sector in Supporting the Economic Recovery of CEE Countries, 8th International Conference on Currency, Banking and International Finance*. Bratislava, Slovakia, pp. 11-23.
- [2] Belas, J. et al. (2015). The business environment of small and medium-sized enterprises in selected regions of the Czech Republic and Slovakia. *E&M Ekonomie a Management*, vol. 18, no. 1, pp. 95-110.
- [3] Fabova, L. et al. (2011). *Ekonomía pre technikov*. Bratislava: Iura Edition.

- [4] Klimova, V. (2007). *Rozvoj malého a stredného podnikání*. Brno: Masarykova univerzita.
- [5] Lee, N. et al. (2015). Access to finance for innovative SMEs since the financial crisis. Research Policy. *Elsevier*, vol. 44, no. 2.
- [6] Mala, D. et al. (2017). Green logistics in small and medium wood-processing enterprises. *Bioresources*, vol. 12, no. 3, pp. 5155-5173.
- [7] Markova, V. (2003). *Malé a stredné podnikanie v Slovenskej republike*. Banská Bystrica: Ekonomická fakulta UMB.
- [8] Misankova, M. and Chlebikova, D. (2013). Possibilities for financing innovation activities in Slovak Republic. *Financial Management of Firms and Financial Institutions: 9th International Scientific Conference Proceedings*, Ostrava, Czech Republic, pp. 562-570.
- [9] Mrva, M. and Stachova, P. (2014). Regional development and support of SMEs – how university project can help. *Procedia – Social and Behavioral Sciences*, vol. 110.
- [10] Mura, L. and Buleca, J. (2012). Evaluation of financing possibilities of small and medium industrial enterprises. *Procedia Economics and Finance. International Conference Emerging Markets Queries in Finance and Business*, Targu Mures, Romania, pp. 217-222.
- [11] Musa, H., Strokova, Z. and Musova, Z. (2016). Financing of Slovak small and medium-sized enterprises in globalising environment. *16th International Scientific Conference Proceedings Globalization and its Socio-economic Consequences*, Rajecké Teplice, Slovakia, pp. 1458-1465.
- [12] SBA. (2016). *Malé a stredné podnikanie v číslach v roku 2015*. [Online]. Available: http://www.sbagency.sk/sites/default/files/msp_v_cislach_v_roku_2015_0.pdf.
- [13] Schwab, K. (2016). The Global Competitiveness Report 2016-2017. [Online]. Geneva: World Economic Forum, 2016. Available: http://www3.weforum.org/docs/GCR2016-2017/05FullReport/TheGlobalCompetitivenessReport2016-2017_FINAL.pdf.
- [14] Sobekova-Majkova, M., Solik, J. and Sipko, J. (2015). Problems with Financing of SMEs as one of the Business Risks in the Conditions of Slovakia. *Finance and Performance of Firms in Science, Education, and Practice*, Zlin, Czech Republic, pp. 1374-1389.
- [15] Toth, Z. and Mura, L. (2014). Support for Small and Medium Enterprises in the Economic Crisis in Selected EU Countries. *Hradec Economic Days 2014: Economic Development and Management of Regions*, Hradec Kralove, Czech Republic, pp. 424-429.
- [16] Veber, J. and Srpova, J. (2012). *Podnikání malé a střední firmy*. (3. ed.). Praha: Grada.
- [17] Vinczeova, M. (2015). *Podnikové financie*. Banská Bystrica: Belianum. Vydavateľstvo Univerzity Mateja Bela.
- [18] Virglerova, Z., Homolka, L., Smrcka, L., Lazanyi, K. and Kliestik, T. (2017). Key Determinants of the Quality of Business Environment of SMEs in the Czech Republic, *E&M Ekonomie a Management*, vol. 20, no. 2, pp. 87-101.

CUSTOMER GLOBAL PREFERENCES AS AN INITIAL PART OF SUSTAINABLE BRAND GROW AS A NECESSARY PART OF THE PROCESS OF GLOBALIZATION

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Abstract. Marketing is a creative profession. And globalization is a necessary part of the global marketing process as marketers need to consider all global factors and customers preferences. It is said, that customers have changed and they require products that support their desire to health and sustainable lifestyle. There are hundreds of researches on sustainable customer behaviour. One thing is to carry out surveys about attitudes of customers, but on the other hand, categorize them into meaningful groups that describe and predict their buying behaviour. Then it is necessary to choose a group as an object to which a company creates a product and appropriate strategy for its placing on the market. However, creativity should be use within a framework of psychological laws and customer buying behaviour and preferences. It is only way how to build strong brand in the local or global market. When we talk about globalization, brand must be considered between top three brands in the segment, otherwise customers do not buy and brand does not grow. If the company is in top of mind, company is a brand, a leader, brand possess added value, and brand sets conditions. Every strong brand has clear vision and execution effectively as it gets. Sustainability and responsible consumption are becoming an important part of our lives. The article presents summary of expert opinions on the a sustainable brand grow. In addition, it enriches this knowledge by results of own research. Research is aimed to discover customers' preferences about basic human activities that companies need to take to account before creating sustainable marketing strategy as a necessary part of the process of globalization.

Keywords: brand, customer preferences, brand building, marketing strategy, globalization

JEL Classification: M30, M31, F60

1. Introduction

Many marketers who believe in holistic approach and developed form of marketing, sustainable green marketing said: "To be successful, brands need to collaborate with each other and align sustainability with the behaviours of today's recession-conscious customer."

What does it mean for brands, for companies? And what does it mean for customers? How globalization influences the process of brand building? What are preferences of customers?

Currently strategic priority with growing interest at an international level among the major companies, private organizations as well as public institutions worldwide is focusing on environmental issues and sustainability. Ecosystem and climate changes concern how to utilize environmental and natural resource for accelerating industries with “green” engine. (Akgun & Gumusbuga, 2015; McQueen, 1991)

2. Conscious consumption and brand grow

Accordingly, customers become more socially responsible to the environment, which leads to socially responsible consumption, such as saving energy, buying eco-labelled products, sorting waste or recycling. As is known in general, the marketing mix of green marketing are respected ordinary structure of 4P marketing mix: product, price, and place and promotion. The second view of the marketing mix is from the customer point of view, which uses a complex 4C’s customer value - the value of the product to the customer, customer costs - the cost of buying the product and its use, convenience - availability solutions for customer convenience and communication - two-way communication. Between these approaches is great relationship. (Andrew & Pitt, 2016) More than ever before, global government and managers, initiative their strategic actions in socially responsible manner with emphasis in the sustainable products to facilitate sustainable consumption. *Motivation* to social responsible behaviour is coming out of personal persuasion that’s mean subjective opinion attitude flowing from moral values. This fact is important for companies that would like to obtain customers with such feelings and persuasion. The type of this target group is called as green consumers and it is related to conscious consumption. Furthermore, here is possible to divide them to two groups: low and high environmental involved. Some consumers seek to make purchase decisions based on a company’s role in society and its level of environmental responsibility. (Cotts, 2010; Grimmer & Bingham, 2012) As a result, the “green market” is recently growing. Estimates are that spending on green goods and services grew by 18% over the previous two years. Green consumerism refers to the individual consumer’s preference for less environmentally damaging companies and products. Green consumerism and company environmental performance are counted within the broader categories of ethical consumption and Corporate Social Responsibility. Despite increased interest, proof of CSR influence, and more specifically environmental, initiatives on customer behaviour are contradictory and equivocal. With this fact is connected “30:3 syndrome”. (Child, 2009) Firstly, it is the phenomenon in which a third of consumers profess to care about companies’ policies and records on social responsibility, but ethical products rarely achieve more than a 3% of market share. (Child, 2009) Second explanation for “30:3 syndrome” concerns the price of environmentally-friendly products. While customers might espouse positive attitudes towards the environment, not all are willing to pay more for products from high environmentally - performing enterprises. Polonsky argued that green marketing is not to achieving its potential, both in terms of its impact on customer purchase behaviour and in terms of its effectiveness in improving the environment. But on the other hands, surveys show that no environmentally preferable car, carpet, cleaner, cosmetic, clothing, coffee, credit card or cell phone has captured more than 2% of its perspective market. (Kamaruzzaman et al., 2016) In most cases, sales of green products represent well under 1% of any given category. (Kang & Hong, 2015)

However, each company need build sustainable brand in meaning the need to survive – make money, make profit. Consulting group futureSME developed methodology taking the best practices and disciplines from highly successful companies and adapting them to be relevant to

all businesses. They summarize all advantages from implementation sustainable marketing and brand building process. (Kliestikova & Moravcikova, 2017)

Table 1: Benefits from implementing sustainable marketing

Advantages	Financial	Non-financial
	Direct cost savings	Risk management
	Product quality	Efficiency of processes
	Reducing the cost of claiming	Productivity gains
	Increasing the brand's worth	Employee motivation
	Reduce unnecessary costs	High working ethics
		Acquiring loyal customers
		Acquiring talents

Source: Self-processed based on FutureSME, 2016

2.1 Brand grow and brand loyalty

The brand is about trust. Customers and people will trust the brand, if the company

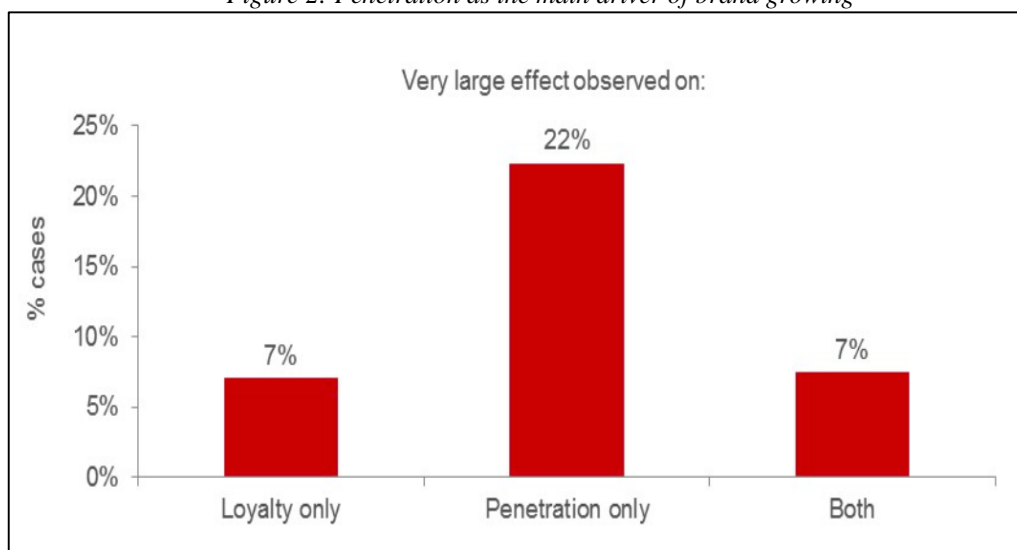
- fulfils the promises,
- listens and tries to understand,
- will be in line with their values.

Brands bring in decision-making a layer of complexity. On the other hand, they allow routines what human brain loves. More than 90% of purchasing decisions are low involvement. This means brand should be focused on light users and try to penetrate as much as it is possible. Brand needs to interfere with all potential and continuously recalls. Brands with different penetration have the same customer structure. It is not possible to strengthen one segment at the expense of others - changes always occur in all segments. In developed markets, all brands of the same category have a similar loyalty. (Ko, 2011; Korpela et al., 2015; Lepkova, 2015)

- Brands with higher penetration (and market share) have slightly higher loyalty.
- A significant change in loyalty would therefore require a massive change in market share, which is practically impossible.
- The brand cannot grow by increasing loyalty by simply increasing penetration. (Schultz, 2000)

Loyalty is the result of easy accessibility, custom, comfort, lock on the platform. Loyalty is a function of penetration, not vice versa. Figure 2 presents results of research that tried to investigate link between grow and loyalty.

Figure 2: Penetration as the main driver of brand growing



Source: *Effectiveness in the digital era*, 2016 Binet and Field IPA, based on data collected between 2008 – 2016

Therefore, the question is: *How to increase penetration?*

- Increasing physical availability.
- Increasing mental availability.

To make the brand grow, it has to be easy to buy and many people have to think about it. The most effective tool is Share of voice. It is more important than ever before. The IPA 2009 report *How Share of Voice Wins Market Share: New Findings From Nielsen And The IPA Databank* contains two critical pieces of advice for those pursuing growth. (Krizanova, 2012) (Potkany et al., 2015)

The critical metric that determines the level of a brand's market share growth is its excess share of voice (ESOV), defined as share of voice (SOV) minus share of market (SOM).

In other words, if you want to grow your market share you need to over invest.

The second advice for brands:

"The corollary of this is that no agency or marketing client can guarantee to continue to deliver the same level of business performance for a brand is ESOV is falling as a result of underinvestment in media and marketing communications."

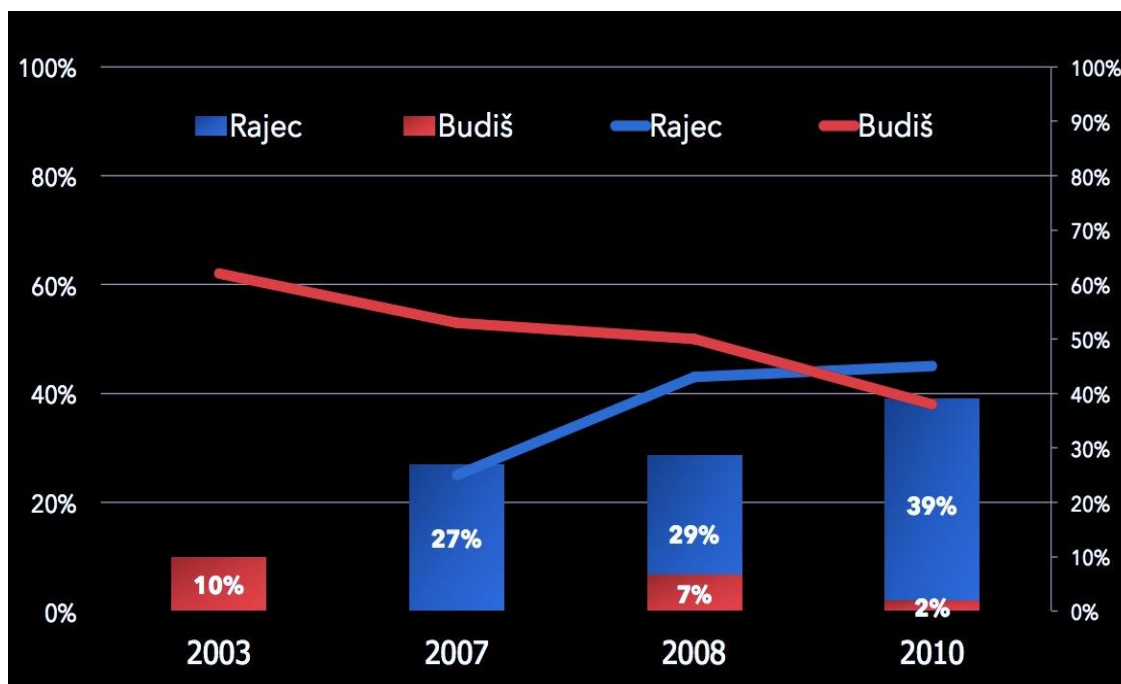
In other words, if you are under-investing, you can expect your market share to decline.

The key findings from the Nielsen analysis were:

- The relationship between ESOV and share growth was confirmed.
- An average of 0.5% points of share growth can be expected per 10% points of ESOV. Thus, a brand with a market share of 20.5% and ESOV of 10% points would expect to grow over a year to 21%.
- The levels of growth achieved per point of ESOV vary according to brand size

2.2 The empirical evidence

Figure 3: Share of voice vs. market share of mineral water companies in Slovakia



Source: Self-processed based on market data available at companies' websites, 2017

Figure 3 presents how share of voice, mental and physical availability caused higher market share of Rajec brand (brand of mineral water) just in 3 years. In advance, there is evidence that people are not loyal to brand. Online survey organized by 2mouse company on sample 1000 people said: 89% of customer buy another brand of mineral water if their "favourite" is not available. Just 11% of customers buy still the same brand of mineral water. (Ling & Wong, 2016; Sillanpaa & Junnonen, 2016; Stephan, 2016)

2.3 Customer survey

As we said in the beginning, people buy some products because company is in line with their values. The object of this research study was to develop customers preferences in daily living activities: eating, housing, traveling/commuting to work, free time activities. The questionnaires were randomly mailed to 1000 people in different age, gender, economic status. There were 386 valid questionnaires from consumers (effective response rate 38,6%, that included 43,9% males and 56,1% female). 40,9% respondents was between 25-34 years, 48-5% between 35-44 years. We used statistical methods as common percentage results. The process of survey was conducted in May 2017. (Vyskocil, 2011; Thornton, 2015)

2.4 Results of survey

There were 4 easy questions: How often do you do voluntary activities related to environmental protection, healthy lifestyle? (garbage collection, recycling, voluntary activities)? Do you buy some certainly product because you believe they are better for environment? Are you willing to pay more for eco-friendly product? If you have a chance, will you move to the city where you work?

Table 2: Results of survey

How often do you do voluntary activities related to environmental protection, healthy lifestyle? (garbage collection, recycling, voluntary activities)		Do you buy some certain product because you believe they are better for environment?		Are you willing to pay more for eco-friendly product?		If you have a chance, will you move to the city where you work?	
Never	6,6%	Never	8,2%	I do not agree	5,7%	I do not agree	3,6%
Less than once a year	18,2%	Rather no	22,7%	Rather no	14%	Rather no	15%
Several times per year	17,7%	Sometimes	42,2%	I do not know	33,1%	I do not know	10,3%
Monthly	22,7%	Rather yes	22,6%	Rather yes	41%	Rather yes	38,9%
Weekly	21,2%	Every time	4,3%	I do agree	6,2%	I agree	32,2%
Daily	13,6%						

Source: Self-processed based on results of survey

As we can see customers are talking about sustainability, but their buying behaviour does not copy this trend. Those who prefer to buy eco-friendly products or doing voluntary activities are in minority. There is a room for companies to educate them or offer just products which are not harmful for environment. But how to educate or how to attract customer attention. As we said in previous parts, if company does not have enough money to penetrate, it needs to be creative. How creativity affect revenues? (Gutierrez & Montserrat, 2015; Shen, et al. 2017)

2.5 Creativity as a key of effective marketing strategy

It is said between famous marketers that: “a *creativity gets you what money cannot buy*. In other words, to some level, market share can be bought. Bill Bernbach said: “*It may well be that creativity is the last unfair advantage we're legally allowed to take over our competitor*” However, the unfair advantage that any marketer can choose to leverage is the power of creativity. In its report *The Link Between Creativity and Effectiveness*, the IPA has some fantastically valuable analysis of the relationship between creatively-awarded work and effectiveness. The sample used for this study were the 257 IPA Effectiveness cases studies for which Gunn Report scores were all available. (Carter & Chu-May, 2017)

The IPA's analysis reveals that that non-awarded campaigns, on average generate 0.5 points of share growth per 10 points of ESOV. Which is obviously very much in line with the findings from Nielsen's analysis. (Laudan et al., 2016; Hudson, 2017)

In sharp contrast, creatively-awarded campaigns generate on average 5.7 points of share growth per 10 points of ESOV. In other words, creatively-awarded campaigns generate around 11 times more share growth per 10 points of ESOV than creatively-non-awarded campaigns. Unfortunately, creativity then, is not merely vanity. (Kliestikova & Moravcikova, 2017; Moravcikova, 2016)

Creativity is also path for smaller brands and is even more important. The Nielsen analysis reveals that brands with market share levels of over 10% achieved on average around 2½ times the level of share growth per point of ESOV than brands with market share levels of under 10%.

Brand leaders achieved 1.4% points of share growth per 10% points of ESOV compared with challenger brands that can only expect 0.4% points of share growth per 10% points of ESOV. The effect of overspending is less pronounced for smaller brands. They really have no choice but to communicate and behave in radically different ways if they are to grow. (Makower & Pike, 2009; Redlein & Zobl, 2016)

3. Conclusion

There is no evidence that a brand that believes in an ideal is more successful than others. There are researches in which some people have expressed the preference of brands that act good. But it is not reflected in revenues. People are saying something, but buying what they are used to, what is being bought comfortably or is in sales as our short survey confirmed.

The fact that brand purpose is a fashion affair, but does not mean we have to ignore it. If you want to grow as a brand you have to catch up this trend. However, when someone will convince you that as a brand you have to act good, otherwise your brand cannot survive, ask yourself if such an investment could bring you, for example, additional publicity. Or in other words, it can increase the mental availability of your brand. Of course, there is a relationship between purpose and business performance, but brand has to think about customer preferences and mental and physical availability. Also, nowadays customers have access to information more than ever before and if a business or brand tells it wants to help solve a big problem in the world, or that it has a higher purpose than simply selling or it wants to make the world a better place, then marketing's claims, promises, and manifestos are not what we should be interrogating.

Instead, customers will be looking at where it sources its raw materials from, manufacturing processes, sustainability practices, employment practices, safety practices and policies, approach to workplace diversity, policy on pay equality, business practices, how it treats its suppliers and partners, how it treats customer data, what it does with its profits, what proportion of its profits go to civic or social good programme and how well all of this is aligned with its stated purpose.

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References

- [1] Akgun, I. and Gumusbuga, F. (2015). Risk based facility location by using fault tree analysis in disaster management. *Omega – International Journal of Management Science*, vol. 52, pp. 168-179.
- [2] Andrew, A. and Pitt, M. (2016). The development of facilities and estate management in the Scottish central government civil estate 1989-2015. *Journal of Facilities Management*, vol. 14, pp. 179-187.
- [3] Carter, S. and Chu-May, Y. A. (2017). From hedonism and utilitarianism to anticipated actual behavior: Do UK and Malaysian postgraduate students behave differently to mobile apps? *Economics, Management, and Financial Markets*, vol. 12, no. 2, pp. 11–34.

- [4] Cotts, D. G. (2010). *The Facility management handbook*, New York, Amacon, pp. 661.
- [5] Grimmer, M. and Bingham, T. (2012). Company environmental performance and consumer purchase intentions. *Journal of Business Research*.
- [6] Gutierrez, V. J. and Montserrat, V. V. (2015). ¿Generación de las nuevas tecnologías? Aularia: Revista digital de comunicación, vol. 4, no. 2, pp. 91-94.
- [7] Hudson, S. et al. (2017). Building a place brand from the bottom up: A case study from the United States. *Journal of Vacation Marketing*, vol. 23, no. 4, pp. 365-377.
- [8] Child, J. (2009). Managerial and Organizational factors associated with Company Performance. *Journal of Mngement Studies*, vol. 12, pp. 12-27.
- [9] Kamaruzzaman, S. N., Zawawi, E. M. A. and Shafie, M. O. (2016). Assessing the readiness of facilities management organizations in implementing knowledge management systems. *Journal of Facilities Management*, vol. 14, pp. 69 – 83.
- [10] Kang, T. W. and Hong, Ch. H. (2015). A study on software architecture for effective BIM/GIS-based facility management data integration. *Automation in Construction*, vol. 8, pp. 655-687.
- [11] Klietkova, J. and Moravcikova, D. (2017). Brand building with using phygital marketing communication. *Journal of Economics, Business and Management*, vol. 5, no. 3.
- [12] Ko, E. et al., (2011). Green marketing' functions in building corporate image in the retail setting. *Journal of Business Research*.
- [13] Korpela, J., Miettinen, R. and Salmikivi, T. (2015). The challenges and potentials of utilizing building information modelling in facility management. *Construction Management and Economics*, vol. 33, pp. 3-17.
- [14] Krizanova, A. VEGA 1/0473/12 Krizanova, A. et al.: Integrated model of building of brand value as a tool of business marketing mix.
- [15] Laudan, D., Elvira, N. and LazaroIU, G. (2016). Structural and functional abnormality in particular brain regions and connections in subjects with internet gaming disorder (IGD). *American Journal of Medical Research*, vol. 3, no. 2, pp. 195–200.
- [16] Ling, F. Y. Y. and Wong, D. M. G. (2016). Redesigning facility management operatives' jobs to increase work outcomes. *Journal of Facilities Management*, vol. 14, pp. 50-68.
- [17] Lepkova, N. (2015). Facilities and property management. *Multiple Criteria Analysis of the Life Cycle of the Built Environment*, vol. 1, pp. 117-181.
- [18] Madritsch, T. and May, M. (2009). Successful IT implementation in facility management. *Facilities*, vol. 2, pp. 429-444.
- [19] Makower, J. and Pike, C. (2009). *Strategies for the green economy: opportunities and challenges in the new world of business*. New York: McGraw-Hill.
- [20] McQueen, J. (1991). Leveraging the power of emotion in building brand equity. *3rd annual advertising and promotion workshop of the advertising research foundation*, New York, USA, pp. 25-34.

- [21] Moravcikova, D. (2016). Impact of globalization on marketing communications and its traditional and progressive tools. *16th International Scientific Conference Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 1419-1426.
- [22] Ottman, J. A. (2011). *The new rules of green marketing: strategies, tools, and inspiration for sustainable branding*. San Francisco, CA: Berrett-Koehler Pub.
- [23] Potkany, M., Vetrakova, M. and Babiakova, M. (2015). Facility management and its importance in the analysis of building life cycle. *4th World Conference on Business, Economics and Management, Procedia Economics and Finance*, Ephesus, Turkey, pp. 202-208.
- [24] Redlein, A. and Zobl, M. (2016). IT-Support within facility management in west - and Eastern Europe. *Emerging Trends in Information systems: Recent Innovations, Results and Experiences*, vol. 10, pp. 1-10.
- [25] Shen, B., Choi, T-M. and Chow, P-S. (2017). Brand loyalties in designer luxury and fast fashion co-branding alliances. *Journal of Business Research*, vol. 81, pp. 173-180.
- [26] Schultz, D. E. and Bailey, S. (2000). Customer/brand loyalty in an interactive marketplace. *Journal of Advertising Research*, vol. 40, no. 3, pp. 41-52.
- [27] Sillanpaa, E. and Junnonen, J. (2016). A customer's possibilities to increase the Performance of a service provider by adding value and deepening the partnership in facility management service. *Management and Production engineering*, vol. 7, pp. 50-61.
- [28] Sridarran, P. F. and Nirodha, G. (2016). Change management framework to enable sustainable outsourcing of facilities management services. *Built Environment Project and Asset Management*, vol. 6, pp. 317-331.
- [29] Stephan, E. G. (2016). Semantic catalog of things, services, and data to support a wind data management facility, *Information Systems Frontiers*, vol. 18, pp. 679-691.
- [30] Thornton, K. (2015). Sharing Stories of Practice in Self-Access Facility Design and Management. *Studies in Self – Access Learning Journal*, vol. 6, pp 216-218.
- [31] Vyskocil, K. V. (2011). *Management podpŕrných procesŕ: facility management*. Professional Publishing, pp. 492.

INCONSISTENT CHOICES IN HUMAN DECISIONS

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Abstract. Based on the expected utility theory, the optimal or best option can always be chosen in a decision-making situation. By doing so, tools of linear programming (LP) or of dynamic optimization are needed many times, particularly in our globalised world, where the cardinality of variables is almost infinite. Although decision makers use different kinds of computer systems to identify the most desired alternative, the result can be questioned in several ways. Should the input attributes take on values of a non-linear scale, the outcome will contain uncertainty. On the one hand in case of complex, global problems, this uncertainty tends to be accepted; managers still use these systems because more advantages can be gained than disadvantages. On the other hand, we can point out that alternatives recommended by computer systems are consistent. However, there are many more people who do not face such complex problems but make their small and simple decisions every day. These small and simple decisions can have international impact as well. Let's just think of the impact of boycott. Although options preferred by humans should be consistent as well, customers often violate even the simplest logical rules or assumptions that could be expected to be taken into consideration during the decision-making process. The global supply chain management and JIT manufacturing are not so keen on not consistent decisions because they cannot be forecasted. That can be a tough challenge for Sales Departments in the international market too.

Keywords: inconsistent choices, unpredictable behaviour

JEL Classification: C44, C91, D81

1. Introduction

In decision theory the normative branch that is also called prescriptive deals with how choices should be made. Accepting a wide scale of assumptions such as a person is fully informed, able to take all of the related data into consideration and make precise calculations based on it, is a prerequisite for this theoretical approach. However, with the technique of LP it become possible to select the most favourable alternative that best serves the achievement of the objectives, the normative branch reflects an idealised state. We do not need to refuse to acknowledge the legitimacy of this way of dealing with decision problems, particularly in our globalized world, where multinational companies tend to optimize everything; however, many doubts can arise concerning the acceptance of the required prior conditions. Who designs every detail if it is about purchasing a bar of chocolate? If you take a look on the back side of the wrapping or even turn the flap over to read the ingredients, you won't be able to memorise the huge amount of data that floods you. You might have some expectations for chocolate. Some, but not several. No one wants to hang around in the shop to compare all the available products and brands. A real economist would perhaps state that the cost of making the comparison is higher than the benefit that can be reached by doing so; therefore, such customers cannot be

found. Is it really the reason why we won't follow this behavioural pattern? Hardy ever. Could you have a better choice by acting like this? Probably yes, but we do not have enough time, are not willing to do so or do not take care of it at all because of the satisfaction felt by having the usually purchased bar or because the decision was made on the basis of gut feeling. Comparison would be a waste of time. Since time is money, comparison increase the price.

It is also worth examining the chocolate-question from the producers' point of view. What really makes the bar attractive? Aside from its display on the shelves (on the lowest or highest row or at eye level), the mass marketing (print advertisements and radio and television commercials) and wrapping, the new or differential features in the product provide an explanation about the customers' decision. Different wrappings and differences in ingredients certainly influence the choice. But what about identical attributions? It can be obvious that the choice is not up to them, they cannot play a role in it. It can be expected that choice shall be influenced only by the differences among many alternatives; the same attributes must be ignored. In fact, it is not so. The aim of this paper is to prove that in a risky situation.

Risk-taking can be discussed from several point of view. Schoemaker (Schoemaker, 1993) summarize its multiple views, its approaches in the field of economics, decision theory, psychology and even biology. How the focus of researches on risky decisions moved from a strong mathematical approach in the 40s to a theory that takes into account the human factor until now, was summarised by Birnbaum (Birnbaum, 2008). Dercskey (Dercskey, 2017) also gives a good overview with a focus on prospect theory. Her findings assume that options chosen by people differ if the decision is made on their own property or on others' ones. Options chosen by respondents are tried to be explained in a various ways. If the data is a result of any measurements or is based on personal beliefs, one might suppose that the wrong decision is made because of this inaccuracy in measurement. Based on Drerup and colleagues (Drerup et al., 2017) we can point out that "low quality of subjective beliefs data should not be treated as a standard measurement error problem, because the strong variation in the precision or meaningfulness of expectations measures actually reflects behaviorally relevant heterogeneity in choice behavior, rather than erroneous reporting". Based on the cognitive accessibility hypothesis, using a language activates the underlying cultural pattern and affect behavior. It was rejected by Li (Li, 2017). If risk can be expressed in percentages, we also have to discuss the perception of it. Li and Hensher (Li & Hensher, 2017) developed a multivariate method for discrete choice analysis, in which individual-specific risk perception is used because it varies from person to person in the real life as well and therefore it describes better the real decisions than just using one common parameter for it. Justifying that an empirical investigation was conducted on road tolling in Australia. Sullivan-Wiley and Short (Sullivan-Wiley & Short, 2017) also examined the risk but focusing on risk prioritization. Data collected from farming households in eastern Uganda was used and based on it four indices were generated reflecting several components of risk perception and to predict holistic risk perception through multivariate regression analysis.

Dealing with personal decisions, with behavioral economics is getting more and more important: this year, in 2017 the Nobel Prize in Economic Sciences was awarded to Richard H. Thaler for his contribution to economic and psychological analyses of individual decision-making.

2. Methods

If the decision problem seems to be a not so difficult one, and both exact probabilities and outcomes are given, people tend to use the expected value as a criteria to decide which alternative should be chosen. The formula is very simple (see Eq. 1) and widely-known and perhaps this is the reason why it is used more often than should be:

$$E(X) = \sum_{i=1}^N p_i \cdot x_i \quad (1)$$

where:

- the expected value is denoted by $E(X)$;
- the number of events or outcomes is denoted by N ;
- the probabilities are denoted by p_i ;
- outcomes are denoted by x_i .

The expected value is sometimes not expected: in case of a random variable, whose probability distribution is skewed either right or left i.e. it has a long tail on one side, the expected value (mean) can fall far from the mode. Malekpour and Barmish introduced the Conservative Expected Value term which is a metric which can be particularly useful when risk aversion must be highly emphasized (Malekpour & Barmish, 2017). The expected value can have bounds. What if the standard expected value is not finite? Or the payoffs are not well defined? Such questions are addressed by Lauwers and Vallentyne in decision theory (Lauwers & Vallentyne, 2016). In my study the not well defined payoffs is caused by the unknown probabilities. Bounds can be discussed in special cases too. In case of a price index, the precision of the estimated bounds can depend more on the volatility of prices than on the volatility of quantities (Bialek, 2017).

To investigate whether ignoring the same attributes during decision making really happens at a notable extent, a short questionnaire, in which expected values only sometimes can be calculated (i.e. we have not defined payoffs), was designed and given to students who were either enrolled in a subject in English at Obuda University or took part in a lecture in the frame of a guest lectureship in Belgium. The questions were as follows:

Q1: Two gambles are offered to you but you can take part only in one of them. Which do you prefer?

- (i) With a 50% chance you win 2,500 USD and with a 50% chance you win nothing;
- (ii) There's a 20% chance that you win 5,000 USD and an 80% chance that you win nothing.

Q2: Suppose you have just won 2500 USD in a gamble. What would you do? It's up to you whether you

- (iii) keep a sure gain of 2500 USD and quit the game;

(iv) you go on, continue the gamble, where there's a 20% chance that you double your winnings, a 50% chance that you can keep your 2500 USD and a 30% chance that you lose your money.

Similar problems were also investigated by Allais (Allais, 1953) while Ellsberg's experiment (Ellsberg, 1961) focused on alternatives with partly unknown proportions and Sen (Sen, 1993) also dealt with the consistency of choices. However violating simple mathematic rules during real-life decision making is a general human property, it can be investigated how it varies over

time or in different cultural backgrounds. Based on Di Guida and colleagues' findings we can state, that there are differences (Di Guida et al., 2015): "In summary, the current analysis shows that the hypothesis that individuals from East Asian cultures are likely to change their behavior over time has high predictive value." Birnbaum (Birnbaum, 2008) describes different kind of problems: in original prospect theory it was also suspected that respondents cancel common parts before a decision is made, in cumulative prospect theory the representation does not, however, satisfy cancellation in general only if their attention is drawn to it. In his article based on empirical test he refuses this property. Similar conclusion is made by Di Cagno and colleagues (Di Cagno et al., 2017): "Although participants are apparently not "born satisficers", learning and advising could reduce the extent of "burning money" and "committing suicide": suboptimality and non-optimal satisficing may be avoided or reduced when alerting participants to their excessive losses and advising them on how to reduce these losses. Teaching and learning could help limit suboptimality and non-optimal satisficing." Laboratory experiments, such as my questionnaire, are generally accepted methods for studying economic behaviour. Brokesova and colleagues (Brokesova et al., 2017) found that people acted similarly in different situations and respondents in the laboratory and in the field made similar risk taking choices, so we can rely on experiment such as mine is.

3. Results

The above detailed questions were asked of students both in Belgium and Hungary so the sample is an international one. The frequency distribution based on the country where respondents are from is shown in Table 1.

Table 1: Frequency distribution based on the home country

Home country	Respondents
Belgium	26
Hungary	17
Total	43

Source: own constructed

The frequency distribution based on the sex is displayed in Table 2.

Table 2: Frequency distribution based on the sex

Sex	Respondents
Female	22
Male	21
Total	43

Source: own constructed

The frequency distribution based on the age is shown in Table 3.

Table 3: Frequency distribution based on the age

Age	18	19	20	21	22	23	24	25	26	32	Total
Respondents	1	14	8	3	3	2	6	4	1	1	43

Source: own constructed

3.1 Expected values in the experiment

Although calculating expected values help the decision only in the long term, where one face the same situation many times, lots of respondents did not calculate them and did not base the choice on them. The results are displayed in Table 4.

Table 4: Expected values calculated from the alternatives

Alternatives	E(X)
(i)	1250
(ii)	1000
(iii)	2500
(iv)	2250

Source: own constructed

Based on the values that can be calculated to alternatives and shown in Table 4, in Q1 there is a dominant alternative: (i), and in Q2 the dominant alternative is (iii). Were the dominant alternatives recognised by the respondents?

Table 5: Frequency and relative frequency distribution of alternatives chosen

	Alternatives	Country	Frequency	Relative frequency
Q1	(i)	Belgium	23	0.53
		Hungary	16	0.37
	Subtotal		39	0.91
	(ii)	Belgium	3	0.07
		Hungary	1	0.02
	Subtotal		4	0.09
Q2	(iii)	Belgium	18	0.42
		Hungary	14	0.33
	Subtotal		32	0.74
	(iv)	Belgium	8	0.19
		Hungary	3	0.07
	Subtotal		11	0.26

Source: own constructed

As shown in Table 5 in Q1 4, in Q2 11 respondents i.e. 9% and 26% did surely not pay attention to expected values. Particularly in the second case, it is astonishing for many reasons: because of the relative high value of 26%, and because the respondents were taking part in Business Studies at bachelor's level! However the dissimilarity expressed in absolute difference is the same amount of 1250, the relative difference is higher in the first case (Q1). That's why during comparing Q1 and Q2 the latter value (the 26%) could have been expected to be lower (compared to the 9%). If the reference point of the relative frequency is not the number of answers given by respondents but that of the subsample by countries, the comparison can be made based on it, as shown in Table 6.

Table 6: Relative frequencies of alternatives in subsamples by countries

	Alternatives	Belgium	Hungary
Q1	(i)	88%	94%
	(ii)	12%	6%
Q2	(iii)	69%	82%
	(iv)	31%	18%

Source: own constructed

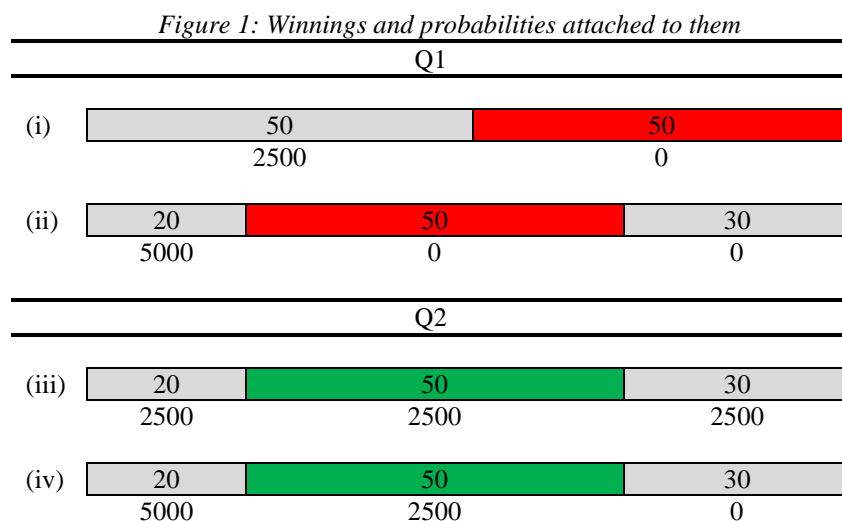
Percentages in Table 6 show that a higher proportion of Hungarians follow the rule of expected value in both Q1 and Q2 but it does not necessarily mean that e.g. the same respondents are behind (i) and (iii).

3.2 Inconsistent choices

Although the structure and the size of the sample does not allow to draw representative conclusions and due to the fact, that the elements in the sample cannot be considered as randomly selected ones no hypothesis tests (neither parametric nor nonparametric) can be carried out, the survey can be suitable to verify an other presumption: that the violation of the “same attributes must be ignored” principle also exist in this case.

To discover the same parts in the possible answers of Q1 and Q2, it is worth to transform them into a bar chart according to Figure 1, where the bars represent the probabilities and the numbers below represent the winnings can be reached by choosing the alternative. Some changes has been made so that later the relationships could be easier recognised but these did not affect the contents of options themselves:

- in the case of alternative (ii) the 80% probability to win nothing is divided into two parts: 50% and 30% to win nothing;
- in case of alternative (iii) the probability of the sure gain of 2500 is divided into three parts: 20%, 50% and 30%.



Source: own structured

In Figure 1 the red bars represent the same probability and the same amount of winnings so when one decides between alternative (i) and (ii), one should think only on whether (a) to win with 50% probability 2500 or (b) to win with 20% probability 5000 or with 30% probability nothing. In Figure 1 the green bars represent the same probability and the same amount of winnings too, so these should be ignored, i.e. it is a question whether to win (c) with 20+30=50% probability 2500 or (d) with 20% probability 5000 or with 30% probability nothing. Having the same attributes ignored we can point out that the decision problem can be considered the same in Q1 and in Q2. That is shown if we only focus on the remaining grey bars (probabilities) and winnings attached to them. A consistent behaviour can be observed if options (i) and (iii) or options (ii) and (iv) were chosen together. The first case (i.e. (i) and (iii) together) assumes not only a consistent behaviour but also a rational one, when decisions are made on the expected values. In Table 7 the sample is split based on the country of data collection and values are expressed in percentages so that they can be comparable. They also

are rounded to whole numbers, so the sum might differ from 100%. Cells representing consistent choices are highlighted in green while that of inconsistent ones in red.

Table 7: Alternatives chosen together

Belgium					Hungary				
Q1		Q2		Σ	Q1		Q2		Σ
		(iii)	(iv)				(iii)	(iv)	
	(i)	62%	27%	89%		(i)	82%	12%	94%
	(ii)	8%	4%	12%		(ii)	0%	6%	6%
	Σ	70%	31%	100%		Σ	82%	18%	100%

Source: own constructed

When the research questions were asked in Belgium, 35% of the respondents marked the alternatives in an inconsistent way. In Hungary only 12% did so.

4. Conclusion

Even those who are studying business, often forget using the simplest rule: the expected value. Depending on the question 9% and 26% of respondents chose the wrong alternative. On the other side decision makers often choose inconsistent alternatives. Depending on the country where the survey was conducted, in Hungary 88% and in Belgium only 65% chose consistent alternatives. Although conclusions have to be accepted with reservations, there can be no doubt that without counting on such divergences from logical rules, no forecasts for consumer behaviour can be successful. Relying only on the lowest data, the 9%, (and not mentioning the extreme 35%) we can point out that in the global world it is too much to ignore it.

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References

- [1] Allais, M. (1953). Le comportement de l'Homme rationnel devant le risque: Critique des postulats et axiomes de l'Ecole americaine. *Econometrica*, vol. 21, no. 4, pp. 503-546.
- [2] Bialek, J. (2017). Bounds for the expected value of the stochastic Divisia's price index. *Communications in Statistics-Theory and Methods*, vol. 46, no. 14, pp. 7134-7146.
- [3] Birnbaum, M. H. (2008). New paradoxes of risky decision making. *Psychological Review*, vol. 115, no. 2, pp. 463-501.
- [4] Brokesova, Z., Deck, C. and Peliova, J. (2017). Comparing a risky choice in the field and across lab procedures. *Journal of Economic Psychology*, vol 61, pp. 203-212.
- [5] Di Cagno, D. et al. (2017). (Sub) Optimality and (non) optimal satisficing in risky decision experiments. *Theory Decision*, vol. 83, no. 2, pp. 195–243.
- [6] Di Guida, S., Erev, I. and Marchiori, D. (2015). Cross cultural differences in decisions from experience: Evidence from Denmark, Israel, and Taiwan. *Journal of Economic Psychology*, vol. 49, pp. 47-58.

- [7] Drerup, T., Enke, B. and Von Gaudecker, H. M. (2017). The precision of subjective data and the explanatory power of economic models. *Journal of Econometrics*, vol. 200, no. 2 pp. 378-389
- [8] Ellsberg, D. (1961). Risk, ambiguity, and the Savage Axioms. *The Quarterly Journal of Economics*, vol. 75, no. 4 pp. 643-669
- [9] Kolnhofer-Derecskei, A. (2017). How would you decide on behalf of your friend? *Management, Enterprise and Benchmarking (MEB) "Global challenges, local answers"*, Budapest, Hungary, pp. 195-204.
- [10] Lauwers, L. and Vallentyne, P. (2016). Decision theory without finite standard expected value. *Economics and Philosophy*, vol. 32, no. 3, pp. 383-407.
- [11] Li, K. K. (2017). How does language affect decision-making in social interactions and decision biases? *Journal of Economic Psychology*, vol. 61, pp. 15-28.
- [12] Li, B. and Hensher, D. A. (2017). Risky weighting in discrete choice. *Transportation Research Part B: Methodological*, vol. 102, pp. 1-21.
- [13] Malekpour, S. and Barmish, B. R. (2017). When the expected value is not expected: A conservative approach. *IEEE Transactions on Systems, Man, Cybernetics: Systems*, vol. 47, no. 9, pp. 2454-2466.
- [14] Schoemaker, P. J. H. (1993). Determinants of risk-taking: Behavioral and economic views. *Journal of Risk and Uncertainty*, vol. 6, no 1, pp. 49-73.
- [15] Sen, A. (1993). Internal consistency of choice. *Econometrica*, vol. 61, no. 3, pp. 495-521.
- [16] Sullivan-Wiley, K. A. and Short, A. G. (2017). Risk perception in a multi-hazard environment. *World Development*, vol. 97, pp. 138–152.

INTERNATIONAL TRADE WITH FAIRTRADE COMMODITIES IN THE PRESENT GLOBAL WORLD

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Abstract. The current global world is becoming more and more intertwined. In the period of growing globalization of the world economy, it can not be overlooked the fact that the differences in the living conditions of the population of advanced economies and the people of developing countries continue to persist. Business concept of fair trade is a form of development aid and represents one of the possible ways of alleviating world poverty. The concept is based on the principle of social and economic solidarity between the poorer and richer part of the World. Fair trade is closely related to the principle of sustainable development and puts into the forefront the mutual links that exist between lifestyle, quality of the environment and fair distribution of resources. In the Czech Republic, the concept of fair trade has begun to be promoted only in recent years. However, it can be said that Fairtrade products are constantly expanding and the annual volume of funds for these products is rising sharply. Despite the undeniable growth in the popularity of Fairtrade Movement ideas, the Czech Republic also has many differences over other developed countries that are participating in the world market for these products. Agricultural produce is grown and commodities are traded on international markets, which are typical for fair trade, especially coffee and cocoa. The aim of the paper is to define fair trade commodities in the international context and to compare them with the Czech Republic.

Keywords: agricultural, Fairtrade, international market

JEL Classification: F18, Q13, Q18

1. Introduction

In the course of history, cultural rules have been shaped on the basis of religious, ethical and moral principles gradually, according to which people in a better situation help disadvantaged, poorer or otherwise weaker. This tradition is currently taking on forms of development cooperation. Raynolds et al. (2007) note that the processes of globalization, industrialization

and market liberalization have been interlinked since the 1980s. As a result, there has been an increase in social inequality and deterioration in the quality of the environment across the world. *In the context of consumer behaviour, ethical or sustainable consumerism is one of the research areas that has aroused growing interest and within this broad field of scientific interest Fair Trade products have been among the most investigated food categories over the last 20 years* (Coppola et al., 2017).

Fair trade can be seen as a political movement, but also as a form of business practice and production relationships (Mare, 2008). The emergence of fair trade as an alternative business concept is attributed to the fact that the developed western countries began to realize that the global economic growth and trade, not benefit all countries and social groups equally (Steinrucken & Jaenichen, 2007). The principle of solidarity between developed and developing countries in order to improve the living, social and economic conditions of the population in Third World countries is therefore a fundamental idea of fair trade.

Fair trade, as an alternative business concept, is therefore a trade partnership based on dialogue, transparency and respect that strives for greater equality in international trade. It contributes to sustainable development by offering better business conditions and ensuring the rights of neglected producers and workers, especially in developing countries (Starrico, 2016; Ballet & Carimentrand, 2010).

Growth of the Fairtrade Market as a form of alternative trade development is becoming a way of expressing moral expressions of conscious consumers from Europe and the USA (Goodman, 2004). By its decision, the consumer declares his / her personal attitudes, dissatisfaction with consumer lifestyle and finds an alternative option for expressing his or her personal standards (Lee et al., 2015; Andorfer & Liebe, 2012). Tang et al. (2016) notes that there are an increasing number of products on global and local markets that communicate with consumers through their moral value, which is expressed in logos, including Fairtrade pictures. This is also confirmed by Bissinger & Leufkens (2017), who states that there is a new dimension of quality marks on both national and international retail markets. This new dimension can be understood as ethics manufacturing process and ethics in trading of intermediate and final commodities.

Under the Fairtrade system, certain requirements of economic, social and environmental standards must be met in terms of work organization and production conditions. If these standards are met, products can be certified and commercially sold and promoted with Fairtrade branding. (Staricco, 2016). The goal of fair trade certification is to contribute to sustainable development by creating transparent and fair trading conditions. Improving access to markets and strengthening of producer organizations is one of the important preconditions for developing this certification. (Bailey et al., 2016). Akaichi et al. (2016) states that consumers are willing to pay a higher price for food products labeled Fairtrade. Paying this sufficiently high price is a prerequisite for ensuring reproduction of production conditions (Staricco, 2016).

The current business world is increasingly interconnected but also divided, and it is about the area of the rich North and the poor South. Since the second half of the nineties, the agrarian and food sector has become important, because the transformation of the agrarian and food sector has also led to changes in the relationship between the two global areas. Agriculture is a traditional and often the only source of livelihood in third world countries. Agrarian products also represent one of the first and most important internationally traded commodities and they represent the expansion and deepening of market ties that define globalization in today's

concepts (Raynolds et al., 2007). The development of fair trade consumer markets is also the current phenomenon of the global South (Doherty et al., 2015).

The aim of the paper is to define fair trade commodities in the international context and to compare them with the Czech Republic. The article consists of several logically interconnected parts. After the introduction to the issue, the theoretical starting point of the article follows, where the opinions of Czech and foreign authors on the subject are compared. Next follows the methodology used to obtain primary data and evaluate it. In the "Results and Discussion" chapter, the data obtained is reviewed and discussed. The Conclusion chapter summarizes and identifies further possible directions for further research.

2. Methods

First, the theoretical framework of the solved theme was defined. This framework was implemented through the analysis of secondary resources and the synthesis of knowledge. As a basic method for processing the theoretical part of the article, documentary examination was used, taking into account the criteria of their cognitive price according to Hendl (2005). In view of the above criteria, the underlying materials were obtained mainly from the databases of scientific articles and professional books.

The annual reports of official institutions and organizations operating at both international and national levels were the source for obtaining statistical data and up-to-date information on the issues addressed. Within descriptive statistics were used absolute and relative frequencies. Other methods used in the article include induction and deduction.

End reference period was chosen the year 2014, it was done in view of the large time lag with which statistics from international organizations are published and the need to have complex data for analysis and comparison. The annual reports of the Fairtrade International organization and the national organization Fairtrade Czech Republic and Slovakia are presented collectively, always as one citation source. The following abbreviations were used in this article: FLO = Fairtrade International.

3. Results and Discussion

The development of the market for Fairtrade products has also expanded the spectrum of those sold under the trademark Fairtrade, as well as other countries that have begun to import these products. *The Fairtrade program transfers income to farmers by establishing a price floor and an alternate distribution channel that bypasses intermediaries between the raw commodity and world markets* (Podhorsky, 2015).

Exporting countries with agrarian and food commodities, which are produced and marketed under Fairtrade certification and handcrafted fairtrade products, are concentrated in three main areas. These areas are structured by Fairtrade International in Africa and the Middle East, Latin America and the Caribbean, and the Asia Pacific region and they are mainly represented by developing countries. Their number increases every year. Each of these areas has different problems and it has a specific character. An overview of Fairtrade retail sales by product volume in individual years is shown in Table 1.

Table 1: Estimated Fairtrade retail sales by product volume*

Commodity/Year	2006	2007	2008	2009	2010	2011	2012	2013	2014
Bananas	135.76	233.79	299.21	311.47	286.60	320.92	331.98	372.71	439.47

Cocoa (cocoa beans)	7.91	7.31	10.30	13.90	35.18	40.20	40.56	54.49	65.09
Coffee	52.06	62.21	65.81	73.78	87.58	98.07	77.43	83.71	93.15
Cotton	1.55	14.18	27.57	23.35	24.75	8.22	8.96	7.82	9.86
Dried and processed fruits	-	-	-	0.54	0.67	0.96	1.54	1.43	2.05
Flowers and plants	157.28	237.41	311.69	335.89	325.21	362.07	536.63	623.91	675.61
Fresh fruits	-	-	26.42	20.09	17.31	16.17	16.17	13.33	11.66
Fresh vegetables/Vegetables	-	-	-	-	-	0.47	0.36	0.71	1.18
Fresh juice	6.31	24.92	28.22	45.58	25.11	38.78	37.17	42.58	43.88
Gold	-	-	-	-	-	-	-	7.56	27.16
Hetbs, Herbal Teas and Spices	-	-	-	0.58	0.41	0.26	0.42	1.80	2.38
Honey	1.55	1.68	2.06	2.07	2.04	2.07	1.32	1.90	2.62
Quinoa	-	-	-	0.56	1.29	0.69	0.59	0.66	0.60
Rice	2.99	4.21	4.69	5.05	5.04	5.72	5.62	5.48	5.07
Sport balls	0.15	0.14	0.14	0.12	0.28	0.16	0.15	0.11	0.14
Sugar (cane sugar)	7.16	15.07	56.99	89.63	126.81	138.31	158.99	193.83	196.36
Tea	3.88	5.42	11.47	11.52	12.36	13.40	11.87	11.38	11.03
Wine	3.20	5.74	8.98	11.91	32.53	11.79	16.43	20.93	22.21

Source: Own processing according to. Fairtrade International (FLO): Annual Reports, 2017

Notes: *Measurement units: thousand MT, flowers in millions stems, fruit juice and wine in million litres, gold in kg.

It should be noted that the way of monitoring and the extent of commodities changed slightly over the monitored period in individual years. Fresh vegetables were independently monitored in 2011 (0.47) and 2012 (0.36), from 2013 on, the item is named vegetables. Oilseeds are presented in Fairtrade International statistics in 2009 (0.86), 2010 (0.86) and 2011 (1.22). In 2011 timber is also reported separately (0.32). Gold is a relatively new commodity, which is monitored since 2013.

Bananas are the traditional Fairtrade commodities. At the end of 2014, 123 production organizations in 11 countries of the world were engaged in the cultivation and sale of Fairtrade-certified bananas. There were nearly 22,000 people involved in Fairtrade banana production. In year-on-year comparison, the volumes sold increased by approximately 15% over the 2012/13 period. This is attributable to the fact that Fairtrade banana production has been promoted by large chains, mainly in France, Germany and Sweden. The largest quantity of bananas bearing the Fairtrade certification is produced in Peru, the Dominican Republic and Ecuador (Fairtrade International (FLO): Annual Reports, 2017).

Increased interest in Fairtrade sweets in recent years has also reflected positively on increasing sales volumes of raw materials needed to produce them, namely cocoa and sugar (Fairtrade International (FLO): Annual Reports, 2017).

In 2011, FLO organization implemented a wide range of training and supporting programs for stakeholders in the production of Fairtrade sugar. In 2012, the volume of sugar sales increased and also the number of countries involved in growing Fairtrade sugar has expanded - Mozambique, Jamaica, and Swaziland. 99 cane producers' organizations in 19 countries worldwide were certified by Fairtrade at the end of 2014. Compared to previous years, the growth of the area under management and the growth of the volume sold of the commodity have slowed down. The cause of this condition can be attributed to the collapse of world sugar

prices due to the release of large amounts of sugar beet for food purposes within the EU outside the quotas. The maintenance and stabilization of Fairtrade cane sugar market has thus become a serious challenge for this area of agricultural production (Fairtrade International (FLO): Annual Reports, 2017).

Coffee is probably the most traditional and most popular commodity within Fairtrade, but the coffee problem is quite complicated. Fairtrade International has made a significant contribution to the overall support of small-scale coffee producers (Fuzhi, 2007), and it also seeks to improve their market access because new entrants are well-off competitors (Claar & Haight, 2015).

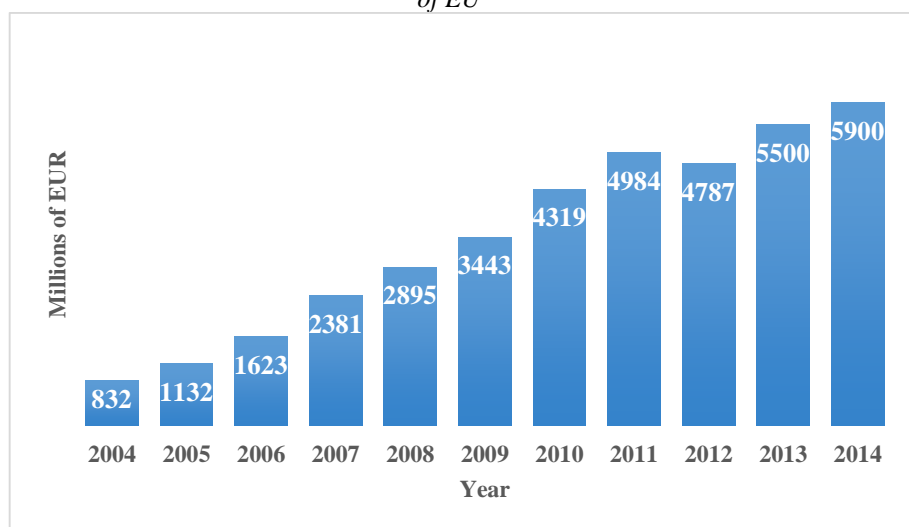
Flowers and plants show a steadily growing trend in terms of sales in the years under review. This is mainly due to an increase in traded volumes of Fairtrade-certified commodities on markets in Germany and the UK. 2012, one of the largest floral farms in the world based in Ethiopia has been certified Fairtrade. More than 48,000 people worked in floral farms in 2013. At the end of 2014, there were 55 growing communities in eight countries in the world. For the most part, it was an East African organization; within this continent, Kenya had a clear leadership. Certified florist and plant growers sold 22% of their total production under Fairtrade certification (Fairtrade International (FLO): Annual Reports, 2017).

In 2014, the estimated retail sales of FLO was 5.9 billion euros ((Fairtrade International (FLO): Annual Reports, 2017), but this is only about a third of the total volume of world trade, which amounted to 16.5 billion in the same year. EUR (WTO: International Trade Statistics, 2017).

Target regions import fair trade products are mainly countries with developed market economies, the main importing regions are thus North America, Europe and the Pacific. Most Fair Trade products are sold in the European market in the UK, Germany, France and Switzerland.

An overview of estimated retail sales of Fairtrade International products worldwide from 2004 to 2014 is shown in Figure 1.

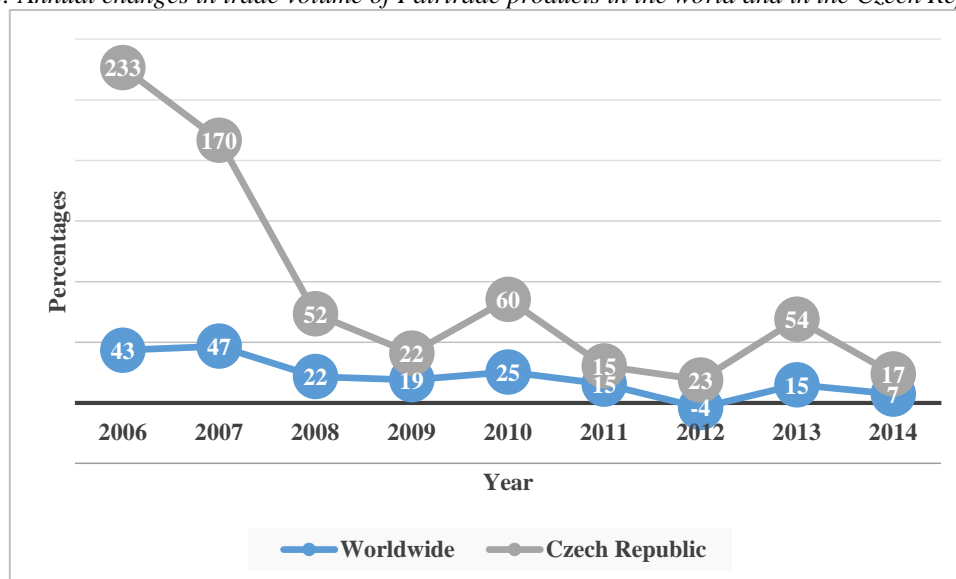
Figure 1: Estimated retail sales of Fairtrade International products worldwide from 2004 to 2014 in millions of EU



Source: Own processing according to Fairtrade International (FLO): Annual Reports, 2017

In the Czech Republic, support for social, economic, and environmental issues is enshrined in legislative and non-legislative documents on development cooperation (Sen et al., 2015). As seen from Figure 2, the highest growth rate was achieved in the Czech Republic in the 2005-2007 market, with 233% compared to 2006/05 and the following period by 170%. In the years 2009 - 2012, the slowdown in growth can be observed, with 15-23% in year-on-year comparison, with the exception of 2010 (60%). In 2013 there was a revival, when compared to the previous year, the turnover of the Fairtrade goods sold in the retail network grew by 54%. In 2014, growth slowed down to 17%.

Figure 2: Annual changes in trade volume of Fairtrade products in the world and in the Czech Republic in%



Source: Own calculations and processing according to Fairtrade International (FLO): Annual Reports, 2017 and Fairtrade Czech Republic and Slovakia, 2017

All the above can be interpreted in such a way that there is a certain saturation of the market for those products. A significant role can also be played by the fact that, in the context of the increased interest of Czech consumers in alternative forms of food purchases and healthy lifestyle, there has been a simultaneous expansion of supply on the market. These are new products (organic food, products of regional origin, etc.) and new alternative business concepts (eg the expansion of mass-market farmers' markets, events etc.) in the Czech Republic (Spilkova et al., 2013).

4. Conclusion

On the basis of the comparison, it can be summarized that on a global scale agricultural and food commodities in the Fair Trade area are bananas, coffee and coffee beans, fresh and dried fruits, cotton, flowers and plants, fruit juices, sugar cane, Quinoa, rice, nuts, tea and wine. The Fair Trade business concept is a relatively new phenomenon, whose importance has grown in recent years. The volume of Fairtrade products shows a steadily growing tendency, their structure and the way their sales are made. Fair Trade's market power is boosted, and so many other question marks come to its next appearance. In the Czech Republic market for Fairtrade products has relatively short tradition, but its importance is growing constantly over time.

References

- [1] Akaichi, F., de Grauw, S., Darmon, P. and Revoredo-Giha, C. (2016). Does fair trade compete with carbon footprint and organic attributes in the eyes of consumers? Results from a pilot study in Scotland, the Netherlands and France, *Journal of Agricultural & Environmental Ethics*, vol. 29, no. 6, pp. 969-984.
- [2] Andorfer, V. A. and Liebe, U. (2012). Research on fair trade consumption—A review. *Journal of Business Ethics*, vol. 106, no. 4, pp. 415-435.
- [3] Bailey, M., Bush, S., Oosterveer, P. and Larastiti, L. (2016). Fishers, fair trade, and finding middle ground. *Fisheries Research*, vol. 182, pp. 59-68.
- [4] Ballet, J. and Carimentrand, A. (2010). Fair trade and the depersonalization of ethics. *Journal of Business Ethics*, vol. 92, pp. 317-330.
- [5] Bissinger, K. and Leufkens, D. (2017). Ethical food labels in consumer preferences. *British Food Journal*, vol. 119, no. 8, pp. 1801-1814.
- [6] Claar, V. V. and Haight, C. E. (2015). Correspondence: Fair trade coffee. *Journal of Economic Perspectives*, vol. 29, no. 1, pp. 215-216.
- [7] Coppola, A., Verneau, F., Caracciolo, F. and Panico, T. (2017). Personal values and pro-social behaviour: The role of socio-economic context in fair trade consumption. *British Food Journal*, vol. 119, no. 2, pp. 1969-1982.
- [8] Doherty, B., Smith, A. and Parker, S. (2015). Fair Trade market creation and marketing in the Global South. *Geoforum*, vol. 67, pp. 158-171.
- [9] Fairtrade Czech Republic and Slovakia [Online]. (2017). Retrieved September 05, 2017, Available: <http://www.fairtrade-cesko.cz/>.
- [10] Fairtrade International (FLO): Annual Reports (2017). [Online]. Retrieved August 29, 2017, Available: <https://www.fairtrade.net/about-fairtrade/annual-reports.html>.
- [11] Fuzhi, Ch. (2007). Case Study #10-8, The Coffee Crisis: Is Fair Trade the Solution? [Online]. *Food Policy for Developing Countries: Case Studies*. pp. 13. Available: <http://cip.cornell.edu/dns.gfs/1200428207>.
- [12] Goodman, M. K. (2004). Reading fair trade: political ecological imaginary and the moral economy of fair trade foods. *Political Geography*, vol. 23, no. 7, pp. 891-915.
- [13] Hendl, J. (2005). *Kvalitativní výzkum: Základní metody a aplikace*, 2. vydání, Portál, Praha.
- [14] Lee, M.-Y., Jackson, V., Miller-Spillman, K. A. and Ferrell, E. (2015). Female consumers' intention to be involved in fair-trade product consumption in the U.S: The role of previous experience, product features, and perceived benefits. *Journal of Retailing and Consumer Services*, vol. 23, pp. 91-98.
- [15] Mare, A. (2008). The impact of fair trade on social and economic development: A review of the literature. *Geography Compass*, vol. 2, no. 6, pp. 1922-1942.
- [16] Podhorsky, A. (2015). A positive analysis of Fairtrade certification. *Journal of Development Economics*, vol. 115, pp. 169-185.
- [17] Sen, J., Garnizova, E. and Negencov, A. (2015). *Local and regional authorities promoting fair trade*. Bruxelles: European Union - Committee of the Regions.

- [18] Spilkova, J., Fendrychova, L. and Syrovatkova, M. (2013). Farmers' markets in Prague: a new challenge within the urban shoppingscape. *Agriculture and Human Values*, vol. 30, no. 2, pp. 179-191.
- [19] Staricco, J. I. (2016). Fair trade and the fetishization of levinasian ethics. *Journal of Business Ethics*, vol. 138, no. 1, pp. 1-16.
- [20] Steinrücken, T. and Jaenichen, S. (2007). The fair trade idea: Towards an Economics of Social Labels. *Journal of Consumer Policy*, vol. 30, no. 3, 201-217.
- [21] Raynolds, L. T., Murray, D. L. and Wilkinson, J. (2007). *Fair trade: the challenges of transforming globalization*. New York, NY: Routledge.
- [22] Tang, S., Yu, F., Han, J., Chen, S., and Shi, J. (2016). Taste moral, taste good: The effects of Fairtrade logo and second language on product taste evaluation. *Food Quality and Preference*, vol. 52, pp. 152-156.
- [23] WTO: International Trade Statistics (2015). [Online]. Retrieved September 12, 2017, Available: https://www.wto.org/english/res_e/statis_e/its2015_e/its15_toc_e.htm.

STRATEGY DEVELOPMENT OF THE COMPANIES PROVIDING THE ACTIVITIES OF RAILWAY INFRASTRUCTURE MANAGER IN THE GLOBAL TRANSPORT MARKET

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Abstract. Business purpose of companies providing the activities of railway infrastructure manager is governed by legislation that clearly defines their market position, product orientation and business opportunities in the conditions of global international market. The aforesaid kind of companies is quite difficult to compare with companies operating in a strong competitive environment as they are aimed to maximise their profits and the purpose of their business flexibly adapts to market conditions. This paper is focused on a difference in approach to strategy development of such companies. The main aim is to highlight that overly progressive and impetuous strategy development methods for legislatively regulated companies would create unviable strategies that would not meet the expectations of business owners. Selection of convenient method not only for development, but also for strategy implementation is a decisive factor for successful and long-term functioning on the international transport market. Out of available management methods for strategy implementation the Balanced ScoreCard method appears to be suitable, the essence of which is an overall view across the entire company from four perspectives - customer perspective, financial perspective, internal processes perspective and also education and development perspective. At the same time the BSC system suggests that all perspectives are equivalent and that the company should achieve its goals in each of the perspectives equally and not at the expense of other perspectives.

Keywords: strategy, railway infrastructure manager, management method

JEL Classification: R49

1. Introduction

Companies providing the activities of railway infrastructure manager in international transport market are governed by legislation that clearly defines their market position, product orientation and business opportunities. This kind of companies is quite difficult to compare with companies operating in a strong competitive global transport market environment as they are aimed to maximise their profits and the purpose of their business flexibly adapts to market conditions. For that reason there must be difference in approach to strategy development of such companies (Abramovic et al., 2016).

Overly progressive and impetuous strategy development methods for legislatively regulated companies would create unviable strategies that would not meet the expectations of business

owners (Kliestik et al., 2015). Selection of convenient method not only for development, but also for strategy implementation is a decisive factor for successful and long-term functioning on the global transport market (Dolinayova et al., 2016).

The Infrastructure Manager as a market entity manages and maintains the railway infrastructure, provides its modernization, offers capacity to undertakings and manages the traffic respectively provides transport for the purpose of maintenance and sets charges for the use of railway infrastructure (White Paper, 2011).

As the competition is spread throughout each market segment not excluding the Infrastructure Managers we can define it as follows:

- Other modes of transport – in particular road transport, but also aviation and water-borne,
- Eventual other manager of state infrastructure,
- Surrounding Infrastructure Managers - the potential of "shift" of transit traffic or diversion of routes.

Given these facts, Infrastructure Manager maintains a targeted strategy to be able to be competitive as much as possible (Cerna et al., 2016).

In the preparation of a good strategy, customers play important role, those are the carriers and the state in case of Infrastructure Manager. So, the better the Infrastructure Manager sets the conditions, the greater the opportunity it has to get customers who were oriented, for example on road transportation (Fraszczyk et al., 2016). This fact creates a very important and topical issue that needs to be addressed.

1.1 Strategy creation, strategy differentiation – strategic management levels

Strategy, not just as a document, is the main product of strategic management. Strategic management was created as the intention to find new methods of company management in the constantly complicating conditions of the business environment (Slavik, 2013). Strategy is a company direction map based on the outputs of used analyses to process company's strategic situation.

Strategy creation is based on the use of external and internal environment analyses. When analysing the external environment, in view of the characteristics of the transport sector, it is best to use internationally recognized instruments, for example PEST (E) analysis for macro-environment and PORTER analysis for micro-environment. The internal environment analysis is also processed through the worldwide applied SWOT analysis. Subsequently, given the company position based on the outputs of the analysis, the strategic goals are defined for each level of company management.

Properly formulated strategy creates the potential to achieve determined global company intentions. The role of strategy and determined strategic goals is to ensure the future prosperity, functional setting and existence of a company on the base of long-term decisions.

From a high-level point of view on the company as a whole, the strategy represents the basic institutional document. At the same time, not just the creation of a strategy, but the implementation itself forms the basis for its successful performance, while the inseparable part of the strategy is knowledge, acceptance and identification of employees with the strategy.

Also the implementation process is an integral part of the strategy. Implementation consists of a division of responsibility and in-house decision-making powers to define

coordinators/gestors for the fulfilment of determined strategic objectives, feedback in relation to ensuring the strategy's achievement, together with a functional remuneration system for performance of strategic actions (Hudakova & Luskova, 2016).

It is necessary to observe the hierarchy of strategy in a company operating in different sectors or in different territories:

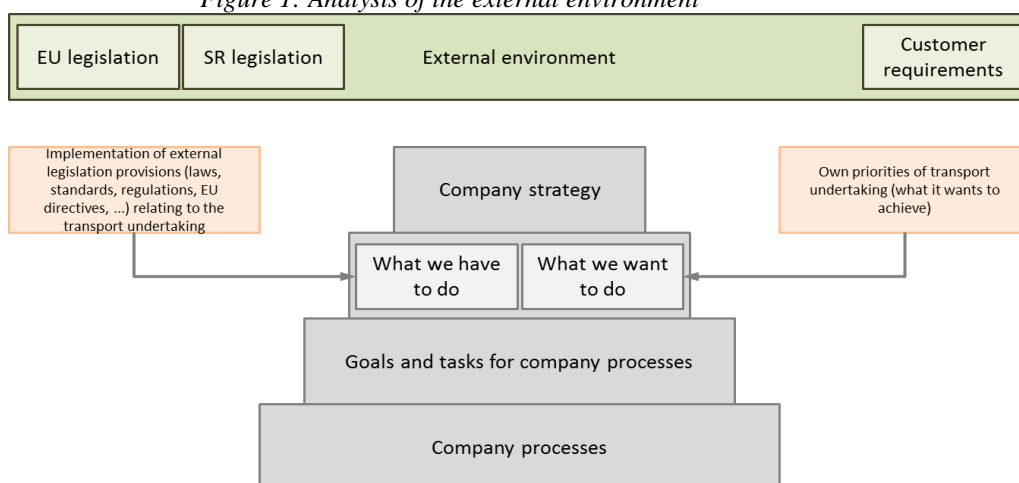
- Ownership strategy - the size of investment, the payback period, the expected return, the industry perspective, the resource structure, the competencies and powers of managers, etc.
- Company strategy - The allocation of capital investments to existing businesses, the reduction of investments or the abolition of low-yielding offers, the expansion of portfolio, the strengthening of positions, the creation of a competitive advantage, etc.
- Business strategy - Formulating responses to changes in the sector, in the economy as a whole, aligning strategic initiatives of functional departments, addressing specific issues typical for a given business unit, etc.
- Competitive strategy - It defines methods and techniques of competition in order to achieve market success, offensive measures to ensure a competitive advance against rival companies and defensive measures to protect its competitive position.
- Functional strategy - being developed for areas such as marketing, manufacturing, research and development, human resources, finance. (Slavik, 2013)

2. Infrastructure Manager Strategy Principles

The Infrastructure Manager's strategy is based on these principles (Maliacek, 2013):

1. Analysis of the external environment (characterised in the Fig. 1)
 - What are the requirements or what will be the requirements under the European and the State legislation (what we have to do).
 - What are the customer requirements (if we want to achieve success towards other transport modes, we all have to "pull together").
 - What we want to improve in-house (to prove to the State that it is an effective manager of its assets).

Figure 1: Analysis of the external environment

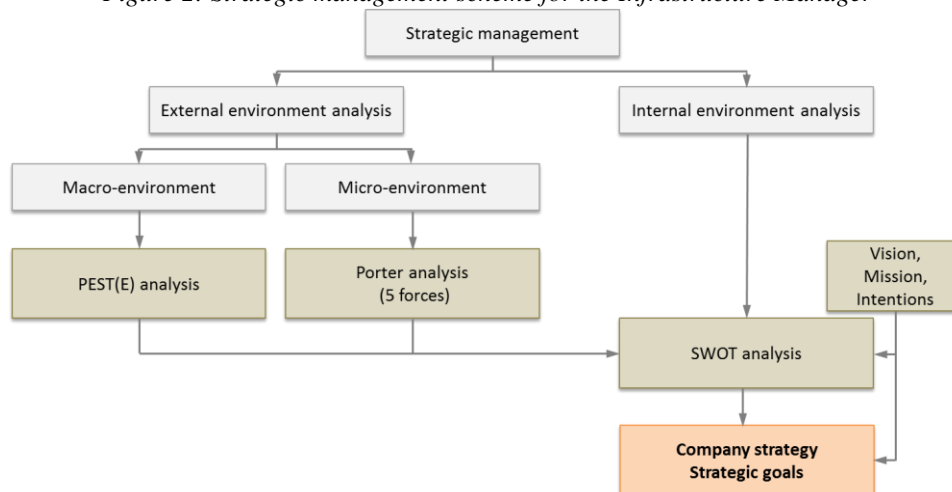


Source: Self-processed according (Maliacek, 2013)

2. Define vision and mission based on the analysis

A vision as an idea and a mission determines the future direction of a company. Vision is the starting point for strategic planning and expresses what basic goals a company wants to achieve. The vision represents an attractive image of a company in the more distant future. The mission is based on a vision that answers the question of why a company exists and what would be its purpose. Subsequently, the mission is specified with the goals (Slávik, 2013). The most common but optimal methods that can be used in analysing the external and internal environment of Infrastructure Manager include internationally recognized tools such as PEST (E) analysis, PORTER analysis and SWOT analysis. Consequently, after analysing, the company strategy is set out, based on the facts in the following Fig. 2.

Figure 2: Strategic management scheme for the Infrastructure Manager



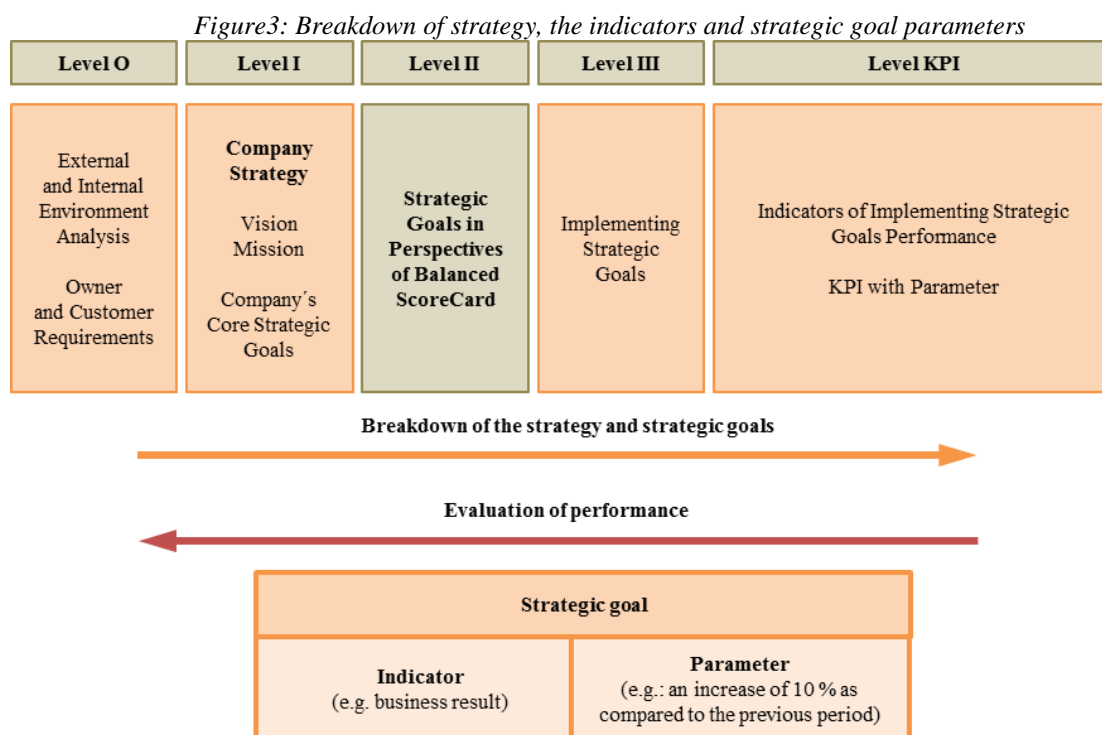
Source: Self-processed according (Strategy ZSR, 2012)

3. Development of vision and mission to the basic strategic goals that form the core of the strategy

Defining the basic strategic goals is based on the vision and mission of Infrastructure Manager. They are based on conditions determined by the international European Union and Slovak Republic legislation and on the necessities which need to be ensured and implemented within the internal environment, so that Infrastructure Manager would be a stabilized company operating a railway infrastructure in accordance with the legislation.

4. Development of core strategic goals to a lower levels

For the needs of set the breakdown of vision and mission to strategic goals it is necessary for Infrastructure Manager to use a tool for implementation of his strategy (Kral & Bartosova, 2016). Based on the characteristics of currently available tools, Balanced ScoreCard is the most appropriate method. In order to evaluate the fulfilment of the set strategic goals, it is necessary to define the parameter of indicators for each goal. What is needed to achieve (e.g.: time - deadline for process output, costs - how much to reduce and when, yields - how much to increase and when...). Each goal must be defined to be uniquely specified, measurable, acceptable, realistic, and time-bound (complies with the principles of S.M.A.R.T.). The Breakdown of strategy and strategic goals is defined and the indicators and strategic goal parameters are stated in the Fig. 3.

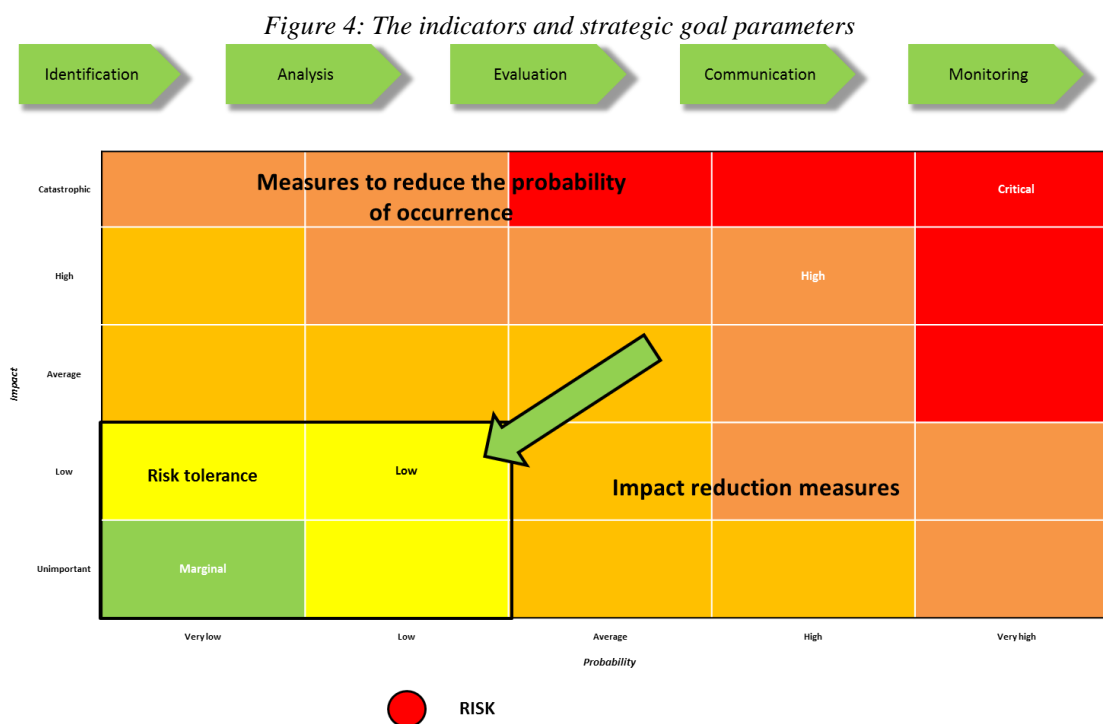


Source: Self-processed according (Strategy ZSR, 2012)

5. For individual goals identify the risks for their performance and set up a system for their elimination (Fig. 4)

If a company knows in advance that while performing a goal there may arise/occur any risk that may prevent its performance, it may be prepared to face it and take steps to reduce the risk to a minimum - i.e. it can eliminate the probability with which it can occur and also the impact of this risk in case it occurs.

Risk management system is based on STN 01 0381: 2011 - Risk Management and is based on risk identification, probability of its occurrence, impact and significance with the task to develop measures to reduce the probability of occurrence and the impact of a risk.



Source: Self-processed according (Maliacek, 2013)

6. Ensure compliance of objectives, timeliness of strategy and goals performance

To assist those who encounters a problem with meeting their goal and meeting the company's core strategic goals. At the same time, it is necessary to harmonize the fulfilment of the objectives in the required deadlines, because the failure of one could affect the fulfilment of another strategic goal (Zefreh et al., 2017). It is also necessary to update the strategy in regular intervals, to adapt it to new conditions and thus to introduce a system of continuous improvement (Stoilova & Kunchev, 2016).

7. Strategic scenarios

Strategic scenarios serve as alternatives to the strategy in the event of changes in the external environment. They are processed in order to set up the performance of strategic goals just in case of unexpected changes. For this reason, it is advisable for Infrastructure Manager who wants to be prepared for various alternatives of future market development, to have its own scenarios that can occur.

3. Conclusion

The essence of the strategy of Infrastructure Manager is to define the priorities and strategic goals, establish a program to ensure the development of railway infrastructure, including its competitiveness in comparison to other modes of transport or the surrounding Infrastructure Managers and in particular to determine financial requirements and needs in relation to the State and fundamental preconditions to fulfil the determined strategy. Also it is the starting point for strategy creation based on the analysis of parameters such as the environment, safety, interoperability, marketing, transport capacity, costs to the sector, etc.

For the railway infrastructure manager, which has its activity clearly regulated by legislation, the optimal choice is to use "more conservative methods of strategy creation" when formulating strategy and defining strategic goals.

This method is one of the possible models through which Infrastructure Manager can set up and define its strategy. At the same time, it is pointed out to the necessity to implement a strategy and set up a roll-out for a long-term successful mastering of the strategy for Infrastructure Manager (Nedeliakova et al., 2016).

Proposed process of strategy creation and implementation is specifically aimed at railway infrastructure manager and creates a general model of strategy creation and implementation that can be used not only for national infrastructure manager but also internationally or as a model setting strategy for any infrastructure manager (Nedeliakova & Panak, 2016).

Several management tools are used to determine the extent to which the strategy is being performed. From the point of view of Infrastructure Manager, a globally accepted "Balanced ScoreCard system (BSC)" is the appropriate option based on monitoring and evaluation multiple tools to date. The main advantage of BSC is that it evaluates the company from four perspectives, from the customer perspective, the financial perspective, the perspectives of internal processes and the perspectives of education and development.

Therefore, focus on progressive and growth strategies would, in many cases, make them unfulfilled. The priority is therefore mainly on stabilization strategies designed to achieve basic obligations and meet the needs and requirements of the customer to whom the business purpose of such a company is intended.

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References

- [1] Abramovic, B., Skrinjar, J. P., and Sipus, D. (2016). Analysis of railway infrastructure charges fees on the local passengers lines in Croatia. *Proceedings of the 3rd International Conference on Traffic and Transport Engineering ICTTE 2016*, Belgrade, Serbia, pp. 918-923.
- [2] Klietnik, T., Musa, H. and Frajtova-Michalikova, K. (2015). Parametric methods for estimating the level of risk in finance. *Procedia Economics and Finance, International Conference on Applied Economics ICOAE 2015*, Kazan, Russia, pp. 322-330.
- [3] Cerna, L., Dolinayova, A. and Danis, J. (2016). Identification of risks in railway transport and the proposal for their price evaluate. *Proceedings of the 20th International Conference on Transport Means*, Kaunas, Lithuania, pp. 414-420.
- [4] Dolinayova, A., Camaj, J. and Danis, J. (2016). New approaches of strategic control in railway transport in the context of sustainable mobility and competitiveness. *Proceedings of the 3rd International Conference on Traffic and Transport Engineering ICTTE 2016*, Belgrade, Serbia, pp. 429-437.
- [5] Fraszczyk, A., Lamb, T., and Marinov, M. (2016). Are railways really that bad? An evaluation of rail systems performance in Europe with a focus on passenger rail. *Transportation Research Part A: Policy and Practice*, vol. 94, pp. 573-591.

- [6] Hudakova, M. and Luskova. M. (2016). Global environment impacts on enterprise risk management. Globalization and its socio-economic consequences. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovakia, pp. 694-701.
- [7] Kral, P. and Bartosova, V. (2016). Importance of company early warning system in globalizing market environment. *Proceedings of the 16th International Scientific Conference Globalization and its socio-economic consequences*, Rajecke Teplice, Slovakia, pp. 1054-1060.
- [8] Maliacek, J. (2013). Stratégia ŽSR. *Journal Railway Transport and Logistic*, vol. 9, pp. 54-57.
- [9] Nedeliakova, E. et al. (2016). Progressive management tools for quality improvement application to transport market and railway transport. *Proceedings of the International Conference on Engineering Science and Management*, Zhengzhou, China, pp. 195-198.
- [10] Nedeliakova, E. and Panak, M. (2016). Methodology for quality assessment within transportation chain. *1st International Conference Contemporary Issues in Theory and Practice of Management*, Czestochowa, Poland, pp. 309-314.
- [11] Slavik, S. (2013). *Strategický manažment*, Sprint, Bratislava.
- [12] Stoilova, S. and Kunchev, L. (2016). Method for optimal transportation using a three-phase model, *Comptes Rendus De L Academie Bulgare Des Sciences*, vol. 69, pp. 905-910.
- [13] Strategy ŽSR (2012). Internal document of Railway Infrastructure Manager.
- [14] Zefreh, M. M., Meszaros, F., Junevičius, R. and Torok, A. (2017). Economic investigation of a public transport support policy: A Case Study at Budapest. *PROMET - Traffic&Transportation*, vol. 29, pp. 77-84.
- [15] WHITE PAPER COM/2011/0144 final. (2011). Available: <http://eur-lex.europa.eu/legal-content/EN/TXT/HTML/?uri=CELEX:52011DC0144&from=EN>.

TWO FACTORS OF GLOBALIZATION SLOWDOWN: ECONOMY STRUCTURAL CHANGES AND ANTI- GLOBALIZATION POLICY (U.S. EXAMPLE)

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Abstract. The article analyses globalization in relation to current economic and political changes with the emphasis on the U.S.A. Globalization trend strengthened during 20th century culminating in the 1990s, at the millennium turn, however, some contradictory tendencies appeared slowing down its pace. According to the author, two key reasons for the globalization mitigating can be pointed out, namely economic and political. The economic one has rather an objective character of spontaneous economic restructuring. It consists in partial return of manufacturing to “domestic” states, especially to developed countries in reaction to production cost changes as well as technology shifts; the return has been also reflected in the global trade growth weakening. The political reason can be seen in the effort of the developed states to respond to escalating social diversification when economic volatility and uncertainty project to the worsening of the middle-class position. Thus, the states try to maintain domestic manufacturing including higher employment and “fair” worker’s income. The U.S. President Trump is the most significant supporter of the policy aimed at that direction. His administration and its supporters even try to revise the post-war trade model based on free trade and inspired by Ricardian theory. Nevertheless, in the author’s opinion, most assumptions of Trump’s economic policy aimed at stopping globalization are fallacious confronted with the world economy long-term development. In fact, even though globalization has changed its character or even reversed temporally, it will continue in a different mode regardless of individual state policy excesses.

Keywords: globalization, structural changes, economic policy

JEL Classification: F63, F68, O14

1. Introduction

Globalizace, zásadní jev v průběhu formování světové ekonomiky, je mnohotvárným a proměnlivým procesem.

V první části textu jsou uvedeny základní globalizační trendy, ve druhé pak faktory změn a jejich zhodnocení. Stať se soustřeďuje na uvedení důvodů nyní často citovaného zpomalování, či krize globalizace – podle autora jednak objektivních, ekonomických, v podobě restrukturalizace světové výroby, na druhém místě subjektivních, hospodářsko-politických. Dále článek chce objasnit na příkladu Spojených států amerických, do jaké míry je hospodářsko-politické působení relevantní ve vztahu k samotnému procesu globalizace. V první části textu je použita logicko-historická metoda rozboru, druhá část pracuje formou komparativní analýzy.

1.1 Globalizace a její vývoj

Globalizace je tradičně vnímána jako výraz liberální otevřené ekonomiky (Chandy & Seidel, 2016, s. 2), jež směřuje ke svobodnému trhu a maximální produkční efektivnosti, které lze naplnit jen v širším mezinárodním prostředí. Stěžejním předpokladem globalizace je *liberalizace ekonomického prostředí, volný pohyb výsledků výroby* a dále pak i *výrobních faktorů* (práce, kapitál). Liberální ekonomické klima konce 19. století, technologická úroveň nadnárodní výroby a její masový výstup nerealizovatelný v národních hranicích, umožnily rozvoj *první globalizační vlny v letech 1870-1914* (Haberler, 1964). Řada autorů nicméně spojuje počátky globalizace již s dobou A. Smitha (srovnej např. Morrison, 2012).

Globalizace není bezpodmínečně kontinuální proces. Její dřívější výzkum akcentoval především vymezení a charakteristiku globalizačních etap, spíše s důrazem na progresi zkoumaného fenoménu. Mezi jednotlivými vlnami existovala sice období poklesu intenzity globalizačního postupu (Velká deprese, světové války), ta však nebyla zpravidla považována za fáze zásadního zvratu. Přes tyto excesy se globalizace po roce 1945 obnovuje a od 60. let se rozvíjí do své druhé vlny (Baldwin & Martin, 1999; McGrew, 2008).

Ve *druhé vlně* znovu zprvu převládly převážně pozitivní předpoklady hospodářského rozvoje. Pokračující ekonomická liberalizace a relativní stabilizace (v rámci existujících bloků) přispěla k obnově ekonomického růstu, rozvoji obchodu a pohybu výrobních faktorů. V tomto smyslu navázala druhá vlna globalizace na první. Globalizace poté dále zesílila, také vlivem institucionálních změn. Např. vznik Světové obchodní organizace (WTO) v 90. letech údajně definitivně změnil „mělkou“ brettonwoodskou globalizaci na tzv. hyperglobalizaci, která dále unifikuje ekonomiky a politiky národních zemí (srovnej Rodrik, 2011, s. 76, 83, aj.).

Období 80-90. let, kdy dochází k urychlení globalizace, lze považovat za začátek další fáze druhé vlny. Radikálně se mění komunikační technologie s dopadem na globalizaci. Prohlubují se ekonomické vztahy vyspělých zemí s rychle rostoucími rozvojovými ekonomikami, které sdílejí část průmyslové produkce. Některé z klíčových rozvojových zemí výrazně růstově akcelerovaly (Čína, země BRICS) a do globalizačního proudu byly vtaženy také středoevropské ekonomiky. Zesílila výrobní a obchodní kooperace a ekonomická integrace.

Na základě těchto příznivých faktorů lze pro poslední dekádu 20. století konstatovat, že globalizace dospěla do své vrcholné fáze. Výzkum globalizace dále analyzoval, zda její rozvoj posílí, či dojde k odklonu globalizačního trendu. Byly zpracovány i scénáře různých variant dalšího vývoje (viz např. O'Sullivan, 2015, s. 5-6).

První dekáda nového milénia naznačovala spíše pesimistický výhled v podobě nárůstu překážek globalizace. Signálem nastupujících problémů se stala finančně-hypotéční krize v letech 2008-2009, jež celosvětově zbrzdila ekonomický růst. Ekonomická a finanční nestabilita naznačily meze finanční a měnové globalizace. Nepříznivý ekonomický vývoj se dále promítl do ochabnutí multilaterální obchodní liberalizace a nárůstu protekcionismu. Výsledně se zpomalila i exportní dynamika v poměru k růstu HDP (Neumann, 2016).

2. Dvojí faktor zpomalení globalizace

Výše uvedené skutečnosti naznačily *možnost krize dalšího postupu globalizace*, která je přímo viditelná ve snížené dynamice obchodu. Pokles obchodní dynamiky může být projevem jak hlubší změny světové ekonomiky, spočívající v restrukturalizaci výroby a v její nové alokaci, tak i nové politiky vlád jednotlivých zemí usilujících o zvýšení národní ekonomické suverenity a jednajících v antiglobalizačním duchu.

2.1 Ekonomický faktor: strukturální změny výroby a jejich příčiny

V novém tisíciletí se postupně změnil výše naznačený trend, jenž vyvrcholil v závěru tisíciletí a promítal se do světové výrobní struktury.

Globalizace od 90. let způsobovala rostoucí disperzi výroby, jejíž části byly intenzivně alokovány do většího počtu zemí. Z důvodu efektivity byly dílčí výroby offshorovány do zemí s nízkými pracovními náklady. Expanze globálních hodnotových řetězců (GVC) a informační a komunikační revoluce výrazně zjednodušily a zlevnily mezinárodní styky. Prohloubily přeshraniční produkční koordinaci a současně znamenaly, zejména vlivem GVC, vyšší stupeň „odpojení“ (second unbundling) produkce od konkrétní země (Baldwin, 2014). Toto období lze označit za *fázi fragmentace výroby*, která vedla i ke zvýšení intenzity obchodní výměny.

Tento trend byl narušen v průběhu první dekády druhého milénia. Docházelo k určité realokaci výrob: některé vyspělé země totiž obnovovaly při změně mzdových nákladů vybrané zpracovatelské výroby dříve umístěné do rozvojových ekonomik. Roli sehrály i nové technologie v rozvinutých zemích, snaha přiblížit se více domácímu náročnému spotřebiteli, či lepší domácí kontrola výroby (Neumann, 2015).

Trend k návratu je nejednoznačný, zatím pouze zpomaluje uvedený offshoring. Při návratu výrob probíhá spíše jistá selekce: jsou realokovány výroby přinášející vyspělým zemím, jmenovitě USA, ve spojení s novými technologiemi zvýšení produktivity a konkurenceschopnosti. Rozvojové země zůstávají u jednodušších a středně vyspělých (mid-tech) výrob.

Trend tedy směřuje k určité regionalizaci výroby s novým typem dělby práce, méně akcentujícím vzájemnou výměnu výrobních komponentů mezi subjekty světové ekonomiky; probíhá tedy *defragmentace výroby*. Ta je prvním faktorem oslabování globalizace, s viditelnými projevy zejména v poklesu tempa mezinárodního obchodu.

2.2 Politický faktor: boj proti globalizaci za „národní ekonomickou suverenitu“

Druhá skupina příčin oslabení globalizace leží v sociálně politické, resp. hospodářsko-politické oblasti.

Vrcholná fáze globalizace v letech 1989-2008 ovlivnila pronikavě a diferencovaně *sociální oblast*. Oproti tradičním názorům, že globalizace nepřispívá k ekonomické a sociální konvergenci rozvojových zemí (např. Nayyar, 2006), rodící se střední třída zejména Číny a Indie ekonomicky v uvedených letech posílila, když její reálný důchod v paritě kupní síly vzrostl o 50-90 %. Naopak v rozvinutých ekonomikách zaznamenala příjmová horní třetina (mimo nejbohatší vrstvu) jen velmi malý zisk, či dokonce pokles reálného důchodu. Za hlavní projev slábnutí střední třídy je zde považována mzdová stagnace (Global Trends, 2017). V USA nízké a střední důchody již od 70. let rostly mnohem méně, než by odpovídalo statistickému růstu HDP (Piketty & Saez, 2013). Např. medián reálného důchodu domácností v USA byl v r. 2016 vyšší oproti roku 1989 jen o méně než 1 % (Stiglitz, 2016).

Viditelná *eroze střední třídy vyspělých zemí* vzbudila odpor ke globalizaci „poškozující“ národní státy a vyvolala růst protekcionismu (Global Trends, 2017). Při revitalizaci postižené skupiny upírají industriální demokracie, hlavně v osobě nového amerického prezidenta D. Trumpa, svůj zájem především na domácí ekonomiku a snižuje se jejich důvěra v zahraniční ekonomické dění podkopávající domácí hospodářskou stabilitu. Nedůvěra dopadá i na odborné charakteristiky globalizace a vede ke zpochybnění jejího teoretického zdůvodnění.

Kritice je podrobováno tvrzení, že globalizace a volný obchod jsou (v „přežilé“ interpretaci ricardiánské teorie „konvenčně“ uvažujícími ekonomy a jim poplatnými politickými elitami) (Keen, 2016) prospěšné pro všechny. Produkty vyspělých zemí obchodované v současné fázi globalizace obsahují pokročilé technologie a jejich komparativní výhody plynou z ceny vloženého, avšak „nepřenosného“ kapitálu. Pak lze podle kritiků vyvodit neplatnost ricardovských závěrů v globalizovaném světě, což podle některých autorů (Roach, 2016) potvrzují i analýzy ekonomických celebrit (Samuelson, 2004), které „obracejí teorii komparativních výhod naruby“.

Dosavadní teorie totiž údajně hájí pokračování globalizace, kde dominuje specializace a dělba práce, která přináší prospěch jen zemím s levnou prací a imitacemi západních technologií. Specializace (a volný mezinárodní obchod) je tedy podvod: zhoršuje ve skutečnosti pozici vyspělých zemí, neboť zde plodí nekonkurenceschopný kapitálový „šrot“ při nemožnosti rozvinout nová odvětví k zajištění ekonomického růstu. „Magickou ingrediencí“, která naopak spasí vyspělé státy a obnoví růst, je *namísto specializace diverzifikace ekonomik* (Keen, 2016).

Prezident Trump deklaroval realizaci hospodářské politiky přijímající v mnoha směrech uvedená ideová východiska. V centru jeho pozornosti jsou negativní vlivy globalizace ve třech oblastech: pracovní síla a trh práce (potažmo pozice střední třídy), výroba a obchod. Trump zdůrazňuje, že vlivem offshoringu Spojené státy přišly o spoustu průmyslu a dobře placených pracovních míst, dovážejí-li levné zahraniční produkty.

V oblasti pracovního trhu je proto nutné omezit imigraci a zabezpečit rovnováhu mezi kapitálem a prací. Domácí pracovníci získají výhodu proti migrantům, posílí role odborů k vyjednání dobrých mezd v ohrožených sektorech, což zajistí životní úroveň střední třídy.

V oblasti obchodu čerpá Trump inspiraci z „otců zakladatelů“ a z rétoriky konzervativců kritizujících volný obchod jako určující faktor hospodářské politiky. Dle Trumpa liberální politika umožňuje dovozcům zaplavovat americký trh levnými výrobky; vzniká importní závislost. Základem nové politiky bude proto obchodní reforma, která zajistí více reciproční obchodní podmínky, omezí deficit obchodní bilance a povzbudí růst. Zvýší se role USA jako výrobce i exportéra: porostou zpracovatelské vývozy, budou selektovány importy (dovoz primárních komodit oproti poklesu importu aut, oceli, spotřebního zboží (Petrás, 2017).

Pokud jde o oblast průmyslu, USA přesunem řady výrob do zámoří limitovaly svůj exportní potenciál. Do zachování průmyslu je podle Trumpa nutné investovat, včetně těžby některých surovin. K obnově domácího průmyslu je třeba využít domácí výrobky a materiály a najímat americké dělníky (Petrás, 2017). Průmysl a ekonomiku je nutno zbavit škodlivých regulací a velkého daňového zatížení. Argumentem je opět historie USA: dříve příjmy domácích subjektů nebyly zdaněny; zahraničních ano v podobě celní zátěže. Současná situace je opačná: omezuje hlavně domácí výrobce, je proto záhodno ji změnit.

Z výše načrtnutého vyplývá, že *Trumpova hospodářská politika* zvláště v oblasti průmyslu a obchodu by *mohla zasáhnout globální vývoj*, především dalším oslabením obchodu. Stává se nejistým další obchodní uvolňování: s rostoucími preferencemi domácí ekonomiky se zvyšuje možnost její ochrany ovlivňující jak obchodní výměnu, tak případně i ekonomický růst.

3. Conclusion

Základ Trumpovy politiky je založen na kritice, jež vychází ze zjednodušené představy fungování národního státu v dnešním silně globalizovaném světovém hospodářství. Politika ignoruje fakt, že již po několik dekad *nelze považovat klíčové ekonomické subjekty* (korporace,

banky, dokonce ani spotřebitele) *za výlučné národní entity*; resp. tyto vytvářejí *svoji produkci a spotřebou výrobků a služeb síť vzájemných závislostí, jež není lokální, ale globální*. Tato skutečnost představuje těžko zpochybnitelný základ světové ekonomiky, proti němuž D. Trump *nemůže vytvořit zásadně odlišnou, a přitom životaschopnou alternativu*.

Trumpův pohled na globalizovanou ekonomiku je založen na *(neo)merkantilistické představě ekonomických vítězů a poražených*, kteří si na základě tohoto statusu rozdělí neměnné bohatství světové ekonomiky (Davidson, 2016). Spojené státy musí z pozice síly vyjednat takové obchodní dohody, jimiž získají větší prospěch než jejich partner. Obchodní a další styky, aby byly pro USA výhodné, musí akcentovat vývoz, resp. omezit dovoz, a zajišťovat ochranu před zeměmi, jež touží ožebračit americkou ekonomiku.

Trump neuvažuje minulý vývoj prokazující výhody liberalizované světové ekonomiky a v zásadě dlouhodobě potvrzující platnost klasické teorie volného obchodu. Silné mezinárodní obchodní a další vazby, které si otevírající se ekonomika USA vytvořila, prospěly růstu produktivity amerických podniků, naproti tomu i zpřístupnily levné zahraniční zboží domácímu spotřebiteli; potvrzoval se tak význam dělby práce a platnost teorie komparativních výhod. *Argumenty protekce* platné před 150 lety opakované nyní *jsou zcela ahistorické, populistické*. Cestou k růstu ekonomiky USA zůstává proto napojení na akcelerující součásti světové ekonomiky uvolněním mezinárodního obchodu (Pearson, 2017).

Přes mnohé iracionální závěry v přístupu k zahraničnímu obchodu má Trumpova „revoluce“ určité opodstatněné vazby na změny světové ekonomiky, které mění podobu globalizace.

Nová politika americké administrativy je zdánlivě v souladu s trendem, který se začal rozvíjet v prvním desetiletí nového století jako částečná realokace výroby do mateřské země a defragmentace částí výroby původně rozptýlených do globálního prostoru (viz část 2.1). To formálně souzní s obnovou „devastovaného“ amerického průmyslu. Trumpova představa je však nereálná ve snaze plošně udržet výrobu a zaměstnanost v odvětvích, která nejsou konkurenceschopná ve srovnání s dalšími zeměmi (např. ocelářství, část těžebního průmyslu).

Přestože přiměřená míra diverzifikace ekonomiky je prospěšná, nenahrazuje však mezinárodní dělbu práce. Specializace je nutným produktem ekonomického rozvoje a technologických změn. Jejich vlivem dochází v USA k ústupu jednodušších výroby, ale i středně vyspělé (mid-tech) produkce.

Politika D. Trumpa nereфлекtuje ekonomické výzvy současnosti, které zřetelně oponují hospodářské izolaci. Příkladem nové perspektivní cesty pro USA, která respektuje globalizaci a účelnou specializaci v jejím rámci, může být např. tzv. pokročilá výroba (Sirkin et al., 2015). Představuje soubor pružných, datově vybavených a nákladově efektivních zpracovatelských procesů, založených na nové generaci robotických zařízení, vyspělých informačních technologiích, nových materiálech, metodách 3D tisku, atd., zajišťujících nejen efektivitu, ale i vysokou produkční flexibilitu. Tato zásadní kvalitativní změna by umožnila Spojeným státům a dalším vyspělým zemím udržet konkurenční výhody oproti emerging markets, zvýšit žádanou diverzifikaci high-tech výroby a přitom profilovat specializaci.

Tyto procesy potvrzují výhody dalšího rozvoje globalizace, neboť zachovává systém racionální dělby práce mezi jednotlivými součástmi světové ekonomiky. Modifikace globalizačního procesu a vznik problémových jevů však nelze vyloučit. Někteří autoři podotýkají, že i když budou nadále podmínky, resp. „pravidla“ globalizace, určitým způsobem zafixovány, budou v jejím rámci probíhat „technické změny“, které mohou situaci jednotlivých

subjektů zhoršovat (např. uvedená stagnace či pokles životní úrovně velkých skupin lidí ve vyspělých zemích). (Stiglitz, 2017)

I přes tyto možné posuny či zvraty ovšem zůstane světový ekonomický prostor více globalizovaný než před sto lety (Ghemawat, 2017). Globalizace takto může zajistit návrat ekonomické dynamiky do rozvinutých ekonomik. Současně poukazuje na slepou uličku ekonomické protekce a udržení neperspektivních průmyslů, o které zčásti usiluje D. Trump.

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References

- [1] Baldwin, R. (2014). Misthinking globalisation: Twentieth-century paradigms and twenty first-century challenges. *Australian Economic History Review*, vol. 54, no. 3, pp. 212–219.
- [2] Baldwin, R. and Martin, P. (1999). Two waves of globalization: Superficial similarities, fundamental differences. *Working Paper 6904. NBER, Text (pdf)*. [Online]. Available: <http://www.nber.org/papers/w6904>.
- [3] Davidson, A. (2016). What Donald Trump doesn't understand about "the Deal". *The New York Times Magazine* [Online]. Available: <https://www.nytimes.com/2016/03/20/magazine/what-donald-trump-doesnt-understand-about-the-deal.html>.
- [4] Ghemawat, P. (2017). Globalization in the age of Trump. *Harvard Business Review* [Online]. vol. 95, no. 4, pp. 112-123. Available: <https://hbr.org/2017/07/globalization-in-the-age-of-trump>.
- [5] Global Trends (2017). Global trends: Paradox of progress. National intelligence council [Online]. Available: <https://www.dni.gov/files/images/globalTrends/documents/GT-Full-Report.pdf>.
- [6] Haberler, G. (1964). Integration and growth of the world economy in historical oerspective. *American Economic Review* [Online], vol. 54, no. 2, pp. 1-22. Available: <http://www.jstor.org/stable/1810895>.
- [7] Chandy, L. and Seidel, B. (2016). Is globalization's second wave about to break? The brookings institution report [Online]. Available: <https://www.brookings.edu/research/is-globalizations-second-wave-about-to-break>.
- [8] Keen, S. (2016). Trump's truthful heresy on globalization and free trade. *Forbes* [Online]. Available: <https://www.forbes.com/sites/stevekeen/2016/11/11/trumps-truthful-heresy-on-globalization-and-free-trade/#35e100ea2a74>.
- [9] McGrew, A. (2008). The logistics of economic globalization. *Ravenhill, J. (ed.) Global Political Economy. 2nd edition*. New York: Oxford University Press, pp. 277-313.
- [10] Morrison, J. (2012). Before hegemony: Adam Smith, American independence, and the origins of the first era of globalization. *International Organization*, vol. 66, no. 3, pp. 395-428.

- [11] Nayyar, D. (2006). Globalisation, history and development: A tale of two centuries. *Cambridge Journal of Economics*, vol. 30, no. 1, pp. 137–159.
- [12] Neumann, P. (2015). The impact of structural changes in national economies on globalization character. *Proceedings of 15th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 498–504.
- [13] Neumann, P. (2016). Is trade decline a start of a new globalization trend? *Proceedings of 16th International Scientific Conference of Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 1491–1498.
- [14] O’Sullivan, M. (2015). The end of globalization or a more multipolar world? Towards a multipolar world? Credit suisse AG research institute [Online]. pp. 4-6. Available: <http://publications.creditsuisse.com/tasks/render/file/index.cfm?fileid=EE7A6A5DD9D5-6204-E9E6BB426B47D054>.
- [15] Piketty, T. and Saez, E. (2013). Top incomes and great recession: Recent evolutions and policy implications. *IMF Economic Review*, vol. 61, no. 3, pp. 456-478.
- [16] Pearson, D. (2017). Lincoln was wrong on trade [Online]. Available: <http://thehill.com/blogs/pundits-blog/economy-budget/321843-lincoln-was-wrong-on-trade>.
- [17] Petras, J. (2017). President Trump: Nationalist capitalism, an alternative to globalization? Global research, centre for research on globalization [Online]. Available: <http://www.globalresearch.ca/president-trump-nationalist-capitalism-an-alternative-to-globalization/5571368>.
- [18] Roach, S. (2016). Opinion: Donald Trump is right about globalization: It’s a broken system. Marketwatch [Online]. Available: <http://www.marketwatch.com/story/donald-trump-is-right-about-globalization-its-a-broken-system-2016-07-25>.
- [19] Rodrik, D. (2011). *The Globalization Paradox: Why Global Markets, States, and Democracy Can’t Coexist*, New York: Oxford University Press.
- [20] Samuelson, P. (2004). Where Ricardo and Mill Rebut and confirm arguments of mainstream economists supporting globalization. *Journal of Economic Perspectives*, vol. 18, no. 3, pp. 135-146.
- [21] Sirkin, H., Zinser, M. and Rose, J. (2015). Why advanced manufacturing will boost productivity. Boston Consulting Group [Online]. Available: https://www.bcgperspectives.com/content/articles/lean_and_manufacturing_production_why_advanced_manufacturing_boost_productivity.
- [22] Stiglitz, J. E. (2016). America’s great malaise and what to do about it. *Journal of Policy Modeling*, vol. 38, no. 4, pp. 639-648.
- [23] Stiglitz, J. E. (2017). The coming great transformation. *Journal of Policy Modeling*, vol. 39, no. 4, pp. 625-638.

GLOBAL SUSTAINABLE CONSUMPTION GOVERNANCE OF THE DIGITAL SHARING ECONOMY

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Abstract. We rely on Sundararajan (2016) to prove that the sharing economy is the present stage of a constant progress of the economy and society that is influenced to some extent by digital technologies. The latter take individuals back to recognizable sharing conducts, self-employment, and types of community-based network that survived before now: an enhanced type of something recognizable should gain boundless acceptance swiftly and have superior economic consequence than the creation of completely novel consumption practices or patterns of hiring. We attempt to address these increasing aspects by elaborating on the aspect that the variety of conducts and organizations that constitutes the sharing economy is a preceding illustration of a time to come in which peer-to-peer network becomes progressively predominant, and the crowd substitutes the company at the heart of capitalism. We develop primary empirical research for the principal case study that determines that the proficiencies of crowd-based capitalism make possible an economy that depends gradually on peer-to-peer platforms to regulate economic operations. We use meta-analysis to inspect evidence proving that rising blockchain technologies might reshape crowd-based capitalism, repositioning the crowd from being the origin of delivery to being the go-between that organizes and jointly dominates the market, but they may drive a novel phase of peer-to-peer markets and digital disorder.

Keywords: digital, sharing, economy, sustainable, consumption

JEL Classification: G18, H11, I28

1. Introduction

Following Sundararajan (2016), this paper aims to prove that the sharing economy is the present stage of a constant progress of the economy and society that is influenced to some extent by digital technologies. The latter take individuals back to recognizable sharing conducts, self-employment, and types of community-based network that survived before now (Androniceanu, 2017): an enhanced type of something recognizable should gain boundless acceptance swiftly and have superior economic consequence (Tulloch, 2016) than the creation of completely novel consumption practices or patterns of hiring. (Sundararajan, 2016) The on-demand economy designates digital media companies that link users via two-sided platform-oriented marketplaces. The most important of on-demand platforms (Uber, Lyft, and Airbnb) indicate

the interconnection and inconsistency between the social and economic nature of these companies' platforms. Such corporations have had substantial interfering effect upon current transit, housing (Vasile & Androniceanu, 2016), and labor markets. (Cockayne, 2016)

2. Literature review

Transactional platforms (e.g. Airbnb and Uber) tip off the ones that make accessible redundancy of user resources or assets. Uber operates on a pattern that hires users as contractors that enables them to deal in their working capacity to other smartphone users. Airbnb users benefit from listing properties, but are not officially hired or paid by the platform. Sharing links a series of distinct economic routines and digital platforms (Androniceanu & Dragulanescu, 2016, A), and the laboring subjectivities (Panova & Buber-Ennsner, 2016) and affective propensities (Friedman et al., 2016) that are associated with them. Proponents of the on-demand economy advocate or deter, via the preservation of the sharing trope, certain laboring and social routines. Sharing as a discursive configuration is instrumental (Selth, 2016) in the design and effectiveness of economic practice. Although labor may be shaped via specific discursive frames (Besciu & Androniceanu, 2017), employees may repudiate or objectify them in dynamic and unstable fashions that may not accurately display their personal features. The pervasiveness and reproducibility of distributed information online, the unimportant value of the latter, and the alleged selflessness of contribution are essential to the economic arrangement of digital systems. Information distributed on social media by separate users has practically no value, an aspect linked to its disproportionate, omnipresent, and effortlessly reproducible traits. (Cockayne, 2016)

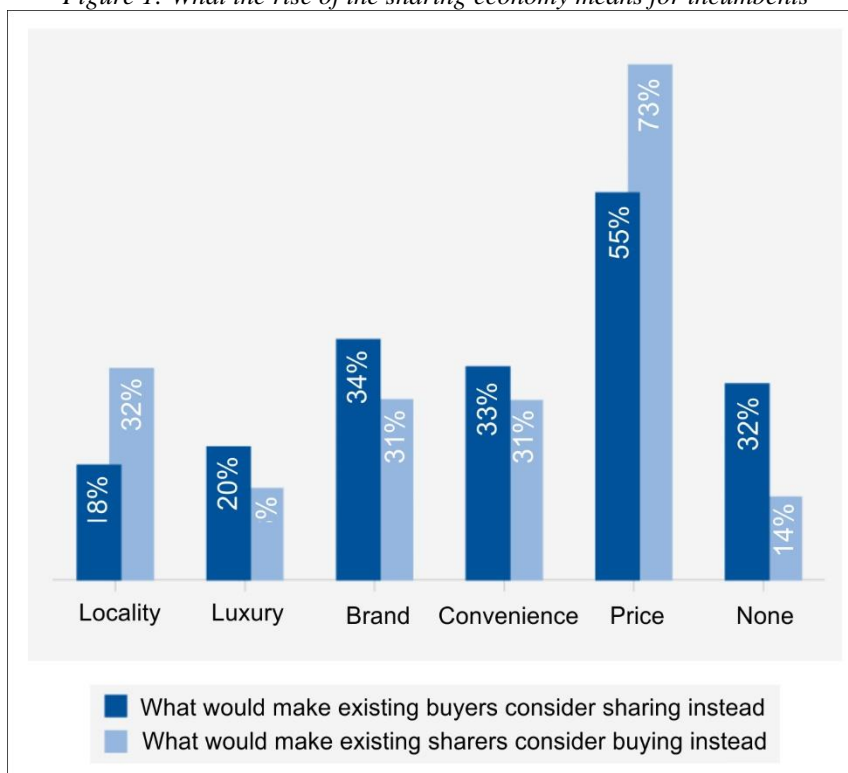
3. Methodology

Using primary empirical research and meta-analysis we elaborate on the aspect that the variety of conducts and organizations that constitutes the sharing economy is a preceding illustration of a time to come in which peer-to-peer network becomes progressively predominant (Lucas, 2016), and the crowd substitutes the company at the heart of capitalism. The adjustability and smoothness of contracting via digital platforms instead of working a day-job (Popescu Ljungholm, 2016) may be challenging (performing on demand for various platforms may be likable), but obtaining a predetermined periodic income (Madsen & Wu, 2016) assists in organizing a future, something pretty demanding when an individual's earnings vary (Ionescu, 2016) contingent on the caprices of delivery and request on a series of apps. Because other platforms concentrate on service labor increasingly, there is a rising threat of greater future social disparity. (Sundararajan, 2016) Linking the distribution of information online to sharing in the framework of the on-demand economy takes on amalgamating labor with input of practically useless information. Sharing in the on-demand framework aims to regularize flexible kinds of work (Androniceanu, 2014) by postulating labor as a required contribution (Bauder, 2016), a sufficient and roughly ineffective must for inclusion, (Machan, 2016) in which sharing is associated with the recurrence of affect that guarantees social status via economic involvement (Layard, 2016), instead of one on social media platforms. (Cockayne, 2016)

4. Empirical data and analysis

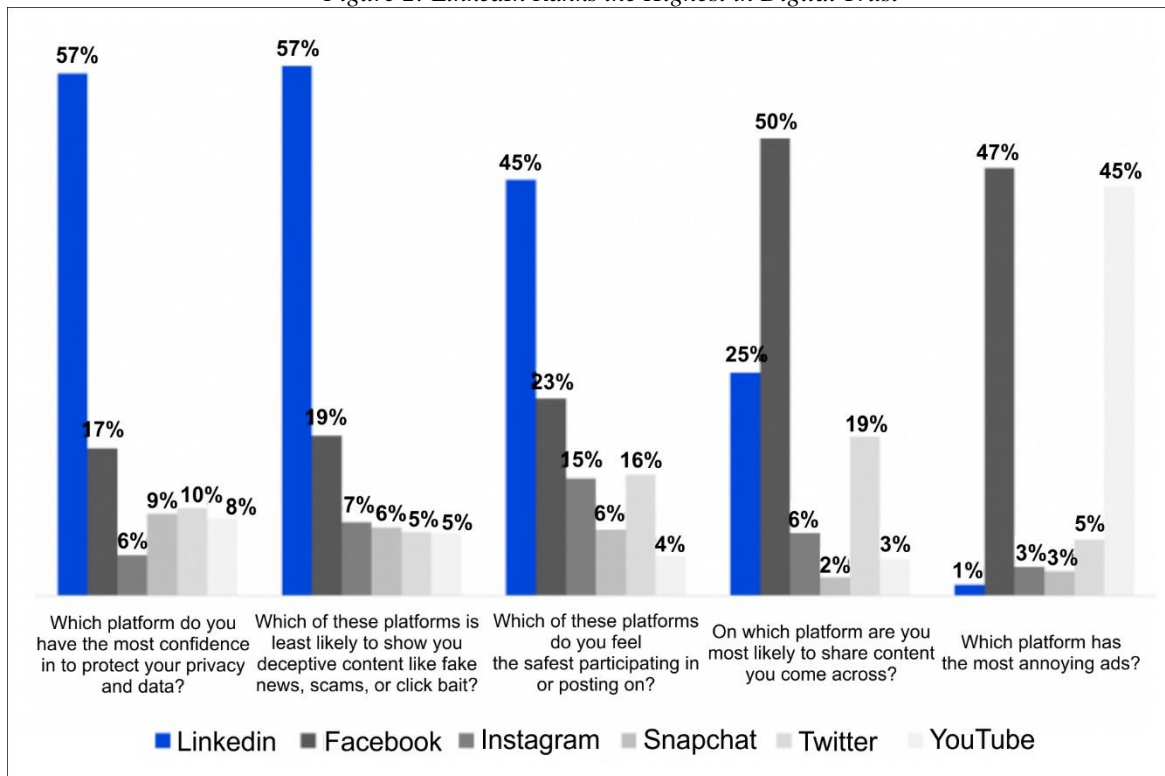
Our estimated data covers what the rise of the sharing economy means for incumbents and types of shared or on-demand online service. We aim to determine that the proficiencies of crowd-based capitalism make possible an economy that depends gradually on peer-to-peer platforms to regulate economic operations. Rising blockchain technologies might reshape crowd-based capitalism (Andrei et al., 2016), repositioning the crowd from being the origin of delivery to being the go-between that organizes and jointly dominates the market, but they may drive a novel phase of peer-to-peer markets and digital disorder. Developing this case, we reflect on the fact that there is a conflict between the profit-stimulated and goal-oriented directions of the sharing economy, between individuals who perceive it as a market economy and people who conceive it as a gift economy. (Sundararajan, 2016) Sharing as a rhetorical figure of speech that guarantees inclusivity in the conditions of the on-demand economy (Weede, 2016) faces a link with the transaction of one's working capacity, and not the contributing of one's ideas on social media platforms. If labor is comprehended in accord with the requirement to distribute information (Siekelova et al., 2017) in the social media frame of reference (Hellman & Majamaki, 2016), it is underrated and regarded only as a boundlessly accessible product for on-demand investment with almost no monetary worth. Such labor may be considered as real and converted into a superfluous object (Mihaila, 2016) via conditions established by on-demand companies via the sharing rhetoric and the caprices of smartphone users to invalidate the dissimilarity between digital goods and working capacity. Consumers require conformity from labor no less than they would from goods, and carry out these normative criteria via routines of peer-implemented permissive supervision moderated via the platform. (Cockayne, 2016) (Figures 1–6)

Figure 1: What the rise of the sharing economy means for incumbents



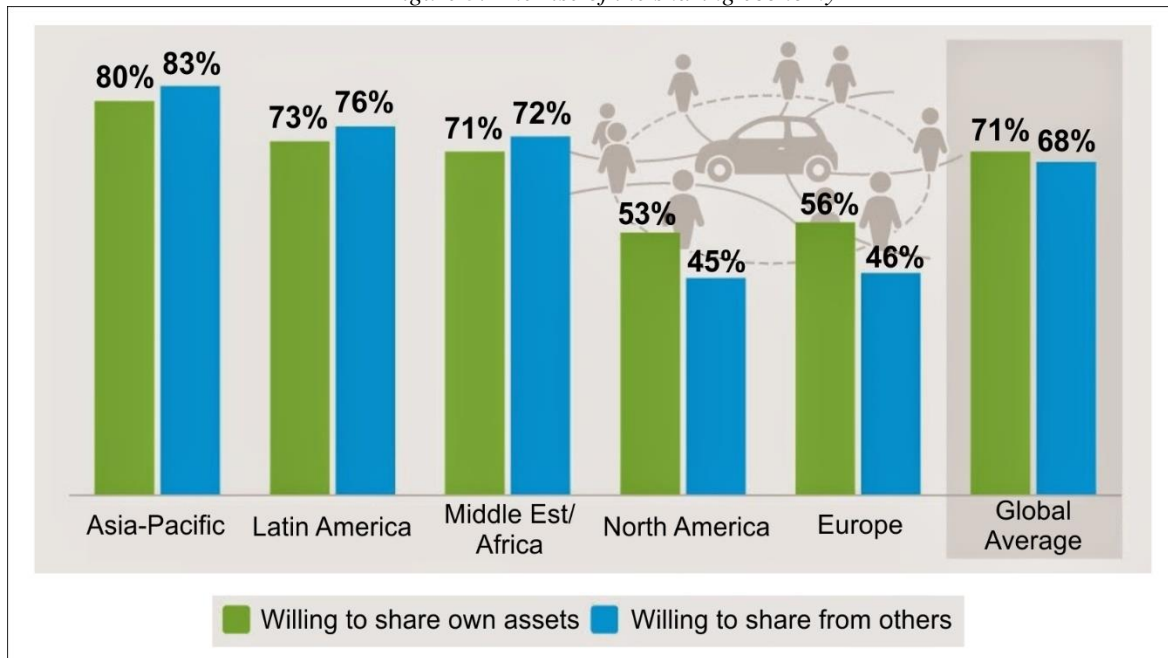
Source: Vision Critical and WEF/Accenture Analysis (2015) and our estimations

Figure 2: LinkedIn Ranks the Highest in Digital Trust



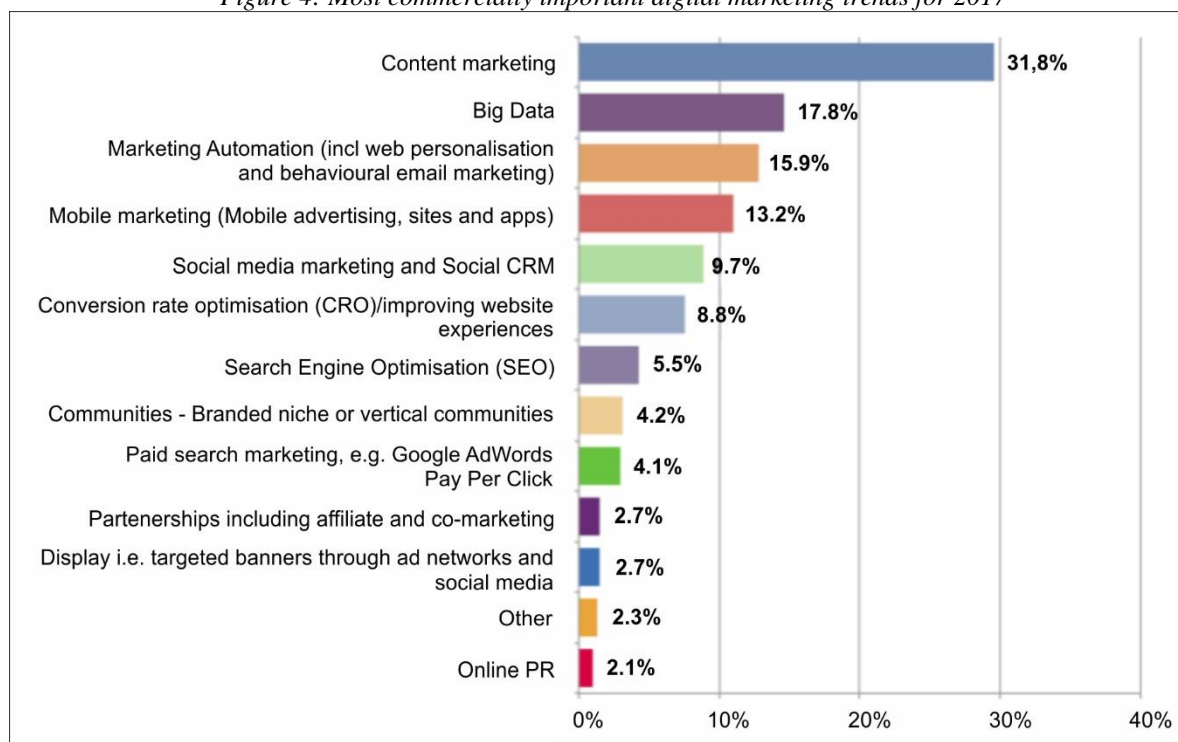
Source: BI Intelligence (2017) and our estimations

Figure 3: The rise of the sharing economy



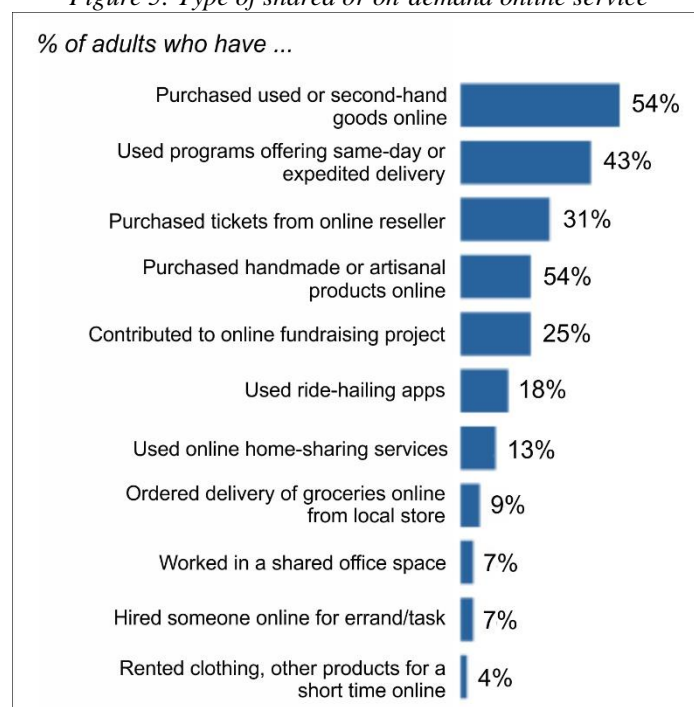
Source: Nielsen, Mashable statista and our estimations

Figure 4: Most commercially important digital marketing trends for 2017



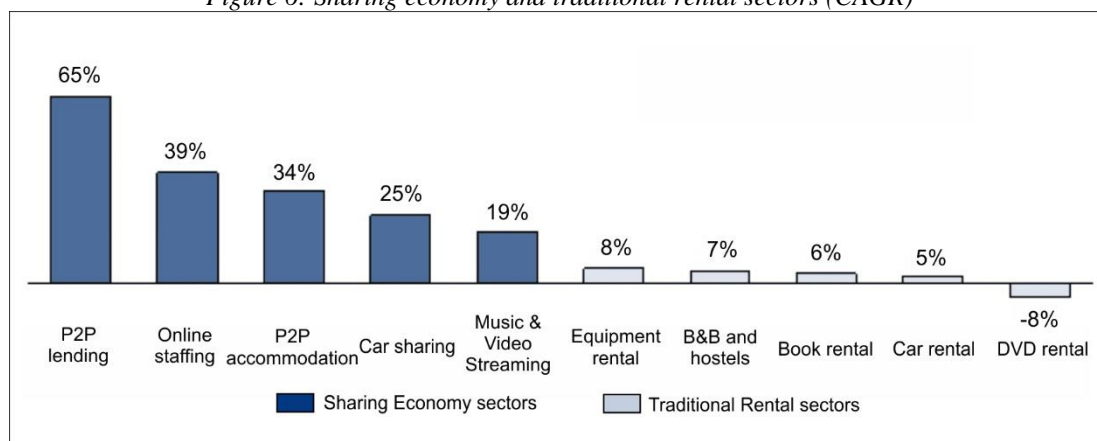
Source: Smart Insights (2015) and our estimations

Figure 5: Type of shared or on-demand online service



Source: PEW Research Center (2015) and our estimations

Figure 6: Sharing economy and traditional rental sectors (CAGR)



Source: PWC (2013) and our estimations

5. Results and discussion

The ideology of the sharing rhetoric redefines the notion of labor, while advancing an authentic alteration and concern for another course of action to the capitalist system (Anderson & Kantarelis, 2016), or a comeback to a relevant series of social connections. Apparent social dissimilarities between classes are eliminated from the public realm (Oliver, 2016), because the capitalist does not come across the laborers at a concrete market to deal in their working capacity, operating transactions under conditions established by a third party platform, via the employment of a digital application (Androniceanu & Dragulanescu, 2016, B) on a smartphone, besides intensifying the false impression of fairness between capitalist and worker (Williams et al., 2016), who both engage in an interactive delusion that the requirement formulated by the former in relation to the acquisition of the latter's working capacity is a broad and social kind of sharing. On-demand laborers create, without associating truthfully with, the digitally interposed type of capitalist exchange. The sharing rhetoric hides the commitment of transformation to the capitalist way of production (Hurd, 2016), via a proposal for a more reliable and established kind of primarily social connection that furthers labors' collaboration in the standardization of flexible work. On-demand platforms reinforce a grasp of goods and labor as unceasing, not disparate. (Cockayne, 2016)

6. Conclusions

Labor as something distributed, and not traded and paid for in the on-demand economy, is figurative with a kind of redundant always-accessible data. The workers who decide not to distribute their labor are construed as the characters that ungenerously or defiantly repudiate the commitment of involvement in the novel better existence and community. Sharing sets up the circumstances for debating labor as something users are allowed to access effortlessly and anytime (Androniceanu, 2012): the on-demand economy aims to conceive a series of prerequisites for grasping labor as something nonrefundable that should reciprocate swiftly to the requirements of smartphone users. On-demand and various other digital companies and platforms engage in the creation of the sharing rhetoric (Popescu & Predescu, 2016), which has a decisive role in the on-demand economy. Sharing, as a regulating undertaking for depicting on-demand labor, is a scheme for approaching the latter in idealistic terms of social connections and cooperation in neoliberal capitalism. (Cockayne, 2016)

References

- [1] Anderson, E. and Kantarelis, D. (2016). Incentive-compatibility and coasean invariance in property affairs. *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 96–114.
- [2] Androniceanu, A. (2012). Key issues related to the human resources management nowadays. *Proceedings of the 6th International Management Conference: Approaches in Organisational Management*, Bucharest, Romania, pp. 221–230.
- [3] Androniceanu, A. (2014). Research on management capacity of medical units for addicts to deliver quality services in time of crisis. *Revista de Cercetare si Interventie Sociala*, vol. 47, pp. 78–104.
- [4] Androniceanu, A. and Dragulanescu, I.-V. (2016, A). A survey on the buyers' eco-responsibility and the urban white pollution. *Environmental Engineering and Management Journal*, vol. 15, pp. 481–487.
- [5] Androniceanu, A. and Dragulanescu, I.-V. (2016, B). Sustainability of the organizational changes in the context of global economic crisis. *Amfiteatru Economic*, vol. 14, pp. 365–379.
- [6] Andrei, A., Galupa, A., Androniceanu, A. and Georgescu, I. A. (2016). Monetary policy with constant real stock of bonds. *Economic Computation and Economic Cybernetics Studies and Research*, vol. 50, pp. 101–116.
- [7] Androniceanu, A. (2017). The three-dimensional approach of total quality management, an essential strategic option for business excellence. *Amfiteatru Economic*, vol. 19, pp. 61–78.
- [8] Bauder, H. (2016). Understanding Europe's refugee crisis: A dialectical approach. *Geopolitics, History, and International Relations*, vol. 8, pp. 64–75.
- [9] Besciu, C. D. and Androniceanu, A. (2017). The link between social inequalities, health system characteristics and R&D expenditure – worldwide evidence. *Romanian Statistical Review*, vol. 2, pp. 21–41.
- [10] Cockayne, D. G. (2016). Sharing and neoliberal discourse: The economic function of sharing in the digital on-demand economy. *Geoforum*, vol. 77, pp. 73–82.
- [11] Friedman, D., Friedman, H. H. and Friedman, L. W. (2016). US healthcare: A system in need of a cure. *American Journal of Medical Research*, vol. 3, pp. 125–141.
- [12] Hellman, M. and Majamaki, M. (2016). Ordinary men with extra-ordinary skills? Masculinity constructs among MMORPG-gamers. *Journal of Research in Gender Studies*, vol. 6, pp. 90–106.
- [13] Hurd, H. M. (2016). The innocence of negligence. *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 48–95.
- [14] Ionescu, L. (2016). Mechanisms for enhancing ethical behavior in the accounting profession. *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 263–269.
- [15] Layard, R. (2016). Why we should spend more on mental health. *American Journal of Medical Research*, vol. 3, pp. 188–206.

- [16] Lucas, R. E. B. (2016). Integral migration in developing economies: An overview of recent evidence. *Geopolitics, History, and International Relations*, vol. 8, pp. 159–191.
- [17] Machan, T. R. (2016). The morality of gregarious egoism. *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 7–29.
- [18] Madsen, E. S. and Wu, Y. (2016). Low R&D efficiency in large pharmaceutical companies. *American Journal of Medical Research*, vol. 3, pp. 141–151.
- [19] Mihaila, R. (2016). Is the decrease in the gender wage gap the principal driver of the sustained rise in female labor market participation? *Journal of Research in Gender Studies*, vol. 6, pp. 146–152.
- [20] Oliver, T. (2016). Goodbye Britannia? The international implications of Britain's vote to leave the EU. *Geopolitics, History, and International Relations*, vol. 8, pp. 214–233.
- [21] Panova, R. and Buber-Ennsner, I. (2016). Attitudes towards parental employment: A ranking across Europe, Australia, and Japan. *Journal of Research in Gender Studies*, vol. 6, pp. 11–37.
- [22] Popescu, G. H. and Predescu, V. (2016). The role of leadership in public health. *American Journal of Medical Research*, vol. 3, pp. 273–279.
- [23] Popescu Ljungholm, D. (2016). The role of work organizations in the social construction of gender. *Journal of Research in Gender Studies*, vol. 6, pp. 269–275.
- [24] Selth, A. (2016). The road to Mandalay: Orientalism, 'Burma girls' and Western music. *Journal of Research in Gender Studies*, vol. 6, pp. 159–191.
- [25] Siekelova, A., Kliestik, T., Svabova, L., Androniceanu, A. and Schonfeld, J. (2017). Receivables management: The importance of financial indicators in assessing the creditworthiness. *Polish Journal of Management Studies*, vol. 15, pp. 217–228.
- [26] Sundararajan, A. (2016). *The Sharing Economy: The End of Employment and the Rise of Crowd-based Capitalism*. Cambridge, MA, and London: The MIT Press.
- [27] Tulloch, L. (2016). The transnational state, neoliberalism and environmental education policy: A New Zealand case study. *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 170–195.
- [28] Vasile, O. and Androniceanu, A. (2016). Dynamics of migration in Romania and management of financing instruments. *European Proceedings of Social and Behavioural Sciences*. Iasi, Romania, pp. 1059–1067.
- [29] Weede, E. (2016). Geopolitics, institutions, and economics: On the rise and decline of civilizations. *Geopolitics, History, and International Relations*, vol. 8, pp. 177–220.
- [30] Williams, J. C., Phillips, K. W. and Hall, E. V. (2016). Tools for change: Boosting the retention of women in the STEM pipeline. *Journal of Research in Gender Studies*, vol. 6, pp. 11–75.

THE BUSINESS WORLD – CHALLENGES AND OPPORTUNITIES FOR BEGINNERS

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Abstract. The business world is more and more an option for the human resource in search of a professional identity. The shorter life of some professions correlated with the weak link between the information received within the educational system and the demands of the labor market, often directs the human resource to conduct a business as a way of achieving social and financial independence. Considering globalization as a real opportunity the premise of a successful business is created. To launch and develop a business, entrepreneurship can combine natural resources, labor and capital available internationally. Developed products or services can be made available to customers around the world. Europe's economic growth and jobs depend on its ability to support the growth of enterprises. The European non-reimbursable funds are of real use for starting and boosting business but it needs proper qualification for accessing them. In Romania, the business sector is a dynamic one, the registrations and cancellations of commercial companies being not negligible. The paper aims to capture the accessibility of the world of business for beginners in Romania, which will be highlighted by presenting the opportunities they have, but also the challenges they have to meet. The paper identifies two major sources of challenges for companies: first, the human resource and its quality in relation to the requirements of the business environment and, the second, the access to financial resources and the fiscal policy as support more or less "friendly" for the development of a business.

Keywords: business, human resource, financial resources

JEL Classification: M13, M20, M50

1. Introduction

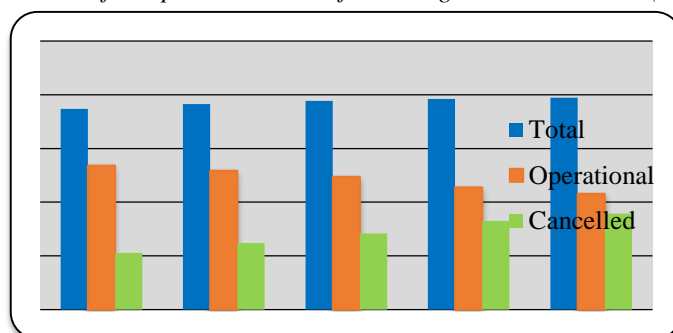
Quite simply said, the world and also working environment are changing quickly and development and growth – whether for an employee, for a company or professional in HR management – requires understanding these changes and being able to cope with them. (Rebetak & Rypakova, 2015) For this reason, we believe that the way in which the human resource is trained should take into account not only the link between the supply and demand on the labor market, but, also, the innate abilities of each individual. In this way, the resource that starts and for which is started the economic engine would be highly capitalized, avoiding the waste of an input that could make the difference between failure and success, welfare and poorness, and not at last, between the human as a purpose and the human as a tool. (Nicolae, 2017)

The paper aims to capture the challenges and opportunities that debutants in the world of businesses have in an environment dominated by change and globalization. The main method that the authors will use is the analysis of the evolution of the relevant indicators for the proposed theme and the literature review, all applied in a case study: Romania.

In Romania there are two forms of business development designed for young people and debutants: SRL-D and companies set up by facilities granted to students. According to GEO no. 6/2011 to stimulate the establishment and development of micro-enterprises by debutants a SRL-D is a Limited Liability Company (LLC) which operates for an indefinite period under the Law no. 31/1990 and falls within the category of micro-enterprises under the conditions of Law no. 346/2004. (www.onrc.ro). The facilities granted to students are regulated by GD no. 166/2003 and refer to the tax exemptions granted to students who are at least in the 2nd year of study and who have fulfilled all the obligations established by the university senate.

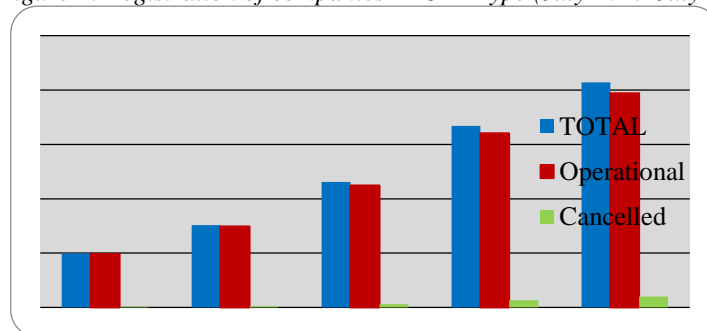
The evolution of these forms of business organization is presented into the following two figures:

Figure 1: Registration of companies based on facilities granted to students (July 2013-July 2017)



Source: (<http://www.onrc.ro/index.php/ro/statistici>)

Figure 2: Registration of companies LLC-D Type (July 2013-July 2017)



Source: (<http://www.onrc.ro/index.php/ro/statistici>)

As it can be seen there is an increasing interest of human resources in Romania (especially young people) to pursue their professional activity as an entrepreneur. According to the EY study, in 2014, 52 % of students wanted to open their own business. (EY 2014)

The limited knowledge, the lack of experience and the difficulty in finding adequate human and financial resources increase the failure rate of these initiatives with negative effects both economically and socio-professionally.

Two are the issues that the authors intend to address into the following:

- The quality of the human resource as the basis for the efficiency of any form of business.

- The access to funding sources as an indispensable medium in the drive of any economic engine.

2. The quality of the human resource as the basis for the efficiency of any form of business

The economic gear of the 21st century, which puts the whole world on the move, seems unable to keep up with the unprecedented diversification of needs. The key parts that made it operational were caught up and overcome by their own projections. Thereby, the human resource, which at the declarative level is the purpose of any economic activity, has become, no matter the angle we look at, the center of the vortex that now dominates any form of human activity. As its edges are increasingly widening, dictated by globalization as a model of economic development, the pace of change produces imbalances that are hard to surmount. One of them, and perhaps the most important one, is the gap between training and/or the accumulation of knowledge and the possibilities that the human resource has to implement them.

According to the Talent Shortage Survey, in 2017, 40 % of employers globally are having difficulty filling positions, Romania being on third place in the top of countries where employers are having most difficulties filling roles. (TSS, 2017)

This is a worrying situation for Romania since 2007-2008. In fact, compared to the European, the American, the Asian and the global average, Romania has always been above them. In 2016 however, the increasing difficulties in finding the right human resources was a galloping one.

In Romania the biggest challenge the human resource generates at the start-up business level can be synthesized into two categories:

1. Entrepreneurship education
2. Low interest of human resources for training

2.1 Entrepreneurship education

The courses and programs in entrepreneurship reinforce perceptions of entrepreneurial skills, which in turn positively influence entrepreneurial intention. The existence of an idea or project and research information to formalize it is a real factor that contributes most to the explanation and prediction of entrepreneurial intention. They express a real commitment of students in the entrepreneurial process. (Salhi & Boujelbene, 2012)

A higher level of education can help entrepreneurs, by enhancing their capabilities to detect and evaluate business opportunities, increasing their knowledge and capabilities, improving their level of self confidence and reducing risk. (Jimenez et al., 2015)

As has been seen from the introduction there is a particular interest in the entrepreneurial area, even at young ages. (The number of companies driven by students has increased by about 5 % in 4 years). Unfortunately, the lack of training in the field but also the other challenges that we will highlight in the paper have determined a pace of companies' cancelling far superior to that of their registrations.

Entrepreneurship, although a viable solution for Romania, is driven more by necessity than talent or passion and, in this way, it solves the problems of employment only in the short term.

Although it might be very difficult to separate these types of start-ups from the more knowledge-intensive start-ups, there is a growing need to sharpen instruments by establishing (knowledge” qualifications, which will allow a more efficient use of the available resources for innovation across countries (Kontolaimou et al., 2016)

We consider the lack of entrepreneurial education as the main cause, generated by the human resource, of this situation.

2.2 The low interest of human resources for training

In an environment that combines high economic tension, delayed retirement, and competition for talent, it is important that each individual finds his place in the organization and is able to project himself into the future of the company. At every stage of the employee’s professional life, he/she must be able to acquire new know-how, express his talents in different contexts, and contribute, through skills pooling, to corporate cohesion. (Kollar & Rebetak, 2015)

The education is a process of conscious and purposeful mediation and actively shaping and acquisition system of scientific and technical knowledge, intellectual and practical skills and human experience, creating moral traits and special interests. (Durana & Chlebikova, 2016)

Related to this, two are the developments that are highlighted in Romania: on the one hand the low interest of the young population for training and on the other hand, the lack of educational programs correlated with the requirements of the labor market.

According to the “Education and Training Monitor. Romania” the adult participation in lifelong learning (group age 25-64 years) decreased between 2012 and 2015 from 1.4 % to 1.3 %. Over the same period the EU average rose from 9.2 % to 10.7%. (ETM, 2016)

In addition, the share of population aged 30-34 in the EU that having completed tertiary education, even if it remains at the level of 2015, places Romania on the last position. The school dropout (group age 18-24 years) in 2016 also gives to Romania the third place in the hierarchy of countries with the highest school dropout, rising from 2015. (EUROSTAT, 2017)

Without a proper trained human resource, able to match perfectly the puzzle of a business, any initiative to conduct an entrepreneurial activity will remain only at the attempt stage.

3. The access to funding sources as an indispensable medium in the drive of any economic engine

3.1 The role of funding sources

A very important aspect that needs to be considered just before the start of a company refers to the financial part, namely the necessary financial resources. The absence of a positive cash flow hinders the smooth running of the business, making it even impossible.

Micro and small enterprises create a crucial part of the economic potential of the European Union, budgeting being one of the most used tool for financial planning. The prosperity of every European country in the current globalized world depends on their vitality, flexibility and competitiveness. (Markova et al, 2016)

The establishment of a company or a sole proprietorship in Romania involves small-scale financial resources this year (2017). The challenge is to be able to maintain a positive cash flow in order to sustain the activity.

In addition to the usual costs that depend on the type of activity carried out (rent, raw materials and materials, salaries, utilities, etc), the country's fiscal policy brings additional tax costs that are not negligible. Income generated by the work done must cover all these costs. The positive cash-flow can be obtained independently of the moment of revenue collection, by taking into account funding sources.

In recent years, Romanian legislation has been constantly changing. Fiscal instability, with many changes in the same year, is a factor to be taken into account. Financial forecasts made in the beginning for one year are often very short-term influenced.

The analysis of international experience shows that the effectiveness of fiscal stimulus depends on the solution of such problems as corruption, availability of funding, labor force quality, infrastructural limitations. In the global practice, the use of taxation is the most widely-practiced way of supporting business activity. (Karen, 2016)

The most common taxes a company faces are, according to Law 227/2015 on the Fiscal Code, as follows:

- Revenue earned generates a 1 % tax (if there is a full-time employee) or 3% of incomes. Exceptions are made by companies with income from consulting or management who pay 16 % profit tax.
- Companies with a turnover of less than 220.000 lei (65.000 euro) do not pay VAT. Otherwise, a 19 % VAT is generally considered.
- Withdrawal of dividends from profits implies a minimum tax of 5 % of the dividend approved by the affiliates of the company.
- Existence of employees also involves costs. The gross minimum salary for a full-time employee is currently 1450 lei for which the state tax is due to approximately 716 lei. Thus, an employee costs 1781 lei.

The state sometimes provides facilities for employing certain categories of people, as follows:

- For the employment of apprentices or graduates of higher education, the company receives 1125 lei/month/apprentice and 1350 lei/month/ trainee (Law 164/2017).
- For the employment of graduates with disabilities the company receives 900 lei/ graduate/ month for 18 month. The same amount is received monthly for 12 months for employing unemployed aged over 45, long-term unemployed, youngsters between 16 and 24 years who do not have a job, do not attend a form of education and do not participate to vocational training or unemployed people who are single parent supporters of single-parent families, for indefinite employment of graduates of educational institutions.
- Employers employing for an indefinite period unemployed who, within the 5 years from the date of employment, meet the conditions for applying for partial early retirement or old-age pension if they do not qualify for the pension partially anticipated, receive monthly, during this period, for each person employed in these categories, an amount of 900 lei.

3.2 Funding sources

Access to financing continues to be one of the most significant challenges for the creation, survival and growth of SMEs in a globalizing environment. (Musa, 2016)

Possible sources of business financing are: bank credits, non-reimbursable funds, business angels, credits from partners.

EU28 SMEs mention credit line or overdraft, leasing and hire purchase, trade credit and bank loans as the most relevant sources of external financing. In all the countries surveyed the vast majority of SMEs indicated that at least one type of debt financing was relevant to their enterprise. (Romania 84% in 2016). For Romania, the slightest problem was access to finance, compared to finding customers, availability of skilled staff or experienced managers and cost of production or labor. 59% of respondents in Romania consider Credit line, bank overdraft or credit cards overdraft to be relevant as a source of funding (they are taken into account for use). (European Commission, 2015)

Importance of startups to social well-being is so obvious that public, especially state economic policy has to react on this phenomenon and its trend (Gregova, 2016)

Innovative new companies are seen as a stimulating factor for growth. In this respect, this year was creating a financing opportunity for the newly established firms, 100 % grant financing. This is the StartUp Nation funding program. The interest for this program was quite high, with more than 19.000 business plans being submitted. More than 70 % of the entrepreneurs of these new businesses are under the age of 35. The funding is up to 44.000 euro and covers wage costs, rents, utilities, equipment, cars, workspaces, furniture, licenses, entrepreneurship courses, consulting for writing and implementing the project. The duration of the project implementation is up to 12 months. It is intended that the newly created company will have a unified spirit and invest in technology. It is also encouraged to create a minimum a job maintained for at least two years after the implementation of the project for disadvantaged people or graduates after 2012. Obviously the amount is small compared to the financial needs of a company, but it is a starting point, an initial support of the activity. Also, given that the funds received are made after the costs, which means the need for additional funds to support these costs, it was envisaged the possibility of contracting a bank loan under this financing program, the annual interest rate being about 4 % (more convenient).

With own contribution of 10 %, there is a possibility to participate in the Microindustrialisation program addressed to the already established companies, a program that supports the investments in the priority economic sectors of production, the increase of the volume of activity and the competitiveness of SMEs in these sectors. In 2016, the maximum amount of funds for such a company was 55.000 euro, for 2017 is estimated a value of 100.000 euro. The obligation is to maintain the investment made and the jobs created with these funds for a minimum 3 years starting from the year following the receipt of the non-reimbursable funds.

Other funds allocation programs (with a 10% own contribution) to small and medium-sized enterprises are:

- A program to stimulate exports,
- A program for the development of entrepreneurship among women,
- Craft and handicraft support program,

- The program for the development of the activities of marketing products and services (250.000 lei) is aimed at strengthening the capacity of economic operators to promote market products and services and developing and modernizing the activity of traders and market service providers,
- The program to support the internationalization of Romanian economic operators (50.000 lei/year) that allows the creation of individual promotion tools for Romanian SMEs to facilitate their access to foreign markets and the development of partnerships for the internationalization.

Obviously, all of these funds are insufficient to support the business, but they are of real use for business development if the entrepreneur knows how to use them effectively in case they earn them.

4. Conclusion

The interest in creating new firms among fresh graduates exists in Romania, but often the difficulties encountered in this approach are not taken into account. Entrepreneurial education plays a very important role for business success, but unfortunately there is still a significant gap between the educational programs and the needs of the practice, which makes the lack of experience even more pressing. Another key aspect is business finance, which, at the beginning of the road, turns out to be almost impossible or too expensive. Banks do not want to take risks by lending to new firms. In recent years, the opportunity to access partially or fully non-reimbursable funds has emerged. Obviously, “winning tickets” are few, the risks are numerous, but they are helpful for starting the business. However, it is necessary to take into account the costs cover by the incomes achieved and the attracted sources, respectively maintaining a positive cash-flow with the lowest costs.

References

- [1] Durana, P. and Chlebkova, D. (2016). The influence of globalization for human resources education. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 391-398.
- [2] EY (2014). Barometrul educatiei si culturii antreprenoriale in randul studentilor. Romania 2014. Available online: <https://www.eyromania.ro>.
- [3] European Commission (2015). Survey on the access to finance of enterprises. [Online]. Available at: http://ec.europa.eu/growth/access-to-finance/data-surveys/index_en.htm.
- [4] EUROSTAT, (2017). Europe 2020 education indicators in 2016. Available at: <http://ec.europa.eu/eurostat/documents/2995521/8001730/3-26042017-BP-EN.pdf/c22de270-ea00-4581-89bc-501056f9cae2>.
- [5] ETM, (2016). Education and Training Monitor. Romania. Available at https://ec.europa.eu/education/sites/education/files/monitor2016-ro_en.pdf.
- [6] Gregova, E. and Dengov, V (2016). Startups importance for the successful development of the Slovak economy. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 505-515.

- [7] Jimenez, A., et al. (2015). The impact of educational levels on formal and informal entrepreneurship. *BRQ-Business Research Quarterly*, vol. 18, pp. 204-212.
- [8] Karen, T. (2016). The impact of tax rate on activity of small enterprises: international experience and Russian case. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 2245-2252.
- [9] Kollar, B. and Rebetak, M. (2015). Development of employees as a tool of increasing corporate performance. *Proceeding of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp 308-311.
- [10] Kontolaimou, A., Giotopoulos, I. and Tsakanikas, A. (2016). A typology of European countries based on innovation efficiency and technology gaps: The role of early-stage entrepreneurship. *Economic Modelling*, vol. 52, pp. 477-484.
- [11] Markova, V., Sedliacikova, M. and Gurova, D. H. (2016). The model of financial budgeting and planning for micro and small enterprises. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 1305-1313.
- [12] Musa, H., Strokova, Z. and Musova, Z. (2016). Financing of Slovak small and medium sized enterprises in globalising environment. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 1458-1466.
- [13] Nicolae, S. (2017). Talent as an Economic Good. *Proceeding of the 29th IBIMA Conference on Education Excellence and Innovation Management through Vision 2020: From Regional Development Sustainability to Global Economic Growth*, Viena, Austria, pp. 1664-1672.
- [14] Rebetak, M. and Rypakova, M. (2015). Future evolutions of human resource management. *Proceeding of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp 604-607.
- [15] Salhi, B. and Boujelbene, Y. (2012). Students and Entrepreneurship: effect of the training. *Proceeding of the 18th IBIMA Conference on Innovation and sustainable economic competitive advantage: From Regional Development to World Economies*, Istanbul, Turkey, pp. 2020-2035.
- [16] TSS, (2017). Talent Shortage Survey. Available at <http://www.manpowergroup.com/talent-shortage-explorer/#.WYGqtWdLfGg>.

DEVELOPMENT OF GLOBALIZATION IN MODERN CONDITIONS: MECHANISMS OF ACTION, CONSEQUENCES, PROSPECTS

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Abstract. The article is devoted to study of problematic issues of the content of globalization, its consequences and development prospects. Globalization is viewed as a consistent but controversial worldwide process of increasing interdependence between the socio-economic systems of different countries in conditions of ever-deepening international division of labor. The analysis is carried out from the point of view of interaction of globalization with integral properties of socio-economic systems, including: the property of their integrity, the consequence of violation of which is formation of systems with inefficient oligarchic structure in the world economy; the property of uncertainty of basic quantitative features, playing the special role in development of transformation systems, for which the reduction in degree of this uncertainty in global economy is vital; poorly studied property of self-similarity (fractality) of socio-economic systems, consisting in formation of stable basic characteristics of the system, invariant with respect to any transformations, and inevitably reproduced at all stages of world development, although in other specific historical forms. Attention is paid to the fact that the interaction analyzed plays the key role in dynamics of global processes, direction and forms of their further implementation. The contradictions arising in the process of the named interaction are identified and analyzed. The purpose of the study is to clarify the mechanisms of globalization and to identify possible limits of its positive impact on development of socio-economic systems. Methods of research are used, such as historical and economic analysis, comparative analysis, and theory of nonlinear dynamics.

Key words: economic globalization; integral properties of socio-economic systems; contradictions of globalization; self-similarity (fractality) of economic systems.

JEL Code: F15, F63, O19, P51

1. Introduction

The globalization as a complex and multi-level phenomenon, has many different definitions which not only disclose its specific concrete aspects, but often contradict, and sometimes exclude each other. The analysis of various numerous approaches and points of view on the problem shows that it is mostly justified and appropriate to consider globalization as a consistent and complex process of continuous rapprochement and unification, i.e. bringing to uniformity of socio-economic systems of different countries, embracing their economy,

politics, management and culture, acting as one of the main system-forming factors for their development and improvement. For this, the most important role is played by globalization in economy. It ultimately leads to radical changes in the structure of the entire world economy and determines various consequences in other spheres of people's life and activity, for example, standardization of legislation, fusion or rapprochement of national cultures of individual countries, in which its systematic character is directly manifested.

The important, although probably indirect, argument of the primacy of economic globalization is the fact that the main quantitative criterion are the rates of growth in exchange between countries, primarily of goods, services and capital, and the qualitative criterion is the indicator of strengthening the interrelationship between individual national economies.

Globalization develops on the basis of such objective prerequisites as the ever-deepening world division and cooperation of labor, expansion of foreign trade and the whole sphere of circulation, and improvement of international relations. At the same time, it has large inverse effect on these underlying processes.

The very concept (term) of globalization was used by scientists in this or that context for a long time, for example, by K. Marx in the sense of intensification of international trade, who noted that globalization had come with California and Japan entering the world market of. (Attali, 2008) However, it was popularized only later in the mid-1980-s by American economist T. Levitt (Levitt, 1983), and introduced in a broad scientific revolution in the same years by English sociologist

R. Robertson, who viewed globalization as beginning one in the XVIII century, stage-by-stage carried out long process, which had led to the formation of stable system of economic relations between the countries, combining universal and particular tendencies (Robertson, 2011), i.e. the desire for integrity, on the one hand, and isolation, on the other hand.

The question of the stages of globalization remains complex and debatable in the scientific literature. Its first stage, is reasonably associated by many scientists with the beginning of the XVIII century, the processes of internationalization at the beginning of the sphere of trade, and then production itself, with simultaneous formation of stable system of economic connections and mutual relations between countries. Later, at about the end of the 19th century, there was a transition from internationalization to more complex form of socialization – economic integration, with which the next, second stage of globalization was associated.

At this stage, unlike the previous one, qualitatively new processes took place, which, summarizing, can be characterized as unification and integration of economies of whole countries into a single whole with abolition of the set of both tariff, and non-tariff restrictions, and also as unification of economic policies. In this case, as we see from Table. 1, integration processes occur at all, without exception, structural levels of economy – from local to national and mega-level, and their content was deepened and expanded from unification of individual phases of production process within the single microeconomic unit to merger of interacting sectors of several regional complexes within the state and to integration in the scale of global economic space.

Table 1: Structural levels of integration processes

Level	Essence of integration at this level
Local	Phases of production process within the single microeconomic unit
Microlevel	Phases of production process within the set of economic units
Regional (local)	Complex of interacting economic entities in a certain region within the state
National	Interacting Sectors of Several Regional Complexes within the State

Mesoregional	Interacting sectors of regional complexes within several border states
Macro-level	Interaction of national complexes in a certain region of the planet
Mega-level	Integration in the Scale of Global Economic Space

Source: *International economic integration*. Available: <https://ru.wikipedia.org/wiki/>.

A feature of the second stage, along with the listed ones, is that economic integration here is not only at all structural levels of economic systems, but also takes such new forms as compulsory economic integration, which is understood ambiguously. First, as the process of compulsory formation of dependence of some economic entities on others, their comparison and interpenetration in order to extract the maximum benefit by the dominant party. Secondly, as unequal association of economic entities, under which the dominant party, with the help of various measures, forces all others to cooperate, beneficial to it. Thirdly, as unequal alliance of several parties (states), imposed by measures of military and political influence. As individual example, one can present colonization of Asian and African countries by Western developed countries, use of free labor of prisoners of war or low-wage labor of population of dependent or colonial countries, export from the occupied countries of various material values, etc. by the conquering countries. (Avladeev, 2014), (Schepotyeu, 2005)

Finally, another important feature of this stage is significant strengthening of political and managerial aspects of globalization. (Gregova & Dengov, 2015), (Richnak, 2015), (Siekelova, 2015). It is manifested, firstly, in formation of various large interstate entities as the UN (United Nations Organization), whose main task is to maintain universal peace and peaceful settlement of international disputes, the OSCE (Organization for Security and Cooperation in Europe), designed to ensure the formation of democratic pan-European standards and settlement of interstate disputes, etc. Secondly, the formation of various international structures with non-state functions and attributes – the EU (European Union). In addition, a number of interstate structures were created, one of the main objectives of which is further stimulation of integration processes: ASEAN (Association of Southeast Asian Nations); LAS (League of Arab States); OAU (Organization of African Unity), etc.

The question of nature of globalization influence on development of socio-economic systems, which is very contradictory and ambiguous is also problematic. (Pichanic & Stankova, 2016), (Antalova, 2016). On the one hand, it undoubtedly contributes to the global progress by forming a single market (without borders), wide dissemination of advanced information technologies that promote the development of digital economies (Miklencicova, 2015), spread of numerous economic, organizational and managerial innovations (Khalabuda & Nikolaev, 2014), (Vokoun, 2016) and unification of mankind into the single new community.

However, at the same time, it threatens the disintegration of national cultures, loss of peoples' self-identity and imposition of alien forms of behavior on them, and reduction of degree of stability of socio-economic systems to the influence of various poorly predictable external factors. (Nikolaev & Belyakin, 2016) This significantly violates the stability of development, both in individual countries and in the world economy as a whole, at the present time appearing in intensification of crisis phenomena that are easily transferred from one country to another.

In view of the above, the study of mechanisms of action and prospects for development of globalization in modern conditions is topical. Particularly important from this point of view is the analysis of its interaction with integral properties of socio-economic systems, since it determines to a great extent the real dynamics of global processes, as well as direction of their development and possible limits of globalization. The need for these studies is reinforced by

the fact that, despite the large number of works devoted to various issues of globalization, these aspects have not received adequate coverage.

In carrying out the work, a number of methods was used: the method of historical and economic analysis to study the laws of development of globalization in modern conditions and the mechanisms of its operation; the abstract-logical approach method was used to analyze the content of globalization and its interaction with integral properties of socio-economic systems; the method of comparative analysis - to separate common and distinctive features of development of globalization at its different stages; elements of theory of nonlinear dynamics – to characterize the property of fractality (self-similarity) and the property of uncertainty of basic quantitative characteristics of socio-economic systems.

1.1 Contradiction of interaction of globalization with integral properties of socio-economic systems

Let us consider the interaction of globalization with integral properties of socio-economic systems. At first – with their integrity, being the main fundamental property and key characteristic of these systems, in which their above-mentioned systemic qualities are directly realized. Integrity means a special type of such a stable unity and inseparability of the elements of the system, when the impact on any one or immediately on all of them inevitably causes a concrete response in various other elements and the corresponding reaction of the system as a whole.

This property undergoes significant changes in the process of global development, which was clearly manifested, for example, in the transition from administrative to generally accepted world market forms of managing, as it has been for a long time in Russia and many other Eastern European states. Thus, the Russian socio-economic system, due to simultaneous breakdown of a huge number of historically formed internal ties between numerous elements, including industries, regions, territories, institutions, essentially simultaneously split into a large number of separate economic structures, in fact ceasing to be an interconnected single entity. The result was the total violation of permeability in it of all kinds of information, in particular, control signals and the sharp decline in economic efficiency. In this case, any, even seemingly well-thought-out and well-grounded attempts to stabilize the transforming economy, including impacts on various economic, legal, financial, organizational and other institutions, did not lead to positive results. According to J Stiglitz's just remark, the Russian economy has not been able to evolve to the normal status of "market" for more than a quarter of century, but rather to a peculiar kind of state capitalism for its own. Russia, like some other countries in Central and Eastern Europe that have gone through similar reforms, lags behind the developed market economies as never before, and their GDP is still lower than at the beginning of the transformation. Thus, Russia's GDP, which previously had the status of the second largest superpower after the United States, currently makes up only about 40% of Germany's GDP and slightly more than 50% of France's GDP. (Stiglitz, 2017, A), (Stiglitz, 2017, B)

J. Stiglitz associates one of possible reasons for this with the consequences of "vicious Washington Consensus" adopted in 1989, i.e. a set of macroeconomic policy measures aimed at activating market forces and reducing the role of public sector and being the instrument for changing the world economy. Under the influence of this consensus, the process of transition to the market in the Russian Federation directly followed the emphasis on the rate of privatization without taking into account its content and ignoring the need for priority creation of institutional market infrastructure. (Stiglitz, 2017, B)

Thus, it follows from the above that interaction of globalization with the property of integrity of socio-economic systems is contradictory, since, on the one hand, the global economy, according to M. Castells, is the economy the main components of which are characterized by institutional, technological and organizational capacity to function as community (or integrity) in real time. (Castells, 2001) And on the other hand, globalization, at least with other equal conditions, leads to destruction of this property. This, in turn, inevitably leads to formation in the economic system instead of the necessary full-fledged institutional structures of various corporate entities, to very rapid (one can say, also in real-time mode) regional and sectoral localization of the system, with its gradual transformation into a large set of relevant regional and sectoral "enclaves" and, ultimately, the formation of an economic system with low-efficient oligarchic structure. This is what was observed both in the Russian economy, and, with varying degrees of severity, and in transforming economies of other countries.

The next property, interaction of globalization, which is of interest, is the almost not mentioned property of uncertainty in basic quantitative characteristics. The essence of it is that the process of obtaining any information about the state of economic system always affects the system itself, in any case, changing it to some extent. This is due to the fact that collection, exchange, accumulation, storage and processing of information requires the expenditure of a large number of resources – labor, material, financial, diverted from the actual production process, creation of corresponding numerous services – engineering, technological, managerial, controlling etc., availability of complex special technical equipment etc. For this, the more complex and fuller the information to be collected is, the more costs associated with it are, which increase disproportionately quickly. In addition, due to the high dynamics of economic processes and rapid increase in the amount of information necessary for effective management in the context of globalization, its full knowledge becomes fundamentally impossible. Therefore, greater or lesser degree of uncertainty in the quantitative basic characteristics of the economic system becomes inevitable and acts as its objective and unavoidable property. This uncertainty plays unequal role at different stages of economic development and is directly related to the current state and dynamics of economic processes. In the case of high degree of stability of the system to the influence of global external factors, as well as under conditions close to equilibrium, its role is comparatively small, practically has almost no effect on development and adoption of effective management decisions and may not be taken into account. However, the situation changes radically with increase in the degree of economic disequilibrium and decrease in stability of the system. For example, under the conditions of transformation transition, when the system is in the state of dynamic chaos, even minor changes in quantitative parameters can significantly affect the characteristics of evolutionary trajectory of the system, the exact knowing of which becomes necessary, for example, indicators of capital flight, dynamics of shadow economy, changes in the tax base, emerging structural imbalances, investment volumes, etc.

Thus, globalization, as the most important external factor, has direct impact not only on the above property of the integrity of economic systems, but also on the property of uncertainty in their quantitative basic characteristics, thus requiring the necessary changes in the macroeconomic policy pursued. Let us consider the interaction of globalization with one of the most important, but little-studied properties of economic systems – the property of their self-similarity or fractality. (Nikolaev, 2005), (Nikolaev & Belyakin, 2016) This very concept was first used by American researcher B. Mandelbrot in the mid-1980-s applied to natural chaotic processes and it meant the ability of an object to look the same regardless of the scale at which it is viewed. Subsequently, together with R. Hudson, it was shown that this property of self-

similarity (repeatability) is also possessed by variety of economic and social processes and phenomena, for example, pricing, income distribution, financial market functioning, etc. (Mandelbrot & Hadson, 2012) The same property is possessed by the entire economic system as a whole, with respect to which it is in reproduction at various stages of its socioeconomic development of the same key basic characteristics of the system, even seemingly previously overcome. For example, the political structure of society is reproduced, albeit in other concrete historical forms, the correlation of institutions of power, law, property, culture and informal relations, structure of institutional matrix, etc. Although not everything is reproduced and repeated, but only a number of basic key characteristics associated with the dominant institutions in the system, which form a kind of inactive, transforming not in content, but only in form, the institutional core of this system. The set of these characteristics primarily includes the following: place and role of institution of power in economic and social structure of society; place, role and correlation of the institution of law with other characteristics and institutions; place, role and importance in the economic development of the institution and property relations; importance and role in economic life and social structure of the institution of informal relations.

So, in Russia throughout the history of its existence, the leading role in the economic, social and socio-political structure was belonged to the institution of power. Only its form was changed and transformed, but not the role. It is to this basic characteristic that any new economic, social and social relations arising in the system in the process of either evolutionary development or as a result of consciously implementing the necessary transformations and reforms were gradually or immediately adjusted and are adjusted at present.

This dominance of the institution of power has deep, objectively conditioned internal causes and is a product of the country's centuries-old historical development in the conditions of, for example, almost annual defensive wars from 1240 to 1462. In similar wars, it spent 334 years between 1380 and 1917, including the Patriotic War of 1812, which is the largest event in the whole of Russian history. (Ryazanov, 1999) If we take into account the First and Second World Wars, the importance of the institution of power, which ensures the possibility of survival under difficult historical conditions, becomes understandable and justified. the complexity and severity of climatic conditions to this should be added, the effect of which is analogous to the above. In uneasy Russian history, another one of basic institutions objectively acquired important value: the institution of informal relations, development of which is directly connected with domination of the institution of power, and to some extent inspired by it, since in any attempt to limit the imperious nature of the emerging relations, immediately the transfer of weight of any transactions to informal arrangements occurs.

The action of self-similarity property, like the above-mentioned property of uncertainty of basic quantitative characteristics, is not always noticeable and is manifested by the main images during the periods of revolutions, transformations, increasing chaos and disequilibrium. It acts, at least at first glance, as a factor of inhibition of reforms and transformations, each time returning the system to its original basic relations and institutions. But this is only at first glance, because in the social structure this property performs completely different function, directing the development of the system or holding it on the trajectory corresponding to age-old traditions objectively conditioned by internal causes and conditions of development, rather than external, often random factors. All of this is directly related to globalization. Being in relation to all individual countries, although the most important, but only the external factor of unity and unification, it enters into the rigid contradiction with the property of self-similarity, realizing

its security functions associated with the national traditions, culture and way of life that are formed for many centuries. (Grupac, 2016).

Hence – the growing anti-globalization movement, gradually shifting from separate skirmishes and demonstrations to organized public protest, the unsuccessful attempts of individual countries to get out of the press of supranational entities and development on their own path. (Gregus & Davidekova, 2016). This contradiction is repeatedly reinforced by the fact that the fruits of globalization, its positive consequences, are distributed between countries extremely unevenly. Generally, rich highly developed states win, while developing and underdeveloped ones are more often losers, turning into peculiar economic appendages of the former. The solution of this contradiction is possible only in the way of cyclical development of globalization through its periodic recessions and upsurge, allowing, albeit temporarily, to remove it or weaken it.

1.1.1 Prospects for Globalization

The famous Russian philosopher A. Zinoviev in 1980 gave the enthusiastic assessment of globalization as "grandiose process that engulfed all of humanity." According to him, the whole destiny of mankind as a whole and its subsequent social evolution are put at stake. (cited in: Zhdanov, 2012) The equally strong definition was given in IMF's World Economic Outlook, a little later, in 1997, where globalization is represented as the process of forming a single global market without national barriers and creating uniform legal conditions for all countries. (IMF World, ..., 2014)

The point here was essentially the creation of comprehensive supranational structure with world government, without borders and barriers, with the same laws for all and uniform rules of conduct. However, reality has always proved more prosaic. Not one revolution, held under the slogans of universal freedom, equality and brotherhood, was replaced in the final analysis by the restoration of previous relations, and the systems of total suppression of free-thinking came to replace their ideals. Even great philosophers and sociologists, including G. Hegel and K. Marx, proved that any social and socio-economic phenomena and processes are internally contradictory, and their development is the infinite sequence of removal, i.e. resolution, these contradictions and their subsequent reproduction after some time on a new spiral of development.

And globalization, like all other phenomena, is contradictory, which was shown in this article, and its development will also follow a cyclical way of resolving and reproducing its internal contradictions. The conducted research has shown that one of the possible mechanisms of this phenomenon is connected with the processes of interaction of globalization with the integral properties of socio-economic systems.

2. Conclusion

The conducted research allows to draw the following conclusions:

1. Globalization, the current stage of development of which is directly connected with economic integration, covers for today, depending on the specific countries, all interconnected structural levels of economic systems - from local to regional, national and mega-levels.
2. The important feature of today's stage of globalization is significant strengthening of its political and managerial aspects, which is manifested in the formation of new or reorganization of previously established international organizations and structures, for

example, the establishment in 2014 of the EAEC - the Eurasian Economic Union or the attempts to reform the UN.

3. One of the most important elements of the mechanism of globalization influence on development of socio-economic systems is its interaction with the integral properties of these systems: integrity; uncertainty of basic quantitative characteristics; self-similarity - fractality, manifested in the form of a kind of economic inertia that inhibits the transformation. The totality of these interactions explains and reveals the contradictory nature of globalization.
4. The interaction of globalization with integral properties, in the process of which there is the contradiction between the tendencies towards socialization and unification of socio-economic systems and their desire to preserve national identity, limits the possibilities for its development. The resolution of this contradiction can be achieved only through recessions and upsurge in the development of globalization.

References

- [1] Antalova, M. (2016). Impact of globalization on the quality of life in the SR. *16th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 41-49.
- [2] Attali, J. (2005). *Karl Marx ou l'esprit du monde*. Paris: Fayard.
- [3] Avladeev, A. A. (2014). Clarification of concepts of "economic integration" and "compulsory economic integration". *Molodoi uchyony*, vol. 21, pp. 260-263.
- [4] Castells, M. (2001). Global capitalism and the new economy: implication for Russia. Available: <https://oko-planet.su/first/62657-globalnyy-kapitalizm.html>.
- [5] Gregova, E. and Dengov, V. (2015). The practical economic policy in transition economies of V4 countries at the present stage of globalization. *15th International Scientific Conference Globalization and Its Socio-Economics Consequences*, Rajecke Teplice, Slovak Republic, pp. 150-156.
- [6] Gregus, M. and Davidekova, S. (2016). European integration and brexit: what is the attitude of young generation towards European Union in Slovakia? Globalization in the modern day in European emplacement: Distribution of czech-slovakia in the context of national literature and language. *16th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 515-522.
- [7] Grupac, M. (2016). Negation phenomena of cultural and social processes of globalization in the modern day in European emplacement: Distribution of czech-slovakia in the context of national literature and language. *16th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 563-571.
- [8] IMF World Economic Outlook. (2014). Available: <http://www.imf.org/external/pubs/ft/weo/weo1097/weocon97.htm>.
- [9] Khalabuda, Y. and Nikolaev, M. (2014). Increase of efficiency of industrial enterprises activity on the basis of innovations of various types. *Procedia Economics and Finance*, vol. 16, pp. 299-302.
- [10] Levitt, T. (1983). *Globalization of Markets*. Harvard Business Review.

- [11] Mandelbrot, B. and Hudson, R. (2012). *The (Mis) behavior of Markets: A Fractal View of Risk, Ruin, and Reward*. New York: Published by Basic Books.
- [12] Miklencicova, R. (2015). Internet Purchasing. *15th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 427-432.
- [13] Nikolaev, M. and Belyakin, A. (2016). Impact of globalization on the sustainable development of economic systems in the context of economic disequilibrium. *16th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 1512-1520.
- [14] Nikolayev, M. V. (2005). On the property of self-similarity (fractality) of economic system and its influence on the course of market transformations. *Journal of Economic Theory*, vol. 3, pp. 125-136.
- [15] Pichanic, M. and Stankova, A. (2016). Can the globalization reduce inequality among the central European countries? (The case of Czech Republic). *16th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 1712-1719.
- [16] Richnak, P. (2015). Globalization and its impact on the present concepts in company management. *15th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 608-616.
- [17] Robertson, R. (2011). *Globalization: social theory and global culture*. London: Sage.
- [18] Ryazanov, V.T. (1999). *Economic development of Russia. Reforms and the Russian economy in XIX–XX cent.* SPb.: Science.
- [19] Schepotev, A. V. (2004). Compulsary economic integration. *Coll. of articles of the III All-Russian scientific-practical conference "Social and economic development of Russia in the XXI century"*. Penza: Privolzhsky House of Knowledge, pp. 19-22.
- [20] Siekelova, A. (2015). The role of the receivables management in conditions of globalization. *15th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 686-690.
- [21] Stiglitz, J. E. (2017, A). Russia could not become a country with market economy. Available: <https://rns.online/economy/Stiglits-Rossiia-ne-smogla-stat-stranoi-s-rin-ochnoi-ekonomikoi-2017-04-20/>.
- [22] Stiglitz, J. E. (2017, B). Les Echos: Failure of market economy in Russia. Available: <http://tehnovar.ru/61515-les-echos-proval-rynochnoy-ekonomiki-v-rossii.html>.
- [23] Vokoun, M. (2016). Globalization and innovation: innovation activities of multinationals in the Czech Republic 1998-2010. *16th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 2409-2416.
- [24] Zhdanov, A. N. (2012). Economic globalization and problems of national and international security. *Problems of modern economy*, vol. 3 no. 43.

GUIDING PRINCIPLES OF THE GROUP OF TWENTY FOR INVESTMENT POLICYMAKING IN THE GLOBAL ARENA'S PLAYERS

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Abstract. A great deal of international companies, as well as Member States of the G20 have accepted acts dealing with the topics of foreign investments that regulate the development of investing relations among states. The economic community of international significance is also an international economic forum the G20, promoting high-level discussion of international economic cooperation. Following their meeting in Shanghai on 9-10 July 2016 under the Chinese G20 Presidency, Trade Ministers agreed on the G20 Guiding Principles for Global Investment Policymaking. The principles by their nature are principles, which are non-legally binding (soft law), but they are very important for global trade development and investment policy cooperation. In addition, the adoption of the Guiding Principles plays a significant role in the foreign and political area. The mentioned principles represent non-binding rules and these rules are used by the states in their international affairs. The research object „the G20 guiding principles for investing policymaking will be focused on, examined and analysed aiming at achieving the primary objective of the scientific paper, which is to highlight the General investment guidelines associated with transparent policymaking emphasizing efficient and effective policies for investment promotion and facilitation. The analysis is performed from a broader perspective, focusing on non-legally binding principles, that assist the movement of the capital, development of the foreign direct investments.

Keywords: G20, Global Investment policymaking, non-legally binding principles, soft law

JEL Classification: F21, F23

1. Introduction

The ever increasing pace of globalisation of world economy has brought the significant changes, as well as new challenges for all national economies. The globalization process itself has an impact not only on economic relations in the state, but also on the employment policy and social policy. (Bajzikova, 2016) According to Kajanova globalization brings both positive and negative impacts. (Kajanova, 2016) Saxunova (2015) considers the globalization process as a creator of not only opportunities for, but also barriers, to sustainable development. As a consequence of changes in the structure of global economy, as well as the economy of the European Union the investment relations became the priority issue, since they support the economic growth, the development of trade and regional development. By their nature the international investments have the economic dimension, and that is why many international economic organisations (WTO, OECD, EU, UNCTAD) as well as international financial organisations (World Bank Group) creates the rules for the regulation of international relations in the field of support and protection of investments. However, even international regulation of

investments does not bring the advantage only to States, but also and not least to private investors as well. To this end the States are concluding the agreements on mutual support and protection of investments so that the investments would be protected and the rules for mutual development of international relationship and fair treatment with investments of investors would exist. The primary goal of investments is economic growth while investors need to govern their risk, which is not directly and solely the business risk. (Dolzer & Schreuer, 2008) Every investment instrument contains criteria that need to be considered for the decision to be taken in respect of investment. It is the risk, profit and liquidity that are at stake. In taking the decision the investor has to find the compromise between those criteria as there is no investment with high profit and at the same time does not imply any risk and is highly liquid (Novotny, 2014). Global business environment in Slovakia is going through the different periods of development during its existence. It has to face not only the unpredictable events, it is also exposed to global challenges, that is subject to from the side of legislation, and it has to take the permanent operative decisions so that the business entity would be at least able to maintain in the market. (Olvecka, 2016).

2. International instrument supporting the development of investment affairs and trade

The international organisations are grouping states into the international community in the interest of further development of cooperation in various areas. They are established on the basis of initiative of States and in pursuing their goals they are obliged to fulfil all the obligations that are binding on them since their accession to the respective international organisation. Within the framework of the development of relations among States several international organisations adopt various treaties (or conventions or agreements) having the nature of hard law (they are legally binding) or Declarations and Principles having the nature of soft law (they are not legally binding). The biggest number of instruments have been adopted by the United Nations and its expert bodies. The General Assembly of the United Nations adopted the Charter of Economic Rights and Duties of States (Charter) (Resolution 3281 (XXIX) of 12 December 1974). Charter of Economic Right and Duties initiated United Nations Conference on Trade and Development. In fact the Charter shall constitute a new system of international economic relations based on equity, sovereign equality and interdependence of the interests of developed and developing countries (Preamble Charter) the Charter contains the universal principles supporting the development of investment relations and trade and at the same time creates the preconditions for fair treatment with the investments of investors, as well as the sovereignty, territorial integrity and political independence of States. The Charter promotes the co-operation among all States, irrespective of their economic and social systems (United Nations, 1974). The Charter does not have the form of multilateral treaty stipulating the obligations and rights, but of Recommendation of General Assembly (not binding). Another significant document represents the Guidelines on the Treatment of Foreign Direct Investment World Bank (1992). The application of these Guidelines extends to existing and new investments established and operating at all times as *bona fide* private foreign investments. These guidelines are not ultimate standards but an important step in the evolution of generally acceptable international standards which complement, but do not substitute the bilateral investment treaties (World Bank Legal framework, 11415/1992). Among other significant principle ranks: the promotion of international economic cooperation, the protection and security foreign investors, not discriminate among foreign investors on grounds of nationality and others. Within the framework of the Organisation for Economic Co-operation and

Development (OECD) the Code of Liberalisation of Current Invisible Operations was adopted, which represents the multilateral instrument supporting the liberalisation of capital movements. The regulation of capital movement was abolished in all Member States of the OECD. The OECD codes enshrine two fundamental principles: standstill (no worsening of provided conditions) and rollback (gradual removal of reservations and improvement of conditions). Another principle that is adhered to, is the principle of equal treatment with all foreigners coming from the OECD Member States, i.e. it is not possible to provide more favourable conditions to some Member States of the OECD in comparison to others. At the level of the European Union the problematics of capital movement is regulated in the primary legislation, in the Treaty on the functioning of the European Union (TFEU) (Articles 63 to 66, supplemented by Articles 75 and 215 TFEU for sanctions). The European Union requires that all restrictions on capital movements between Member States as well as between Member States and third countries should be removed. On the basis of this we can state that several international organisations adopted instruments having various legal nature and force supporting the cooperation of States in the field of investments. The Slovak Republic is the Member State of all these international organisations, and that is why the mentioned rules are fully respected. The integration and mutual interconnection of global economy is determined by the foreign trade and investments (Milosovicova & Stachova, 2016).

2.1 The G20 Guiding Principles for Investment

The Group of Twenty (or G20) is an independent platform for international cooperation on financial and economic issues, is not an international organisation. It was founded in year 1999. The G20 comprises 19 countries plus the European Union.¹ The Group of Twenty help to bring about reform at national and multinational levels. The G20 members account for over 80% of the world's gross domestic product (GDP) and they host almost two-thirds of the world's population (Consilium, 2017). The G20 Leaders met for the first time in 2008 in Washington, D.C. At the meeting in Shanghai on 9-10 July 2016 under the Chinese the G20 Presidency Ministers agreed the G20 Guiding Principles for Global Investment Policymaking. The principles contain general rules that are not legally binding, but have political, ethical and moral significance. These general principles are applied within the framework of the development of international economic relations. At the same time they represent the rules of current international economic law and in overall they represent a body of principles of behaviour of participants of international markets. They are the set of fundamental principles recognised by international community, providing for the preconditions for the development of international commercial, investment, financial and tax relationships. The G20 Guiding Principles for Investment Policymaking cover nine areas: anti-protectionism, non-discrimination, investment protection, transparency, sustainable development, the right to regulate, investment promotion and facilitation, responsible business conduct, international cooperation. For example, at present the G20 asks for abolition of export subsidies, especially from the side of the EU, as well as the reduction of domestic subventions that are deforming the market, from the side of rich States. In addition, it pursues the goal of keeping the Special Safeguard Mechanism (SSM) for the development countries (Hanrahan & Schnepf, 2007).

¹These countries are Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom (UK) and the United States of America (US).

I. Anti-protectionism

Recognizing the critical role of investment as an engine of economic growth in the global economy, Governments should avoid protectionism in relation to cross-border investment.

The institute of protectionism is connected with the introduction of national measures with the aim to disfavour the foreign goods in comparison to domestic ones. The protectionism is a type of unfair competition. that protect domestic businesses from world-wide competition. The protectionism policy is based on the policy of state interventions, i.e. the state interventions into the economy (tariffs, import quotas). At present the impact in the field of international trade is on reducing the non-tariff barriers. The fight against protectionism and for enlarged access to markets is in the forefront of interest of both industrially developed and developing countries, and therefore it ranks among the interest of the G20 of Twenty. From the global point of view, the protectionism steams towards the decrease of international trade. Leaders the states the G20 acknowledged that inequalities undermine confidence and limit future growth potential.

II. Non-discrimination

Investment policies should establish open, non-discriminatory, transparent and predictable conditions for investment.

The non-discrimination principle is one of the fundamental elements of international investments and trade relations. Without this principle there would be no international flow of capital and goods in the current process of globalisation. The principle of non-discrimination constitutes a corner-stone in different fields of international economic law, notably international trade in goods and services as well as intellectual property and investment protection (Diebold, 2011). The principle of non-discrimination is considered by the G20 as the heart of investment neutrality, because it creates conditions for fair position of investors in the market as well as for their fair treatment. The principle non-discrimination is the key element for the development investments cooperation and establishes the equal position of investors in the market. The principle of non-discrimination guarantees to all investors the minimum standard of treatment, as it is provided to domestic investors. The principles of equality and non-discrimination are regarded as 'the most frequently declared norms of international economic law. In Slovakia the ban of discrimination based on nationality is regulated by article 21 of the Commercial Code as well as in other laws.

III. Investment protection

Investment policies should provide legal certainty and strong protection to investors and investments, tangible and intangible, including access to effective mechanisms for the prevention and settlement of disputes, as well as to enforcement procedures. Dispute settlement procedures should be fair, open and transparent, with appropriate safeguards to prevent abuse.

In the present globalised world the investment can be subjected to permanent non-market risks such as expropriation, uprisings, riots or the possibility of armed conflict. From this reason it is necessary to permanently ensure their international legal protection. The essence of this right is the protection of the rights of investors and his/her assets, and ensuring the legal certainty. It is obvious, that investor who uses his/her assets as the investment abroad wants to have the highest possible degree of certainty as regards the return of investment and to have the lowest possible business risk. The investment protection provides for the legal certainty for companies and at the same time it is the instrument for the states around the world in order to attract and keep foreign direct investments (FDI) to support their economy (European Commission, 2013). The G20 considers this principle as very important from the point of view of guarantees and fulfilment of investor's expectations. In case of dispute settlement the principle fairness and transparency should be applied. The right to fair trial is the fundamental pillar of democratic

states and modern judiciary. The ascertained facts including in their mutual correlation, as well as the consideration of all evidence should help to settle the dispute and to reach agreement through searching for the compromise. In Slovakia, the protection of investor's investments is regulated in article 25 of the Commercial Code. investor. The institute of possessions inviolability is protected by the Constitution of the Slovak Republic even more rigorously (Gregusova et al., 2016, B).

IV. Transparency

Regulation relating to investment should be developed in a transparent manner with the opportunity for all stakeholders to participate, and embedded in an institutional framework based on the rule of law.

All legal regulations and rules concerning the investment policy should be adopted in a transparent manner; they should be published and accessible for all market participants in the same way. In Slovakia, all legal regulations are adopted in compliance and further to the international obligations binding on Slovakia. Legal regulations are published in the web sites of the state authorities and some are also published in English language (such as the Law on Investment Incentives).

V. Sustainable development

Investment policies and other policies that impact on investment should be coherent at both the national and international levels and aimed at fostering investment, consistent with the objectives of sustainable development and inclusive growth.

The political representation of the G20 devotes proper attention also to the issue of sustainable development. The sustainable development as the development that has to fulfil the needs of current generation without the limitation of the needs of future generations, became the part of the principles of international development of investment relations. The concept of sustainable development is also connected with the economic growth, social justice, removal of differences among regions, protection of environment and the effective use of natural resources. All investment activities of investors should be realised in accordance with the policy of sustainable development that is targeted, long term (continual), complex and synergic process. In the Slovak Republic, the sustainable development is legally stipulated in article 6 of the Law no. 17/1992 Coll. on Environment as amended. According to this Law, it is the development that provides for the current and future generations the possibility to satisfy their basic needs for their life and at the same, it does not reduce the diversity of nature and keeps the natural functions of ecosystems.

VI The right to regulate

Governments reaffirm the right to regulate investment for legitimate public policy purposes.

This principle provides the governments with their legitimate rights to decide about placement of investments in the given regions and at the same time, it enables them to provide investment incentives for investors in case of investment in the national and economic interest. This principle includes the right of economic sovereignty, i.e. the absolute independence and inadmissibility of any interference to the economic relations of states. Within the framework of this principle, each state has the sovereign and inseparable right to regulate its economic system, as well as its own economic, political, social and cultural relations.

VII. Investment promotion and facilitation

Policies for investment promotion should, to maximize economic benefit, be effective and efficient, aimed at attracting and retaining investment, and matched by facilitation efforts that

promote transparency and are conducive for investors to establish, conduct and expand their businesses.

The institute of investment promotion and facilitation enables the state to provide foreign investors with certain economic advantages (subsidies, state aid, investments incentives). The most frequent advantages that are provided by the states are the divestment of state assets for the price lower than the market one or the exemptions from the income tax for legal persons. This principle applies in Slovakia in accordance with the Law no. 358/2015 Coll. on the Regulation of Certain Relations in the Field of State Aid and Aid de minimis. In Slovakia the Investment and Trade Development Agency (SARIO) was established. This Agency promotes the pro-investment policy and assists Slovak business entities in realisation of their foreign trade activities (Paskrtova, 2014). The National Entrepreneurial Centre (NPC) established within the operational programme „Research and Development“ is another significant institution in Slovakia (Gregusova et al., 2016).

VIII. Responsible business conduct

Investment policies should promote and facilitate the observance by investors of international best practices and applicable instruments of responsible business conduct and corporate governance.

The principles of responsible business conduct have been introduced to all areas of economy as well as to investment relations. The responsible business conduct is necessarily connected with the everyday functioning of the society and its behaviour inwards and outwardly as well. The responsible business conduct represents the modern attitude of investment companies in reaching their profits while respecting the requirements of all partners that have contact with them in doing business. These partners are business partners, employees, suppliers, etc. In essence, it can be defined as the adherence to the legal regulations and non-application of prohibited unfair terms that would provide more favourable terms for the company in the market.

IX. International cooperation

The international community should continue to cooperate and engage in dialogue with a view to maintaining an open and conducive policy environment for investment, and to address shared investment policy challenges.

According to this principle, the international cooperation should also be aimed at the development of states. It should not be focused on unilateral advantages, but the cooperation should bring mutual results. Each state should promote and develop international cooperation in the economic area and to remove obstacles to the development of mutual relations. International cooperation should contribute to strengthening and spreading the principles of freedom and democracy, human rights, rule of law international law, peace and stability in the light of Article 1 paragraph 3 of the UN Charter: „to achieve international co-operation in solving international problems of an economic, social, cultural, or humanitarian character, and in promoting and encouraging respect for human rights and for fundamental freedoms for all without distinction as to race, sex, language, or religion.“ It means non- discrimination in international economic, social, cultural relations.

3. Conclusion

The main contribution of this paper is to analyse the principle of investments within the Group of Twenty and to point out their significance in the process of globalisation. Globalization processes have impact on internationalisation of the economies (Milosovicova &

Paskrtova, 2015) and the process of economic integration is taking place on the basis of the commercial relations and forming the national economic communities is considered its most significant phenomenon (Viturka, 2010). The G20 States adopt the Guiding Principles for international cooperation and development of innovative solutions to global challenges, such as economic stability and sustainable growth. Given principles have the form of soft law; however, they are important for the development of investment relations as well as for the development of economic cooperation. We can conclude that they are principles originating from international conventions of international organisations. From the point of view of international law, they are considered as non-binding Guiding Principles providing guidance for investment policymaking. In order to acknowledge their relevant legal force in the international background as well it is necessary that they are widely and representatively applied in the majority of States.

References

- [1] Bajzikova, L. (2016). Employment support in Slovakia. *Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 74.
- [2] Diebold, N. F. (2011). Standards of non-discrimination in international economic law. *International and comparative law quarterly*, vol. 60, pp. 831.
- [3] Dolzer, R. and Schreuer, (2008). *Principles of International Investment Law*. University Press Oxford, Oxford, pp. 3-11.
- [4] European Council (2017). The G20 summit in Hamburg, Germany, 07-08/07/2017. [Online] Available: <http://www.consilium.europa.eu/en/meetings/international-summit/2017/07/07-08/>.
- [5] European Commission (2013). Investment Protection and Investor-to-State Dispute Settlement in EU agreements [Online] Available: http://trade.ec.europa.eu/doclib/docs/2013/december/tradoc_152009.pdf.
- [6] European Union (2010). Treaty on the functioning of the European Union. OJ EU C 83.30.3.2010.
- [7] Gregusova, D. et al. (2016). Safeguarding obligations through securities. *SGEM 2016: International multidisciplinary scientific conference on social sciences and arts. Albena, Bulgaria*, pp. 770.
- [8] Gregusova, D. et al. (2016). Execution of the public authorities' competencies electronically in the Slovak republic. *SGEM 2016 International multidisciplinary scientific conference on social sciences and arts. Albena, Bulgaria*, pp. 770.
- [9] Hanrahan, E. and Schnepf, R. (2007). WTO Doha Round. The agricultural negotiations. [Online] Available: <http://www.usembassy.it/pdf/other/RL33144.pdf>.
- [10] Kajanova, J. (2016). Globalization and its impacts on chemical enterprises performance in Slovakia. *Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 808-815.
- [11] Milosovicova, P. and Paskrtova, L. (2015). Development of Slovak-german economics affairs. *Proceedings of the 15th International Scientific Conference Globalization and its socio-economic consequence*, Rajecke Teplice, Slovakia, pp. 442.

- [12] Milosovicova, P. and Stachova, P. (2016). Development of the global Slovak-austrian relations. *Proceedings of the 16th International Scientific Conference Globalization and its socio-economic consequence*, Rajecke Teplice, Slovakia, pp.1404.
- [13] Novotny, J. (2014). Investing in real and financial investment. *Hradec Economic Days 2014*, Hradec Kralove, Czech Republic, pp.342.
- [14] OECD (1961).Code of Liberalization of capital Movements. Code of Liberalization of Current Invisible Operations [Online] Available: http://www.oecd.org/daf/inv/investment-policy/CapitalMovements_WebEnglish.pdf.
- [15] Olvecka, V. (2016). The analysis of tax licence consequences on global business environment. *Proceedings of the 16th International Scientific Conference Globalization and its socio-economic consequence*, Rajecke Teplice, Slovakia, pp. 1609.
- [16] Paskrtova, L. (2014). Institutional support of the Slovak Republic foreign market. *Hradec Economic Days 2014*, Hradec Kralove, Czech Republic, pp. 397.
- [17] Saxunova, D. (2015). Innovative Financing Mechanisms in Global Environment. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 642.
- [18] United Nations (1974). Resolution adopted by the General Assembly (1974) 3281 (XXIX). Charter of Economic Rights and Duties of States. [Online] Available: <http://www.un-documents.net/a29r3281.htm>.
- [19] Viturka, M. (2010). New approach to evaluating disparities in the regional development. *17th International Colloquium on Regional Sciences*, Brno, Czech Republic, pp. 25-33.
- [21] World Bank (1992). Guidelines on the Treatment of Foreign Direct Investment. [Online] Available: <https://www.italaw.com/documents/WorldBank.pdf>.

APPROACH TO THE ECONOMIC REGULATION OF AIRPORTS IN THE TERRITORY OF EU WITH EMPHASIS ON CENTRAL EUROPE

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Abstract. The paper is focused on the different approaches of European Union countries to the economic regulation of airport charges. In March 2009, the European Parliament and the Council decided on the importance of economic regulation of the airports in European Union and issued the Directive 2009/12/EC on Airport Charges. Member States should have brought into force the laws, regulations and administrative provisions necessary to comply with Directive by 15 March 2011 and the Commission should have submitted to the European Parliament and the Council a report on the application of this Directive assessed progress made in attaining its objective as well as, where appropriated, any suitable proposal by 15 March 2013. The paper describes the current situation in EU countries with emphasis on Central Europe especially on the Slovak and Czech Republic after 6 years of practising the economic regulation systems of airport charges. The States have different systems, models and approaches how to regulate their airports and the relevant question is, if the economic regulation in the Central European countries is effective and really useful in these days. This paper describes some of the specific simulation models that also point to an understanding of the need for economic regulation of airports as a global economic problem on the Air Transport Market.

Keywords: economic regulation, airport, charges, approach, EU

JEL Classification: L93

1. Introduction

Economic regulation is an important instrument of government policy in market economies (Ricketts, 2006). Rules and regulation are a pre-condition for the functioning of markets and enabling competition. Regulation creates entry barriers, economic regulation is highlighted in the literature as particularly problematic in terms of hindering effective competition, which is a process of rivalry among firms and is a crucial factor driving economic growth (Buccirossi et al, 2011). The challenge for policy makers is to design rules and regulations so that the objectives of creating well-functioning markets, ensuring that health and safety and other social and environmental objectives are pursued in a way that minimise any negative impacts of regulation (OECD, 2014). Balance needs to be struck between the necessity of rules for the functioning of markets and achieving a minimum level of regulatory burden which does not impede domestic and international competition (Regulation and competition, 2017). The basic premise of the enforcement theory of regulation is that all of these strategies for social control of business are imperfect, and that optimal institutional design involves a choice among these imperfect alternatives (Shleifer, 2005). The existence of the excessive regulatory burden is

explained by the fact that the regulatory intervention creates distortions in the market, requiring further regulatory measures in a never-ending spiral (Regulation and competition, 2017). When we know this, is regulation generally a good idea, as the positive correlation between its growth and the growth of income seems to indicate, or has it been an obstacle to economic and social progress? Have the USA and Western Europe grown in spite of it? How much regulation of a particular activity is really appropriate (Shleifer, 2005)? In 1983 Littlechild wrote: “Regulation is essentially a means of preventing the worst excesses of monopoly; it is not a substitute for competition. It is a means of holding the fort until the competition arrives (Littlechild, 1983).”

Is it true today? Or do we really need hard economic regulation? Competition among airports has increased with the liberalisation of the air transport market in Europe, but it is patchy and often airports hold considerable market power in all or some of their market segments. Accordingly some form of regulation is often needed to protect users from a potential abuse of market power (Evaluation of Directive 2009/12/EC, 2013). In Europe, this kind of protection is the Directive 2009/12/EC on Airport Charges.

2. Regulation of European Air Transport Market and application of the Directive

The Air Transport Market in Europe has undergone many significant changes since the progressive implementation of the single aviation market began in 1992. Airports have an important role to play in the development of the market (Directive 2009/12/EC). The ability of EU airlines to enter and exit local aviation markets at will since full liberalization has increased the market power of the airlines vis airports and has led to the extensive use of bilateral service agreements between airline and airport (Starkie et al., 2009). Both in past and nowadays, in connection with the role of the airports in Europe is very important the question remains as to whether the airport is a natural monopoly or not. Concerning the text and content of the Directive we can define airports as a geographically limited natural monopoly. Due to this position, it was necessary to create a common European law in the field of airport charges and equal access of airlines = airports users to airports services. The combination of the airlines' increased need for differentiated levels of service and for market protection led the European Parliament and Council to adopt Directive, which was to be transposed by Member States by March 2011. The Directive applies to airports located in a territory subject to the Treaty and open to commercial traffic whose annual traffic represents more than five million passenger movements. It is also applied to the airport with the highest passenger movement in each Member State (Kurdal et al., 2015), as it enjoys a privileged position as a point of entry to that Member State. It was necessary to apply the Directive to these airports in order to guarantee respect for certain basic principles in the relationship between the airport managing body and the airport users in particularly with regard to transparency of charges and non-discrimination amongst airport users (Directive 2009/12/EC). There are following obligations for Member States:

- to establish the independent supervisory authorities,
- to allow airport managers to offer differentiated services to airlines, inform about infrastructures investment and consult charges with their users (airlines).

Airport users have to supply planning data to airports. This Directive applies the ICAO principles and enshrines these into EU law (Tomova & Martisova, 2014). There can be a problem with the application of the principle of cost-relatedness, which is only mentioned in

the preamble of the Directive and cannot be found in any article. The Directive also allows airport networks to operate across the EU with a common charging system, which allows a cross-subsidization across airports in a network, which is inconsistent with the principle of cost relatedness (Evaluation of Directive 2009/12/EC, 2013).

Member States should bring into force the laws, regulations and administrative provisions necessary to comply with the Directive by 15 March 2011 in accordance with the above described common principles of the Directive. By 15 March 2013 the Commission submitted to the European Parliament and the Council a report about the application of this Directive and the progress made towards achieving its objective.

The basic instrument for regulating airport charges is the application of the economic regulation of airports with using one of the standard models. The most known regulation models used in European Union are: rate of return regulation, price cap regulation and reserve regulation (light handed approach). The rate of return regulation can be also named cost-based or profit control regulation. Price cap regulation provides the regulated firm with incentives to reduce costs (Tomova, 2008). Airports are price capped in several countries belonging to the European Union, as well as else- where, notably India (Adler & Liebert, 2014, Adler et al., 2015). However, most of the price caps are not a pure price cap in which the X-factor is set independently of the cost of the regulated airport. The reserve regulation or the light handed approach means that the regulator is being involved in the price-setting process if the airport's market power is abused or if airport users cannot reach agreement. This is more a threat of regulation rather than actual regulation. The regulatory regime can be divided into single-till and dual till distinction, and it can be set for both the aeronautical and non-aeronautical operations (single-till) or strictly on the aeronautical operations (dual-till) (Czerny & Zhang, 2015, Kratzch & Sieg, 2012).

3. Currently situation in the Member States particularly in Central Europe

This paper describes the current situation in EU countries with emphasis on Central Europe especially on the Slovakia and Czechia after 6 years of practising economic regulation systems of airport charges. EU Member states have different regulation systems and approaches as can be seen in Table 1, which specifies the type of applied regulation regime, which focuses mainly on the type of ownership. The ownership models of the airports are becoming increasingly diverse as private sector management, financing and ownership become more prevalent (Evaluation of Directive 2009/12/EC, 2013). The traditional airports management model fully depends on state decisions, revealed not enough reactivity to the quick and deep changes affecting the air transport market (Kliestik, 2009). Aware of this lack of efficiency, most of European governments in these days tend to consider airports as potential profit-making enterprises and tend to change the airport ownership and management model. It is typical for some European countries such as Greece, Poland, Czechia, Slovakia etc. (Rahman et al., 2017), that airports remain owned and managed by the state, still in Europe two main trends have been developed - devolution and privatization of airports. Devolution can be seen as change in airport status, it gives airports greater autonomy (in financial planning) by directly involving local and regional authorities in their development strategies. This form of devolution is therefore generally the first step before privatization. (Kazda et al, 2013).

Table 1: Economic regulation regimes in EU states

Member State	Airport	Regulatory oversight	Till regulation
Austria	Vienna	Price cap	Dual
Belgium	Brussels	Rate of Return	Hybrid
Belgium Wallonie	Charleroi	No regulation	FSP*
Bulgaria	Sofia	No regulation	FSP
Cyprus	Larnaca	Concession fixing charges	Unclear
Czechia	Prague	No regulation	FSP
Denmark	Copenhagen	Price cap	Hybrid
Estonia	Tallin	No regulation	FSP
Finland	Helsinki	No regulation	FSP
France	Paris CDG, Paris orly	Price cap	Hybrid
	Toulouse	Price cap	Single
Germany	Frankfurt, Munich, Berlin-Tegel, Stuttgart, Cologne/Bonn, Berlin Schönefeld, Hanover	Rate of Return	Dual
	Düsseldorf, Hamburg	Price cap	Dual
Greece	Athens	Rate of Return	Dual
Hungary	Budapest	Price cap	Dual
Ireland	Dublin	Price cap	Single
Italy	Fiumicino	Price cap	Hybrid
	Milan Malpensa, Linate, Venice	Price cap	Dual
	Catania, Bologna, Naples	Price cap	Single
Latvia	Riga	Price cap	FSP
Lithuania	Vilnius	Unclear	Unclear
Luxembourg	Luxembourg Findel	No regulation	FSP
Malta	Malta International	No regulation	FSP
Netherlands	Amsterdam Schiphol	Rate of Return	Dual
Poland	Warsaw	Rate of Return	Hybrid
Portugal	Lisbon, Porto, Faro	Price cap	Dual
Romania	Bucharest	No regulation	FSP
Slovakia	Bratislava	No regulation	FSP
Spain	Madrid, Barcelona	Price cap	Single to Double over 5 years
	Palma de Mallorca, Malaga, Gran Canaria, Alicante, Tenerife, Ibiza, Lanzarote	Price cap	2013
Sweden	Stockholm	No regulation	FSP
United Kingdom	Heathrow, Gatwick, Stansted	Price cap	Single
	Manchester, Luton, Edinburgh, Birmingham, Glasgow, Bristol	No regulation	FSP

*FSP= Free to set their own prices

Source: Evaluation of Directive 2009/12/EC, 2013

The paper focuses mainly on Central European states and airports: Austria, Czechia, Hungary, Poland and Slovakia. The regulation approach of these states can be divided into two systems: the hard and the soft regulation. It depends on the size, type and ownership of the airport, important are some key economic and operating indicators as number of handled passengers, quality of services, etc. (Oum et al., 2004; Assaf & Gillen, 2012). Charges account for a significant proportion of airlines' costs and airport services as an increasingly important part of the airline offer as the airlines continue to differentiate themselves through the level of service they provide to passengers (Evaluation of Directive 2009/12/EC, 2013).

There were many discussions about possible privatization in these states during last years. However Only Vienna airport is in private ownership with a private management body. All the others are publicly managed in public ownership.

In 2016 Vienna international airport handled 23 352 016 passengers, Prague airport (Vaclav Havel Airport Prague) 13 074 517 passengers, Budapest Airport (Ferenc Liszt International Airport) 11 441 999 passengers, Warsaw airport (Chopin Airport) 12 836 500 passengers and Bratislava airport (M.R. Stefanik Airport) 1 756 808 passengers.

Table 2: Number of handled passengers in Central Europe

State	Airport	Number of passengers
Austria	Vienna	23 352 016
Czechia	Prague	13 074 517
Hungary	Budapest	11 441 999
Poland	Warsaw	12 836 500
Slovakia	Bratislava	1 756 808

Source: Authors

Bratislava airport is the smallest one and in a close vicinity of Vienna airport, they both share one catchment area. The position of these airports is completely different than the other three airports. We can compare Prague airport, Warsaw airport and Budapest airport, they have similar number of handled passengers, but each one has its own approach to the economic regulation of airport charges. There states apply hard regulation: Vienna airport and Budapest airport - price cap dual till regulation regime, Warsaw airport applies rate of return regulation hybrid till. September 2013 Czechia and Slovakia declared no regulation system, but later they applied soft regulation regime= the reserve regulation and it has been used since.

The regulation is not only about the regulation formula, it is also about non-discrimination and transparency. Each Member State established independent supervisory authority. The establishment and the responsibilities of the supervisory body are diverse in EU (Table 3 below), but for Central European states were established typically CAA (Civil Aviation Authorities) as it is in all technical areas (licensing of pilots, air operator certification, commercial air transport, etc.). It is true that this institution doesn't have the same name in every state, the only difference lies in the fact if the authority carries responsibility for civil aviation exclusively or for other types of transport as well. Usually, they are officially named as the transport or national transport authorities. Based on the checked responsibilities of supervisory bodies in the Table 3, we can reason which states have more or less experience in this field. From these five states and airports only Vienna airport was regulated before the Directive entered into force and Austria supervisory body has the most experience and knows many problems of regulation regime and how it works. The other states and their supervisory bodies try to find the best way how to introduce all articles of Directive into everyday life of airport operators and airport users.

Table 3: Independent Supervisory Authorities in Central Europe and their Responsibilities

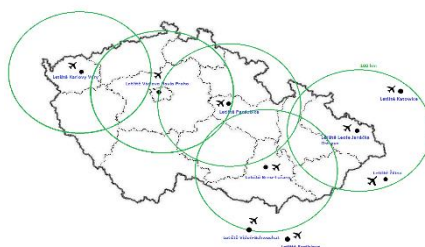
State	Independent Supervisory Authority	Responsibilities
Austria	Civil Aviation Authority	Interpretation of regulatory law to stakeholders, decision making in case of disagreement
Czechia	Ministry of Transport (Civil Aviation Department)	Publishing the price list and components on request of an airlines, forming part of the consultation process
Hungary	National Transport Authority (Aviation Authority Division)	All relevant CAA activities
Poland	Civil Aviation Authority	All relevant CAA activities
Slovakia	Transport Authority (Civil Aviation Division)	Not answered

Source: Evaluation of Directive 2009/12/EC, 2013

3. Czechia and Slovakia after application of the Directive on airport charges

The position of Prague Airport and Bratislava airport is completely different, not only because of their passengers' movements, ownership, but also because of management bodies. Prague airport was founded after transformation process in 2008, in 2011 it was incorporated in firm structure Czech Aeroholding as the sole shareholder. Now is 100% of this joint stock company is owned by Czech Aeroholding, a group of companies operating in air transport and related ground services at Prague airport, whose single shareholder is the Czech Republic represented by the Ministry of Finance of the Czech Republic (www.prg.aero, 2017). This airport is regulated airport not only because of Directive, but because of its location. It can be identified as a geographically natural monopoly (Figure 1), there is no other airport in the vicinity distance of 100 kilometres that can offer similar services to airport users (Tomova, 2015). Because of Prague airport has to be a regulated airport not due to the European legislation, but because of aviation economic theories.

Figure 1: Location of the Czech International Airports



Source: authors

Bratislava Airport is a joint stock company 100% owned by State (Ministry of Transport and Construction of Slovak republic- Civil Aviation Department) and was founded after transformation process in 2004 by Act no.136/2004 Coll. The distance between Vienna and Bratislava is only 60km and Bratislava airport wants to increase the passenger movements and the number of airlines with base in Bratislava, so the goal is to have airport charges at the lowest possible level. So we can sum up that this airport has to be regulated because of the European regulation, not because of aviation economic theories. This can be confirmed by the fact that until 2011 we created hard regulation formula- price cap single till for Bratislava airport (Novak Sedlackova & Novak, 2010) and the prediction showed lower airport charges without hard regulation formula. After seven years we confirm that this prediction was right.

4. Conclusion

After 6 years of applying the reserve regulation formula in Czechia and Slovakia are able both states to evaluate its efficiency. Annually Czech airport management body consults charges with airport users (airlines) and usually are the prices (airport charges) accepted. Several problems occurred last year, so the Ministry of Transport as independent supervisory authority had to judge them. Even so, the reserve regulation formula is sufficient. In Slovakia Section of Navigation Services and Airports (part of Civil Aviation Division of Transport Authority) as a supervisory body calls Ministry of Transport and Construction of the Slovak republic (Civil Aviation Department) as a major shareholder for consultation with users/airlines of Bratislava Airport. Nevertheless, upper results in this paper confirms that Bratislava airport still need more passengers and it has shown that the best way to achieve this is to apply soft regulations of airport charges.

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References

- [1] Regulation and competition. A literature review. Report 0218. (2017) Swedish agency for economic and regional growth. Stockholm. [Online]. Available: https://tillvaxtverket.se/download/18.7b586e5115b13ff864b24615/1490965697446/Regulation+and+Competition+-+170331_hela.pdf.
- [2] Buccirossi, P., L. Ciari, T. Duso, G. Spagnolo, and Vitale, C. (2011). Competition policy and productivity growth: An empirical assessment. *DICE Discussion*, Düsseldorf Institute for Competition Economics, no. 22.
- [3] OECD (2014). OECD Going for growth interim report. OECD Publishing. Paris
- [4] Ricketts, M. (2006). Economic regulation, principles, history and methods. [Online]. Available: https://www.researchgate.net/publication/286291621.Economic_regulation_principles_history_and_methods.
- [5] Shleifer, A. (2005). Understanding regulation. *European Financial management*, vol. 11, no. 4, pp. 439-451.
- [6] Kurdel, P., Ceskovic, M., Nyulaszi, L. and Adamcik, F. (2015). Selected method of diagnosing aviation ergatic systems. *Nase More*, vol. 62, no. 3, pp. 233-236.
- [7] Evaluation of Directive 2009/12/EC on airport charges. Final Report. 2013. [Online]. Available: <https://ec.europa.eu/transport/sites/transport/files/modes/air/studies/doc/airports/2013-09-evaluation-of-directive-2009-12-ec-on-airport-charges.pdf>.
- [8] Littlechild, S.C., (1983). Regulation of British telecommunications' profitability, Department of Industry, U.K.: London.
- [9] Tomova, A., (2008). Air Transport Economics Airports, EDIS, Slovakia: Žilina.

- [10] Czerny, A. I. and Zhang, A. (2015). Single –till versus dual-till regulation of airports. Tinbergen Institute Discussion paper. TI2015-049/VIII. [Online]. Available: <https://papers.tinbergen.nl/15049.pdf>.
- [11] Kazda, A., Badanik, B., Tomova, A., Laplace, I. and Lenoir, N. (2013). Future airports development strategies. *Communications: scientific letters of the University of Žilina*, vol. 15, no. 2, pp. 19-24.
- [12] Oum, T. H., Zhang, A. M. and Zhang, Y. M. (2004). Alternative forms of economic regulation and their efficiency implications for airports. *Journal of Transport Economics and Policy*, vol.38, pp. 217-246.
- [13] Assaf, A. G. and Gillen, D. (2012). Measuring the joint impact of governance form and economic regulation on airport efficiency. *European Journal of Operational Research*, vol. 220, no. 1, pp. 187-198.
- [14] www.prg.aero, 2017. Available: <http://www.prg.aero/en/prague-airport/about-airport/>.
- [15] Tomova, A. (2015). The need for new directions in airspace economics: seventy years after Chicago. *Journal of air transport management*, vol. 44-45, pp. 1-7.
- [16] Novak Sedlackova, A. and Novak, A. (2010). Simulation at the Bratislava airport after application of Directive 2009/12/EC on airport charges. *Transport and telecommunication*, vol. 11, no. 2, pp. 50-59.
- [17] Tomova, A. and Martisova, A. (2014). Incentives in airport pricing: benchmarking of twelve capital European airports. *Business and management '2014*, Vilnius, Lithuania, pp. 597-603.
- [18] Adler, N. and Liebert, V. (2014). Joint impact of competition, ownership form and economic regulation on airport performance and pricing. *Transportation Research Part a-Policy and Practice*, no. 64, pp. 92-109.
- [19] Adler, N., Forsyth, P., Mueller, J. and Niemeier, H. M. (2015). An economic assessment of airport incentive regulation. *Transport Policy*, vol. 41, pp. 5-15.
- [20] Starkie, D. (2011). European airports and airlines: Evolving relationships and the regulatory implications. Case Associates London and University of Adelaide. [Online]. Available: https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1742253.
- [21] Kratzsch, U. and Sieg, G. (2012). No need to regulate airports with predominantly non-aeronautical revenues, *European Transport*, no. 52, paper no 8. [Online]. Available: https://www.openstarts.units.it/bitstream/10077/8188/1/ET_2012_52_8%20-%20KratzschSieg.pdf.
- [22] Klietk, T. (2009). Quantification effectiveness activities traffic company by the rules of data envelopment analysis. *Ekonomie a management/Economics and Management*, vol. 12, no. 1, pp. 133-145.
- [23] Rahman, A., Belas, J., Klietk, T. and Tyll, L. (2017). Collateral requirements for SME loans: empirical evidence from the Visegrad countries. *Journal of Business Economics and Management*, vol. 18, no. 4, pp. 650-675.

CONNECTION OF MANAGEMENT, ECONOMY, SECURITY, POWER AND GLOBALIZATION

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Abstract. Management, economics, safety, power, globalization are frequented in nowadays world. They have its content that is changeable in its development, there is also relationship between them, and they influence each other. From the point of systematic approach view we can understand them as complex dynamic systems and subsystems with relatively unlimited group of conceptions and different relationships based on resolution level. Also hierarchy of these conceptions - systems is historically changeable. All conceptions have its characteristic development features. Probably oldest conceptions, not only by its name, but also by its content, are management. Because human in the humanity existence beginning - as individual, if he wanted to survive, had to manage his life, his existence. He realized basic processes of his existence, usage of resources he had around himself, that were available in nature around him. We can suppose that he realized his power also based on his safety needs - especially survival. Later, based on work development, economization started. Needed structures began to develop - the only human itself, tribe, group, state, nation, global. And based on that so called globalization begins. Today's perception of content and wideness of mentioned conceptions or systems and their consequences is different and also prediction of development is uncertain. Can we manage processes of economics, safety or power in nowadays globalized world? Is nowadays describe able and manageable? What are nowadays structures in competition and super competition? Why not cooperation? Many questions and only a few unclear answers.

Keywords: management, economy, security, power, globalization

JEL Classification: H0, H7, O0, R0, Z0

1. Introduction

Pojmy uvedené v názvu tohoto článku - řízení, ekonomika, bezpečnost, moc, globalizace jsou silně frekventovanými pojmy dnešního světa. Mají svůj obsah a rozsah, který je ve svém vývoji proměnlivý, existuje mezi nimi široká či úzká souvztažnost, vzájemně na sebe působí a ovlivňují se. V teorii i praxi, zejména v každodenních procesech, není dost dobře možné je od sebe oddělit. Přestože tyto pojmy jsou velmi moderní i módní, lze konstatovat, že nejsou podle svého obsahu jen dnešní. Smyslem příspěvku je poukázat na podstatu těchto pojmů v malém zamyšlení. Alespoň několik slov k jejich objasnění.

2. Podstata pojmů ze současného pohledu

Z hlediska systémového přístupu lze tyto pojmy chápat jako složité dynamické systémy a podsystémy s relativně nekonečnou množinou prvků a různých vazeb dle použití rozlišovací úrovně. Rovněž hierarchizace uvedených pojmů – systémů je historicky proměnlivá. Všechny pojmy mají své vývojové charakteristické rysy. (Weissova & Spuchlakova, 2016)

a. Řízení

Řízení existovalo vždy. Vyplývá to z jeho podstaty. Člověk od nepaměti musel v zájmu své existence nějakým způsobem využívat zdroje lidské, materiální, později finanční, informační a časové. Převáděno do praxe – člověk používal svou osobnost pro nejrůznější duševní i manuální činnosti, směřující k uspokojení svých základních potřeb, především zachování života. O financích, tak jak je chápeme dneska, zřejmě nevěděl vůbec nic, byť jakýmsi základem byla směna zboží. Zdroje materiální povahy byly rozhodující. Příroda mu nabízela, ale také brávala materiální potřeby pro své žití, v počátku ji využíval a později stále více přetvářel. Zdroje časové mu poskytovaly čas k životu, k různým aktivitám, k odpočinku, spánku. Zdroje informační mu umožňovaly přetvářet informace ke svému životu. (Alanqar, 2017).

Tyto výše uvedené zdroje řízení se postupně vyvíjely k prospěchu člověka, ale také k jeho ničení a sebeničení. Možná bychom se mohli alespoň někdy nad minulostí, současností a zejména budoucností těchto zdrojů zamyslet, poučit se. Autor těchto řádků vidí neadekvátní řízení, tedy pokud možno optimální využívání zdrojů, jako největší nebezpečí pro lidstvo. Nejde jen o obecné řízení, ale zejména o uvědomění si potřeb (nutností) a možností řízení a sebeřízení každého jednotlivého člověka. Řízení je nejdůležitější pojem, nejdůležitější aktivita.

Můžeme předpokládat, že řízení mělo, má a bude mít dva nejcharakterističtější rysy. Prvním rysem je řízení jako nedílná součást obecné kultury. Druhým rysem řízení je jeho funkce řešit rozpory mezi zdroji a možnostmi jejich využívání pro člověka. Oba rysy jsou dvojediný. (Minjae et al., 2017).

Několik slov k prvnímu rysu. Obecná kultura souvisí s lidským vědomím a bytím, vztahy mezi duchovním a materiálním, vztahy mezi minulostí, přítomností a budoucností, vztahy mezi příčinami a následky, vzájemné vztahy víry, náboženství, zdraví, soužití lidí, tužeb, přání, uspokojování hodnot a podobně. Takže v tomto smyslu je řízení vlastně nutnou potřebou společenskou. (Snider, 2017)

Druhý rys je již praktičtější, směřující k naplnění lidské existence využíváním zdrojů, které jsou k dispozici. Věci, jevy a procesy jsou stále složitějšími, provázanějšími, rychleji probíhajícími a také se rychleji měnícími. Dnešní dobu lze alegoricky charakterizovat jako dobu bez směru plavby, kormidelníka a kotvy. Většinou převládá krátkodobá účelovost nad perspektivou a předvídáním důsledků našich rozhodnutí.

Současná doba, a pravděpodobně i doba budoucí je charakterizována pojmy jako změna, globalizace, rychlost, zrychlení, síťovost, modernizace, inovace, nejistota, chaos. Jsou samozřejmě možné i další charakteristiky, přičemž spolu velice úzce souvisejí, vzájemně se tedy ovlivňují a jejich proporce nabývají různého obsahu i rozsahu.

Mění se vlastně všechno a změny se zrychlují. Toto zrychlování je částečně způsobováno rychlejší komunikací. Lidé, a speciálně řídící pracovníci musí na problémy reagovat rychle, často tak, že nejsou schopni domyslet důsledky svého rozhodování a také musí dělat rozhodnutí ve věcech, o kterých vědí stále méně a méně. Dochází tak k ostrému rozporu mezi řízením a odborností. Probíhající změny zvyšují rychlost a někdy i překvapivost řídicích i řízených operací.

Odpovědnost řízení stále roste, protože důsledky rozhodování se mohou projevit velice silně v kladném či záporném smyslu. Roste odpovědnost řízení za využití kapitálu všech zdrojů, nejen kapitálu ve smyslu finančním. Řízení musí také respektovat etickou stránku.

O potřebách člověka a společnosti bylo mnoho napsáno a mnohé se také píše a mluví. Jde mnohdy o texty a slova manipulující, sloužící k ovládání lidí a také napomáhající k upevnění či získání moci mocných. Informace jsou v tomto pojetí spíše dezinformacemi. To je nebo může být nebezpečné.

Řízení by mělo směřovat k zabezpečení obecných i individuálních potřeb člověka. Nejnutnější potřeby pro život člověka se nemění, protože člověk je svou podstatou stejný. Mění se však jejich kvantita a kvalita v průběhu vývoje. Zásadně lze vyjádřit jako současné potřeby:

- ❖ Společenské a individuální rozhodování odpovídající soudobým potřebám; je obtížné a mnohdy až antagonistické harmonizovat obecné a zvláštní potřeby, cíle. Je rozpor v hodnotách společnosti obecně, v hodnotách nadnárodních společností, v hodnotách národních firem, v hodnotách státu, v hodnotách působnosti státní správy a samosprávy, v hodnotách politických stran a hnutí, hodnotách rodin, v hodnotách jednotlivých lidí,
- ❖ Společenské zdraví a zdraví jednotlivce; zdraví je zřejmě prvořadou hodnotou člověka, nikoliv svoboda, jak je často neuváženě a také záměrně proklamováno k ohlupování lidí. To zná každý, kdo ví, co je to nemoc, úraz. Jaký dopad má zdravotní indispozice. Oblast zdraví společenského i individuálního by měla být alespoň v částečném souladu. Ne vždy tento soulad je, ne vždy jsou zájmy státu a firem na jedné straně a zájmy lidí sjednoceny. U všech jmenovaných složek dochází často k rozporu. U lidí dochází ke ztrátě pudu sebezáchovy a na vině není vždy jen jednotlivec, ale také stát a firmy. Můžeme se o tom dovídat takřka každý den. Jen v roce 2017 Českou republiku postihla např. ptačí chřipka, salmonela, africký mor u prasat. Vše má své projevy, následky a také náklady. V letošním roce byly vyneseny rozsudky v tzv. metanolové aféře, kdy zemřelo 48 lidí, a desítky osob mají trvalé poškození zdraví. Je to čí vina? Jaký je podíl státu, firem, člověka?,
- ❖ Možnost dýchat zdravý vzduch s co nejmenším znečištěním; roste počet chorob i úmrtí způsobených chemickým a fyzikálním znečištěním, dýcháme spoustu škodlivin. Velkým znečišťovatelem je automobilový provoz a přece lidé nejsou ochotni slevit ze své pohodlnosti. Hustota provozu je také dána přístupem firem, které raději z řady důvodů použijí nákladní auta a ne třeba vlak,
- ❖ Snižování hladiny hluku; hluk je prokazatelně lidskému zdraví škodlivý, a ani zde nedbáme na svou bezpečnost. Viz výše uvedený automobilový provoz, stroje, přístroje a další zařízení, hlučnost na hudebních atrakcích, přehrávačích apod.,
- ❖ Možnost dostatku kvalitní pitné vody; v posledních letech prokazatelně klesá hladina spodní vody, kvalita vody (která je i v podzemních zdrojích nepoživatelná bez chemické úpravy), projevuje se nedostatek vody v některých oblastech a na druhé straně povodně, včetně obtížně předvídatelných povodní bleskových,
- ❖ Dostatek kvalitních potravin prospěšných a neškodících lidskému organismu,
- ❖ Odpovídající mezilidské vztahy,
- ❖ Vytváření podmínek pro pracovní vztahy v celé šíři a hloubce problémů,
- ❖ Využívání výsledků věd základních,
- ❖ Využívání výsledků věd aplikovaných,
- ❖ Odpovídající obecné a specializované vzdělávání,
- ❖ Potřebné obecné i speciální informace,

- ❖ Eliminace dezinformací,
- ❖ Možnost využívat informační a komunikační technologie,
- ❖ Využívání druhů a prostředků dopravy,
- ❖ Využívání volné přírody pro zdraví, pohyb, rekreační a estetické účely,
- ❖ Možnost navštěvovat historické památky jako nadstavbu k obohacení svého života,
- ❖ Vytváření podmínek pro své záliby a koníčky,
- ❖ Mít možnost využívání sociálních a humanitárních služeb.

Tento výčet není úplný a není také možné všechny potřeby realizovat v jejich ideální společenské i individuálně lidské úrovni. Ve výše uvedených odrážkách také není uveden jejich obsah z důvodů omezení rozsahu příspěvku. Přesto je nutné jim věnovat pozornost. Jejich potlačování může a také vede ke krizovým situacím s negativními důsledky na společnost i člověka. V posledních několika málo letech je diskutována čtvrtá industriální revoluce (Stanek, 2017). Je to fenomén, jehož projevy jsou již z části poznatelné, z části nepředvídatelné a mísí se naděje i obavy z jeho důsledků. (Russell, 1993)

b. Ekonomika

Tento pojem, stejně jako řízení, je každodenně frekventován v různých souvislostech. Nebudeme se proto věnovat jeho obšírnému vysvětlování. Jen malá pozornost bude věnována aktuálním problémům.

Ekonomika vytváří materiální hodnoty pro existenci společnosti a také ovlivňuje její duchovní stránku.

Jaká je současná ekonomika? (Svihlikova, 2016). Padesátá a šedesátá léta dvacátého století jsou označována jako zlatá léta kapitalismu, nikdy před tím a zřejmě nikdy v budoucnu se takový rozvoj neuskuteční. V sedmdesátých letech dochází k příznakům první velké krize, kdy dochází k rozpadu koloniální soustavy, ze které západní země těžily pro svou prosperitu. Dochází také k první ropné krizi. Začíná éra neoliberalismu, socialistické země jsou ekonomicky značně vyčerpané (nutno dodat – i za vlivu kapitalismu). (Menashy, 2017)

Po převratu v roce 1989 jsme si mysleli, jaká naděje z napojení na zahraniční kapitál nás čeká. Do Evropské unie jsme pak v roce 2005 vstupovali s nadějí na rychlý růst materiální úrovně a sbližování se Západem. Nějak se to příliš nepovedlo. Sbližování životní úrovně obyvatel není příliš znatelné, protože kapitál si z bývalých východních zemí bere vyšší díl, a dává ho Západu. Takže i nadále ve své podstatě stagnujeme a zaostáváme. Současný stav v Evropské unii lze označit jako hledání cesty jak dál. Poměrně otevřeně se hovoří o dvourychlostní Evropě. První rychlostí pojedou zřejmě Německo, Francie a zbytek Evropy pojedou rychlostí druhou, nižší. (Adams et al., 2006).

V České republice je stav ekonomiky, přes neustálé ujišťování o růstu HDP, nepřiliš radostný a obavy jsou namístě. Jsem závislý na nadnárodním kapitálu a nadnárodních firmách, a zejména na automobilovém průmyslu a Německu. Podíl firem pod zahraniční kontrolou je kolem 42%, některé zdroje uvádějí až 80%. Banky jsou z 97% v zahraničním vlastnictví. Takže zahraniční matky našich bank a firem mají rozhodující úlohu (kde je ta neustále proklamovaná svoboda?). Odliv kapitálu do zahraničí je 350 až 450 miliard korun ročně. Státní rozpočet je ve výši cca 1,3 bilionu korun. Vláda se odlivem kapitálu sice zabývá, ale bezvysledně. Jak by ne?! Může nanejvýš prosit zahraniční firmy. Pracující chudobou je ohroženo cca 15 procent mužů a 25 procent žen. Desetina žáků škol nemá peníze na obědy, nemůže jezdit na výlety, šestina

studentů vysokých škol má problém vyjít z penězi. Za této situace je podivné, že zvyšujeme rozpočet na armádu a policii. Proč? Protože to po nás chtějí zahraniční firmy a politikové k jejich prospěchu, ale ke škodě naší ekonomiky a zejména životní úrovně? (Povoledo, 2017)

c. Bezpečnost

Bezpečnost je vlastní historii člověka. Je jednou z hlavních potřeb jeho existence. Je podmínkou jeho rozvoje a zachování vůbec. Člověk vždy musel dbát na svoji bezpečnost, ať byly jeho aktivity jakékoliv.

Bezpečnost je důležitým pocitem pro člověka, patří k jeho základním hodnotám a je také neméně důležitým pojmem pro manažery všeho druhu (včetně politických a vojenských). Pojem bezpečnost je svým obsahem i rozsahem velmi proměnlivým hybridem obecnosti i konkrétnosti. Bezpečnost je stav a procesy, kdy hrozby a rizika jsou pro systém na co nejnížší možné úrovni (Novak, 2005).

V posledních letech je bezpečnosti ve světě i u nás věnována pozornost. Příčinou je vysoký růst nebezpečnosti ve světě i uvnitř zemí. Ve světě probíhá řada válek a válečných konfliktů, projevů terorismu. V čem jsou příčiny možná nikdo neví a možná, že to ví ti, kteří tyto konflikty z různých důvodů zapříčiňují. Nejde však jen o projevy terorismu ze zahraničí. V souvislosti s různými krizemi jsou zejména země Evropy stále ohroženy mezinárodním terorismem. Ale nejen jím. Není žádnou novinkou posledních let, že kapitalismus v současné formě se přežil a že je nutné nastolit změny. Jde o to, zda to jsme schopni udělat pokojnou cestou, či bude nutno revolučních změn. A také je třeba řešit, co bude potom. (Podhorska & Siekelova, 2016)

d. Moc

Moc je vlastní člověku, je projevem jeho existence a jeho součástí. Moc je jednou ze základních lidských potřeb, často je nazývána nejsilnější drogou na světě. Moc působí na všechny oblasti života společnosti i jednotlivce, příznivě a nepříznivě. Moc je individuální, kolektivní a státní. Projevuje se fyzicky, fyzikálně, finančně, ekonomicky, politicky, vojensky atp. Moc má dvě složky – subjekt řízení moci a objekt řízený mocí, funguje zde princip akce a reakce. Jak praví přísloví – každá hůl má dva konce. Příkladů realizace moci je kolem nás mnoho. (Novak, 2013)

Moc státu má obecně tyto zdroje a složky:

- ❖ obyvatelstvo – počet a jeho schopnosti, zejména v dovedném řízení,
- ❖ morální síla, vlastenectví, hrdost a odhodlanost bránit vlast,
- ❖ geografickou (také geostrategickou) polohu,
- ❖ přírodní zdroje a suroviny,
- ❖ hospodářská síla, vědeckotechnická úroveň a rozvoj
- ❖ vojenský potenciál a jeho odstrašující vliv,
- ❖ politika a diplomacie. (Hertzova, 2001; Jirasek, 2006)

e. Globalizace

Globalizace je pestrá škála věcí, jevů a procesů zahrnujících například masivní pohyb lidí, možnosti okamžitých přesunů kapitálu v globálním prostoru, razantní přesah problémů spjatých s populačním růstem či devastací životního prostředí za hranice postižených regionů, nové formy globálně organizovaného zločinu, růst nerovností a podobně. Tyto skutečnosti

představují zároveň rizika a hrozby a také možnosti. Sám proces globalizace je však zatím nezvratný, byť nezasahuje všechny části Země stejně a jeho důsledky jsou rozmanité, často i velice negativní. Je záležitostí řídících pracovníků všech úrovní i lidí samotných, zda bude povaha procesů globalizace interpretována především jako riziková záležitost, nebo především jako výzva, možnost. (Haass & Ottmann, 2017)

Svět globalizace je stále rychlejší, chaotičtější, složitější a stále méně dosavadními způsoby říditelný. Přináší celou řadu problémů dříve nevídaných, než na jaké byli lidé ve své historii zvyklí. Problémy jsou často řešeny metodami včerejška a při rychlosti vývoje přitom je potřeba řešit již zítřek. Je třeba si otevřeně přiznat, že rozhodování je stále více stochastičtější a technické prostředky pro podporu rozhodování nesplňují naše požadavky a naděje. A tak trendy globalizace jsou zpochybňovány a kritizovány právě z centra procesů globalizace, z oblastí euroatlantického prostoru. Jde především o důsledek narůstajících rozporů procesů globalizace a formování globální odpovědnosti a potřeby světového řádu, které jsou právě v centru procesů globalizace akutní. (Cohen & Kietzmann, 2014)

Globální svět, zejména v materiálně vyspělých zemích přináší také rozpaky a jistou globalizovanou i jednoduchou zmatenost. Došlo k posunu blahobytu a životní úrovně v materiální oblasti bezesporu vzrostla měrou nevídanou. Avšak také došlo a stále více dochází k ostřejším hranicím mezi bohatými a chudými, což stravuje energii lidí, zejména těch, kteří pracují a roste nespokojenost až nenávisť. Všechno nemůže být poměřováno jen ekonomikou a penězi. K čemu musí takzvaný vyspělý svět hromadit materiální bohatství, které nemůže spotřebovat, nebo které mu zotročuje život? Kde jsou hranice tohoto typu růstu? Na druhé straně dochází k odlidštění a mrzačení života právě v důsledku zmiňovaného materia. Peníze a věci jsou smyslem života? (Collings & Mellahi, 2009)

A co je vlastně smyslem globalizovaného života? Co je to pokrok, co je to moderní? V organizačních strukturách probíhají dva hlavní typy procesů. Na jedné straně dochází k rozpadu a atomizaci za účelem šetření nákladů a dosahování co nejvyššího zisku a zachování existence struktur vůbec. A na straně druhé dochází ke spojování a růstu velikosti struktur, které přesahují hranice států. Tyto struktury jsou často mocnější a bohatší než jednotlivé státy a tak vlastně nezodpovídají a nepodléhají nikomu, než sobě samým. Nezodpovídají za lidi, za své produkty. Také pojetí vlastnictví je jiné, protože vlastně organizační struktury vlastní lidi a determinují jejich vývoj, diktují státním orgánům a jsou v řadě případů organizacemi nadstátní moci. A to stále více, protože jsou někdy nepodchytilné a nepostižitelné. (Barta et al., 2012)

3. Problém potravin a zemědělství

Problematika potravinové dostatečnosti je klíčovým problémem současného světa. Ukazuje se stále více, že nedostatek potravin, je rizikovým faktorem s celoplanetárním dopadem, nebo ohrožuje zdraví i životy lidí, včetně populačního vývoje. Zatímco bohaté státy Severozápadu mají zatím dostatek potravin, byť s výkyvy způsobenými zejména počasím a poklesem úrodnosti půdy (mnohdy trvalého charakteru), státy Jihu se stále více potýkají s nedostatkem potravin a rovněž hladem. Ten má své důsledky v lidském utrpení a také v migraci. Tato migrace může nabýt nepředvídatelných důsledků zejména pro Evropu. Řešení je v nedohlednu, a pokud Evropa a Západ vůbec chce dostát svému humanitárnímu základu společnosti, může se dostat do neřešitelné situace a pak si položíme otázku, co zbude z naší civilizace, kultury a také z našich životů. (Dahl, 2017)

Problémy České republiky v oblasti zabezpečení potravin jsou, zejména pro budoucnost, vážného rázu. Hovoří se o tom na různých fórech. V nedávném rozhovoru pro deník Haló

noviny (Jandejsek, 2017) prezident Agrární komory Zdeněk Jandejsek uvedl fakta, z nich pro účely článku lze některá z nich vybrat. (Dai et al., 2002; Gil, 2017).

Denně ztrácí naše země bez náhrady 12-15 hektarů často nejúrodnější půdy. Zemědělci se v těchto případech ochrany nedovolají. Je to trestuhodné! Kdo za to nese odpovědnost? Půdu využíváme na stavbu silnic, dálnic i parkovišť. Další zábor půdy je pro fotovoltaické elektrárny a také obchodní domy a logistické sklady. Rovněž trestuhodné!

Oproti roku 1989 je v naší milované zemi 40 procent skotu, 29 procent dojníc či 29 procent prasnic. Přitom dovážíme 50 procent sýrů a mléčných výrobků a přes 60 procent vepřového masa. Také k zamyšlení a řešení. Je to také projev svobody pro Českou republiku? Nebo to může být označeno jako zrada na lidech?

Tento stav může být v budoucnu značným bezpečnostním rizikem!

4. Conclusion

Předkládaný článek je věnován problematice řízení, ekonomiky, bezpečnosti, moci, globalizaci. Napsaný text poukazuje na řadu problémů, které vyžadují řešení. Nelze konstatovat, že jejich řešení bude optimistické či pesimistické. Lze se klonit k názoru, že je v každém případě hodně naléhavé a nesmírně složité i možná nemožné v některých oblastech. Existence společnosti je na hraně. Krizovost našeho světa je značná. V roce 2015 uplynulo 70 let od skončení poslední světové války. Byla opravdu poslední? Stále více odborníků se kloní k názoru, že válka je možná. Válka vzniká z nezvládnutého míru. Jsme schopni dosavadní relativní mír řídit? Jsme schopni se poučit z historie lidstva a jejího odkazu pro přítomnost i budoucnost? Dokážeme to? Lze to vůbec dokázat? Víme co pro to udělat? Chceme to vůbec dokázat?

References

- [1] Adams, R., Bessant, J. and Phelps, R. (2006). Innovation management measurement: A review. *International journal of management reviews*, vol. 8, no. 1, pp. 21-47.
- [2] Alanqar, A. et al. (2017). An economic model predictive control approach to integrated production management and process operation. *Aiche Journal*, vol. 63, no. 6, pp. 1892-1906.
- [3] Barta, M., Kovar, M. et al. (2012). *Kolaps a regenerace*, Academia, Praha.
- [4] Cohen, B. and Kietzmann, J. (2014). Ride on! Mobility business models for the sharing economy. *Organization & environment*, vol. 27, no. 3, pp. 279-296.
- [5] Collings, D. G. and Mellahi, K. (2009). Strategic talent management: A review and research agenda. *Human resource management review*, vol. 19, no. 4, pp. 304-313.
- [6] Dai, F. C., Lee C. F. and Ngai, Y. Y. (2002). Landslide risk assessment and management: an overview. *Engineering geology*, vol. 64, no. 1, pp. 65-87.
- [7] Dahl, C. A. (2017). Energy efficiency: Building a clean, secure economy. *Energy Journal*, vol. 38, no. 6, pp. 232-233.
- [8] Gil, D. et al. (2017). Big data. New approaches of modelling and management. *Computer standards & interfaces*, vol. 54, pp. 61-63.

- [9] Haass, F. and Ottmann, M. (2017). Profits from peace: The political economy of power-sharing and corruption. *World development*, vol. 99, pp. 60-74.
- [10] Hertzova, N. (2001). *Plíživý převrat*, Dokořán, Praha.
- [11] Jirasek, J. A., (2006). *Agenda příštích let*, Professional Publishing, Praha.
- [12] Menashy, F. (2017). The privatization of education: A political economy of global education reform. *Comparative education review*, vol. 61, no. 4, pp. 840-841.
- [13] Minjae, P. et al. (2017). Process control and economic cost design for total quality management. *Total Quality Management & Business Excellence*, vol. 28, no. 7-8, pp. 858-878.
- [14] Novak, J., (2005). Projevy násilí jako součást prostředí managementu. *Sborník GEMAN 05, Acta EVIDA*, Sdružení EVIDA, Plzeň.
- [15] Novak, J. (2013). Potravinová bezpečnost jako subsystém obecné bezpečnosti. *Bezpečnostní management a společnost*, Univerzita obrany, Brno.
- [16] Podhorska, I. and Siekelova, A. (2016). The impact of internally generated goodwill on the financial performance of companies-international comparison. *16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 1736-1743.
- [17] Povoledo, L. (2017). Modelling the sectoral allocation of labour in open economy models. *Canadian Journal of Economics-Revue Canadienne d'Economie*, vol. 50, no. 3, pp. 685-710.
- [18] Rusell, B. (1993). *Logika, věda, společnost, filozofie, společnost*. Nakladatelství Svoboda, Praha.
- [19] Snider, E. A. (2017). International political economy and the new middle east. *PS-Political Science & Politics*, vol. 50, no. 3, pp. 664-667.
- [20] Svihlikova, I., (2015). *Jak jsem se stali kolonií*. Rybka Publishers, Praha.
- [21] Jandejsek, Z., (2017). Řešení eroze je v rozumném hospodaření. *Haló noviny*, vol. 8, pp. 3.
- [22] Stanek, P., (2017). Fenomén čtvrté industriální revoluce. *Vratimovský seminář, Vratimov*
- [23] Weissova, I. and Spuchlakova, E. (2016). The impact of internally generated goodwill on credit risk of companies. *International Conference on Applied Social Science and Business ICMIBI-ASSB*, Windsor, United Kingdom, vol. 65, pp. 14-19.

GLOBALIZATION AND ITS IMPACT ON CHANGES IN VOLUNTEERING

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Abstract. The issue of volunteering does not interfere only with the individual behaviour and decision of an individual, but volunteering is a social phenomenon that is organizationally, culturally and historically conditioned. Therefore, the examination of volunteering goes beyond the individual framework and concerns the socio-economic and organizational context in which it is located. In general, this context has changed in recent years. Social trends related to company modernization, such as demographic change, technological development, globalization, changes in civil society, and others, modify people's attitudes and attitudes towards volunteering. One of the most important social phenomena, which largely interferes with volunteering, is the process of individualisation. At present, volunteering is an important part of the lives of many people, organizations, and society as a whole. We expect this to be the case in the coming years, as volunteering is becoming more and more popular in Slovakia. This is certainly helped also by international business companies that pay attention to corporate volunteering. There is still insufficiently developed formal volunteerism in the territory of the Slovak Republic. Volunteering opportunities are not well known to the public. Volunteering is a social phenomenon whose importance to individuals as well as to society as a whole is also underlined in the context of public policies. It is highlighted many times that volunteering is a form of civic participation in terms of social significance. By building social capital, it acts as a factor of social inclusion and enhances social cohesion.

Keywords: Volunteering, new trends, the impact of globalization, individualism, forms of employment

JEL Classification: J24, D64, I30, F66

1. Introduction

Problematika dobrovoľníctva nezasahuje len do individuálneho správania a rozhodnutia jednotlivca, ale dobrovoľníctvo je sociálny jav, ktorý je organizačne, kultúrne a historicky podmienený. Preto skúmanie dobrovoľníctva presahuje individuálny rámec a týka sa celospoločenského a organizačného kontextu, v ktorom sa nachádza. Vo všeobecnosti sa tento kontext v posledných rokoch mení. Spoločenské trendy, ktoré sú spojené s modernizáciou spoločnosti, akými sú zmeny v demografii, technologický rozvoj, globalizácia, zmeny v občianskej spoločnosti a iné, modifikujú správanie a postoje ľudí v súvislosti s dobrovoľníctvom. Jeden z najpodstatnejších sociálnych fenoménov, ktorý v značnej miere zasahuje do oblasti dobrovoľníctva, je proces individualizácie. Mnohokrát sa vyzdvihuje fakt, že dobrovoľníctvo je formou občianskej participácie z hľadiska spoločenského významu. Tým, že buduje sociálny kapitál, pôsobí ako faktor sociálnej inklúzie a umocňuje sociálnu súdržnosť. Podoby dobrovoľníctva v rôznych krajinách sveta sú významne ovplyvňované ekonomickými,

politickými, sociálnymi a demografickými faktormi, tak isto ako aj historickými koreňmi charity a filantropie. Prínosy dobrovoľníctva pre samotného jednotlivca, ale aj celú spoločnosť, sú veľmi známe a vo všeobecnosti uznávané. Vykonávanie dobrovoľníckych činností má pozitívny vplyv na zdravie človeka, či už fyzického alebo psychického, uspokojuje potrebu seberealizácie a spirituálne potreby človeka (Proactiva 2015).

Dobrovoľníctvo je sociálny fenomén, ktorý sa vyskytuje v každej spoločnosti. V posledných rokoch stále stúpa jeho spoločenský význam a stáva sa objektom rôznych politických, výskumných a praktických reflexií. Veľký dôraz v oblasti dobrovoľníctva sa kladie na vekovú kategóriu mládeže. Práve mladá generácia je generáciou zmien. Dobrovoľníctvo významne vplýva na rozvoj osobnosti mladých ľudí a teda na rozvoj celej generácie.

2. Zmeny v dobrovoľníctve

Keď sa pozrieme na dobrovoľnícku prácu z historického hľadiska, môžeme povedať, že v našej spoločnosti sa vyskytuje už niekoľko tisíc rokov. Podstatu dobrovoľníctva vnímali už ľudia v stredoveku a už v tom období si ľudia nezištne pomáhali. Dobrovoľník je neoddeliteľnou súčasťou spoločnosti, pretože napomáha k jej rozvoju a vo svete má dlhoročnú tradíciu. Pomer medzi mužmi dobrovoľníkmi a ženami dobrovoľníčkami je približne vyrovnaný. Posledných dvadsať rokov demografické zmeny stavajú sociálnu politiku pred výzvu nájsť alternatívne spôsoby zabezpečenia udržateľnosti štátneho rozpočtu. Dobrovoľníctvo dáva možnosti pre spoluprácu bez veľkých finančných investícií. (Sabic, 2014)

2.1 Desať kľúčových trendov

V poslednom období sme svedkami meniacej sa podoby dobrovoľníctva. Je možné identifikovať niekoľko kľúčových trendov, ktoré budú najdôležitejšie pri porozumení dobrovoľníkov a dobrovoľníctva v nasledujúcich desaťročiach.

2.1.1 Dobrovoľnícka práca zvyšuje zamestnateľnosť

Dobrovoľníctvo môže zvyšovať zamestnateľnosť prostredníctvom rozvoja profesionálne relevantných vedomostí a kompetencií. Výsledky ukazujú, že akceptácia investičného modelu dobrovoľníctva je v Európe pomerne rozšírená a že rozdiel v akceptácii investičného modelu medzi bežnou populáciou je spôsobený individuálnymi (napríklad vek alebo pohlavie), ako aj medzinárodnými rozdielmi, ale variácia je viac pripísateľná rozdielom medzi krajinami, ako krížovo medzi demografickými skupinami. (Souto-Otero & Shields, 2016)

Dobrovoľníctvo je často vnímané ako príležitosť pre ľudí bez práce ako si zvýšiť svoj pracovný potenciál. (Spera et al., 2015) Dobrovoľnícka práca je argumentovaná tým, že dobrovoľníkom dodáva zručnosti, reputáciu a sociálne prepojenia, ktoré zvyšujú celkovú zamestnateľnosť. (Petrovski et al., 2017)

2.1.2 Nárast znalostných dobrovoľníkov a dobrovoľníčok

Ak existuje jedna téma, ktorá prechádza všetkými trendmi a myšlienkami týkajúcimi sa budúcnosti dobrovoľníctva, je to fakt, že „dobrovoľníci to robia pre seba“. Dobrovoľníci budú čoraz viac chcieť vedieť, čo môžu z toho vyťažiť pre seba. Či už ide o skúsenosti, ktoré budú môcť využiť v ďalšej kariére, životné skúsenosti, nadobúdanie zručností a vedomostí, budovanie tímov a vzťahov na pracovisku, prekonanie osamelosti alebo nadväzovanie nových priateľstiev. To všetko však znamená, že dobrovoľníci robia prácu, ktorú platení zamestnanci vykonávať nebudú.

Dobrovoľníci majú možnosť významne rozvíjať danú oblasť, ktorú si vyberú ako cieľ svojich záujmov. Oblasť, v ktorých je možno vykonávať dobrovoľnícke aktivity je mnoho. Môže ísť o ochranu životného prostredia, ochrana ľudských práv, zdravotnícka a kultúrna oblasť, športové a vzdelávacie činnosti a mnohé iné.

2.1.3 Vzostup vecne stimulovaných (cause-driven) dobrovoľníkov a pomalý pokles časovo stimulovaných (time-driven) dobrovoľníkov

Veľmi dôležité je hľadať spôsoby ako motivovať ľudí k vykonávaniu dobrovoľníckej činnosti. V minulosti ľudia vykonávali dobrovoľnícke aktivity, pretože mali dostatok voľného času. Nebolo pre nich dôležité komu, alebo čomu, ten svoj čas venovali ale ich cieľom bolo vyplniť voľné chvíle. Keďže v súčasnosti je čoraz viac spôsobov ako tráviť voľný čas, dobrovoľníctvo musí konkurovať mnohým zaujímavým alternatívam. Ľudia budú chcieť byť čoraz viac odmeňovaní a budú si vyberať do čoho budú investovať svoj čas a peniaze. Dobrovoľníci majú možnosť nábrať nové zručnosti, alebo rozvíjať už existujúce. Učia sa tímovej práci a rozvíjajú svoju osobnosť. Mnoho dobrovoľníkov, ktorých neuspokojuje práca vykonávaná v zamestnaní, nachádza uspokojenie práve v dobrovoľníckych aktivitách, ktoré vykonáva bez nároku na odmenu

2.1.4 Vzostup sebeckého dobrovoľníka

Sebecké dobrovoľníctvo vlastne znamená, že ľudia sa zapájajú do dobrovoľníctva stále viac preto, že chcú získať niečo sami pre seba, nie len dávať. Pozerajú skôr na to, čo z toho dostanú a získajú pre seba, ako na to, čo do toho vložili. Pri tomto trende existuje dobrý vzor a to je platený personál. Nikto neočakáva, že osoba, ktorá sa hlási na platené miesto, nebude mať záujem o plat a výhody plynúce zo zamestnania. Dobrovoľníci sa budú stále viac podobať plateným zamestnancom s tým rozdielom, že za svoju prácu nedostávajú mzdu. Dôležitosť platenej práce závisí a je rozdielna od národnej úrovne pracovnej exklúzie. (Foubert et al., 2017)

2.1.5 Narastá potreba profesionalizácie manažmentu dobrovoľníkov a dobrovoľníčok - Dobrovoľníctvo viac ako fundraising - Fundraising viac ako dobrovoľníctvo

Dobrovoľnícke organizácie zamestnávajú čoraz viac špecialistov na získavanie finančných prostriedkov (z angl. „fundraiser“): individuálnych fundraiserov, firemných fundraiserov, komunitných fundraiserov a podobne. Profesionálny dobrovoľnícky manažment je však stále v začiatkoch. Len minimum dobrovoľníckych organizácií však v súčasnosti investuje prostriedky na nábery kvalitných pracovníkov, na ich rozvoj a školenia, z dôvodu počiatočných vysokých nákladov a výnosov viditeľných v dlhšom časovom horizonte. Je ale nutné poznamenať, že najväčšie dobrovoľnícke organizácie s profesionálnou sieťou fundraiserov rastú vo svojich oblastiach oveľa rýchlejšie ako odvetvie ako celok.

2.1.6 Vnímanie dobrovoľníctva ako továrne na komunitný sociálny kapitál

Tento fenomén je zahrnutý do rozličných sociálnych procesov, prináša benefity aj pre spoločnosť, aj pre dobrovoľníka. Dobrovoľníctvo je inštitúcia, ktorá vzájomne spolupôsobí so vzdelávaním, kultúrou, politikou, trhom práce... (Pevnaya, 2014) V dobách hospodárskej krízy sa dobrovoľnícka práca považuje za zdroj, ktorý je ekonomický a poskytuje sociálne služby, pretože štát znižuje výdavky na sociálne zabezpečenie, a aj spoločenský - aby čelili sociálnemu rozpadu. (Haas & Serrano-Velarde, 2015)

Súdržné spoločenstvá sa vytvárajú najmä v mestských oblastiach. Jednou z ťažkostí pri vytváraní väčšieho sociálneho kapitálu je to, že iba málo ľudí má potrebu sa poznať s ostatnými.

Dobrovoľníctvo tu hrá veľkú rolu, pretože umožňuje ľuďom sa stretávať a spoznávať sa. Dobrovoľníctvo pomáha budovať komunity z dlhodobého hľadiska.

2.1.7 Nárast mladých aktivistov a pokles mladých dobrovoľníkov

Súčasnú vládu majú určitú posadnutosť a tou je dobrovoľníctvo mladých. Dobrovoľníctvo sa začalo chápať ako spôsob zvyšovania občianskej zodpovednosti a ako príspevok k formovaniu identity mladých ľudí. Množstvo výskumov zdôrazňuje kombináciu motívov pre dobrovoľníctvo, dôležitosť rodiny a školy v rozhodovaní sa o dobrovoľníctve a očakávanie dlhodobých efektov dobrovoľníckej práce. (Bradford et al., 2016)

Samo o sebe to nie je zlá vec, ale musí sa brať ohľad najmä na túžby a záujmy mladých. Mladí ľudia sú aktívni pri rozhodovaní ako využívajú svoj čas a peniaze. Ak chceme, aby mladí ľudia vykonávali dobrovoľnícke aktivity, nesmieme to volať dobrovoľníctvo, ale musíme podporovať aktivizmus a sociálne svedomie.

Takisto môžeme konštatovať, že dobrovoľníctvo mladých ľudí je prejavom aktívneho občianstva a angažovanosti. (Maliskova & Hrozenska, 2016)

Dobrovoľníctvo prináša mladým ľuďom veľa výhod. Každého to môže obohatiť iným spôsobom, ale jedno majú spoločné. Vytvárať lepšiu budúcnosť a pozitívne ovplyvňovať životy iných, bez nároku na odmenu. Mladí dobrovoľníci sa môžu zúčastňovať rôznych dobrovoľníckych výmenných pobytov a stáží. Spoznávajú kultúru a život v iných krajinách, čo prispieva k väčšiemu porozumeniu medzi rôznymi národmi. Spoznávajú zmýšľanie ľudí, ich hodnoty a postoje k životu. Stretávajú sa s rôznymi ľuďmi, v rôznych vekových kategóriách a nadväzujú nové kontakty a priateľstvá. Ďalšou výhodou, ktorú ponúka dobrovoľníctvo pre mladých ľudí je získavanie nových zručností a skúseností, ktoré im môžu neskôr pomôcť pri hľadaní nového zamestnania.

2.1.8 Nárast počtu firemných dobrovoľníkov hľadajúcich nové skúsenosti

Spoločnosti chcú dobrovoľnícke aktivity, ktoré budú upevňovať tímy a vytvárať súdržnejšiu partiu, zlepšovať morálku, umiestňovať spoločnosť do miestnych komunit a poskytovať zamestnancom nové skúsenosti. Firemné darovanie je odmenou za poskytovanie nehmotných výhod, ako sú zručnosti, zvyšovanie morálky a spokojnosť.

2.1.9 Zapojenie sa do dobrovoľníctva je závislé na tom, v akej životnej etape sa človek nachádza a či je schopný venovať v tejto fáze čas alebo skôr peniaze

Aj napriek tomu, že je to dôležité pre občiansku spoločnosť, relatívne málo vieme o tom, ako jednotlivci poskytujú čas a peniaze na dobročinné zabezpečenie tovaru a služieb. Ukazuje sa, že jednotlivci nahrádzajú čas venovaný dobrovoľnej práci formou darovania peňazí. (Bauer et al., 2013) Charitatívne organizácie odovzdali proces rozdávania a rozdelili ho na dve polovice. Jedna časť je dávať čas a druhá časť je dávať peniaze. Človek žijúci v 21. storočí je bohatý buď na čas alebo na peniaze. Veľmi zriedka nastanú oboje súčasne. Takže ak si chceme udržať priaznivcov dobrovoľníctva počas celého ich života, musíme byť schopní reagovať na to, čo potrebujú v danej etape ich života. Musíme zabezpečiť, aby prekročili z jedného spôsobu dávania k druhému.

2.1.10 Produktizácia dobrovoľníctva

Posledný bod, ktorý je možno najdôležitejší, spočíva v tom, ako reagovať na všetky tieto zmeny. Kľúčovým riešením je vytváranie príležitostí pre dobrovoľníctvo. Dobrovoľnícka skúsenosť má byť „zabalená“ a ponúknutá ako produkt, pri ktorom bude dobrovoľník rozumieť

koľko času je potrebné venovať aktivite, ako dlho a aké sú prínosy pre neho a pre prijímateľov. (Evans & Saxton, 2005) Motivácia je jeden z najdôležitejších nástrojov, ktoré zvyšujú pracovný výkon. Pochádza z latinského slova „movere“, čo znamená pohybovať sa, konať, byť aktívny. Motívom teda môžeme rozumieť určité správanie a konanie, ktoré plyní z vnútra človeka a smeruje k stanovenému cieľu s určitou intenzitou a trvaním. Motív trvá dovtedy, dokým nepríde k dosiahnutiu vytýčeného cieľa a s tým spojené očakávané uspokojenie. Na vykonávanie dobrovoľníckej činnosti majú dobrovoľníci rôzne dôvody. Môže ísť o získavanie nových zručností a vedomostí, nadväzovanie nových vzťahov, rozvoj vlastného sociálneho života. Aj keď väčšia časť nových dobrovoľníkov sú aktívne žijúci ľudia, majú svoje rodiny a profesionálnu prácu, majú potrebu robiť niečo, kde môžu pomáhať a meniť veci k lepšiemu. Status dobrovoľníka môže predstavovať aj mnoho náročných situácií, ale na druhej strane je veľmi prospešný pre spoločnosť. Dobrovoľníci prispievajú k ekonomickým a sociálnym zmenám, s cieľom budovať súdržnejšiu spoločnosť cez dôveru a súdržnosť.

Dobrovoľnícke aktivity prinášajú vhodné využitie voľného času každého dobrovoľníka. Zmocňuje sa ich dobrý pocit z dobre vykonanej a zmysluplnej práce, ktorú vykonávajú v prospech iných a väčšina nachádza zmysel života práve v dobrovoľníctve. niektoré činnosti označené ako dobrovoľnícka činnosť však môžu byť skôr považované za časovo viazané záväzky, ktoré sú súčasťou zabezpečenia služieb pre členov rodiny. (Brown & Zhang, 2013)

Podľa získaných výsledkov sa do formálneho dobrovoľníctva, čiže vykonávania dobrovoľníckych aktivít v prospech alebo prostredníctvom nejakej organizácie na Slovensku venovalo v roku 2010 27,5 % obyvateľstva nad 15 rokov. (Brozmanova Gregorova, 2012)

Na príklade jednej z najväčších dobrovoľníckych organizácií na Slovensku, ktorou je Slovenský Červený kríž si môžeme ukázať, ako sa vyvíja počet dobrovoľníkov a počet odpracovaných dobrovoľníckych hodín za posledné roky (tab. 1). Dobrovoľníci sú nosnými pilierami a nositeľmi myšlienok a princípov Slovenského Červeného kríža. Podieľajú sa na všetkých aktivitách SČK a na všetky činnosti sú špeciálne vyškolení. Poskytnutím svojho voľného času, energie a schopností v prospech činnosti, za ktorú neočakávajú odmenu, nielen zlepšujú kvalitu života iným, ale osobnostne rastú, získavajú životné skúsenosti. (SČK 2016)

Table 1: počet dobrovoľníkov SČK a odpracovaných dobrovoľníckych hodín

	2010	2011	2012	2013	2014	2015	2016
Počet dobrovoľníkov	26 606	18 699	13 585	8 873	8 156	5 856	5 889
Počet odpracovaných hodín	156 027	148 265	119 297	70 238	53 725	47 523	51 543

Source: Interné materiály SČK za roky 2010 – 2016

3. Conclusion

Pre rôzne druhy mimovládnych organizácií ako sú napr. občianske združenia, nadácie, neziskové organizácie predstavujú dobrovoľníci jednu z možností ako premieňať svoje plány na skutočnosť. Častým problémom s ktorým sa organizácie tretieho sektora stretávajú je nedostatok finančných zdrojov na pokrytie všetkých výdavkov a tak je časté, že spolupráca s dobrovoľníkmi je spôsobom ako preklenúť tieto problémy. Netreba sa však na dobrovoľníkov pozeráť len ako na spôsob ako znížiť náklady. Samotní dobrovoľníci sú mnohokrát veľmi motivovaní pre prácu v treťom sektore, pretože v činnosti organizácie vidia zmysel a spôsob, ako aj svojou troškou prispieť k zlepšeniu fungovania spoločnosti či naplniť ciele organizácie.

Aj napriek tomu, že dobrovoľníci nepoberajú finančnú odmenu je dôležité, aby ich organizácia oceňovala. Môže ísť o rôzne formy odmien ako napr. certifikáty, školenia ale aj oficiálne spomenutie prínosu práce dobrovoľníkov

Dobrovoľnícke organizácie by mali vytvárať podmienky a priestor na dobrovoľnícke príležitosti pre mladých ľudí, aby sa mohli aktívne podieľať na rozvoji spoločnosti – a najmä u tých skupín ľudí, ktorí sú sociálne znevýhodnení.

Základným predpokladom na pozitívny vývoj budúcnosti dobrovoľníctva je vzájomná komunikácia a informovanosť verejného, súkromného a neziskového sektora, čiže v rámci dobrovoľníckych organizácií a širokej verejnosti. Dobrovoľnícke centrá a organizácie by mali šíriť osvetu a propagáciu dobrovoľníctva. Môžeme tvrdiť, že v súčasnosti stále nie je dostatočná informovanosť o dobrovoľníctve.

Organizácie, v ktorých dobrovoľníci pôsobia, musia poznať, ako ich motivovať a ako si ich udržať, keďže túto prácu vykonávajú dobrovoľne a nezištne. Sú ochotní venovať svoj čas a peniaze na pomoc druhým, bez akejkoľvek finančnej odmeny. Aby dobrovoľníci mali pocit, že ich práca má význam, musia túto činnosť brať ako aktivitu, ktorá ich baví a naplňuje. Musia mať pocit potrebnosti a efektívnosti. Dobrovoľnícke organizácie by na to mali neustále myslieť a aktívne ich podporovať.

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References

- [1] Bauer, T. K., Bredtmann, J., and Schmidt, C. M. (2013). Time vs. money — The supply of voluntary labor and charitable donations across Europe. *European Journal of Political Economy*, vol. 32, pp. 80-94.
- [2] Bradford, S., Hills, L. and Johnston, C. (2016). Unintended volunteers: the volunteering pathways of working class young people in community sport. *International journal of sport policy and politics*, vol. 8, no. 2, pp. 231-244.
- [3] Brown, E. and Zhang, Y. (2013). Is volunteer labor part of household production? Evidence from married couples. *Review of economics of the household*, vol. 11, no.3, pp. 341-369.
- [4] Brozmanova Gregorova, A. (2012). *Dobrovoľníctvo na Slovensku – výskumné reflexie*. Bratislava: Iuventa.
- [5] Foubert, J., Levecque, K. and Van Rossen, R. (2017). Feeling well while chronically ill or impaired: a multilevel study on the moderating role of employment and volunteering in Europe. *Disability & Society*, vol. 32, no. 1, pp. 17-36.
- [6] Evans, E and Saxton, J. (2005). The 21st Century volunteer. A report on the changing face of volunteering in the 21st Century. [online]. London: nfpSynergy, 2005 Dostupné na internete: <http://thestewardsjourney.com/wp-content/uploads/2014/12/21st-Century-Volunteer.pdf>.

- [7] Haas, R. and Serrano-Velarde, K. (2015). When doing good becomes a state affair: Voluntary Service in Germany. *Voluntas*, vol. 26, no. 5, pp. 1718-1738.
- [8] Maliskova, Z. and Hrozenska, M. (2016). *Práca s mládežou - výzvy a trendy*. Bratislava: Mádež ulice, o. z., pp. 24.
- [9] Petrovski, E., Dencker-Larsen, S., and Holm, A. (2017). The effect of volunteer work on employability: A study with Danish survey and administrative register data. *European Sociological Review*, vol. 33, no. 3, pp. 349-367.
- [10] Pevnaya, M. (2014). Youth volunteering, the way to the regional labor market or source of human resources loss? *Proceeding paper from 8th international days of statistics and Economics*, Prague, Czech Republic, pp. 1145-1153.
- [11] PROACTIVA, n.o. (2015) Stratégia podpory rozvoja dobrovoľníctva v Košickom kraji. Dostupné na internete: https://web.vucke.sk/files/dokumenty/pub/regionalny_rozvoj/phsr/2015/prilohy/priloha_9_strategia_podpory_rozvoja_dobrovolnictva_v_kosickom_kraji.pdf.
- [12] Sabic, A. (2014). Challenges of demographic changes and an example of good practice in social work with older people. *Revija za socialnu politiku*, vol. 21, no. 2, pp. 161-184.
- [13] Souto-Otero, M. and Shields, R. (2016). The investment model of volunteering in the EU 27 countries: skills development and employability. *European societies*, vol. 18, no. 5, pp. 487-513.
- [14] Spera, C., Ghertner, R., Nerino, A. and DiTommaso, A. (2015). Out of work? Volunteers have higher odds of getting back to work. *Nonprofit and voluntary sector quarterly*, vol. 44, no. 5, pp. 886-907.
- [15] Výročná správa SČK 2016. dostupné na: <http://redcross.sk//content/images/upload/image-1500013104-5968623042d06.pdf>.

INSTITUTION FEATURES OF ECONOMIC DEVELOPMENT DURING GLOBALIZATION

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Abstract. The institutional characteristics defining the features of the Russian economy and advantages provided by initially available environment are considered in article. Also the shortcomings representing certain restrictions of opportunities of use of positive sides of the globalization processes happening in the world are considered. Globalization should be considered as a modernization process component – a necessary component of development of society, as process of liberalization of national economies, political systems, assimilation of a way of life inherent in the western civilization. The type of economy and methods of managing of each civilization are developed on the basis of the historical experience of economic life and various geographical, demographic and other factors. A significant role among this factors play the national mentality and habits (customs) interconnected with it, standards of behavior and traditions. In turn customs and traditions are a form of existence of the norms and standards accumulated and told to the subsequent generations that provides preservation by means of institutes of traditional society of repeatability of certain socially significant situations. Globalization brings economy of various countries to qualitatively other level, thus smoothing and even destroying their cultural and historical features. This process can be slowed down as a result of action of a national features and traditions.

Keywords: Economic Development, Globalization, Civilization Features, Social and economic Institutes.

JEL Classification: O21, O43, Z1

1. Introduction

In modern world economic system globalization processes become the prevailing development vector playing the predominating role in functioning practically of all national economies.

These globalization processes are shown in all spheres of life of society and have the consequences which are reflected in change of relationship between civilizations, between religious faiths, between social groups on all planet. (Kane and York, 2017).

As the reasons of such rapid development of globalization processes it is possible to consider both scientific and technical revolution, and universal introduction of information technologies, and quality change of human consciousness. In general, globalization represents the integration processes which unify development of world economy, transformation of the market relations, scientific and technical progress. However, degree of objectivity and naturalness, existence of

both positive, and negative consequences of these processes for all countries and the people can be treated ambiguously. (Dengov et al, 2016; Morck et al., 2005)

2. Strategy of economic development

According to the representations put by technological type of the western civilization, tradition is destiny of the past, and traditional society is one of intermediate (or even initial) stages of the rectilinear movement of each human community, regardless of features of its historical development, to an ideal — to modern industrial society, to «society of general welfare». From such point of view, the modernization considered as the process of liberalization of national economies and political systems directed on creation of a specific civilization of the European type, represents transition from traditional society to the modern (Kirillovskaya et al, 2016; Kern et al., 2015)

On this unique and historically predetermined way, according to supporters of the theory of modernization, have to pass and there are all nations and the countries, however they take a way of modernization at different times. Their place among the developed countries and extent of achievement of welfare depends on this reason today. (Ermolaev & Salomatina, 2016). On this basis all states are subdivided into modernization echelons.

In the countries of the first echelon of modernization, since XV century, there were centers of world system of capitalism, the centers of European and world economy. This «world of economy», is the space outlined by certain borders, that has a certain center and peripheries, that is the sum of private economies with various level of riches. From this construction emerged such type of an inequality as the international division of labor which is concretized in the form of spatial model of development and backwardness as division of labor on the scale of the world economy wasn't the agreement of equal partners. (Brodell, 1992)

By the beginning of an industrial civilization the state of dependence accelerated process of modernization in some countries and braked it in countries, that were the vendors of raw materials. And with time, when domination of economy became more and more considerable, also the economic inequality of partners of the world economy were increased that divided the world into exclusive part and part deprived of privileges. Over time such inequality ceased to satisfy the countries - peripheries of the world economy, and this dissatisfaction was shown in aspiration to look for and find the models of independent development which will take into account features of internal economic and cultural life of the country (Altunyan & Kotsofana, 2016).

The idea of need for further world development of globalization of national economies, transition to the uniform world economy based on liberalism became reaction of the centers of the world economy to the changed position of the peripheral countries. Globalization, according to her supporters, has to become irreversible process of internationalization not only the economic sphere, but also all public life, having created conditions for free movement of financial, material and human resources. (Claveria et al., 2017)

Globalization, as well as modernization in general, introducing the culture, culture of «modernita», destroying one traditions incompatible with its principles, at the same time establishes others — traditions of continuous change, tradition of rationalism.

Theorists of modernization and globalization distinguish favorable and adverse factors of transformations, claiming that during modernization it is necessary to eliminate adverse factors (Madr & Kouba, 2015).

Among all factors influencing economic development the person as the subject of economic activity and a component of a community, is considered as a factor the most important (Neumann, 2015). In this regard today the leading role is given to concept of national mentality, and change of consciousness of the person, his representations, economic thinking, norm of actions and mentality is the key moment of modernization of society. (Pradhan et al., 2017)

Preservation of elements of traditional society and absence of rationalistic consciousness at most of the population belong to adverse factors of transformations. M. Veber recognized that the type of behavior and perception which could be called «traditionalism» was the first opponent whom «spirit» of capitalism had to meet (Veber, 1990).

Therefore some scientists consider that «development of a new cultural stereotype» forms «core» of all process of modernization. And ideologists of modernization consider destruction or, at least, transformation of traditional sector and traditional social and economic and political institutes as a foreground task. From there is such definition of modernization as rationalization of consciousness on the basis of scientific knowledge, with refusal of behavior according to traditions, as changes of types of consciousness, transformation of the subject of public consciousness, change like the community of people (Gerasimov, 1994).

Change, correction of consciousness, according to «modernizers», has to lead to possibility of creation and functioning of new social and economic, political and cultural institutes and the relations, values and norms. And these institutes, the relations, values, norms have to conform, or at least not contradict the ideals defined, accepted in the western society, establishments and institutes of civil society having a basis in the Roman right and the western Christianity (Harumova, 2015).

Different types of the personality, different national mentalities were formed under the influence of various natural and social factors. Their distinctions caused various understanding of economic freedoms, sense and the basic principles of economic activity (Butek, 2015). The mentality of the West European civilization based on ideas of Protestantism differs in pronounced rationalism and individualism. And expansion of the West European civilization defined the main lines of world history within some last centuries. (Szczerbiak, 2016).

«Such qualities as practicalness, efficiency, thrift, ingenuity, ability to risk, coldness, emotional callousness, aspiration to independence, tendency to integrity in business, sense of superiority over other people, ability to self-discipline and self-organization are peculiar to representatives of the western civilization. Only such human qualities can reproduce the western civilization, or keep it in the same form and with the same qualities» (Zinoviev, 1995).

Socio-political and economic systems of the Russian civilization and the Russian economic mentality were historically formed in the specific conditions not peculiar to other people. Set of such conditions isn't subsistent in any of the countries. Specifics and uniqueness of Russia is that the enormous state always represented the special world economy in which the certain stereotype of economic behavior caused by features of space and a current of historical time was created (Grechenyuk et al, 2016).

For one thousand years Russia represented the self-sufficient economic system functioning under all laws of similar macrosystems, contacting and interacting with the world economies, but very little depending on them. Production of such system capable to independent existence,

has to be necessarily composite and versatile (Kormanova, 2015). The country which isn't providing itself to all necessary can't independently exist.

This truth, actual for Russia, was formulated at a turn of the XIX-XX centuries by the Russian scientist-economist L. Tikhomirov in the following form: «The country can't, without being independent economically, not to depend on other stronger country and in the political relation. Between the strong countries there can be only a balance of economic and political forces – if the economy becomes weaker, the political component, usually by means of the military force or threat of force has to amplify. If it isn't present, prepotent country starts dictating the terms with a pressure from economy» (Tihomirov, 1990). And so was always during a thousand-year path of development of Russia. (Vochozka, 2010)

The world famous modern Russian writer, the thinker, the sociologist A. A. Zinovyev who lived long time in the West in one of the latest books, entered the term «zapadnization» meaning «aspiration of the West to make other countries similar to on a social system, economy, ideology, psychology and culture». Thus Zinovyev warns that the purpose of this process – to bring other countries «to such state that they lost ability to independent development, to include them in the West sphere of influence, and not as equal and equipotent partners, and as satellites or, better to say, colonies of new type» (Zinoviev, 1995; Szczerbiak, 2016)

This aspiration and this process have the widespread name «globalization», and the doctrine reflecting regularity of development of this process and explaining the logician of its existence – «globalism».

Globalization has the positive sides. These are benefits of the international division of labor, the increasing exchange of technological innovations, high mobility of the capitals and labor, expansion of the commodity markets (Korostyshevskaya & Urazgaliev, 2016).

But there are also negative consequences which threaten not only the countries of the second and third echelons, but also favourites of globalization – to economically developed countries.

Negative consequences:

- deepening of social stratification, and as at the level of housekeeping and regions and the whole states,
- loss of the economic sovereignty and self-sufficiency of the countries,
- vulnerability of the country to financial crises, which reasons out of control.
- deindustrialization and denationalization of the industry that is expressed in capital flow to the states with cheap labor, and inability of the working economically developed countries to compete with the coming cheap labor of developing countries (Buhanan, 2001).

Thus, as a result of the developing process of globalization all states, regardless of their economic situation can be damaged. (Pashkus et al., 2016) The transnational systems which unite production, financial, scientific and information structures, and define (or so far only seeking to define) the directions of economic development of all world system are the winners. (Havu, 2016)

For weakening of negative consequences of globalization it is necessary to choose own vector of development based on every possible strengthening of national economies which have to rise in rigid opposition to the free market not to lose the sovereignty and not to appear depending on multinational corporations.

In the real world there have to be national economies interacting with each other. In separate national economies crucial decisions have to be made on the basis of that is better for the nation.

The dependence of Russia from influence of the West began to amplify since the beginning of the XVI century. This dependence was connected with processes of modernizations which happened in the centers of the capitalist world. Russia found the answer to the happening processes – imperial modernization. Now also the way which is equitable to interests of the people and the state has to be found.

It is important to understand, whereto the world economy develops, what deformations happened and will happen in capitalist system, despite its victory over socialism. Whether there was this victory thanks to great advantages of capitalism, or because of violation of the principles of functioning of socialist model of managing. (Nadanyiova, 2016)

3. Conclusion

During transitional stages of economic development each public, each state in own way feels need for updating and transformation. The Russian State is even more, than other countries needs changes. However when we tell about transformation of the country, it is necessary to act as much as possible deliberately and carefully. Any measure can be entered only after is resolved an issue of what impact it will make on all parties of activity of the people.

Each type, every way of economic development of the country assumes the accounting of both internal, and external factors which are defined by historically developed national, climatic and geopolitical characteristics. Each type and every way of economic development has the features relating to different stages of development and connected with basic conditions on each of them.

Thus, one of key factors of success of any social and economic transformations is conformance of strategy of these transformations to the institutional environment which is available in this society. The fact of the matter is that. application of the economic policy which well recommended itself in one place, can't show the same results in other place and in other time.

Therefore the chosen path of economic development needs to be correlated to mentality, traditions and other key elements of institutional structure of this society.

References

- [1] Altunyan, A. and Kotsofana, T. (2016). Global political and economical processes, monetary policy of the bank of Russia and development of the Russian economy. *Proceedings of the 16th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 33-40.
- [2] Brodel, F. (1992), *Material civilization, economy and capitalism. XV – XVIII cc. In 3 volumes*. V.3. Time of world, M. Progress. 679, pp. 14.
- [3] Buhanan P. (2001). Economic nationalism or global economy? *Predprinimatelstvo*, no. 1, pp.62-74.
- [4] Butek, M. (2015). Importance of local structures in the globalized world. *Proceedings of the 15th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 72-77.

- [5] Claveria, O., Oscar, M. and Torra, S. (2017). A new approach for the quantification of qualitative measures of economic expactations. *Quality & Quantity*, vol. 51, no. 6, pp. 2685-2706.
- [6] Gerasimov, I. (1994) Russian mentality and modernization. *Social Sciences and the Present*, no. 4, pp. 63-73.
- [7] Dengov, V., Gregova, E. and Maksimov, A. (2016). Globalization in the field of food retail St.Petersburg: Analysis of the price policy. *Proceedings of the 16th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 362-374.
- [8] Ermolaev, K. and Salomatina, S. (2016). Synergetic approach to the development of international institutions regulating in the conditions of globalization. *Proceedings of the 16th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 433-441.
- [9] Grechenyuk, O., Grechenyuk, A. and Polyanin, A. (2016). Research of global servicization processes and their role in the Russian economy. *Proceedings of the 16th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 523-531.
- [10] Harumova, A. (2015). Multinationals as a part of globalization. *Proceedings of the 15th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 192-198.
- [11] Havu, K. (2016). EU law in member state courts: ‘Adequate Judicial Protection’ and effective application – ambiguities and nonsequiturs in guidance by the court of justice? *Contemporary Readings in Law and Social Justice*, vol. 8, no. 1, pp. 158–187.
- [12] Kane, K. and York, A. M. (2017). Prices, policies, and place: What drives greenfield development? *Land Use Policy*, vol. 68, pp. 415-428.
- [13] Kern, A., Marien, S. and Hooghe, M. (2015). Economic crisis and levels of political participation in Europe (2002-2010): The role of resources and grievances. *West European Politics*, vol. 38, no. 3, pp. 465-490.
- [14] Kirillovskaya, A., Pashkus, V. and Volkova, A. (2016). The newest economic policy, government regulation of the economy and economic security. *Proceedings of the 16th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 870-875.
- [15] Kormanova, L. (2015). Global methods of communication as a necessary part of communication mix. *Proceedings of the 15th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 318-324.
- [16] Korostyshevskaya, E. and Urazgaliev, V. (2016). Russia in European innovation space in the context of globalization. *Proceedings of the 16th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 970-979.
- [17] Madr, M. and Kouba, L. (2015). Diversity of capitalism in the European post-socialist countries: Evidence from the Balkan and post-soviet states. *Proceedings of the 15th*

- International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 382-392.
- [18] Morck, R., Wolfenzon, D. and Yeung, B. (2005). Corporate governance, economic entrenchment, and growth. *Journal of Economic Literature*, vol. 43, no. 3, pp. 655-720.
 - [19] Nadanyiova, M. (2016). Using the principles of green marketing in Slovak conditions, *Ekonomicko-manazerske spektrum*, vol. 10, no 1, pp. 47-58.
 - [20] Neumann, P. (2015). The impact of structural changes in national economies on globalization character. *Proceedings of the 15th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 498-504.
 - [21] Pashkus, V. Y. et al. (2016). Evaluation of city brand in the global economy: Techniques and perspectives. *Proceedings of the 16th International Scientific Conference of Globalization and its Socio-Economic consequences*, Rajecke Teplice, Slovakia, pp. 1635-1641.
 - [22] Pradhan, R. P. et al. (2017). Venture capital and innovation: Evidence from European economic area countries. *International Journal of Innovation and Technology Management*, vol. 14, no. 6.
 - [23] Szczerbiak, A. (2016). A model for democratic transition and European integration? Why Poland matters. *Geopolitics, History, and International Relations*, vol. 8, no. 1, pp. 221–236.
 - [24] Tihomirov, L. (1990). *Questions of economic policy*. M. Univer. Tip. 83, pp. 23.
 - [25] Veber, M. (1990). *Protestant ethics and spirit of capitalism*. Col. «Selected works». M. Progress. 808, p.p. 80.
 - [26] Vochozka, M. (2010). Development of methods for comprehensive evaluation of business performance. *Politická Ekonomie*, vol. 58, no. 5, pp. 675-688.
 - [27] Zinoviev, A. (1995). *West. Zapadnizm phenomenon*. M. CenterPoligraf. 461 p., pp. 46-47, 416.

DEVELOPMENT OF INVESTMENT PRECIOUS METALS IN THE GLOBAL ENVIRONMENT

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Abstract. Precious metals are gaining in popularity especially in the times of financial crises, and uncertainty, when their prices tend to rise as investors seek safe investments to evaluate free financial resources. The main aim of the article is to highlight and explain the importance of the development of selected investment precious metals in the global environment and their evaluation over time using technical analysis. For the determination of profit or loss at individual time intervals, an analysis is performed using the Elliott International Classification of Waves. The problem is that a large proportion of citizens cannot exploit and assess the precious metals' benefits for improving living conditions. The business environment, nevertheless, creates and adjusts investment products made of precious metals in physical form in the form of slurries, bricks and coins to make them affordable for as many investors as possible. Thanks to these adjustments, citizens can make regular and irregular investment plans which increase their real wealth according to their economic possibilities. The advantage is that some metals are highly liquid and acceptable assets in the global environment and not only from the side of the investment public but also from the side of industrial companies. Some enterprises are unable to create products without the existence of precious metals, which is another positive attribute which has an influence on their assessment. Making real money savings in precious metals can be considered justifiable and desirable because they lead to securing or possibly maintaining the current standard of living in unexpected life situations.

Keywords: global environment, precious metals, technical analysis, investor

JEL Classification: G1, G11, G19

1. Introduction

Drahé kovy jsou jednou z investičních cest, jak je možné vytvářet hodnotná aktiva, které by měl člověk využívat v době nedostatku finančních prostředků vlivem nepříznivých životních skutečností. Drahé kovy mají své opodstatnění, protože jsou to investice s bohatou historií, které se i nadále těší velké oblibě u části investičního publika. Svůj význam některé z nich podtrhují skutečnosti, že je lze uplatnit v globálním prostředí jako platidlo nebo i jako zástavu při žádosti o úvěr. Avšak každá investice obsahuje určitou míru rizika vlivem řady faktorů, které se vytváří v čase. Okamžik načasování pro nákupy a prodeje je jedním z nich, protože až při uskutečnění prodeje investor zjistí, zda má zisk nebo ztrátu. Investice mají buď pozitivní anebo negativní dopady podle Myskove et al., (2013) a to platí i pro drahé kovy. Určitým dalším nedostatkem může být skutečnost, že z reálné držby drahých kovů neplyne žádný dodatečný

výnos jako např. u akcií v podobě dividend. Dividendovou problematikou se zabývá např. Sejkora & Duspiva (2015), Jo & Pan (2009).

Hlavním problémem článku je, že velká část dospělé veřejnosti nedokáže zhodnocovat své volné finanční zdroje s využitím investičních možností, které nabízí i další drahé kovy nejen zlato a stříbro, které jsou občanům přece jen známější než ostatní drahé komodity. Hlavním cílem článku je upozornit a vysvětlit, že je možné uskutečňovat investiční záměry do méně populárních cenných kovů, které mají své přednosti v globálním prostředí vlivem času s využitím technické analýzy. Záležitostmi souvisejícími s investičními drahými kovy se zabývá např. Low et al. (2016), Novotny (2014), Almudhaf & AlKulaib (2017).

2. Investiční technická analýza

Investor, který začne uskutečňovat aktivní obchody ve světě investic ať reálných nebo finančních může při svých investičních záměrech využívat některou z existujících finančních analýz. Tyto finanční analýzy tvoří fundamentální, psychologická a technická analýza. Výhodou technické analýzy, je skutečnost, že investor může číst změny, údaje, data a informace z různých grafických formací, které jsou velice jednoduché. Další pozitivní atribut této analýzy je její široké využití na všech trzích, to znamená investor ji může uplatnit nejen při investování na akciových trzích podle Yamamoto (2012), Mitra (2011), ale i při investování do komodit na to upozorňují Nesnidal & Podhajsky (2007), Yen & Hsu (2010), Bosch & Pradkhan (2015), do měn Kuang, et al. (2014).

Jednou částí technické analýzy je teorie Elliotových vln, která tvrdí, že věci se v přírodě pravidelně opakují v časových periodách a to platí i pro ekonomiku a finanční trhy. Příkladem může být střídání optimismu a pesimismu tzn., že buď ekonomika roste anebo klesá a to platí i pro finanční trhy. Existuje mezinárodní klasifikace Elliotových vln uvedená v tabulce 1, kterou využívají Rejnus (2014), Atsalakis et al. (2011), která charakterizuje úroveň vlny a dobu trvání a podle které lze provádět investiční záměry.

Table 1: Mezinárodní klasifikace Elliotových vln

	Úroveň vlny	Doba trvání vlny
1.	Grand Supercycle	Od několika desetiletí po staletí
2.	Supercycle	Od několika let po několik desetiletí
3.	Cycle	Od jednoho roku do několika let
4.	Primary	Od několika měsíců do cca dvou let
5.	Intermediate	Týdny až měsíce
6.	Minor	Týdny
7.	Minute	Dny
8.	Minuette	Hodiny
9.	Sub-minuette	Minuty

Source: Rejnus (s. 307, 2014)

Z mezinárodní klasifikace plyne pro investory řada výhod. V případě, že na trhu existuje investice s bohatou historií, je to velká přednost, protože je možné připravit si různá časová období právě za pomoci této klasifikace, kde investor může zjistit zajímavé skutečnosti při analýze časových vln, které mu mohou usnadnit investiční rozhodování.

3. Investování do drahých kovů za pomoci mezinárodní klasifikace Elliotových vln v globálním prostředí

Vliv času na investice je velice zásadní, to platí i pro drahé kovy, protože v průběhu času se odehraje hodně událostí to jak v domácím, ale i v mezinárodním prostředí, které mají buď pozitivní anebo negativní dopad na majetky investorů zvláště v dnešní době, kdy svět je čím dál tím více globalizovaný. Faktor času nelze opomíjet, to dokládají zde uvedené modelové příklady při investování do drahých kovů za pomoci analýzy mezinárodní klasifikace Elliotových vln, která má devět vln podle doby trvání. Poslední devátá vlna není v modelových příkladech vyhodnocena s ohledem na její velice krátkou dobu trvání. Je to proto, že drahé kovy nemají takový spekulativní charakter, jako to mají např. akcie. Pro analýzu byly vybrány méně populární drahé kovy, které nejsou investiční veřejnosti tak známy jako zlato a stříbro, kde jejich investiční potenciál je často zbytečně opomíjen. Analyzovány a klasifikovány jsou tyto kovy: platina, palladium, rhodium, ruthenium a iridium. Cílem je zjistit jaké výnosy případně ztráty generují tyto drahé kovy investorům v globálním prostředí, protože pro kovy platí doporučení držet je minimálně pět a více let, aby došlo k zhodnocení. Modelové příklady nezohledňují daně a transakční náklady a jsou řazeny v pořadí uvedené v tabulce 1. Dalším předpokladem je, že investor v každém období koupil a po vymezeném čase i prodal jednu trojskou unci vybraných kovů a to v amerických dolarech (USD). Data zkoumané problematiky byla čerpána pouze z portálu Johnson Matthey (Precious Metals Management), kde se jednalo o nákupní a prodejní ceny pro časové intervaly. (Matthey, 2017; Low et al., 2016)

3.1 První vlna Grand Supercycle

První vlna je zaměřena na nejdelší období, kdy doporučení je několik desetiletí až staletí investici držet. Modelový příklad zohledňuje sice sedmnáct let, což je z důvodu dostupnosti existujících dat o těchto drahých kovech, přesto lze doporučení považovat za téměř splněné, protože k naplnění doporučení chybí pouze tři roky, aby byla splněna podmínka několik desetiletí.

Table 2: Grand Supercycle od 1. 7. 2000 do 30. 6. 2017

Drahý kov	Nákup 1. 7. 2000	Prodej 30. 6. 2017	Výnos absolutní	Výnos relativní
Iridium	415	960	545	131,33
Palladium	707,38	853	145,62	20,59
Platina	566,14	925	358,86	63,39
Rhodium	2451,18	1040	-1411,18	-57,57
Ruthenium	161,67	65	-96,67	-59,79
Celkem	4301,37	3843	-458,67	-10,66

Source: vlastní zpracování

Přestože, toto portfolio drahých kovů vykázalo ztrátu, dokládá to tabulka 2, a i přes splnění podmínky držby pět a více let. Je si třeba uvědomit, že žádná investice není zcela bezriziková, ačkoli drahé kovy jsou považovány za méně rizikové. Ztrátu je možné eliminovat tím, že by investor nadále ztrátové kovy držel a prodal je až v okamžiku, kdy dosáhnou pozitivních hodnot nikoli 30. června jak je uvedeno v modelovém příkladu. I zde se ukázalo, jak je důležité sestavovat portfolia, byť tři kovy nedokázaly eliminovat ztrátu dvou z nich. V případě, že by investor vlastnil pouze kovy rhodium a ruthenium, jeho celková ztráta by byla mnohem větší.

3.2 Druhá vlna Supercycle

Druhá vlna již splňuje podmínku času, která trvala dvanáct let a je vyhodnocena v tabulce 3. Oproti předchozímu období stejné drahé kovy vykázaly zisk a taktéž i ztrátu, ale se zásadním rozdílem, že ziskové investice dokázaly pokrýt ztrátu a ještě generovat výnos. Zde sestavování skladby investic dosahuje dalšího opodstatnění, proč neinvestovat pouze do jednoho kovu.

Table 3: Supercycle od 1. 7. 2005 do 30. 6. 2017

Drahý kov	Nákup 1. 7. 2005	Prodej 30. 6. 2017	Výnos absolutní	Výnos relativní
Iridium	173,33	960	786,67	453,86
Palladium	186	853	667	358,60
Platina	876	925	49	5,59
Rhodium	1974,29	1040	-934,29	-47,32
Ruthenium	80,29	65	-15,29	-19,04
Celkem	3289,91	3843	553,09	16,81

Source: vlastní zpracování

3.3 Třetí vlna Cycle

Ve vlně Cycle, téměř všechny drahé kovy vykázaly pouze ztrátové obchody, tuto situaci vysvětluje tabulka 4. Pouze palladium generovalo výnos. Samozřejmě, že investor může eliminovat svoje ztrátové obchody, že počká na ziskové pozice, protože čas je velice klíčový faktor, který v globálním prostředí nabývá na významu vlivem častých změn.

Table 4: Cycle od 1. 7. 2012 do 30. 6. 2017

Drahý kov	Nákup 1. 7. 2012	Prodej 30. 6. 2017	Výnos absolutní	Výnos relativní
Iridium	1074,09	960	-114,09	-10,62
Palladium	581,64	853	271,36	46,65
Platina	1429,55	925	-504,55	-35,29
Rhodium	1227,95	1040	-187,95	-15,31
Ruthenium	115	65	-50	-43,48
Celkem	4428,23	3843	-585,23	-13,22

Source: vlastní zpracování

3.4 Čtvrtá vlna Primary

Vlna Primary má zcela opačný charakter než předchozí vlna Cycle. Většina drahých kovů dosáhla na ziskové pozice, jen platina byla ztrátová. Přitom se jedná pro kovy o velice krátké časové období, které trvalo pouze jeden rok. Čili zde dochází k částečnému vyvrácení tvrzení, že je dobré držet kovy pět a více let. Tento příklad charakterizovaný v tabulce 5 podtrhl jak je klíčový okamžik nákupu a prodeje.

Table 5: Primary od 1. 7. 2016 do 30. 6. 2017

Drahý kov	Nákup 1. 7. 2016	Prodej 30. 6. 2017	Výnos absolutní	Výnos relativní
Iridium	540,48	960	419,52	77,62
Palladium	647,95	853	205,05	31,65
Platina	1093,67	925	-168,67	-15,42

Rhodium	648,57	1040	391,43	60,35
Ruthenium	42	65	23	54,76
Celkem	2972,67	3843	870,33	29,28

Source: vlastní zpracování

3.5 Pátá vlna Intermediate

Vlna Intermeditate navázala na pozitivní výsledky z období Primary, které jsou uvedeny v tabulce 6, protože stejné kovy jako předchozím časovém úseku opět generovali zisky a stejně tak i platina, která navázala na ztrátové obchody z předešlého období.

Table 6: Intermediate od 1. 1. 2017 do 30. 6. 2017

Drahý kov	Nákup 1. 1. 2017	Prodej 30. 6. 2017	Výnos absolutní	Výnos relativní
Iridium	697,62	960	262,38	37,61
Palladium	752,95	853	100,05	13,29
Platina	975,29	925	-50,29	-5,16
Rhodium	834,29	1040	205,71	24,66
Ruthenium	40	65	25	62,5
Celkem	3300,15	3843	542,85	16,45

Source: vlastní zpracování

3.6 Šestá vlna Minor

Tato zkoumaná vlna, vykazuje obdobné hodnocení jako předchozí dvě vlny a to Primary a Intermediate. Výsledky jsou zaznamenány v tabulce 7. Kde stejné komodity vykazují opět ziskové pozice a pouze ztrátová je opět platina. Zde se potvrzuje skutečnost, která je typická pro drahé kovy, které na některé ekonomické skutečnosti ve světě reagují se zpožděním nebo na ně vůbec nereagují, případně jsou proti nim imunní jako např. proti inflaci.

Table 7: Minor od 5. 6. 2017 do 30. 6. 2017

Drahý kov	Nákup 5. 6. 2017	Prodej 30. 6. 2017	Výnos absolutní	Výnos relativní
Iridium	945	960	15	1,59
Palladium	848	853	5	0,59
Platina	957	925	-32	-3,34
Rhodium	950	1040	90	9,47
Ruthenium	65	65	0	0
Celkem	3765	3843	78	2,07

Source: vlastní zpracování

3.7 Sedmá vlna Minute

V předposlední zkoumané vlně uvedené v tabulce 8 se poprvé objevuje nulový rozdíl mezi nákupní a prodejní cenou u iridia a ruthenia. Jedná se přece jen o drahé kovy, které se netěší takovému zájmu ze strany investorské veřejnosti a již se začíná objevovat skutečnost, že drahé kovy nemají takový spekulativní charakter jako některé cenné papíry.

Table 8: Minute od 26. 6. 2017 do 30. 6. 2017

Drahý kov	Nákup 26. 6. 2017	Prodej 30. 6. 2017	Výnos absolutní	Výnos relativní
Iridium	960	960	0	0
Palladium	867	853	-14	-1,61
Platina	926	925	-1	-0,11
Rhodium	1015	1040	25	2,46
Ruthenium	65	65	0	0
Celkem	3833	3843	10	0,26

Source: vlastní zpracování

3.8 Osmá vlna Minuette

Poslední zkoumanou vlnou je Minuette, která trvala pouze pět a půl hodiny. Toto časové období podtrhlo, že se nejedná o vysoce spekulativní investice, protože rozdíl mezi nákupní a prodejní cenou byl nulový dokonce u třech komodit a to iridia, rhodia a ruthenia dokládá tabulka 9, kdy prodej byl uskutečněn na Hongkongské burze vlivem dostupných aktuálních cen a u ostatních modelových příkladů to bylo na komoditní burze v Londýně. (Matthey, 2017)

Table 9: Minuette od 8:30hod do 14hod dne 30. června 2017 v Hongkongu

Drahý kov	Nákup 30. 6. 2017	Prodej 30. 6. 2017	Výnos absolutní	Výnos relativní
Iridium	960	960	0	0
Palladium	858	857	-1	-0,12
Platina	923	925	2	0,22
Rhodium	1030	1030	0	0
Ruthenium	65	65	0	0
Celkem	3836	3837	1	0,03

Source: vlastní zpracování

4. Analýza a komparace výnosů a ztrát v jednotlivých vlnách

Každé období je svým způsobem jedinečné a podle toho se vyvíjí výnosy a ztráty. I na investory to má značný vliv, protože musí uskutečnit i ztrátové obchody, pokud nutně potřebují finanční prostředky vlivem změn i v jejich osobním životě ať pozitivních nebo negativních. Načasování v globálním prostředí hraje významnou roli pro každého investora, dokládají to i dosažené souhrnné výsledky v tabulce 10.

Table 10: Analýza a komparace dosažených výnosů a ztrát u sestavených portfolií v jednotlivých vlnách

Úroveň vlny	Dosažený výnos v USD	Dosažený výnos v %	Portfolio kladné +/záporné -
Grand Supercycle	-458,67	-10,66	-
Supercycle	553,09	16,81	+
Cycle	-585,23	-13,22	-
Primary	870,33	29,28	+
Intermediate	542,85	16,45	+
Minor	78	2,07	+

Minute	10	0,26	+
Minuette	1	0,03	+

Source: vlastní zpracování

Při pohledu na celkové výsledky v jednotlivých portfoliích sestavených v osmi časových vlnách z vybraných drahých kovů lze konstatovat, že většina z nich dosáhla celkových pozitivních hodnot a to v šesti případech a pouze ve dvou negativních.

Dále je vhodné analyzovat a komparovat jednotlivé drahé kovy zastoupené v portfoliu ve zvolených vlnách, aby investor zjistil, který z nich generoval nejčastěji výnosy a který ztráty. V tabulce 11 je uvedena frekvence, která by měla ovlivnit investiční záměry, které by měly vést k rozhodnutí, které kovy v portfoliu držet a které prodat.

Table 11: Analýza a komparace výnosů a ztrát u zkoumaných drahých kovů v jednotlivých vlnách

Úroveň vlny	Iridium	Palladium	Platina	Rhodium	Ruthenium
	Výnos +/Ztráta -/Bez změny x				
Grand Supercycle	+	+	+	-	-
Supercycle	+	+	+	-	-
Cycle	-	+	-	-	-
Primary	+	+	-	+	+
Intermediate	+	+	-	+	+
Minor	+	+	-	+	x
Minute	x	-	-	+	x
Minuette	x	-	+	x	x
Celkem výnosů/ztrát/beze změny	5/1/2	6/2/0	3/5/0	4/3/1	2/3/3

Source: vlastní zpracování

Z výsledků tabulky vyplývá, že nečastějších výnosů v šesti obdobích dosáhl drahý kov palladium, o jedno výnosové období méně má iridium. Nejméně ziskových obchodů dosáhl ruthenium pouze ve dvou vlnách, ale s největším počtem nulových obchodů, které byly tři.

Uvedené modelové příklady zabývající se investováním do vybraných drahých kovů přinesly nové poznatky, které jsou tak příznačné pro drahé kovy, že se zhodnocují v delším časovém horizontu, což ne vždy bylo prokázáno podle zde zvolené mezinárodní klasifikace Elliotových vln.

5. Conclusion

Existuje jeden hlavní názor pro drahé kovy, že znamenají jistotu, což bylo potvrzeno i zde jejich analýzou v jednotlivých časových vlnách, protože všechny kovy se nadále využívají jak pro investiční záměry, ale i v průmyslu a neexistuje předpoklad, že by tomu mělo být jinak. Přece jen drahý kov není akciová společnost, která může zaniknout, fúzovat a měnit právní formu, a to se buď pozitivně anebo negativně projeví v cenách akcií. Může samozřejmě zaniknout i společnost, která kovy vyrábí, těží a prodává, ale pokud investujeme do reálných drahých kovů a ty vlastníme, nemá to tak zásadní vliv jako to má např. na akcie. Přece jen se investor, zajímá prioritně o investiční produkt nikoli o společnost to je doménou cenných papírů. Výhodou některých drahých kovů je, že je lze přeměnit na finanční hotovost téměř na celém světě, čili některé kovy slouží jako globální platidlo jako je hlavně zlato. Avšak i zde

byla prokázána skutečnost, že žádné investice nejsou bezrizikové, což potvrdily i některé kovy ve zkoumaných časových vlnách, které vykázaly ztrátu. Výsledky analýzy lze považovat za relevantní, i když časové periody byly stanoveny autory.

Reference

- [1] Almudhaf, F. and AlKulaib, Y. (2017). Market timing in precious metals is detrimental to value creation. *Applied Economics Letters*, vol. 24, pp. 1019-1024.
- [2] Atsalakis, G., S., Dimitrakakis, E., M. and Zopounidis, C., D. (2011). Elliott wave zheory and neuro-fuzzy systems, in stock market prediction: The WASP system. *Expert Systems with Applications*, vol. 28, pp. 9196-9206.
- [3] Bosch, D. and Pradkhan, E. (2015). The impact of speculation on precious metals futures markets. *Resources Policy*, vol. 44, pp. 118-134.
- [4] Jo, H. and Pan, C. (2009). Why are firms with entrenched managers more likely to pay dividends? *Review of Accounting and Finance*, vol. 8, pp. 87-116.
- [5] Kuang, P., Schroeder, M. and Wang, Q. (2014). Illusory profitability of technical analysis in emerging foreign exchange markets. *International Journal of Forecasting*, vol. 30, pp. 192-205.
- [6] Low, R., K., Y., Yao, Y. and Faff, R. (2016). Diamonds vs. precious metals: What shines brightest in your investment portfolio? *International Review of Financial Analysis*, vol. 43, pp. 1-14
- [7] Matthey, J. (July 2017). Precious metals management [Online]. Available: <http://www.platinum.matthey.com/prices/price-charts>.
- [8] Mitra, S., K. (2011). How rewarding is technical analysis in the Indian stock market? *Quantitative Finance*, vol. 11, pp. 287-297.
- [9] Myskova, R., Obrsalova, I., Cencik, P. and Satera, K. (2013). Assesment of environmental and economic effects of environmental investment as a desicion problem. *In WSEAS Transaction on Environment and Development*, vol. 9, pp. 268-277.
- [10] Nesnidal, T. and Podhajsky, P. (2007). *Obchodování na komoditních trzích: průvodce spekulanta*. 2nd ed. Praha: Grada Publishing, pp. 47-49.
- [11] Novotny, J. (2014). The investment trends of enterprices into commodities in present business environment based on psychological analysis. *International Conference on Current Problems of the Corporate Sector*. Bratislava, Slovakia, pp. 356-361.
- [12] Rejnus, O. (2014). *Finanční trhy*, 4th ed. Praha: Grada Publishing, pp. 300-310.
- [13] Sejkora, F. and Duspiva, P. (2015). The Position of Management of Czech Joint-Stock Companies on Dividend Policy. *Economics and Management*, vol. 18, pp. 73-88.
- [14] Yamamoto, R. (2012). Intraday technical analysis of individual stocks on the Tokyo Stock Exchange. *Journal of banking & Finance*, vol. 36, pp. 3033-3047.
- [15] Yen, S., M., F. and Hsu, Y., L. (2010). Profitability of technical analysis in financial and commodity futures markets - A reality check. *Decision Support Systems*, vol. 50, pp. 128-139.

MACROECONOMIC AND MICROECONOMIC IMPLICATIONS OF GLOBALIZATION AND PUBLIC CHOICE THEORY

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Abstract. The process of globalization relies on one of the basic principles of economics that specialization and mutual trade can lead to the growth of the economic welfare of stakeholders, as the change in the composition of output of individual national economies will result in an increase in global output. Global business, which in turn leads to falling prices for products and services in the area of pricing, brings its macroeconomic positives when countries involved in the international economy reach a situation where their consumption options always exceed their production possibilities. From a microeconomic point of view, however, the globalization process brings its negative social consequences to employment, as winning global firms displace domestic producers who are unable to succeed in the global international economy. The failure of domestic producers reflects in a rise in domestic unemployment coupled with a significant reallocation of household income with all its socio-economic consequences on the domestic economy. For this reason, the pressure of domestic lobby groups is likely to influence the political and economic decision-making of national governments in the short or medium term, which, in pursuit of electoral victory, benefit from financial, media or other assistance of these very well organized groups. The subject of this contribution is to examine the above-mentioned microeconomic impacts brought about by globalization, from the prism of the theory of public choice, i.e. the economic approach examining the issue of political decision-making using the tools of economic theory.

Keywords: globalization, public choice, international economy, socio-economic consequences

JEL Classification: D72, D73, F61, F62, F68

1. Introduction

One of the important consequences of globalization is a growth of global prosperity based on one of the basic economic principles claiming that specialization and mutual trade can lead to the growth of the economic welfare of stakeholders, as the change in the composition of output of individual national economies will result in an increase in global output. In the course of global business prices fluctuate. This fact may have its macroeconomic positives when countries participating in the global economy reach a state where their consumption optimum exceeds their production optimum. However, in terms of microeconomic impact, globalization processes can, at least, have negative socio-economic consequences on employment in the short run, as domestic producers operating in the international economy may be forced out by winning global firms. A logical consequence of these processes is a growth in domestic unemployment accompanied by a significant redistribution of household incomes, which, in turn, can significantly affect the position of political parties in the domestic economy. For this

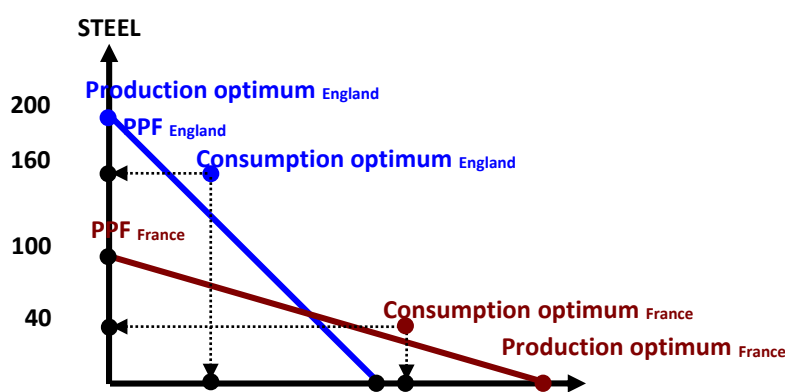
reason, domestic lobby groups are able to influence political and economic decision-making of national governments through financial and media assistance in the short or medium term.

One way to examine the political and economic decision making of national governments is to use the theory of public choice that analyses political behaviour and decision making using the tools and methods of economics (Holman, 1999). The subject of this paper is to examine the aforementioned microeconomic impacts brought about by globalization in terms of the public choice theory. First, the division of consumption and production optima of national economies will briefly be analysed using the production possibility frontier model. The second part will focus on the macroeconomic and microeconomic impacts of specialization and international trade. The third part will examine how globalization influences the behaviour of governments from the public choice theory's point of view.

2. Production possibility frontiers – production and consumption optima

Since its origin, economic science has brought a number of various theories and models that can illustrate the beneficial effect of participation in the international economy. Even very simple economic models are sufficient to understand the benefits of participation in the international economy. To use an abstract model of production possibility frontiers is one of the ways how to understand the division of consumption and production optima of individual national economies within the international economy (Martincik, 2005). Every economy is always limited by the volume of its scarce resources when choosing the quantity of produced output. This limitation can be graphically represented using the production possibility frontier, which represents the maximum of available combinations of two goods that can be produced with the given scarce resources and level of technology. If the economy is on the production possibility frontier, i.e. if it allocates its resources efficiently, then an increase in the production of one commodity is possible only if the production of the second one is reduced.

Figure 1: Absolute advantages



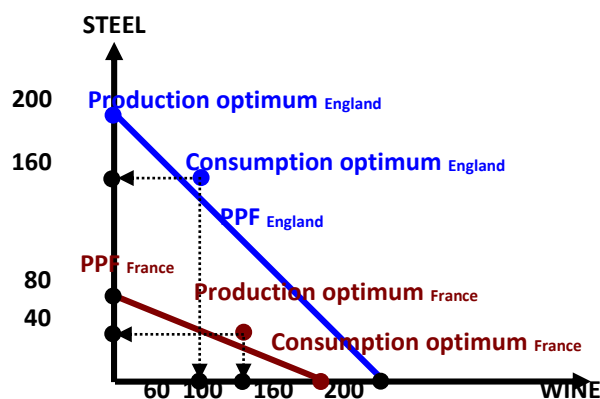
Source: Martincik (2005), own processing

The benefits of specialization with a subsequent barter can be illustrated by a simple example of England and France that produce wine and steel. Let us consider that England produces 200 units of steel or 300 units of wine and France produces 100 units of steel or 300 units of wine at the given volume of resources and the state of technology. Assuming constant yields, the combinations of possible distribution of steel and wine production in both economies are shown in Figure 1.

The figure clearly shows that England has an absolute advantage in the production of steel and France has it in the production of wines. In the case of specialization by absolute advantages, England will produce 200 units of steel and France will produce 300 units of wine. Because both economies want to market both commodities, there must be a mutual barter. If the mutual exchange ratio is set, for example, at 40 units of steel to 80 units of wine, then the final result of the barter will be 160 units of steel and 80 units of wine on the side of England and 40 units of steel and 220 units of wine on the side of France - see Figure 1. The result of specialization and subsequent mutual exchange is a situation where both economies will exceed the limits of their production possibilities in terms of their consumption. Dividing the production and consumption optima thus proves the advantages of specialization and mutual exchange.

We can also consider an analogical situation, i.e. the one when economies do not achieve absolute advantages, but they achieve comparative advantages. Let us consider that England is able to produce 200 units of steel or 200 units of wine, and France can produce 80 units of steel or 160 units of wine at the given volume of resources and the state of technology. Assuming constant yields, the combination of possible distribution of steel and wine production in both economies is shown in Figure 2. Although the economy of England is absolutely better in production of both commodities, specialization and mutual exchange are still important even in this case. If we compare the production of both economies in terms of relative advantages, then to produce only steel is better for England and only wine for France. If the mutual exchange ratio is set, for example, at 40 units of steel to 60 units of wine, then the final result of the barter will be 160 units of steel and 60 units of wine on the side of England and 40 units of steel and 100 units of wine on the side of France - see Figure 2.

Figure 2: Comparative advantages



Source: Martincik (2005), own processing

Also in this case of comparative advantages, where the production and consumption optima were divided, we have come to the same conclusion as in the previous case of absolute advantages, namely that both sides can improve their position by specialization and mutual trade.

3. Microeconomic and macroeconomic implications of specialization and international trade

In the previous chapter, the consumption and production optima of national economies in the case of achieving absolute or comparative advantages were analysed on the simple model of production possibility frontier. Those who clearly benefit from the aforementioned situation are English steelmakers, French winemakers and consumers in both economies. However, positive macroeconomic impacts may be accompanied by negative microeconomic consequences at least in the short term. In the event that both national economies were closed economies, i.e. there were no specialization and mutual exchange, then both British and French producers of steel and wine would participate in the overall output in England and France. Once the two economies open up and start to cooperate with each other, negative microeconomic impacts will occur in the form of displacement of those national producers who are unable to withstand foreign competition, i.e. they do not achieve absolute or comparative advantages. Those who will lose out on specialization and mutual trade after opening of economies will be wine producers in England and steel producers in France. The import of cheap French wine into England will create problems English winemakers with high costs and prices. The result of competitive clash will be attenuation of British wineries accompanied by rising unemployment. Changes in the production factor markets will subsequently be reflected in the redistribution of incomes derived from the ownership of production factors. In France there will be an analogous situation. There the imports of English steel will force out French steelmakers, which will have a negative impact on the unemployment in the steel sector accompanied by repeated changes in income with all its socio-economic consequences.

In both countries, the participation in the international economy will create groups of the injured who will begin to exert a strong political pressure on the national governments in the sense of preventing the loss of domestic jobs. One of the many arguments the injured parties will choose will be the argument of protecting domestic jobs, which is based on the claim that domestic jobs are lost as a result of importing cheaper foreign production. Then, there is an argument of equal competition pointing to abuses of import duties and export subsidies and the one of national security based on the necessity to protect the sectors that are indispensable for the defence of national economy. The first two most frequently used protectionist arguments were repeatedly refuted by the economic theory. The mistake of the argument to protect domestic jobs is based on the fact that imports through the exchange rate mechanism will then stimulate exports, since workers who have lost their jobs in sectors affected by cheap imports will subsequently find their way into sectors which will expand due to cheap imports. As for the equal competition argument, it is evident that if the neighbouring economy decides to impose import duties on the imported production, then the measure will be particularly harmful to neighbouring consumers. Although the relevant retaliatory duties will help domestic producers, domestic consumers will be harmed much more. In the case of export subsidies, the relevant expenses of export subsidies are borne by taxpayers of the neighbouring economy. Moreover, domestic consumers do not care whether cheap imports result from subsidies, climate conditions, tax reliefs, etc. (Mankiw, 2001).

As already mentioned, participation of national economies in the international trade increases the economic welfare of one party to the detriment of the other. Despite the theoretical rationale for the invalidity of a number of trade protectionism arguments, politicians often resort to the introduction of trade barriers. How do governments take decisions and what are the motives for such government actions?

4. The theory of public choice and globalization

As described by Pokrivcak & Toth (2016), in the context of the traditional neoclassical economics the behaviour of governments is analysed marginally, as neoclassical economists focus on competitive markets, efficiency and distribution of incomes. The theory of public choice deals with the analysis of motives and actions of politicians, governments, and government officials, i.e. entities with personal interests, which may be consistent or inconsistent with the interests of the public. According to Zemanovicova & Vasakova (2016), the theory of public choice *“examines the laws, mechanisms, problems of political decision-making, and, analogically to the economic market, it analyses the market politically and motivation of its participants.”* In this concept, politicians behave in analogy with market entities, i.e. they try to maximize their utility, with preferring short-term solutions, which are attractive for voters, to long-term solutions, which are in the public interest. The theory of public choice in the form of an economic analysis of politics, among other things, deals with interest groups, rent-seeking, rational ignorance, a model of the central voter, etc.

According to the Economic Dictionary (Hindls et al., 2003), interest groups can be defined as *“... groups of people of common economic interest, pushing them through political pressures.”* The concept of interest group in economics is associated with the name of Mancur Olson (1965, 1982), who analysed the functioning of interest groups in plural democracies. Olson has concluded that smaller interest groups are able to achieve results more effectively than large interest groups (voters, consumers, taxpayers, etc.). The reason is the fact that the potential profit is divided into a smaller group, so the growth of benefit per an individual is quite large. On the other hand, the decline in benefit affects a larger group, so the individual loss is relatively small. For this reason, interest groups focus on those politicians who, thanks to the financial and media assistance of these very well-organized interest groups with precisely defined goals, will increase their chances of electoral victory. Since numerically strong, unorganized groups of voters miss clearly defined goals, they do not represent interest groups for politicians (Novz, 2016). For these reasons, the political and economic power of interest groups increases over time, which has its negative impact on the efficiency and economic growth of national economies (Olson, 1982).

American economists Tullock (1996) and Buchanan (1983) are associated with another concept of the public choice theory, the so-called rent-seeking. The economic theory describes rent-seeking on the example of import quota - a license whose granting gives its holders a net profit - rent. A limited number of licenses leads to the fact that those interested in the privileged import license are willing, according to Holman (1999), *“... to bear the costs of ‘rent-seeking’ up to the amount of rent.”* The result of this privilege struggle is a growth of non-productive costs associated with lobbying, creating political and economic contacts, giving bribes, etc. instead of trying to increase production quality, finding new production methods, etc. As in the case of partial interests, rent-seeking is also associated with state interventionism.

The concept of rational ignorance was, among others, dealt with by Downs (1957), Callahan (2009) and Tullock (2008). This concept is linked to the finding that a rationally acting voter is not willing to incur costs on getting information on political parties, election programmes and political candidates, because his/her yield consisting in the possibility to influence elections by his/her vote is minimal. For this reason, the voter prefers rational ignorance, i.e. the choice based on ideology, politicians' image and emotions. It results in little control over politicians by voters and in ample room for state interventions.

The theory of public choice offers another explanation of politicians' behaviour. According to Krpec & Hodulak (2012), an example may be the theory based on the model of a central voter who has no choice in the system of two political parties standing at the opposite end of the political spectrum, as the two political parties almost make their election programmes identical in their efforts to win the voters. Such a situation results in the lower voter turnout. Orientation of political parties towards the left or right would not deprive political parties of their voters. As for the redistribution of incomes, national governments are trying to redistribute incomes to central voters, i.e. to middle-income groups.

In assessing the role of politicians influenced by globalization, we must first deal with the concept of globalization itself, because it is defined in the economic theory in different ways. According to Zidek (2009), there are two approaches. The first one understands globalization in the sense of a qualitatively new form of internationalization and the second one regards globalization as a continuation of integration tendencies. Other authors view globalization as a process within which economic, social and political structures converge (Cerny, 1996, Hejdukova, 2015). According to Rojicek (2012), the current phase of globalization is characterized by high dynamics of growth in international trade and foreign investment, a growth of intermediate goods volume and a massive growth of research and consulting services, the rise of the Internet, etc. According to Hejdukova & Kurekova (2015) globalization plays a very important role in migration of human resources in today's world. At the end of this overview of approaches to globalization, we can mention Breinek (2005) who defines globalization as a functional integration related to interconnecting of business systems, and as an institutional integration which is related to observing adopted rules by national governments within relevant international organizations (Novy, 2016).

As mentioned in the second chapter, the involvement of a national economy in the global economy has its positive macroeconomic impact in terms of the economic welfare growth and, from the microeconomic point of view, it leads to the emergence of injured groups that have not stacked up to the international competition. These groups, using a wide range of trade protectionism myths described in Chapter Three, are putting pressure on their national governments to get some compensation for losses incurred. Interest groups that pursue their partial interests, rent seekers, voters making decisions in the situation of rational ignorance, and political parties targeting central voters create enough room for decision-making of national governments that in the short run with regard to the electoral cycle prefer short-term solutions popular for voters, which leads to a decline in the efficiency of national economy and to the weakening of economic growth dynamics in the long run.

In what ways can globalization processes disrupt the process of decision-making by national governments? If we work only with economic globalization, which is the decisive phenomenon in the last twenty years (Woodward et al., 2001), within the multi-dimensional view of globalization, what are its consequences?

Kunesova et al. (2014) state that the economic consequences of globalization include, inter alia: (i) liberalization stimulating international trade, (ii) access to larger markets beyond national borders, (iii) increasing competition on a global scale with an impact on more efficient resource management, and (iv) the spread of technology, knowledge and information. As part of the current globalization wave (i) new markets where the exchange of goods, services and capital is interconnected 24 hours a day are created, (ii) new communication technologies in the form of the Internet, smartphones, etc. are used, (iv) new rules and standards on deregulation, privatization, global conventions, etc. are created, and new participants are

entering the market – see WTO, EU, G7, etc. A significant decline in transport and communication costs is a parallel effect of this globalization wave (Novy, 2016).

The result of the aforementioned is the fact that new comparative advantages are easier to find, which significantly reduces the difference between short and long-term effects of participation in the global economy. Subsequent relatively rapid structural changes in the national economy significantly weaken the argument for the protection of domestic jobs. Reducing transport costs, new communication technologies, easier access to new knowledge and skills – these altogether make job markets more flexible and enable to find new job opportunities, which again waters down the above-mentioned argument for the protection of domestic jobs. Another consequence of globalization processes is a significant weakening of national governments in the area of market, law and politics (Jenicek, 2012), so domestic interest groups and rent-seekers have significantly less room for their activities. The advent of the Internet, new communication technologies, smartphones etc. influence the voters' decision making. Although the weight of a vote does not change within rational ignorance, it significantly reduces the costs of obtaining information about political parties, their election programmes, political candidates, etc. For this reason, the numbers of rationally ignorant voters are decreasing.

When evaluating the globalization changes, one cannot forget the influence and strength of new players that have been allowed to considerably increase their power through globalization, i.e. transnational corporations, which significantly contribute to limiting the role and position of the nation state. Their growing importance gradually leads to the redistribution of power between national states and transnational corporations, namely in favour of these transnational corporations. Instead of originally domestic interest groups pursuing their own partial interests and rent seekers, there are new interest groups and new rent seekers who, in some cases, use the same methods (election campaign financing, lobbying, the state apparatus staffing) to exert influence upon national governments. As a result of that, national governments, rather than taking care of creating a competitive environment within their economic policy, very often comply with the transnational corporations' wishes because they are concerned about job losses, decrease in collected taxes, social and health insurance, etc., namely in case of major investors leaving the country (Kunesova et al., 2014).

5. Conclusion

Globalization processes that are currently influencing many areas of our lives significantly alter political and economic decision making of national governments. Interest groups, rent seekers and voters deciding in situations of rational ignorance have less room for their activity in the globalized economy. The result is a higher economic growth of national economies. Not insignificant risk of globalization is the growing importance and influence of transnational corporations, which in many cases displace domestic interest groups and rent seekers and take their positions. The subject of further research will be the question of how to avoid these risks.

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References

- [1] Breinek, P. (2005). Processes of globalization in the world economy. *Politická ekonomie*, vol. 53, pp. 826-841.
- [2] Buchanan, J. (1983). Rent seeking, noncompensated transfers, and laws of succession. *Journal of Law & Economics*, vol. 26, pp. 71-85.
- [3] Callahan, G. (2009). The myth of the rational voter: Why democracies choose bad policies. *Independent Review*, vol. 13, pp. 470-474.
- [4] Cerny, P. (1996). Globalization and other stories: The search for a new paradigm for international relations. *International Journal*, vol. 51, pp. 617-637.
- [5] Downs, A. (1957). *An Economic Theory of Democracy*. New York: Harper and Row.
- [6] Hejdukova, P. (2015). Globalization and health markets. *15th International Scientific Conference Globalization and its socio-economic consequences*, Rajecké Teplice, Slovak Republic, pp. 199-206.
- [7] Hejdukova, P. and Kurekova, L. (2016). The globalized world and migrants: Impacts of healthcare markets. *16th International Scientific Conference Globalization and its socio-economic consequences*, Rajecké Teplice, Slovak Republic, pp. 628-635.
- [8] Hindls, R., Holman, R. and Hronova, S. et al. (2003). *Ekonomický slovník*. Praha, CZE: C. H. Beck, pp. 471.
- [9] Holman, R. (1999). *Dějiny ekonomického myšlení*. Praha, CZE: C.H. Beck, pp. 482-500.
- [10] Jenicek, V. (2012). Globalisation – content, dynamics. *Agricultural Economics-Zemedelska ekonomika*, vol. 58, pp. 127-134.
- [11] Krpec, O. and Hodulak, V. (2012). Political economy of trade policy – institutions, regulation, social and political context. *Politická ekonomie*, vol. 30, pp. 20-39.
- [12] Kunesova, H., Kocourek, A., Bednarova, P., Cihelkova, E. and Novy, M. (2014). *Světová ekonomika. Nové jevy a perspektivy*. 3rd ed. Praha, CZE: C. H. Beck, pp. 25-32.
- [13] Mankiw, N. G. (2001). *Principles of Economics*. 2nd ed. Fort Worth, TX: Harcourt College Publishers, pp. 192-202.
- [14] Martincik, D. (2005). *Základy mikroekonomie*. Plzeň, CZE: Západočeská univerzita, pp. 56-60.
- [15] Novy, M. (2016). The influence of globalization on international trade in the context of maximizing consumer surplus and producer surplus. *16th International Scientific Conference Globalization and its socio-economic consequences*, Rajecké Teplice, Slovak Republic, pp. 1563-1570.
- [16] Olson, M. (1965). The logic of collective action. Public goods and the theory of interests. *Policy Making in the European Union*, ed. H. Wallace, W. Wallace and C. Webb. Chichester, U.K.: Wiley.
- [17] Olson, M. (1982). *The Rise and Decline of Nations: Economic Growth, Stagflation, and Social Rigidities*. London, Yale University Press.

- [18] Pokrivcak, J. and Toth, M. (2016). Globalization and regional development in Slovakia: The role of policies. *16th International Scientific Conference Globalization and its socio-economic consequences*, Rajecke Teplice, Slovak Republic, pp. 1744-1752.
- [19] Rojicek, M. (2012). Impact of globalisation on the functioning of international trade, *Politická ekonomie*, vol. 60, pp. 187-207.
- [20] Tullock, G. (1996). Rent-seeking and the law. *Current Issues in Public Choice*, pp. 179-188.
- [21] Tullock, G. (2008). Reflections on Caplan's The myth of the rational voter. *Public Choice*, vol. 135, pp. 485-487.
- [22] Woodward, D., Drager, N., Beaglehole, R. and Lipson, D. (2001). Globalization and health: a framework for analysis and action. *Bulletin of the World Health Organization* 2001, vol. 79, pp. 875-881.
- [23] Zemanovicova, D. and Vasakova, L. (2016). Independent regulatory institutions in the global economy. *16th International Scientific Conference Globalization and its socio-economic consequences*, Rajecke Teplice, Slovak Republic, pp. 2498-2504.
- [24] Zidek, L. (2009). Globalizace a světové hospodářství. *Politická ekonomie*, vol. 57, pp. 622-643.

SUSTAINABLE MANAGEMENT OF MUNICIPAL WASTE IN THE CONTEXT OF GLOBALIZATION ON THE EXAMPLE OF EU COUNTRIES

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Abstract. The municipal waste management in the European Union countries is quite diversified. In some countries Directive 2006/12/EC of the European Parliament and of The Council of 5 April 2006 on waste has already been implemented and some countries are still implementing it. High international recycling and waste management requirements are imposed. It is important that changes of this nature are global and implemented around the world. Increasingly popular is the minimalism and “zero waste lifestyle”. Trends in more conscious choice of products in terms of their negative impact on the environment and minimizing the amount of packaging, have a significant impact on the reduction of waste in the world. However, not all citizens are willing to make such sacrifices. A compromise in this regard is the sustainability. It is important to minimize the amount of waste globally. If the waste is produced, it is important that they be properly developed, disposed of or recycled, which often has an international character. This article examines the EU countries in terms of diversification of municipal waste management. Very significant international differences can already be seen in the level of municipal waste produced per capita. Also examined levels of recovery of secondary raw materials in the EU countries and the recycling rates. The analyses of changes in sustainable development indicators related to municipal waste management in EU countries and their international comparisons are presented.

Keywords: municipal waste, sustainable management, sustainable development, management of municipal waste, globalization

JEL Classification: F60, M14, M20, O10, Q50

1. Introduction

Global trends leading to an ever greater integration of states, societies, economies and cultures around the world lead to the unification of different types of processes and the growing importance of different types of relationships between businesses, communities or countries. Globalization processes in different industries now have more or less advanced forms (Hes & Hesova, 2016). In the case of municipal waste management, the processes of globalization are quite advanced globally. Some countries, and even continents, specialized in the processing of waste and recyclable materials recovery and recycling. They excel here mostly Asian countries. At the same time it must be emphasized that this situation is often due to the use of very cheap

labor and it is far from the idea of sustainable development. An excellent example is the treatment, segregation and processing of electrical and electronic equipment (EEE). When they are no longer useful, they become e-waste (WEEE) (Pathak et al., 2017). It is extremely harmful for the environment to mix WEEE with municipal waste streams (Marczuk et al., 2015).

On the other hand, WEEE contains many valuable elements which, after proper processing, can become valuable raw materials. In countries such as India and China, the electoral system is massively processed, often imported from around the world. Unfortunately, in the Asian countries (except India and China also in other countries, such as Indonesia, Malaysia and Pakistan) it is illegal industry developed the treatment of WEEE, mainly from the United States and EU countries. These are mostly found in the largest ports in India and China and are further transported by land to places where they are processed. Very often this is done without observing the basic principles. Employees often have contact with highly toxic substances, which affects their health and a significant contamination of the environment (Awasthi & Li, 2017).

The example of WEEE shows that the process of globalization in the management of municipal waste management does not always have a positive impact and leads to the implementation of sustainable development. Another example of globalization processes on municipal waste management may be the recycling of polyethylene terephthalate packaging, commonly known as PET. The most common are the bottles that sell water and various types of drinks. PET is mainly processed into yarns from which garments and various types of fabric are made (Aizenshtein, 2013). Many countries export properly chopped PET bottles to Asian countries, mainly China and there they are processed by companies (Grabara et al., 2015). In this case we can talk about the successful implementation of the idea of sustainable development in the context of globalization. Most of the raw material goes to China where it is processed because China specializes in the mass production of processed PET bottles (Zhang & Wen, 2014).

2. Assumptions of management of municipal waste management in EU countries

European Union countries are obliged to comply with Community arrangements. In the event of non-compliance, various penalties may be imposed on each country, including high financial penalties. In the field of waste management, all EU countries are subject to Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste (*Directive 2006/12/EC*, 2006). It imposes high requirements on waste recycling and their proper management. European Union countries will eventually have a very similar level of municipal waste management, although there are still significant differences between countries.

Meeting the requirements of Directive 2006/12/EC is associated with incurring by individual member states financial outlays for investments aimed at improving the processing and waste management. At present, these requirements are primarily the introduction of new waste management systems. Most EU countries have already stepped up or just implemented it. This involves a thorough redevelopment of the municipal waste management system. The earlier systems were based on the principles of free-market economy systems, where each household in which the waste was produced chose the company with which it had signed a contract for the receipt and management of waste. Often, the criterion for choosing a company was price, and

this often did not go hand in hand with the proper processing of waste, which often ended up damaging the environment in the case of fraudulent businesses.

The systems required by the EU assume that municipalities are the owners of all municipal waste and that the inhabitants bear the costs of operating the system and the processing and disposal of waste, often colloquially called “waste tax”. In this approach, local government units are responsible for proper waste management and for the establishment of appropriate waste treatment facilities (Ulfik & Nowak, 2014). Different EU countries differ significantly, especially in terms of proper waste treatment infrastructure. The construction of a sorting plant, composting plant, incineration plant or other waste management facility is always associated with large financial expenditures. This is at the same time a necessity, first of all because of legal requirements, and secondly because of the implementation of the idea of sustainable development.

Another legal regulation of the European Union is Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain directives (*Directive 2008/98/EC*, 2008). It introduces the recommended waste hierarchy:

- “(a) prevention;
- (b) preparing for re-use;
- (c) recycling;
- (d) other recovery, e.g. energy recovery; and
- (e) disposal.”

This recommended hierarchy should be implemented in the context of municipal waste management and, in addition, Directive 2008/98 / EC introduces concrete levels of recycling. By 2020 recycling of such materials as paper, metal, plastic and glass must reach 50% of the total waste weight. The best and cheapest way to properly manage the waste is to segregate it at the source of creation by the residence. However, this requires a long and costly educational process for the whole society (De Gisi et al., 2017). It is necessary to change habits in the context of waste generation, by preventing them from happening, even by not wasting food (Salkova et al., 2015).

The requirements for settling the relevant recycling rates are difficult to meet, especially for countries where there is no adequate infrastructure for proper waste management. The construction of waste disposal, composting and incineration plants is often a regional investment that requires huge financial investments and often takes many years to complete.

The whole of EU policy aims to reduce negative impacts on the environment and preserve natural resources (Rossi et al., 2015), leading to effective implementation of sustainable development in the face of globalization (Budica et al., 2015). There are, however, a number of factors affecting waste generation and their initial segregation by EU residents (Triguero et al., 2016).

3. Sustainable consumption and production indicators in EU countries

Among the many indicators of sustainable development should be distinguished group on sustainable consumption and production. In the context of municipal waste management in EU countries collected data on resource use and waste. This group contains a number

of indicators for the municipal waste generation and treatment. This study provides a detailed analysis of the data contained in this group of sustainable development indicators.

Table 1 presents data on the amount of municipal waste generated in 28 EU countries over 20 years expressed in kg per capita. Data from the last 2015 years were available in the course of writing this paper.

It should be noted that there is a very large variation among EU countries in the amount of waste produced per capita. This situation has changed over the past 20 years, but for most countries the overall proportions have been maintained. Most waste expressed in kg per capita, was generated in 2015 in Denmark (789 kg), Cyprus (638 kg), Germany (625 kg), Luxembourg (625 kg), Malta (624 kg) and Austria (560 kg). The least waste per capita in 2015 were generated in Romania (247 kg), Poland (286 kg), Czech Republic (316 kg), Slovakia (329 kg), Estonia (359 kg) and Hungary (377 kg).

Easy to see that the spread between countries is very high and in the case of Denmark and Romania exceeds three times. So significant differences indicate a very large range and diversity of the Member States in the preparation of municipal waste.

Table 1: Municipal waste generation in 28 EU countries in kg per capita in years 1995 – 2015

	1995	2000	2005	2010	2015
EU (28 countries)	-	521	515	504	476
Austria	437	580	575	562	560
Belgium	455	471	482	456	418
Bulgaria	694	612	588	554	419
Croatia	-	262	336	379	393
Cyprus	595	628	688	689	638
Czech Republic	302	335	289	318	316
Denmark	521	664	736	772	789
Estonia	371	453	433	305	359
Finland	413	502	478	470	500
France	475	514	530	533	501
Germany	623	642	565	602	625
Greece	303	412	442	532	485
Hungary	460	446	461	403	377
Ireland	512	599	731	624	-
Italy	454	509	546	547	486
Latvia	264	271	320	324	404
Lithuania	426	365	387	404	448
Luxembourg	587	654	672	679	625
Malta	387	533	623	601	624
Netherlands	539	598	599	571	523
Poland	285	320	319	316	286
Portugal	352	457	452	516	-
Romania	342	355	383	313	247
Slovakia	295	254	273	319	329
Slovenia	596	513	494	490	449
Spain	505	653	588	510	434
Sweden	386	428	477	439	447
United Kingdom	498	577	581	509	485

Source: own study based on data from EUROSTAT

Table 2 contains data on generated and treated municipal waste in the European Union. The data from the year 2015 and are the most recent data available at the time of writing this paper. In the case of Portugal the latest available data were from 2014, and in the case of Ireland - from 2012 and the available data, these have been analyzed.

Table 2: Municipal waste generation and treatment, by type of treatment method in 28 EU countries in kg per capita and in percentage to waste generated in 2015, except Ireland – data from 2012 and Portugal – data from 2014

	Waste generated	Landfill / disposal		Total incineration (including energy recovery)		Material recycling		Composting and digestion	
	[kg]	[kg]	%	[kg]	%	[kg]	%	[kg]	%
EU (28 countries)	476	122	25,6	126	26,5	136	28,6	78	16,4
Austria	560	17	3	212	37,9	144	25,7	175	31,3
Belgium	418	4	1	181	43,3	143	34,2	80	19,1
Bulgaria	419	278	66,3	11	2,6	80	19,1	43	10,3
Croatia	393	313	79,6	0	0	64	16,3	7	1,8
Cyprus	638	475	74,5	0	0	85	13,3	30	4,7
Czech Republic	316	166	52,5	56	17,7	81	25,6	13	4,1
Denmark	789	9	1,1	415	52,6	215	27,2	150	19
Estonia	359	26	7,2	185	51,5	89	24,8	13	3,6
Finland	500	57	11,4	239	47,8	141	28,2	62	12,4
France	501	129	25,7	174	34,7	112	22,3	87	17,3
Germany	625	1	0,2	196	31,4	299	47,8	114	18,2
Greece	485	409	84,3	2	0,4	62	12,8	12	2,5
Hungary	377	202	53,6	53	14,1	98	26,0	23	6,1
Ireland (2012)	587	224	38,2	93	15,8	181	30,8	34	5,8
Italy	486	129	26,5	92	18,9	126	25,9	86	17,7
Latvia	404	250	61,9	0	0	92	22,8	24	5,9
Lithuania	448	242	54,0	52	11,6	103	23	46	10,3
Luxembourg	625	110	17,6	213	34,1	178	28,5	124	19,8
Malta	624	558	89,4	2	0,3	42	6,7	0	0
Netherlands	523	7	1,3	245	46,8	129	24,7	142	27,2
Poland	286	127	44,4	38	13,3	75	26,2	46	16,1
Portugal (2014)	453	222	49,0	94	20,8	74	16,3	64	14,1
Romania	247	178	72,1	6	2,4	14	5,7	18	7,3
Slovakia	329	226	68,7	35	10,6	25	7,6	24	7,3
Slovenia	449	102	22,7	77	17,1	208	46,3	34	7,6
Spain	434	239	55,1	50	11,5	73	16,8	71	16,4
Sweden	447	4	0,9	229	51,2	145	32,3	70	15,6
United Kingdom	485	109	22,5	152	31,3	132	27,2	79	16,3

Source: own study based on data from EUROSTAT

In table 2 in the first column we see data on the amount of municipal waste produced per capita in individual EU countries. Data for 2015 have already been discussed during the discussion of Table 1. The following columns provide data on sustainability indicators related to waste processing and management, expressed in kg per capita as well as in percent of total waste generated in the country.

The first indicator, which is compared to the total amount of generated waste is waste that end up in landfill are not processed or stored there after processing. In Germany, Belgium, Sweden, Netherlands, Denmark, Austria and Estonia is less than 10 % of the total municipal solid waste generated. These are very good results, showing that these countries have well-designed and well-functioning waste management systems. The smallest amount of landfill

waste is enormously beneficial to the environment, and there is no need to implement costly new landfill, degassing and disposing of leachate waste. There are also countries in the European Union where the rate is much worse. These include Malta, Cyprus, Greece, Croatia, Bulgaria and Latvia, where landfill waste accounts for more than 60 %. They should improve these indicators as soon as possible.

In case of incineration of waste, the highest rates are in Denmark (52,6 %), Estonia (51,5 %), Sweden (51,2 %), Finland (47,8 %) and Netherlands (46,8 %). Incinerators do not have Latvia, Croatia and Cyprus at all. Global trends indicate that waste incineration is an excellent way to reduce the amount of waste and, in addition, to obtain energy that can be used in both heat and electricity (Kot & Slusarczyk, 2013).

In the case of material recycling the highest percentage is reached in Germany (47,8 %), Slovenia (46,3 %), Belgium (34,2 %) and Sweden (32,4 %). The highest composting and digestion indicators are in Austria (31,3 %) and Netherlands (27,2 %).

4. Conclusion

European Union countries, having a common policy on municipal waste management, are well suited to the tendency towards sustainable development in the context of globalization (Regnerova et al., 2016). This is the result of successively introduced changes and adjustments. Often these changes are implemented fairly rapidly, and countries that are not able to quickly adapt to their new requirements, have to bear the consequences, e.g. in the form of financial penalties.

The data on municipal waste and the sustainability indicators are, however, puzzling. For example, in Poland landfill is 127 kg per capita, accounting for 44.4 % of total municipal waste. In France, 129 kg is stored, representing only 25.7 %. Such large percentage differences stem from the amount of waste produced in these countries. In Poland, one resident produced an average of 286 kg of waste and in France as much as 501 kg. The EU assume achieving indicators on the waste expressed as a percentage relative to the amount of waste generated. In absolute terms these data are already quite different, which is illustrated by the example. It is worth considering whether it would be better to introduce indirect measures that take into account both the percentage of waste recovery and the countries where the amount of waste produced is significantly lower than the EU average. Such solutions could further encourage countries that produce enormous quantities of waste to gradually reduce them by promoting not only the idea of waste segregation but also the reduction of their production. On the global scale, such actions could bring real benefits by replacing one-off and highly processed products into their more eco-friendly versions.

References

- [1] Aizenshtein, E. M. (2013). Present and future polyethylene terephthalate fibres. *Fibre Chemistry*, vol. 45, no. 3, pp. 125–132.
- [2] Awasthi, A. K., and Li, J. (2017). Management of electrical and electronic waste: A comparative evaluation of China and India. *Renewable and Sustainable Energy Reviews*, 76, 434–447.
- [3] Budica, I. et al. (2015). Waste management as commitment and duty of citizens. *Polish Journal of Management Studies*, vol. 11, no. 1, pp. 7–16.

- [4] De Gisi, S., et al. (2017). Assessing the public perception of islanders regarding the implementation of new technologies to optimize the municipal solid waste management system: A mediterranean case study. *Journal of Cleaner Production*, vol. 164, pp. 1586–1601.
- [5] Directive 2006/12/EC of the European Parliament and of the Council of 5 April 2006 on waste, Official Journal of the European Union (2006).
- [6] Directive 2008/98/EC of the European Parliament and of the Council of 19 November 2008 on waste and repealing certain directives (2008).
- [7] Grabara, J., Bajdor, P., and Mihaescu, L. (2015). Steps of sustainable development implementation into enterprise activities. *Management of Sustainable Development*, vol. 7, no. 1, pp. 45–49.
- [8] Hes, A., and Hesova, I. (2016). Aspects of global communication in post modern society. *Globalization and its socio-economic consequences, 16th International Scientific Conference*, Rajecke Teplice, Slovak Republic, pp. 636-645.
- [9] Kot, S. and Slusarczyk, B. (2013). The role of biomass in the energy production in the European Union countries. *Proceedings of the 7th International Scientific Symposium on Electrical Power Engineering (Elektroenergetika 2013)*, Kosice, Slovak Republic, pp. 559-561.
- [10] Marczuk, A., et al. (2015). Chemical consequences of inappropriate segregation of electrowaste. *Przemysł Chemiczny*, vol. 94, no. 10, pp. 1703–1707.
- [11] Pathak, P., Srivastava, R. R. and Ojasvi (2017). Assessment of legislation and practices for the sustainable management of waste electrical and electronic equipment in India. *Renewable and Sustainable Energy Reviews*, vol. 78, pp. 220–232.
- [12] Regnerova, O., Salkova, D., and Regnerova, M. (2016). Sustainability in the process of globalization. *Globalization and its socio-economic consequences, 16th International Scientific Conference*, Rajecke Teplice, Slovak Republic, pp. 1848-1855.
- [13] Rossi, V. et al. (2015). Life cycle assessment of end-of-life options for two biodegradable packaging materials: Sound application of the European waste hierarchy. *Journal of Cleaner Production*, vol. 86, pp. 132–145.
- [14] Salkova, D., Regnerova, M. and Hes, A. (2015). Global extent of food waste. *Globalization and its socio-economic consequences, 15th International Scientific Conference*, Rajecke Teplice, Slovak Republic, pp. 755-763.
- [15] Triguero, A., Alvarez-Aledo, C. and Cuerva, M. C. (2016). Factors influencing willingness to accept different waste management policies: empirical evidence from the European Union. *Journal of Cleaner Production*, vol 138, pp. 38–46.
- [16] Ulfik, A., and Nowak, S. (2014). Determinants of municipal waste management in sustainable development of regions in Poland. *Polish Journal of Environmental Studies*, vol. 23, no 3, pp. 1039–1044.
- [17] Zhang, H., and Wen, Z. G. (2014). The consumption and recycling collection system of PET bottles: A case study of Beijing, China. *Waste Management*, vol. 34, no. 6, pp. 987–998.

THE HUMAN AS THE WEAKEST LINK IN ENSURING TECHNICAL SAFETY

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Abstract. Globalization of the world economy is a process in which one can find the following phenomena: trade liberalization, free movement of capital and technology transfer between economic entities in different countries. All the above improve the level of prosperity and life conditions of people. One of the most important factors facilitating and accelerating the economic globalization process is technical progress, including modern information and communication technologies. The industrial revolution brings many profits, but it is also a source of many risks related to nuclear power stations, chemical industries and transport. Ensuring technical safety plays more and more important role in the economic globalization process. One distinguishes four basic categories of accidents' causes: human factors, organizational factors, technical factors and environmental factors. Statistical data indicate that the main source of accidents and disasters are mistakes made by humans, which means that the human factor plays a crucial role in ensuring technical safety. That is why the knowledge regarding human reliability is being developed by research facilities all over the world. This article brings up the issue of human reliability where it comes to ensuring technical safety. The notion of human reliability has been defined, the classification of mistakes made by humans in man-technical object system has been provided and an analysis of the mentioned mistakes has been performed. Finally, chosen qualitative and quantitative methods of Human Reliability Analysis (HRA), such as THERP, ASEP, HEART, SPAR-H, ATHEANA, CREAM, have been described.

Keywords: globalization, technical safety, human factors, human reliability analysis

JEL Classification: D81, F69, C39

1. Introduction

A human being has a great influence on a safe exploitation of technical systems. Potential human errors increase risk level connected with their use. That is why, the knowledge concerning human reliability is necessary as early as at the stage of designing a man-technical object system. The human should be treated as an essential link of this system, against which reliability theory used for technical objects has a limited and approximate use. In order to estimate risk resulting from potential human errors, a set of methods called Human Reliability

Analysis (HRA) is used. With the help of the HRA, the human influence on a particular technical system is analyzed, which leads to a decrease in their damage susceptibility.

2. Human reliability and potential human errors

A man, being a user of technical objects wants these objects to be reliable. One can say that reliability is the most important trait of the technical object, which defines its quality. Reliability can be understood as the object's ability to accomplish certain functions under specific conditions, in a definite period of time. This definition determines reliability in a quality sense. What is used very often though, are definitions allowing to estimate numeric values connected with reliability, called reliability indicators. In this case, reliability is defined as a probability of meeting the requirements by the object and the reliability model is a stochastic process (Nowakowski et al., 2016) (Łukasik et al., 2016).

When analyzing the reliability of a technical system, one cannot omit human reliability. Because of the humans' high failure rate in the man-technical object system, it would be incorrect to analyze only the reliability of the technical system. That is why, the issue of human reliability should be an integral part of the systems reliability.

Where it comes to humans, many definitions of reliability are used. In the case of the man-machine model, human reliability can be defined as the capability to perform tasks with the minimum failure risk, under specific conditions and at a certain time. This definition allows for essential aspects of human actions, such as precision and speed, and for the fact that these actions' quality depends on the material environment. However, this definition does not include characteristic traits of the human, distinguishing him from the machine, such as the subjectivity of the human, resulting from his consciousness. The human meets the set requirements in a conscious way, he is able to assess the level of his unreliability, and also to notice the consequences of not fulfilling the requirements. An important difference is also human ability to learn and make rational decisions in difficult to predict situations. These and other unique features differentiating the man from the machine constitute his reliability's special character, placing the man on a privileged position (Bedny & Harris, 2013). Unfortunately, they also pose a threat connected to the fact that the human needs to fulfil the set requirements, which might exceed his abilities to do so.

From the definition of human reliability as the capability to fulfil requirements and avoid errors, a need to conduct a necessary research arises. The research should be conducted paying attention to the classification of human errors, identification of their source area and methods for avoiding through elimination of the causes of its appearance (Saetren et al., 2016).

Among many classifications of errors made by humans, the division into categories of general faults and specific categories, resulting from the performed activities, seems to be the most reasonable one. For example, among the so called faults of the operator one can distinguish:

- a lack of the proper action after hearing the signal,
- a late action,
- an action performed in time, but not finished or done instead of another,
- a superfluous action, resulting from a chaotic activity,
- a premature action,

- a spontaneous action, without an external signal, instead of refraining from activity, taking action prematurely,
- an action opposite to the desired one or inaccurate.

As it has already been mentioned, in the analysis of the human errors one should take the human subjectivity, meaning consciousness and the ability to control their own behaviour, into consideration. It allows the humans to avoid mistakes. The human nature has its strong and weak sides. The main causes of the errors connected with the man's work include (Dąbrowska, 2011):

- a lack of communication – mistakes and disturbances in exchanging information,
- routine – certainty resulting from a long-time practice combined with the loss of awareness of existing hazards, caused by frequently repeated activities and a monotonous work,
- a lack of knowledge – a lack of clarity or certainty in understanding something,
- absent-mindedness – caused by e.g. distracting someone's attention, confusion, mind chaos,
- a lack of cooperation in a team – an incoherent effort of a group of people caused by e.g. no common goal, fear of letting the management know about the errors made by others, wrong manner of leadership, wrong ways of communication,
- tiredness – happens to be ignored (as long as it is not overwhelming, the person is not aware of it),
- a lack of resources – a lack of tools, materials, an outdated documentation, improper work conditions,
- pressure – caused by superiors or co-workers, the lack of time, wrong task management,
- a lack of assertiveness – not being able to decline performing a task, resulting from e.g. a lack of confidence, fear or complexes,
- stress – nervousness caused by e.g. time pressure, new methodology, a change of tasks' range, competition or private factors,
- carelessness – a faulty estimation of possible consequences of actions caused by e.g. pressure, a lack of experience or a lack of knowledge,
- facilitation – making exceptions from instructions as standards facilitating work.

Estimating causes of errors made by humans is very difficult (Ruiz-Moreno & Trujillo, 2012). The source of human capacity limitations are: senses (vision, hearing, touch, smell, taste), cognitive activities (concentration, perception, processing information), memory, motivation, situation awareness (the ability to notice elements in the work environment and understand what we see and to determine the consequences of actions). Factors that might influence the level of human reliability are: health and psychophysical condition, tiredness, monotony and emotional tension (stress) (Cloninger & Zohar, 2011) (Kim & Hamann, 2007). In the analysis of the errors' causes it is especially important to include personal abilities of the man (temper, character, routine) as constant traits and states (tiredness, stress, attitude) as variable features (Cloninger et al., 1993). What also should be taken into consideration is the influence of external factors, e.g. environment or situation. The environmental elements are

things and people remaining in mutual relations. That is why, each human being is a part of his own environment. Human behaviour takes place in a given environment and situation. The situation is each interaction between the man and the environment's elements, taking place in a definite time and space, resulting from a determined goal of action. Probability of occurrence of a given event can be assessed in a context of a real - objective situation (complexity, clarity, strength, liberty or constraint, tasks, roles, terms of conduct, physical traits, other people) and perceived - subjective (goals, expectations, needs, motifs, emotions). Both, environment and situations sometimes impose too many requirements on a person, influencing his reliability. Sudden changes occurring during failure force people to act allowing for the lack of time, being the source of stress. A hazardous situation can take on negative emotions (anxiety, fear) contributing to making mistakes. A tendency to become stressed, as well as the capability to overcome a stressful situation belong to individual features of the human. One should emphasize that once can increase his immunity to stress with the help of exercises.

3. Methods of assessing human reliability

There are many qualitative and quantitative methods to assess potential contribution of the human factor to safety; they are called Human Reliability Analysis (HRAs). The HRAs methods can be divided into two generations. The "first generation" includes the following methods:

- Technique for Human Error Rate Prediction (THERP),
- Accident Sequence Evaluation Program (ASEP),
- Human Error Assessment and Reduction Technique (HEART),
- Simplified Plant Analysis Risk-Human (SPAR-H) reliability assessment.

Some of the methods from the "second generation" are:

- A Technique for Human Error Analysis (ATHEANA),
- Cognitive Reliability and Error Analysis Method (CREAM).

The first tools were designed to help estimating risk and to predict and assess probability of making a human error. The above methods suggest dividing a task into components and then considering a potential influence of individual factors, such as time deficit and stress. They focus on rules of the human behaviour, not allowing for factors such as the influence of environment or situation. Regardless of these faults, these methods are useful and many of them are regularly used in qualitative and quantitative risk assessment.

The development of the "second generation" tools began in the 1990s. In these methods one tried to take into consideration the influence of environment and situation when estimating human errors. The "second generation" methods are still being developed, but even on their current stage they can provide much valuable information regarding human reliability.

The THERP method was developed in 1983 and serves for identification and risk assessment of the occurrence of human errors (Kirwan, 1996). It can also be used for the identification of threats and accidents' causes. Thanks to this method, probability of the appearance of human errors and their outcome severity can be determined. An analysis with the THERP method consists of the following stages:

1. Recognizing the problem, considering the information received from system analysts.
2. Quality assessment of the problem through:

- analysis of tasks and their decomposition into elements,
 - modelling in an HRA event tree.
3. Quantity assessment through:
- estimation of the occurrence of HEPs (human error probabilities) for each element,
 - determination of effects of PSFs (Performance Shaping Factors) for each element,
 - calculation of effects of dependence between tasks,
 - determination of success and failure probability of total task (quantification of total task).
4. Research and the use of results:
- sensitivity analysis,
 - passing the information to the system analysts.

As a result of a thorough analysis run with the THERP method, one can undertake, early enough, activities reducing human error probabilities, and the level of their severity.

ASEP is a shortened version of THERP developed in 1987. The ASEP method consists of four procedures (Gore et al., 1997):

- pre-accident tasks: the tasks which, when performed improperly, can lead to the unavailability of the system or its elements, making it impossible to react properly to an accident,
- post-accident tasks: the tasks that are intended to assist in returning the system to a previous condition, in which the system was before the damage,
- screening human reliability analysis: initial sensitivity analysis reducing the amount of detailed analyses to be performed,
- nominal human reliability analysis: probabilistic risk assessment run for each task identified during the screening process, allowing to detect all possible sources of errors.

HEART was developed by Williams in 1985, and then modified in 1988. This method takes into account human tasks and ergonomic and environmental factors, which have a negative influence on performing the tasks (Kirwan, 1996) (Kirwan et al., 1997). The HEART method defines 9 GTTs (Generic Task Types) and related to them nominal values of HEP (Human Error Potential) and determines 38 conditions badly influencing human activity (EPC – Error Producing Conditions) along with correction coefficients. For the analyzed task one chooses relating to it generic task, and next determines the HEP, dependent on the EPC product rates.

SPAR-H was developed in 1999 for the US Nuclear Research Commission. In this method one decomposes tasks performed by a human, taking into account two basic types: diagnosis and/or action. In the case of the tasks combined with the diagnosis and action, the HEP is a sum of nominal values of errors probability of the diagnosis and action. Probability is calculated considering eight influence factors - PSFs (Performance Shaping Factors) developing human efficiency (Boring & Blackman, 2007). One can distinguish the following performance shaping factors: time available, stress, complexity, experience and training, ergonomics including HMI,

procedures, fitness for duty (dependent on the psychological and physical condition of the operator, tiredness, illness, over-confidence, absentmindedness) and work processes (control over the performed tasks, tasks planning, organization factors understood as preparing the work process).

ATHEANA is an HRA method developed by the US Nuclear Regulatory Commission in 2000. This method was designed to identify plausible error-likely situations and potential error-forcing contexts (EFCs) and to produce estimated human error probabilities (HEPs) in risk assessments. The ATHEANA methodology consists of the following stages (Thompson et al., 1997):

- defining the examined problem,
- determining the range of the conducted analysis,
- describing all accident scenarios and their context,
- defining HFEs (Human Failure Events) and dividing them into two groups: safe and unsafe actions (UAs),
- assessing human performance relevant information and characterizing factors that could lead to potential vulnerabilities,
- searching for deviations of each scenario relevant to the examined HFE/UA,
- evaluating the potential for recovery,
- estimating the HEPs for the HFEs/UAs,
- incorporating the results of the ATHEANA analysis into the PRA (Probabilistic Risk Assessment).

CREAM was developed by Erik Hollnagel in 1998. This method can be used to analyze errors made by a human (retrospective analysis), and also to estimate error possibilities (prospective analysis) (Bedford et al., 2013). The retrospective method is composed of nine phenotypes (timing, duration, force, distance, speed, direction, wrong object, sequence, quality/volume) and three genotype categories (human factors, technical/environmental factors, organizational factors). Analysis consists in the choice of the subsequent phenotypes, characteristic for an improper human activity, and then it is about the choice of a genotype matching a given phenotype. The prospective analysis of CREAM is a method that assigns quantitative probabilities to identify high risk systems. This method distinguishes four control modes proper for the control level performed by the operator (Marseguerra et al., 2006):

- strategic (operator has little control over the situation and chooses the next action at random),
- tactical (operator follows a known procedure or rule),
- opportunistic (operator chooses actions inefficiently),
- scrambled (actions are chosen after careful consideration of functional dependencies between task steps and the interaction between multiple goals).

Each control mode has an ascribed range of the HEPs, which gives an overall view on human reliability. A correct probability value can be achieved after considering one of nine levels of CPC Common Performance Condition.

4. Conclusion

The aim of the functional safety management of a safety-related system is reducing risk to an acceptable level. Accidents research indicates that their main reason is the human factor. That is why it is obligatory to improve the HRA methods, which concern the interaction between a human and a technical object. A right assessment of the human behaviour and his mistakes allows to correctly estimate risk and to rationally make decisions in the safety management process. Risk minimization is possible thanks to running an analysis of human errors, with the usage of the HRA methods, which include the influence of humans, environment, work, failure situations in order to ensure safety. Despite the prevailing methods serving for running a human reliability analysis, there are big difficulties in precise assessment of the influence of the human factor on the safety level. Many experts think that up-to-date HRA methods are not enough detailed and that they use a simplified conception of human errors, that is why there is an ongoing work on new methods. This article has pointed out a need to include in these method human subjectivity, present in a man-technical object system, which is resulting from the man's consciousness. The man accomplishes tasks in a conscious way, has the ability to assess a changeable situation, the ability to act in atypical situations, he has creativity in solving problems and the ability to learn on his and else's mistakes. Human nature has its weak sides too though. That is why, in a human reliability analysis it is essential to pay attention more carefully to the laws governing human psyche and behaviour, that is to psychological aspect.

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References

- [1] Bedford, T., Bayley, C. and Revie, M. (2013). Screening, sensitivity, and uncertainty for the CREAM method of human reliability Analysis. *Reliability Engineering & System Safety*, vol. 115, pp. 100-110.
- [2] Bedny, G. Z. and Harris, S. R. (2013). Safety and reliability analysis methods based on systemic-structural activity theory. *Proceedings of the Institution of Mechanical Engineers - Journal of Risk and Reliability*, vol. 227, no. 5, pp. 549-556.
- [3] Boring, R. L. and Blackman, H. S. (2007). The origins of the SPAR-H method's performance shaping factor multipliers. *Proc. IEEE 8th Conference on Human Factors and Power Plants/HPRCT 13th Annual Meeting*, Monterey, CA, pp. 177-184.
- [4] Cloninger, C. R., Svrakic, D. M. and Przybeck, T. R. (1993). A psychobiological model of temperament and character. *Archives of General Psychiatry*, vol. 50, no. 12, pp. 975-990.
- [5] Cloninger, C. R. and Zohar, A. H. (2011). Personality and the perception of health and happiness. *Journal of Affective Disorders*, vol. 128, no. 1-2, pp. 24-32.
- [6] Dąbrowska, J. (2011). Czynniki ludzkie w lotnictwie. *Prace Instytutu Lotnictwa*, vol. 221, pp. 66-70, Warszawa 2011 (in polish).

- [7] Gore, B. F., Dukelow, J. S., Mitts, T. M., et al. (1997). Conservatism of the accident sequence evaluation program HRA procedure. *Risk Analysis*, vol. 17, no. 6, pp. 781-787.
- [8] Kim, S. H. and Hamann, S. (2007). Neural correlates of positive and negative emotion regulation. *Journal of Cognitive Neuroscience*, vol. 19, no. 5, pp. 776–798.
- [9] Kirwan, B. (1996). The validation of three human reliability quantification techniques THERP, HEART and JHEDI, Part I - Technique descriptions and validation issues, *Applied Ergonomics*, vol. 27, no. 6, pp. 359-373.
- [10] Łukasik, Z., Ciszewski, T. and Wojciechowski, J. (2016). Power supply safety of railway traffic control systems as a part of international transport safety. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecké Teplice, Slovakia, pp. 1212-1219.
- [11] Marseguerra, M., Zio, E. and Librizzi, M. (2006). Quantitative developments in the cognitive reliability and error analysis method (CREAM) for the assessment of human performance. *Annals of Nuclear Energy*, vol. 33, no. 10, pp. 894-910.
- [12] Nowakowski, W., Łukasik, Z. and Bojarczak, P. (2016). Technical safety in the process of globalization. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecké Teplice, Slovakia, pp. 1571-1578.
- [13] Ruiz-Moreno, J. M. and Trujillo, H. M. (2012). Models for assessment of human error in system reliability studies. *Anales de Psicología*, vol. 28, no. 3, pp. 963-977.
- [14] Saetren, G. B., Hogenboom, S. and Laumann, K. (2016). A study of a technological development process: Human factors-the forgotten factors? *Cognition Technology & Work*, vol. 18, no. 3, pp. 595-611.
- [15] Thompson, C. M., Cooper, S. E., Kolaczowski, A. M. et al. (1997). The application of ATHEANA: A technique for human error analysis. *Proc. IEEE 6th Conference on Human Factors and Power Plants - Global Perspectives of Human Factors in Power Generation*, Orlando, FL, USA, pp. 913-917.

GLOBAL IMPACT ON LIFE CYCLE COST SAVINGS WITHIN LARGE TRANSPORTATION PROJECTS

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Abstract. Managing large international projects namely within traffic and transport structures design processes need a special attention in terms of dealing with enormous amount of data and information. Principally, to achieve economically sustainable life cycle of any traffic and transport structure, employing of Building Information Management (BIM) tools should be explored and evaluated from the global perspective. BIM itself contains huge potential, how to increase effectiveness of every project in its all life cycle. It means from initial investment plan through project and building-up activities to long-term usage and property maintenance and finally demolition. Both important economical sets of tools, and managerial or technological, must be considered. Managerial part aims to describe ways how to gather information of real expectations and desires of final users in terms of how could they benefit from managing long-term projects, covering whole life cycle in terms of sparing investment money and other resources. Technological part primarily describes new technologies that BIM may support and deliver to users anywhere in whole world. How to use this technology for data and metadata collection world wide, storage and sharing, which processes should these new technologies deploy. Specific emphasis and particular description of world usage in large international BIM projects in transportation industry aimed do investment savings are of the major importance.

Keywords: Building Information Management, savings, structure's design, traffic structure, transport structure,

JEL Classification: O31, O31, O32, R49

1. Introduction

A new SmartMarket Report from Dodge Data & Analytics (Dodge Research Analytics, 2017) shows that the use of building information modelling (BIM) is increasing in the horizontal (transportation projects) construction market. The Business Value of BIM for Infrastructure 2017 SmartMarket Report –produced in partnership with Autodesk, and with support from Deloitte – analyses how engineers, contractors and owners are using BIM for transportation infrastructure projects in the US, and in Europe (Hochmuth & Breining, 2016). It shows that commitment to BIM is skyrocketing among firms who use it, with 52% now reporting they deploy it on over half their projects, versus only 20% of them implementing it at that high level just two years ago.

“Dodge has been closely tracking the growth of BIM for buildings globally since 2007,” says Steve Jones, Senior Director of Industry Insights Research at Dodge Data & Analytics, “and we have seen steady growth in both its usage and the tangible business benefits that its users receive. It is exciting to now see a similar pattern rapidly taking shape for transportation infrastructure, and the dramatic global growth expected for that segment is certain to accelerate this trend.”

“This report makes clear that BIM is not only for building design, but a ‘must have’ for transportation infrastructure projects,” says Nicolas Mangon, Vice President of AEC Business Strategy at Autodesk. “With a significant portion of the world’s transportation infrastructure funded by taxpayers, BIM reduces risk and waste enabling a more responsible way to design, build, operate and maintain roads, bridges, and public transit systems.”

The majority (87 percent) of BIM users in the study report that they are receiving positive value from their use of BIM, and most believe that they have only begun to experience its full potential. Critical benefits reported by users include fewer errors, less rework, and greater cost predictability, all of which improve project delivery for transportation infrastructure.

In addition to improving project performance, most users report that having BIM capability yields important internal benefits to their own businesses, which include:

- Increasing revenue by expanding their ability to offer services (56 %), and maintaining business with past clients (52 %),
- Conducting their business more effectively by improving the ability to teach younger staff about how projects go together (58 %), establishing a consistent and repeatable project delivery process (54 %), and, for design professionals, spending less time documenting and more time designing (50 %).

2. Life Cycle Cost Savings

Life cycle cost savings impacts are the effects a project or policy has on the economy of a designated project area, measured in terms of the change impact on business sales, jobs, value added, income, or tax revenue of all related shareholders involved by particular project. These effects are sometimes referred to as "economic development impacts". Whereas Benefit-Cost Analysis is an exercise to determine an action's social welfare effects (compared to costs), Life Cycle Cost Analysis is an exercise to determine how a project or policy affects the amount and type of economic activity in a region.

Life Cycle Cost impacts can result from various sources, including time savings to businesses, household and business vehicle operating cost savings, the strengthening of local and regional market connectivity, induced land development, or increased tourism. In all cases, economic impacts arise because a transportation investment causes a change in prices, a change in household behavior, or a change in business behavior that improves business investment, attraction, expansion, retention, or competitiveness in the study area (when impacts are positive - of course, they can be negative as well).

2.1 Examples

- A new highway connection makes it possible for a rural region to attract new industry, creating jobs and tax revenue.

- Eliminating size or weight restrictions for a river crossing, airport, or marine port allows local business to expand shipping facilities, creating new jobs and tax revenue.
- Expanded transit service to a low-income residential area increases residents' access to jobs, reducing unemployment, increasing income levels, and creating tax revenue.
- A new highway interchange makes an abandoned industrial area more accessible and hence more attractive for office or industrial park redevelopment, leading to higher tax revenues.

2.2 Relationship to Transportation System Benefit-Cost

Economic impacts are not included in benefit-cost analysis (with the exception of productivity impacts, discussed below). Economic development impacts occur as the end result of direct impacts of a transportation project on travelers and non-travelers. A transportation project may improve local business competitiveness (and hence economic growth) by reducing existing transportation costs (for employees and freight), expanding markets for business sales and services (providing more revenue with economies of scale in operations), and expanding labor market access (providing access to a broader job base). A transportation project may also affect economic growth by saving money for area residents (increasing available income to spend elsewhere in the economy) or by improving the attractiveness of the area as a place for people to live and locate their business activities.

2.2.1 EIA differs from transportation system Life Cycle Cost Analysis in the following ways:

- **Geographic Scope** - EIA focuses on changes in economic activity to households and businesses within in a well-defined study area of certain transportation project (such as a Region, Metropolitan Area, or State). In contrast, Benefit-Cost Analysis typically takes a wider view, measuring benefits to all users and non-users of a facility (regardless of where they live or work). Thus, BCA typically takes a national, or even global view.
- **Scope of Direct Benefits** – Life Cycle Cost Analysis should take a wider view of direct benefits than EIA. Through a number of valuation methods, Life Cycle Cost Analysis attempts to capture welfare change of a project, even when those do not generate follow-on economic activity. A common example is personal travel time. Life Cycle Cost Analysis explicitly captures the value of time spent making a personal trip (for example, driving to go to visit your friends in other town). In EIA, this trip generates no follow-on activity because if the traveler were not driving, she would otherwise doing leisure (non-productive) activities. Environmental and noise pollution are other direct costs that Life Cycle Cost Analysis can value, but are not included in economic impact analysis.
- **Scope of Follow-On Benefits** - EIA takes a wider view of follow-on benefits than Life Cycle Cost Analysis. Economic impact analysis generally separates impacts into three categories:
 1. direct impacts, which follow "directly" from traveler cost savings or other consequences of the investment,
 2. indirect impacts, which occur when industries that are directly affected buy goods and services from other industries, and

3. induced impacts, which occur from increased household spending due to higher regional wages.

Impacts (2) and (3) are considered "follow-on" impacts, and while they are typically included in EIA, they are explicitly excluded from Life Cycle Cost Analysis.

2.3 Use as a Complement to Transportation System Benefit-Cost

Fundamentally, EIA and Life Cycle Cost Analysis address different questions:

- Life Cycle Cost Analysis - addresses whether society is better off by performing, a certain action (such as building a road) versus doing nothing,
- EIA - addresses how an economy is likely to change as a result of an action.

Because the practices address different questions, they can frequently be used in a complementary way to describe a broad set of outcomes from a project or policy. In particular, there are many times when the societal and local economic perspective are both relevant for planning purposes. Further, Transportation planning agencies are often interested in assessing economic impacts because they can indicate how well a project addresses three types of societal goals:

1. Economic impacts reflect how transportation improvements lead to tangible benefits for constituents of a government agency, who are generally residents of a particular city, metro area, county or state. This helps avoid the situation where residents of one area pay the full cost for a project that benefits only residents of another area,
2. Economic impacts reflect productivity benefits — not only those associated with reducing costs for existing travel patterns, but also those associated with expanding accessibility to broader product distribution, service, and labor markets. Increased market access can provide further productivity benefits related to "economies of scale" in business operations. It is sometimes erroneously stated that shifts in business location and growth patterns are a "zero sum game." Actually, business activity shifts would not occur unless there were at least some productivity benefits to justify the costs of relocating economic activity,
3. Economic impacts can also show movement towards addressing social equity goals — insofar as improved accessibility and redistribution of future business growth can also help to reduce disparities in job access and income levels between rich and poor areas, or between urban and rural areas.

When conducting Life Cycle Cost Analysis and EIA for the same project, it is important to keep the following points in mind:

- Keep the analyses separate. Although both practices use some of the same initial information (such as travel time savings), results should be developed and presented separately to avoid any confusion.

Never add final economic impacts to Life Cycle Cost Analysis benefits.

2.4 When to Use Life Cycle Cost Analysis

Economic evaluation (also called appraisal, assessment or analysis) refers to various methods to determine the value of a policy, program or project. It involves quantifying incremental (also called marginal) economic impacts (benefits and costs) to determine net benefits or net

value (benefits minus costs), and the distribution (also called incidence) of these impacts. Economic evaluation is not limited to market impacts (which involve goods that are commonly traded in competitive markets), it can also incorporate non-market resources such as personal time, health and environmental quality.

One of the most proposed in this article economic evaluation methods is Life cycle Cost analysis, which can use monetized (measured in monetary units) values to compare total incremental benefits with total incremental costs. The results can be presented as a ratio, with benefits divided by costs. Net Benefits is defined as the sum of all benefits minus the sum of all costs, which provides an absolute measure of benefits (total dollars), rather than the relative measures provided by B/C Ratio. To perform Life Cycle Cost Analysis it is necessary to monetize all relevant impacts. In recent years economists have developed techniques for monetizing non-market impacts, and some transportation agencies have adopted standardized values for travel time, crash damages and environmental impacts. Life Cycle Cost Analysis could be most applicable for evaluating proposed projects that meet the following criteria:

- The potential project expenditure is significant enough to justify spending resources on forecasting, measuring and evaluating the expected benefits and impacts,
- The project motivation is to improve the transportation system's efficiency at serving travel and access-related needs, rather than to meet some legal requirement or social goal,
- Environmental or social impacts that are outside of the transportation system efficiency measurement are either: (a) negligible in magnitude, (b) measurable in ways that can be used within the benefit-cost framework, or (c) to be considered by some other form of project Benefit-Cost Analysis is neither necessary nor desirable to justify all transportation projects. It may not always be appropriate in the following cases.

Nevertheless it is important to mention that is inappropriate to rely solely on Life Cycle Cost Analysis in situations where there are special concerns that must also be considered outside of that analysis. Since Life Cycle Cost analysis focuses on the comparison of total benefits and total costs in monetary terms, some particular concerns affecting a given project may be either hidden or missed within the calculation of total benefits and total costs. In some cases, the desirability of projects needs to be considered in terms of their effectiveness at reducing certain key objectives — such as air pollution reduction, creation of new jobs, or improving mobility for physically, economically and socially disadvantaged people. In such cases, cost-effectiveness analysis (which measures environmental or social benefits per dollar of transportation project spending) may be appropriate, either in addition to or instead of benefit-cost in addition to or instead of benefit-cost analysis. Also, it is important to mention that change of culture in all processes will be required, as well (Nyvlt et al., 2015).

3. BIM as a new technology that leads to cost savings in many ways

Using BIM (Building Information Modeling) technology may support more effective managing knowledge through whole building life cycle. Structured and unstructured knowledge managed by using BIM technology helps to better cooperation of all project participants (Zhou et al., 2017). This technology may be supported and delivered to users anywhere in whole world. It collects data and metadata and it can be very useful tool for sharing, too. “In the recent years Building Information Modeling (BIM) has been finally widely recognized as the next

evolutionary step in the architecture, engineering and construction (AEC) industry and also as a step towards the sustainable construction”, says V. Kusý (Kusy, 2013).

Adoption of BIM and BIM-related digital technologies improves the whole building life cycle, it helps with managing of all the processes that needs to be performed. At first, it can reduce the failure caused by human factor in building structure (Vondrackova et al., 2017) due to the access for more accurate and better management of transmission and sharing of information. Based tools for BIM are e.g. Bentley AECOsim Building Designer, Tekla Structures, Autodesk Revit's Architecture, Structure, MEP, and many others. These tools can handle numerous types of data input, as design in 3D, models of energy consumption, cost estimates etc. (Kaddaj & Srour, 2016). In current times, there is worldwide used software using three-dimensional system (3D). BIM as a Building Information Modeling is not just about this 3D. BIM technology has many other benefits that are measureable (Barlish & Sullivan, 2012). It offers sufficient amount of non-graphical and, of course, also graphical attributes, that means data that are assign to every element used within the model (Podmanicky & Nyvlt, 2015). But BIM is more useful in meaning Building Information Management (Nzvlt, 2017). This term is about the managing of not even data but mainly about the managing of processes that BIM technology is able to offer to the all participants using a single model through the whole structure life cycle. One of the most used tools is BIM project execution plan (BIM Planning, 2017) that contributes to the use of the BIM technology and methodology (Pruskova, 2017).

BIM technology and related technologies can be used not only for the construction of transportation project, but it's also very useful through the other stages of structure life cycle. Especially in the facility management of structures, the processes connected to the FM are more utilizing within the BIM technology (Dias & Ergon, 2016). There are many BIM-based collaboration platform revealed (Ma & Ma, 2017) which are developed for the better participants cooperation. For example the technology used within the BIM – Level of Development (LOD) servers for precious time-management of processes. Level of Development helps to clarify and formulate how much in which stage is the information within the used model reliable. BIM technology and its adoption already resulted many benefits in savings: within the time during the design process, cost of the structure itself (structure realization, completion work, etc.), energy savings during the erection of structure and during the operation of the structure, FM and others (Cemesova & Hopfe, 2015).

4. Conclusion

EIA is common process, how to evaluate economically acceptable new infrastructures. In order to achieve economically sustainable life cycle of any traffic and transport structure, employing of Building Information Management (BIM) tools should bring wider platform for evaluation from the global perspective. New technologies are able to support taking in account more items, points of interest, and impacts on society into one platform, evaluating life cycle not of infrastructure itself, but also wider region and even other businesses affected. From global perspective it means better and more correct focus on the process of evaluation of new infrastructure.

References

- [1] Nyvlt, V., Vondrackova, T. and Vostova, V. (2015). Barriers for BIM (Building Information Modeling) adoption. *Central European Conference in Finance and Economics (CEFE 2015)*, Herlany, Slovakia, pp. 486-492.

- [2] Podmanicky, P. and Nyvlt, V. (2015). BIM technology as an inovation tool in the design of building structures in the Czech Republic. *15th International Multidisciplinary Scientific GeoConference SGEM2015, Nano, Bio and Green Technologies for a Sustainable Future*, Albena, Bulgaria, pp. 377-384.
- [3] Ma, Z. and Ma, J. (2017). Formulating the application functional requirements of a BIM-based collaboration platform to support IPD projects. *KSCE Journal of Civil Engineering*, vol. 21, no. 6, pp. 2011-2026.
- [4] Vondrackova, T., Vostova, V. and Nyvlt V. (2017). The human factor as a cause of failures in building structures. *MATEC Web of Conferences*, vol. 93, pp. 259-262.
- [5] Dias, P. and Ergan, S. (2016). The need for representing facility information with customized LOD for specific FM tasks. *Construction research congress 2016: Old and new construction technologies converge in historic San Juan*, San Juan, Puerto Rico, pp. 2563-2572.
- [6] Barlish, K. and Sullivan, K. (2012). How to measure the benefits of BIM - A case study approach. *Automation in Construction*, vol. 24, pp. 149–159.
- [7] Pruskova, K. (2017). The mutual relations between level of development and project documentation stages in Czech Republic's legislation. *17th International Multidisciplinary Scientific GeoConference SGEM2017, Nano, Bio and Green Technologies for a Sustainable Future*, Albena, Bulgaria, pp. 821-826.
- [8] Khaddaj, M. and Srour, I. (2016). Using BIM to retrofit existing buildings, *Procedia Engineering*, vol. 145, pp. 1526-1533.
- [9] Cemesova, A. and Hopfe Ch. J. (2015). PassivBIM: Enhancing interoperability between BIM and low energy design software. *Automation in Construction*, vol. 57, pp. 17–32.
- [10] Kusy, V. (2013). An ontology driven BIM components repository: a new way to share BIM components. *Sustainable building and refurbishment for next generations (CESB2013)*, Prague, Czech Republic, pp. 559-562.
- [11] Hochmuth, M. and Breining, W. (2016). BIM pilot project Auenbach viaduct - Innovative design methods in bridge construction. *Bautechnik*, vol. 93, no. 7, pp. 482-489.
- [12] Zhou, Y., et al. (2017). Formulating project-level building information modeling evaluation framework from the perspectives of organizations: A review. *Automation in construction*, vol. 81, pp. 44-55.
- [13] Nyvlt, V. (2017). Building information management in long time horizon building's assessment techniques. *17th International Multidisciplinary Scientific GeoConference SGEM2017, Nano, Bio and Green Technologies for a Sustainable Future*, Albena, Bulgaria, pp. 821-826.
- [14] Dodge Research and Analytics (September 2017). Smart market reports - Market trends – Construction. [Online]. Available: <http://analyticsstore.construction.com/smartmarket-reports.html>
- [15] BIM Planning, (September 2017), [Online]. Available: <http://bim.psu.edu>.

EMPLOYMENT AND CHANGING LABOUR MARKET: NEW OPPORTUNITIES IN THE LITHUANIAN LABOUR MARKET

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Abstract. In the conditions of modern global economy, the labour market indicators are highly sensitive to economic changes. Labour market dynamics significantly depends from the changes of economic cycle. Under the development of globalization conditions one of the priority objective of the European Union is to maintain and create new jobs according to the migration process. According to the basic indicators characterising situation of employment, the situation and employment trends are evaluated in this article. In this article the following methods of analysis are used: a systematic analysis of the scientific literature, general and logical analysis, comparative analysis, the analysis of statistical data. The new labour market opportunities in the context of a new labour market legislation is highlighted in the article. The carried out evaluation of employment situation allows as to state that despite of improving general employment statistics specific demographic groups still face difficulties integrating into labour market. However, it should be noted, that Lithuania has recently started reforming the labour market by implementing the recommendations of the European Commission. It is believed, that flexibility conferred by new legislation will improve the employment opportunities and Lithuanian labour market will maintain its competitiveness during the economic changes in the context of globalization.

Keywords: labour market, employment, globalization, integration, flexibility

JEL Classification: J21; J41; J71

1. Introduction

Questions of globalization are actively discussed in academic circles and society as well the concept globalisation is widely used in various fields of life and science. This term is used to describe various related and different economic, social, political and business phenomenon. Many authors independently of the paradigm or school they represent, agree that globalization is an important process, changing the structure of world politics, economics and society.

To be emphasized, that in the context of globalization social-economic problems attract different evaluations from world economists (Buch et al., 2014; Martins & Yang, 2015; Cabral et al., 2016). Such situation derives from different perspectives applied to outcomes of the process of globalization. Some scientists see serious dangers in the world economic system, when others assume, that process of globalization is a way leading toward further economic growth and progress. Labour market process obviously relate to globalization, they represent level of productivity in the country and internal trade relations (Cuyvers, 2011; Seo et al., 2015; Aubry et al., 2016). It is important to underline, that globalization of economy had impact on the scope and scale of global migration (Martin & Yang, 2015; Kurekova et al., 2016;

Fernandez, 2016). During the last 30 years due to rapid globalization, rates of migration increased more than ever before – in 2015 number of international migrants reached 244 bln. Around 3 % of the world population comprise people who live outside their native country (International Organizations ... 2012).

In the article, we analyse outcomes of globalization and present analysis of the employment situation in Lithuania in the context of globalization, we discuss impact of globalization to labour market and present what new opportunities and challenges rise for Lithuanian labour market. Research methods: an analysis and summarize of the scientific literature, comparative analysis, analysis of statistic data.

2. The consequences of globalization process

In scientific disputes about the impact of globalization and outcomes stand out approach to positive and negative impact of globalization (Davidson & Sly, 2014; Cabral et al., 2016; Aubry, 2016; Bojnec & Ferto, 2017), as well evaluation of the impact to EU member states.

Global trade openness has boosted EU economic growth, raising prosperity and helping to keep us competitive (IMF, World Bank, WTO, 2017; European Commission, 2017). The EU's share of global goods exports remains above 15 %, having only fractionally declined since the turn of the century and the emergence of China as a WTO member and export powerhouse. Some of our Member States that are most integrated in global supply chains also have both higher incomes and lower inequality. This success has provided resources to support our social model and protect the environment.

Globalisation has had similar positive effects around the world. It has helped lift hundreds of millions of people out of poverty and has enabled poorer countries to catch up. It has played a role in increasing stability, democracy and peace (OECD, 2017).

At the same time, globalisation also poses challenges. Its benefits are spread unequally among people and regions, some of which are less adaptable to change and competition than others. In recent decades, many countries — sometimes with lower wages, environmental standards or taxes — have increasingly competed with Europe in low-skill and low-value added industry segments. The fact that other countries do not all share the same living, social, environmental, tax and other standards as Europe means that companies can use these differences to their competitive advantage. This has led to factory closures, job losses or downward pressure on workers' pay and conditions. Companies that are unable to compete with more productive or cheaper foreign counterparts close, leaving a lasting impact on those laid off, their families and the wider region (European Commission, 2017).

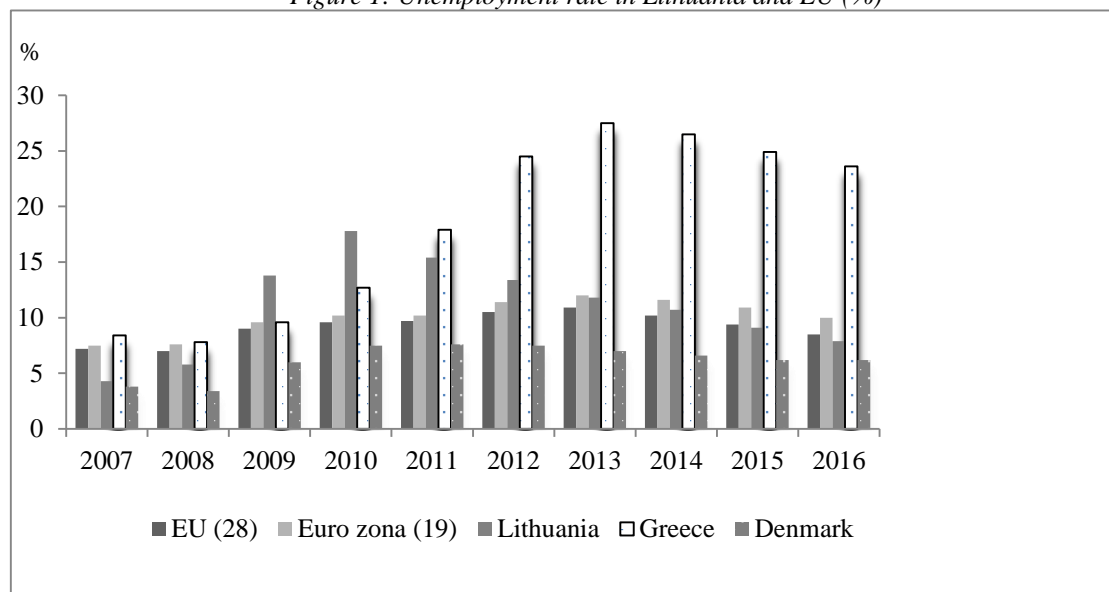
A combination of globalisation and technological change has increased demand for skilled labour but reduced the number of jobs for those with a lower level of qualifications, particularly in manufacturing. Displaced workers struggle to get a new job, especially when this means acquiring new skills. Legal immigration has generally boosted the economies of receiving countries and can provide the EU with the skills needed to address labour market shortages. However, where local infrastructure and integration efforts have not kept pace with the increased scale of migration, this can lead to social tensions in communities. In particular, in

countries and regions with high levels of unemployment and exclusion, economic and societal costs can be high, whilst in some cases marginalisation can also lead to radicalisation.

3. Evaluation of employment situation in the conditions of globalization

Evaluation of the employment tendencies in Lithuania in the long- term perspective show that situation in the labour market is tightly related and dependent on cycles of economic fluctuations (Fig. 1).

Figure 1: Unemployment rate in Lithuania and EU (%)



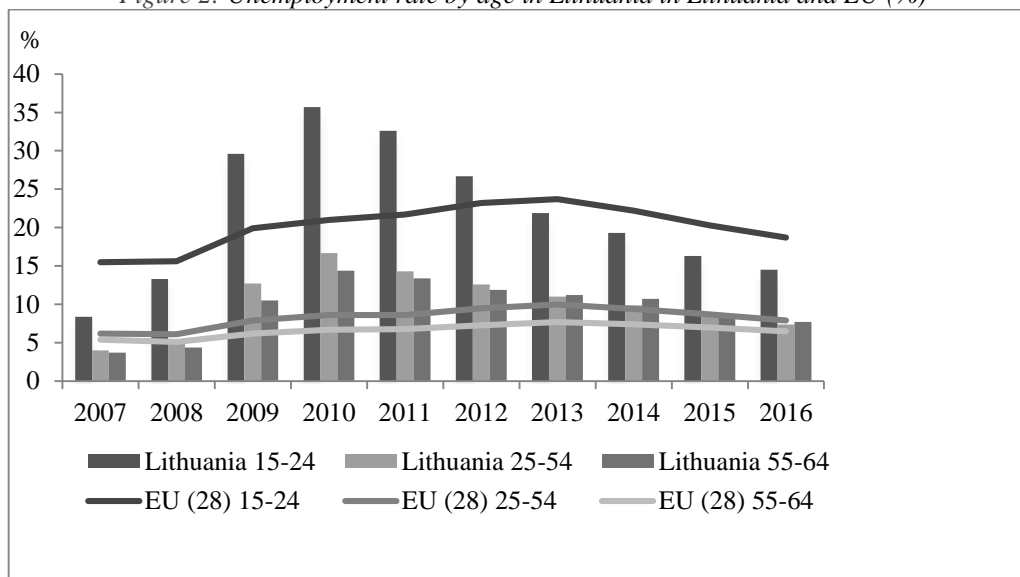
Source: based on Eurostat data

To be emphasized, that global financial crisis together with overheat of real estate market affected Lithuanian labour market more than any other EU countries. The peak of unemployment in Lithuania fixated in 2010 (reached even 17.8 %), significantly exceeded EU (28) median (9.6 %).

Despite improving situation in labour market, neither in Lithuania, nor in European Union (EU 28) the level of unemployment in 2016 did not reach the level before crisis, the indicator remains higher. Eurostat 2016 data show the lowest level of unemployment is in Czech Republic (4 %) and Germany (4.1 %), the highest – in Greece (23.6 %) and Spain 19.6 %). The level of unemployment of young persons is outstanding and much higher in all EU countries (Fig. 2).

The financial crisis of 2009 made severe impact on the employment indicators in Lithuania. In 2010 there were fixated the lowest rate of employment through the period of evaluation. After significant drop, that concluded 10 percentage points, in 2008–2009 employment rate reached 63 % in Lithuania. Starting form 2011 recovery of Lithuanian economy brought back lost opportunities and the indicator started tendentious lift up. When comparing EU 28 and Lithuanian labour average, we can observe that changes in labour were significantly more serious in Lithuania than EU average.

Figure 2: Unemployment rate by age in Lithuania in Lithuania and EU (%)

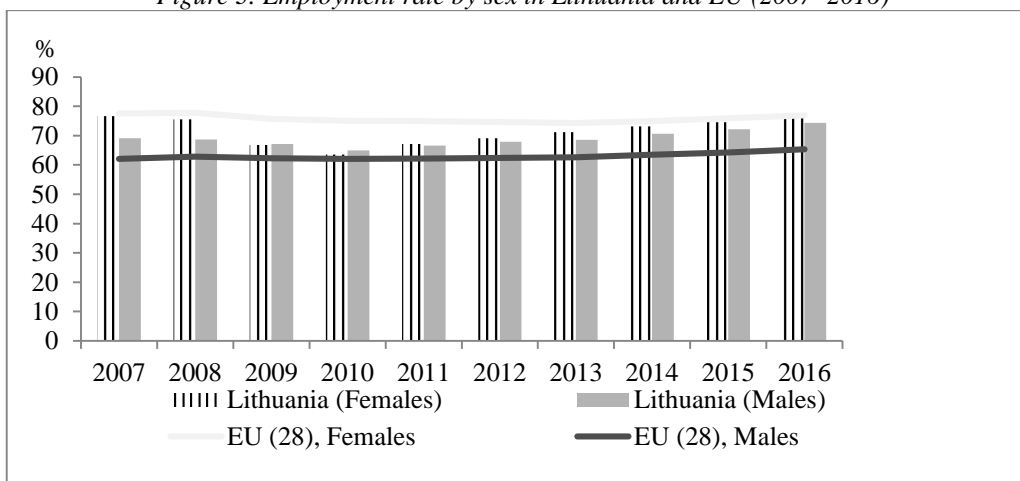


Source: based on Eurostat data

One of the main goals of the strategy „Europe -2020– to reach that till 2020 75 % of all citizens of European Union (at age 20–64) participate in labour market (European Commission 2010). In order to achieve this goal there were recommended to reform out-dated labour market policies of some EU countries. The special attention shall be paid to flexibility of work relations and to life-long learning conception. Statistics Lithuania data show, that in the 2nd quarter of 2016, employment rate among citizens of Lithuania (at age 20-64), exceeded the goal, defined in the strategy, reaching 75.4 % limit, that was higher than EU average.

Analysing employment level in Lithuania according to sociodemographic attributes, traditionally employment level of men is higher than women (Fig. 3).

Figure 3. Employment rate by sex in Lithuania and EU (2007–2016)



Source: based on Eurostat data

Analysis of statistic data shows in 2007–2008 in Lithuania men were employed around 8% more often than women. However, since 2009 this gap is decreasing. There is an assumption that economic recession had bigger impact on young men employment (the employment level in male category declined more than in female). Analysis of EU (28) changes of employment

situation by gender show that during the last 20-year general tendencies are the same (male employment exceeds female employment by 10 %).

This is relevant also to youth employment tendencies. The largest difference between male and female demographic groups was in 2008 when the difference reached 8.3 percentage points. The smallest difference has been fixated in 2009 when financial crises damaged construction and manufacturing sectors, where male employees compound the largest part. During the financial crisis the young male employment rate decreased from 30.1 % to 19.1 % – that is less than 37 percent. Employment rate of young female in the given period decreased from 21.8 % to 17 %, and that is 23 % drop. Therefore, we can make an assumption that economic recession had stronger impact on young male employment changes. To be emphasized, that employment rates of these demographic groups varied differently as well in post-crisis period: female employment decreased till 2011, when male employment bottom was reached already in 2010.

Globalization, Europeanization and related processes created significant changes in migration also in Lithuania. Since 1990 the number of residents living in Lithuania has dropped by 845 thousand people, which constitutes about 23 % of the entire population. Lithuania is attributed to countries, that experience the high emigration. The country is characterized by the highest negative international migration saldo to 1000 inhabitants in comparison to other European Union states.

4. New opportunities and challenges in the Lithuanian labour market

In 2012 European Commission submitted recommendations to Lithuania in order the Government can effectively implement the program of national reform. One of the items in the recommendations was directed toward actions against high level of unemployment at that time. Not enough flexible labour market policy was underlined as one of the possible limitations. Regarding that, there were recommended to change legal acts, related to conditions of work agreements, terms of dismissal and flexible work forms (European Commision, 2012).

Scientific researches show (Bernal-Verdugo et al., 2012) that reforms of labour market that aim to achieve flexibility of labour market and liberalization of work relations shall lower unemployment level. The flexibility of labour market is treated as necessity that helps countries to adjust to dynamic changes of conditions in globalization circumstances. There is an approach, that work standards and regulation has a negative impact on labour market flexibility and decrease competitiveness on macro – countries and micro – organizational levels (Cook, 2010).

In order to liberalize local labour market, in 2016 The Parliament of The Republic of Lithuania adopted the project of the law, which changed the Labour Code, valid from 2002. The new Labour Code of the Republic of Lithuania aims to create more flexible labour market and therefore more attractive to local and foreign investors.

In European Commission Europe 2020 strategy for smart, sustainable and inclusive growth, the labour market flexibility is presented as the main instrument, enabling members of European Union to induce into labour markets more attractiveness and to reveal potential opportunities for employment for reaching the stated goal.

One of the main novelties, that allows organizations to plan human resources more flexibly and employees to adjust working functions to personal needs, are the new types of employment contracts:

Temporary employment contract. That is an employment form where work relations involve three parties – temporary employee, temporary employment enterprise and the user of temporary work. Thus, a temporary employee for the fixed period or non-fixed period is sent to a temporary job at the organization of the user of temporary work. This labour form allows to employ the work force that is not needed in the actual time, without dismissal, and later when situation in the company changes to return employee back.

Employment contract with not defined work scope. That is a work agreement, where time for work functions is not set in advance and the employee commits to execute the job functions when the employer asks and informs in advance to five work days. The minimal obligation of the employer is to pay the minimum sum required for 8 work hours per month despite there was or there was not request for a job. The employer is allowed to work at the other work place and is able to refuse in the written form to take a job after the employers' request if requirements of Labour Code Article 86 (Register of Legal Acts, No. 23709, 2016) had been violated and such rejection is not treated as violation of job duties.

Project employment contract. That is a terminated employment contract, where the employer commits to execute work duties for the concrete result. The duration of the contract is up to two year period with the new employee and up to five years, if this form of employment changes previous valid employment contract. The Labour Code defines the wage payment order – not lower than a minimal hourly payment and opportunity to additional payment for the executed result.

Shared workplace employment contract – under this contract, two employees, share one workplace without exceeding established working time norm. The work time of different employees can be different – that is an item of mutual agreement of the contract parties and has to be approved by the employer and can be changed. Periods of sick leave and leave for one employee do not influence the work schedule and order of the other. When the new contract is signed or the ordinary employment contract is changed into shared workplace employment contract, the employer is obliged to discuss the possibility to apply this form of employment, if manufacturing and organizational process allows and the employee's who requests for this form of employment belongs to the social risk groups.

Shared employer contract. This is a contract, signed by the employee and two or more employers. The job function of the employee remains the same. The employee's work time may not be divided for each employer if the employee executes job functions, satisfying need of several employers at the same time. On the contrary, the parties can agree about the work time norms or work schedule in the contract and that shall be presented to the employee, taking over the job functions, not later than five work days in advance. In the employment contract the lead employer is chosen, he by The Labour Code, carries all obligations and all typical employer's functions – taxation of work incomes, designing work schedules, provision of information about the employer and other. Other employers compensate to the lead employer costs, in regard to the work time devoted to them by the employee.

Seasonal employment contract. This contract is applied when due to natural and climate conditions (seasonal period) is not possible to offer to employee permanent work and employment. This employment contract defines that employee works during the periods of duration not longer than eight months. The jobs executed under such contracts shall be included into the list of seasonal works. The terms and conditions of the seasonal employment contracts as well payment of wages and other peculiarities are regulated by the Government of the Republic of Lithuania following The Labour Code (Register of Legal Acts, No. 23709, 2016).

Updated reglamentation of work relations creates more opportunities to choose adequate work relations form. Employees and employers will be able to react to market and own needs more flexibly. Scientists consider that employment for not full work day has positive impact for country residents as well for the whole economy. Despite increasing work satisfaction, scientists find, that employees, working under flexible employment forms, more often choose to work in simple positions and to receive lower salary, more seldom attend qualification programs and other education

5. Conclusions

The analysis of the labour market is inseparable from the outcomes of globalization. High emigration existing in Lithuania is an obvious outcome of globalization. Despite globalization has positive traits, such as free movement, new work places, the rise of technologies and other, as the executed analysis show it also creates alot of problems: ageing of countries, lack of qualified work force, dishonest business practice of some foreign companies or states. On the other hand globalization is inescapable process aiming to progress and foster the development of innovations, therefore it is important to establish the right „rules”, in order the business becomes “conscientious”, creating competitive work places, oriented toward principles of sustainable development on macro and on micro levels, supporting economic stability and steady growth of well-being.

European Commission in 2012 recommended to Lithuania relevant changes and solutions for the employment market policy. There is a hope that the new Labour Code of the Republic of Lithuania, adopted in 2016, will give more flexibility to labour market not only in aspects of dismissals and labour disputes, but also will provide significant changes in regulation of employment contracts. New forms of employment contracts shall create more flexibility, that will increase attractiveness of specific demographic groups in the labour market, therefore will foster competitiveness of local business organizations. Employment promotion initiatives that are put into action will create new possibilities for persons willing to participate in the labour market under conditions of globalization.

References

- [1] Aubry, A., Burzynski, M. and Docquier, F. (2016). The welfare impact of global migration in OECD countries. *Journal of International Economics*, vol. 101, pp. 1–21.
- [2] Bernal-Verdugo, L. E., Furceri, D. and Guillaume, D. (2012). Labor market flexibility and unemployment: new empirical evidence of static and dynamic effects. *Comparative Economic Studies*, vol. 54, no. 2, pp. 251–273.
- [3] Bojnec, S. and Ferto, I. (2017). Effects of globalization and corruption on the outward FDI in OECD countries. *Ekonomický časopis*, vol. 65, no. 3, pp. 201–219.
- [4] Buch, C. M. and Pierdzioch, Ch. (2014). Labour market volatility, skills, and financial globalization. *Macroeconomic Dynamics*, vol. 18, no. 5, pp. 1018–1047.
- [5] Cabral, R., Garcia-Diaz, R. and Varella Mollick, A. (2016). Does globalization affect top income inequality? *Journal of Policy Modeling*, vol. 38, no. 5, pp. 916–940.
- [6] Cook, L. J. (2010). More rights, less power: Labor standards and labor markets in East European Post-communist States. *Studies in Comparative International Development*, vol. 45, no. 2, pp. 170–197.

- [7] Cuyvers, L., De Lombaerde, Ph. and Rayp, G. (2011). The labour market consequences and regionalisation introduction. *International Journal of Manpower*, vol. 32, no. 3, pp. 252–256.
- [8] Davidson, C. and Sly, N. (2014). A simple model of globalization schooling and skill acquisition. *European Economic Review*, vol. 71, pp. 209–227.
- [9] Eurostat Database. [Online]. Available: <http://ec.europa.eu/eurostat/data/database>.
- [10] Fernandez Perez, A. (2016). Problems about migration in the globalization context. *Praxis Sociologica*, vol. 20, pp. 147–166.
- [11] ILO statistics database. [Online]. Available: <http://www.ilo.org/global/statistics-and-databases/lang--en/index.htm>.
- [12] IMF, World Bank, WTO (2017). Making trade an engine of growth for ell. The case for trade and for policies to facilitate adjustments.
- [13] Kurekova, L. and Hejdukova, P. (2016). Globalization and migration: The empirical study of panel data of the migration in the Czech Republic and Slovak Republic. *16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 1136–1144.
- [14] Labour Code of the Republic of Lithuania (Legal Acts) XII-2603. TAR (Register of Legal Acts), 2016, no. 23709 (Valid from July 1, 2017).
- [15] Martins, P. S. and Yang, Y. (2015). Globalized labour markets? International rent sharing across 47 countries. *British Journal of Industrial Relations*, vol. 53, no. 4, pp. 646–691.
- [16] OECD (2017). Key issues paper: making globalisation work: better lives for all. [Online]. Available: <https://www.oecd.org/mcm/documents/C-MIN-2017-2-EN.pdf>.
- [17] Recommendation for a Council Recommendation on Lithuania's 2012 national reform programme and delivering a Council opinion on Lithuania's convergence programme for 2012–2015. COM (2012) 319 final. Brussels: European Commission.
- [18] *Reflection paper on harnessing globalization*. European Commission. (2017). COM (2017) 2040. ISBN 978-92-79-68226-1. Belgium: Brussels.
- [19] Seo, H. J., Kim, H. S. and Lee, Y. S. (2015). Globalization and labor demand elasticities: Empirical evidence from nine OECD countries. *Korean Economic Review*, vol. 31, no. 2, pp. 413–439.

GLOBAL RESPONSIBILITY FOR THE QUALITY OF ELECTRICITY

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Abstract. Electricity, being a market product, must have certain parameters. Providing these parameters is mainly supplier's responsibility. However, it turns out that the electricity quality indicators provided by the supplier are significantly affected by the consumers themselves. In the past, large industrial plants caused the biggest disruptions in the power system. Particularly steelworks with electric arc furnaces and with unit power of up to dozens MW generated disturbances experienced by many consumers of electricity. Interference in the power grid generated by the furnace had a direct impact on man through the light sources. In recent years the nature of used receivers has changed significantly, especially those used by individual consumers. For example, a whole range of modern electronic devices has appeared in households. Recently LED technology has gained popularity. The following article is continuation of the issues related to power security and electricity quality presented at the 16th International Scientific Conference on Globalization and Its Socio-Economic Consequences. This article will present the impact of large industrial customers on energy quality. It will try to trace the direct influence to the human organism caused by interference generated to the power grid by receivers installed in the steelworks. Another issue will be addressing the problem of global "littering of the power grid" by individual consumer.

Keywords: costs of poor power quality, flicker of light, disrupting of the power grids

JEL Classification: L49, Q40, Q41, Q43

1. Introduction

Electricity produced in commercial power plants is characterised by very good quality parameters. Voltage is symmetric, without distortions, ideally sinusoidal. The supply of electricity with appropriate quality parameters on a continuous basis is a very complex issue. Ensuring continuous power supply and issues relating to long power supply interruptions were presented at the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences (Olczykowski & Łukasik, 2016), (Korczak et al., 2016) This paper mainly focuses on the electricity quality. What is poor electricity quality, who causes its deterioration, and what are its consequences? An answer to such questions will be presented in its further part.

2. Electricity quality indicators

The rated voltage of a low voltage grid is 230/400V. Due to a variable load, disturbances occurring in the grid, technical condition of a line, etc., the voltage changes in a more or less dynamic way: voltage fluctuations, voltage dips, interruptions, overvoltage. These changes

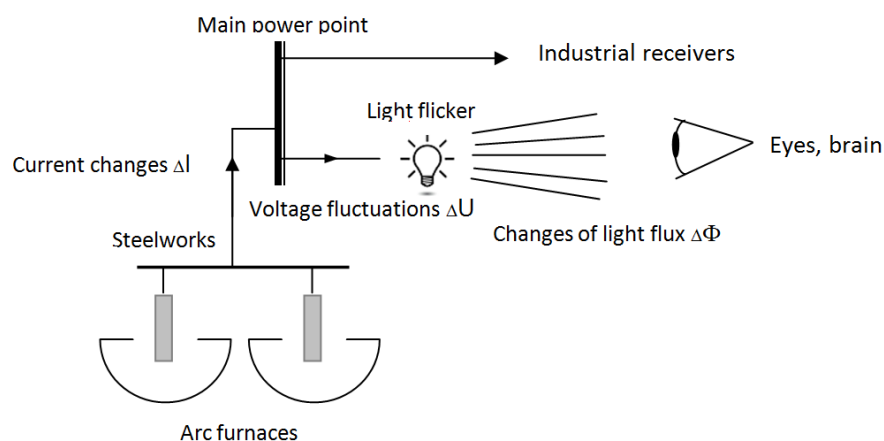
affect both the value and the shape of voltage curve. Considerable voltage deviations from its rated value and sinusoidal shape may cause disturbances in the power grid operation as well as industrial and individual receivers. Therefore, regulations have been adopted, which regulate the voltage quality supplied to its consumers. A legal act enforced in Poland in respect of electricity is the Regulation (Ordinance of the Minister of Economy, 2007). It has been considerably based upon the EN-50160 (Parameters of the supply voltage ..., 2014).

Basic indicators characterising electricity quality include: supply voltage root mean square and a range of its fluctuations, voltage frequency and a range of voltage frequency fluctuations, long-term flicker severity value P_{lt} , supply voltage asymmetry factor, Total Harmonic Distortion summary, percentage factor THD, percentage content of individual harmonics $u_{h\%}$, a summary supply interruption time during a year, a single supply interruption time.

3. Reasons for poor electricity quality

It may be assumed that electricity produced in commercial power plants meets all requirements stipulated in norms and regulations. It is transmitted by transmission and distribution lines to consumers. During the transmission some disturbances may occur affecting the continuity and quality of electricity. They can be divided into three groups. The first group comprises external factors, independent of commercial power industry. These are, inter alia, weather conditions: storms, hurricanes, icing, floods, etc. They affect mostly power supply dependability (power supply interruptions). The second group of disturbances comprises disruptions resulting from commutation operations within power grids, causing mostly over voltages and voltage dips. The third group of disturbances is dependent on the technical condition of transmission and distributions networks. The poor condition of a network causes considerable low voltage failures and power supply interruptions.

Figure 1: Light flicker perception



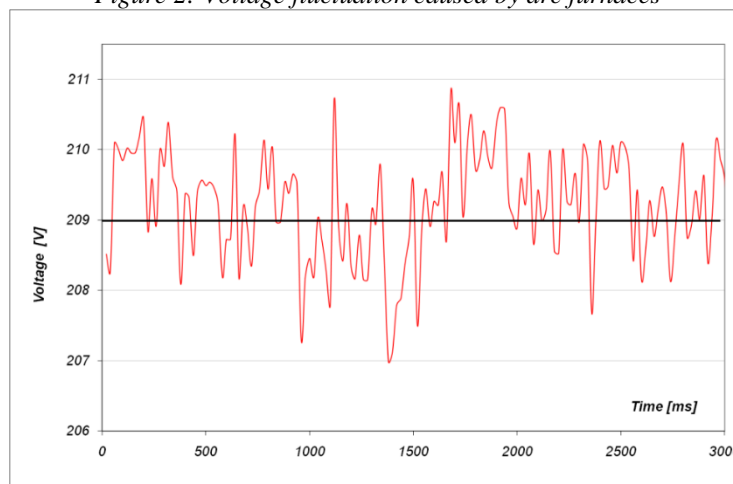
Source: (Own elaboration)

A significant influence upon the quality of electricity within a power grid is exerted by consumers operating arc devices, predominantly electric arc furnaces. Arc furnaces belong to the biggest receivers supplied from the power grid. The technological process related to the melting of steel is characterised by rapid fluctuations of the current consumed by the furnace. Arc furnaces, similarly to arc welding machines, cause the occurrence of high-frequency voltage fluctuations. The fluctuations result in light flicker, which has a direct impact on a human being. It may lead to problems with concentration, mistakes in professional work (precision mechanical engineering, watchmakers' work, etc.), and in extreme cases, it may

cause epilepsy recurrences. The indicators which inform us about the adverse effect of light flicker are: short-term flicker severity value P_{st} and long-term flicker severity value P_{lt} . The Fig. 1 shows the process of flicker caused by the operation of arc furnaces.

Light sources are among the receivers which are very vulnerable to even small voltage fluctuations, which disturb their operation (Alkandari & Soliman, 2009). Voltage fluctuations can be defined as interharmonics (Maksic & Papic, 2012). Those disturbances are perceptible to a human being as light flicker. The Fig. 2 shows voltage fluctuations caused by arc furnaces.

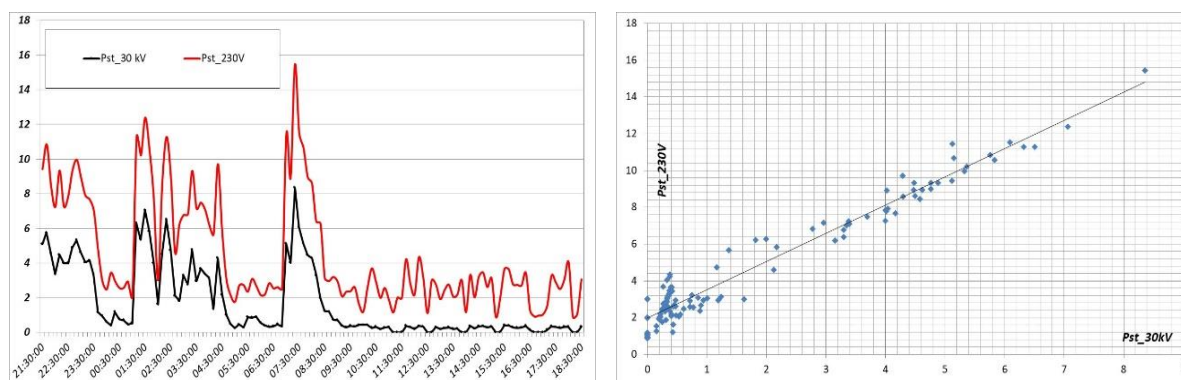
Figure 2: Voltage fluctuation caused by arc furnaces



Source: Own measurements

An experiment was carried out during the research conducted by the author. Its purpose was to determine an extent to which arc furnaces influence light flicker. Lighting receivers in a mill were powered from the same transformer as arc furnaces. In normal conditions, receivers vulnerable to voltage fluctuations are powered from a different, independent transformer. Fig. 3 shows changes in light flicker indicators measured simultaneously in the steel mill power supply network ($U_n=30\text{kV}$) and in the lighting system of steel mill office facilities ($U_n=230\text{V}$). During the arc furnace operation between 9:30 p.m. and 9:30 a.m., an increase in light flicker could be observed. Particularly high values occurred at the initial stages of the melting process. The disturbances caused by the arc furnace were transmitted via power supply lines and the main transformer of the mill to the lighting circuits. The correlation coefficient between the light flicker within the 230V lighting system and the 30 kV steel mill power supply network is 0.98 (Fig. 3).

Figure 3: Changes in light flicker indicators measured simultaneously within the steel mill power supply network and lighting system of steel mill lighting facilities.

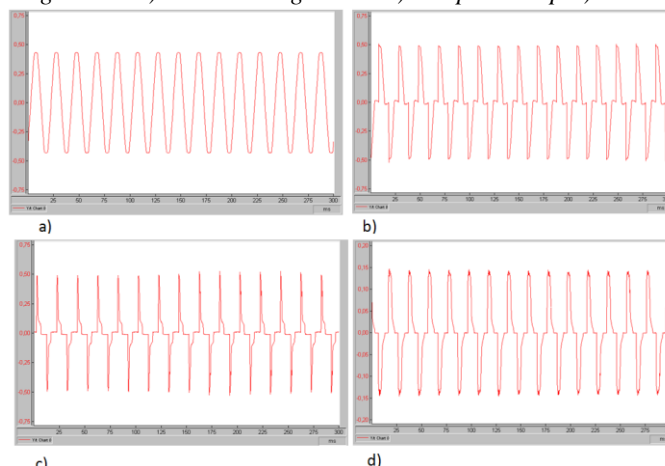


Source: Own measurements

From among lighting receivers, incandescent light sources belong to devices being most vulnerable to voltage fluctuations. Due to low energy performance in the European Union member states, light bulbs have been being withdrawn from the market since 1 September 2009 (Commission Regulation (WE) NR 244, 2009). Energy-saving compact lamps, halogen lamps, and recently lamps made in LED technology widely introduced into the market, have allowed to revolutionise lighting technology. The introduction of modern light sources has considerably decreased energy consumption as well as reduced light flicker resulting from voltage fluctuations. Modern lighting devices, on the one hand, reduce energy consumption, but on the other hand, cause its quality to deteriorate. The use of energy-saving compact lamps, halogen lamps powered by electronic transformers, electronic dimmers or LED light sources causes energy quality disturbances (Sohel et al., 2013), (Yi et al., 2014). Single receivers have small unit power. However, their common use creates serious problems for the whole power grid. The Fig. 4 shows currents consumed by a light bulb, a light bulb controlled with a dimmer, a compact lamp and an LED lamp.

Figure 4: Currents consumed by light sources

a) light bulb b) dimmable light bulb c) compact lamp d) LED lamp



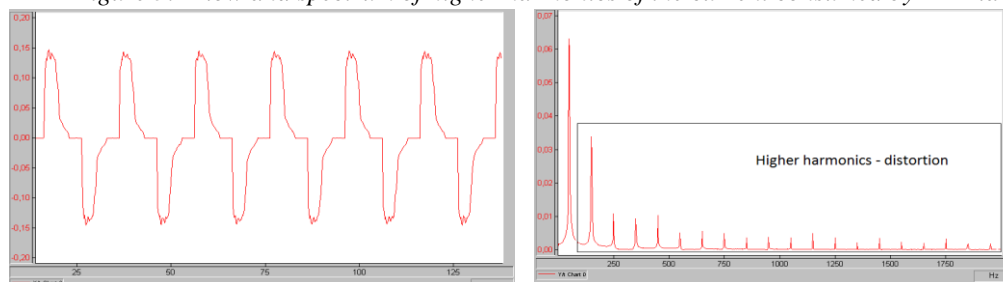
Source: Own measurements

The current consumed by a light bulb is sinusoidal. The currents consumed by the other receivers are non-linear, are considerably distorted. One of the consequences of non-linear

current flow is a power grid voltage distortion. The voltage distortion causes a great number of adverse phenomena with regard to both devices comprised by the power system and receivers operated by industrial and individual consumers.

The Fig. 5 shows the flow of a current consumed by an LED lamp and its spectrum of higher harmonics.

Figure 5: Flow and spectrum of higher harmonics of the current consumed by LED lamp

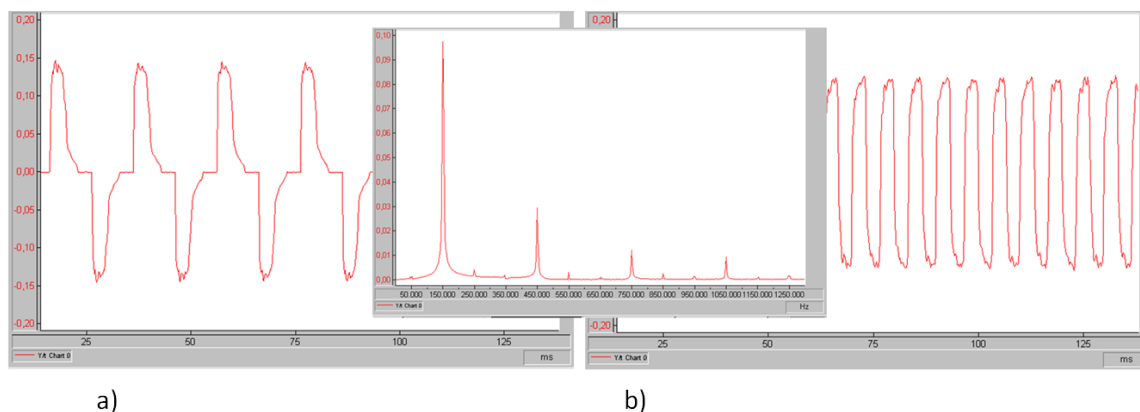


Source: Own measurements

One of the consequences of the flow of distorted currents in electrical systems is an increase in the current in a neutral conductor. At symmetric linear load with e.g. light bulbs, the current does not flow in the neutral conductor.

The Fig. 6 shows the flow of a current in the phase conductor as well as total current in the neutral conductor. It is an example of three-phase power supply of a symmetric non-linear lighting system (compact lamps). In the case of a symmetric non-linear system, the higher harmonics of a current being multiplicity of three, are summed up. The current in the neutral conductor may exceed the value of phase currents.

Figure 6: The flow of a current in the phase conductor (a) and the total current in the neutral conductor (b)



Source: Own measurements

For a three-phase symmetric receiver consisting of compact lamps, the current in a neutral conductor is 147% of the phase current, whereas 137% in LED lamps and 133% in dimmer-powered light bulbs.

4. Costs of power supply interruptions and poor electricity quality

Electricity, as a product which is sold to industrial, municipal, individual, etc., must be characterized by certain parameters. Failure to ensure such parameters results from disturbances occurring within a power grid and power devices as well as receives used by consumers.

A power supply interruption is a disturbance which is always noticeable to consumers. A power supply interruption may last from a few milliseconds to a few days. In the event of long interruptions affecting a vast area and a considerable number of consumers, we deal with the so-called Blackout (Bialek, 2010).

Costs of the most serious power grid failures run into billions dollars (Andersson et al., 2005; van der Vleuten & Lagendijk, 2010). The most severe power failure in Europe, which took place 28 September 2003 in Italy from affected 35 million of inhabitants. The costs of the failure were estimated to reach over 2,3 billion euro (Corsi & Sabelli, 2004), (Petracci, 2011). A powerful failure took place in North America in the same year. It affected over 50 million consumers in the USA and Canada. The costs were estimated to be approx. 8-10 billion dollars (Hines et al., 2009). In 30-31 July 2012, over 700 million of citizens of India were deprived of electricity supply.

Not only long power supply interruptions cause considerable financial losses. It turns out that more than 95% power supply disturbances occurring within a power system are represented by voltage dips and short power supply interruptions. It is estimated that power quality problems cost industry and commerce in the EU about 10 billion per annum while expenditure on preventative measures is less than 5 % of this. Table 1 shows costs dependent on the type of a consumer and the duration of a power supply interruption (Chapman, 2001).

Table 1: Typical financial loss

Factory	Cost [Euro]	Time
Semiconductor production	3 800 000	per event
Financial trading	6 000 000	per hour
Computer centre	750 000	per hour
Telecommunications	30 000	per minute
Steel works	350 000	per minute
Glass industry	250 000	per minute

Source: Chapman, D. 2001

Considerable costs are incurred by industrial consumers, who must limit disturbances they generate. For instance, reduction of voltage fluctuations (resulting in light flicker) caused by arc furnaces, by means of SVC_Light devices represents costs amounting to approx. 60% of the whole furnace system. The use of passive and active filters restricting an impact of higher harmonics means additional costs to be incurred by consumers operating receivers generating those disturbances.

It turns out that the introduction of receivers which were to save electric energy into the market causes a number of disturbances within the power system. Examples of such receivers are energy-saving compact lamps and light sources made in LED technology. Based on the research conducted by the author, those receivers generate higher harmonics into the power grid. Due to the small unit power of individual receivers reaching up to a few watts, disturbances generated by individual devices are small. However, the common use of those receivers causes the disturbances to sum up. As a consequence, a considerable amount of small disturbances enters the power system, which ultimately causes serious financial losses. In the event when only nonlinear currents flow through a transformer, its throughput decreases by more than 50% as compared with the flow of sinusoidal currents. The capacity of line and

power devices decreases likewise. Voltage higher harmonics (voltage distortions) also affect correct operation and life-span of electricity receivers.

5. Conclusion

The paper focuses mostly on two types of disturbances occurring within a power system. The first are high-frequency voltage fluctuations resulting in light flicker. This type of disturbances is mostly caused by receivers with a dynamically changing load. Light flicker is directly perceptible to a human being. Depending on the intensity of voltage fluctuations, the adverse effect of flicker may be more or less bothering. Reduction of light flicker sensibility can be gradually achieved by the introduction of modern light sources. It turns out, however, that the use of compact lamps or LED lamps entails another type of disturbances. These are higher harmonics (the second type of disturbances described in the paper) generated into power grids. They cause a number of disturbances in the operation of lines and receivers.

Arc devices, particularly arc furnaces, cause disturbances which affect a considerable number of consumers. Similarly, disturbances caused by modern light sources are a global problem for domestic power systems. Elimination of those disturbances involves considerable costs. In the case of arc devices, the costs of reducing disturbances, particularly voltage fluctuations, are incurred by consumers (mills). Reduction of higher harmonics generated by nonlinear receivers of small unit power, including modern light sources, is more complex.

Supplying consumers with energy characterised by certain parameters on a continuous basis is a very complex issue. The list of the causes of the poor electricity quality supplied to consumers is very long. It may start from disturbances independent of energy suppliers and connected with extreme weather conditions, through the bad technical condition of a network and end up with interfering receivers used by consumers.

So what remedial measures should be taken? Firstly, a wide information campaign should be conducted on the issue of electricity quality. One of the Polish organisations dealing with this issue is the Electric Energy Quality and Effective Use Committee operating at the Association of Polish Electrical Engineers (SEP). Education of future electrical engineers by running studies focusing on the issue of energy quality.

References

- [1] Andersson, G., Donalek, P. et al. (2005). Causes of the 2003 major grid blackouts in North America and Europe, and recommended means to improve system dynamic performance. *IEEE Transactions on Power Systems*, vol. 20, pp. 1922-1928.
- [2] Alkandari, A. M. and Soliman, S. A. (2009). Measurement of a power system nominal voltage, frequency and voltage flicker parameters. *Electrical Power and Energy Systems*, vol. 31, pp. 295–301.
- [3] Bialek, W. J. (2010). Critical interrelations between ICT and electricity system. *Securing Electricity Supply in the Cyber Age*, Springer, pp. 53-70.
- [4] Chapman, D. (2001). The cost of poor power quality. *Power Quality Application Guide – Cost. 2.1. Copper Development Association, European Copper Institute*.
- [5] Corsi, S. and Sabelli, C. (2004). General blackout in Italy Sunday September 28, 2003, h. 03:28:00, *IEEE Power Engineering Society General Meeting*, vol. 1 and vol. 2, pp. 1691-1702.

- [6] Hines, P., Apt, J. and Talukdar, S. (2009). Large blackouts in North America: Historical trends and policy implications. *Energy Policy*, vol. 37, pp. 5249–5259.
- [7] Korczak, A., Olczykowski, Z. and Wojciechowski, J. (2016). The smart grid technology in Poland as a part of global electric power system. *16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecké Teplice, Slovakia, pp 945-953.
- [8] Maksic, M. and Papic, I. (2012). Calculating flicker propagation in a meshed high voltage network with interharmonics and representative voltage samples. *Electrical Power and Energy Systems*, vol. 42, pp. 179–187.
- [9] Olczykowski, Z. and Łukasik, Z. (2016). The impact of blackouts on the economy and national security. *16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, pp – 1596 -1603.
- [10] Petracci, B. (2011). Trading when you cannot trade: Blackout periods in Italian firms. *International Review of Law and Economics*, vol. 30, pp. 196-204.
- [11] PN-EN 50160:2014: (2014). Parametry napięcia zasilającego w publicznych sieciach elektroenergetycznych. Warszawa, *Polski Komitet Normalizacyjny*. [In Polish: PN-EN 50160:2014 Parameters of the supply voltage in the public power networks, Warsaw: Polish Committee of Standardization].
- [12] Rozporządzenie Ministra Gospodarki z dnia 4 maja 2007 r. w sprawie szczegółowych warunków funkcjonowania systemu elektroenergetycznego (2007). *Dz. U. Nr 93, poz. 623*, [In Polish: Ordinance of the Minister of Economy of 4 May 2007 on detailed conditions for the functioning of the power system. 2007. *Dz. U. Nr 93, poz. 623*]
- [13] Rozporządzenie Komisji (WE) NR 244/2009 z dnia 18 marca 2009 r. w sprawie wykonania dyrektywy 2005/32/WE Parlamentu Europejskiego i Rady w odniesieniu do wymogów dotyczących ekoprojektu dla bezkierunkowych lamp do użytku domowego, *Dz.U. L 76 z 24.3.2009*.
- [14] Sohel, U., Hussain, S. and Azah, M. (2013). Power quality performance of energy-efficient low-wattage LED lamps. *Elsevier Measurement*, vol. 46, pp. 3783–3795.
- [15] van der Vleuten, E. and Lagendijk, V. (2010). Interpreting transnational infrastructure vulnerability: European blackout and the historical dynamics of transnational electricity governance. *Energy Policy*, vol. 38, pp. 2053–2062.
- [16] Yi, L., Gyung-Seok, H. and Hee-Jun, K. (2014). Analysis of the twice-line-frequency light flicker of an LED lamp driven by a single-stage PFC Circuit. *Journal of the Korean Physical Society*, vol. 65, no. 2, pp. 234-238.

GLOBALIZATION AND THE INFLUENCE OF WAGE POLITICS ON EMPLOYMENT

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Abstract. Individual and collective employment relations are regulated in the Labor Code. An employment starts by signing employment contract between employer and employee in a written form. Technological progress of twentieth century brought work efficiency, which led consequently to reduction and flexibility of working time. In an employment contract, an employer agrees with an employee on substantial work-related elements and payment conditions. Wage policy should follow objectives leading to efficiency and work ethics, which should be reflected also by fair employee compensation. The International Office of Work created a list of factors, which lead to such employee reward strategy, so that wage system condition were balanced with wage-political decision making. That is why crisis management reviews and looks after the risk deficit of wage matters, which include employment matters in a business sector. When dealing with a specific situation, a corporate crisis management must be based on overall conditions given by a national, and in our case - Slovak economy. Crisis management shall monitor global economy factors, mainly the ones with a potential to be influenced. Among the fundamental economical business factors, new matters arise, which should be unconditionally focused on, so that the crisis of potential employment deficit would be settled in advance. Due to globalization and extremely fast changing business environment in the last years, the importance of education becomes significant in this investigated topic. Therefore, a primary matter of effective wage system arises, which shall secure consistency among other business control subsystems.

Keywords: employment, globalisation, management, wage system, monitoring

JEL Classification: G32, F65

1. Introduction

Cieľom príspevku je analyzovať vplyv mzdovej politiky na zamestnanosť, zhodnotiť stav odmeňovania zamestnancov a navrhnúť opatrenia, ktoré by viedli k zefektívneniu daného procesu, keďže Zákonník práce upravuje individuálne alebo kolektívne pracovnoprávne vzťahy v súvislosti s výkonom závislej práce fyzických alebo právnických osôb. Pracovnoprávny vzťah vznikne uzatvorením riadnej pracovnej zmluvy alebo dohodou o práci, ktorý zamestnanec vykonáva mimo svojho pracovného pomeru a patrí mu mzdové ohodnotenie.

2. Metódy

Príspevok bol spracovaný z domácej a zahraničnej odbornej literatúry, rôznych finančných, informačno-hospodárskych portálov a popisné metódy. Vzhľadom k tomu, že informácie musia byť spracované úplne, prehľadne a spoľahlivo, je potrebná ich syntéza, analýza, indukcia,

dedukcia, komparácia. Aby podnik fungoval úspešne, jedným z predpokladov je aj kvalifikovaná práca s informáciami, ktoré prinesú obraz jeho budúceho smerovania.

3. Teória

V rámci pracovného pomeru sa zamestnanec zaväzuje pre zamestnávateľa vykonávať prácu za určitú mzdu. Mzda je charakterizovaná všeobecne ako peňažné plnenie zamestnávateľa voči zamestnancovi, teda je to systém odmeňovania, ktorý je dôležitý pre každého zamestnanca, aby mohol fungovať dopyt a ponuka na trhu. Závislá práca je práca, ktorá je vykonávaná vo vzťahu nadriadenosti zamestnávateľa a podriadenosti zamestnanca, osobne zamestnancom pre zamestnávateľa, podľa pokynov zamestnávateľa, v jeho mene a v pracovnom čase, ktorý určí zamestnávateľ (Zákonník práce). Práca v živote človeka predstavuje dôležitú aktivitu, pretože uspokojuje jeho potrebu pracovnej realizácie. Avšak dlhodobá nezamestnanosť so sebou prináša nielen nedostatočný príjem, ale aj nedostatočnú potrebu seberealizácie, čo sa priamo odráža na kvalite života nezamestnaných ľudí (Buchtova, 2013). Cieľom politiky zamestnanosti je dosahovanie rovnováhy medzi ponukou a dopytom po pracovnej sile (Matousek, 2008).

3.1 Mzdová politika

Ciele mzdovej politiky by mali smerovať k efektívnosti, etike a harmonickosti v podniku. Efektivita v podniku zvyšuje schopnosť vytvárať výkony z nákladov, ktoré sú na tieto výkony práve vynaložené. Na základe porovnania vlastného výkonu a dosiahnutej odmeny s výkonmi a odmenami ostatných, je etika neoddeliteľnou súčasťou podniku, kedy predstavuje predpoklad spravodlivého odmeňovania zamestnancov v podobe miezd a harmonickosť zabezpečuje súlad medzi mzdovopolitickými rozhodnutiami a platnou legislatívou, ako aj vnútro podnikovými predpismi. (Joniakova, 2005).

3.2 Hodnotenie práce a funkcie mzdy

Aby mohol človek existovať, mal by prinášať aj hodnoty pre spoločnosť v podobe svojej vlastnej práce, z čoho pramení aj stará ľudová múdrosť, že človek nie je pre prácu, ale práca je pre človeka.

Globalizácia ako uvádza mnoho autorov a štúdií prináša pozitívne aj negatívne vplyvy (Kajanova 2016). Podľa Bajzika proces globalizácie ovplyvňuje nielen hospodársky rozvoj a medzinárodný obchod krajín, ale má aj pozitívny vplyv na trh práce a zvyšuje cezhraničnú mobilitu pracovnej sily (Bajzik, 2016). Človek by si mal nájsť podľa možnosti takú prácu, ktorá ho uspokojuje, motivuje a za svoje vynaložené úsilie a výsledky, dosiahne spravodlivú odmenu, teda finančné ocenenie svojej práce. K dobrému pracovnému úsiliu, zvyšovaniu kvalifikácie zamestnanca a v neposlednom rade aj jeho uspokojenie z dobre vykonanej práce, by malo napomáhať dobré pracovné prostredie.

Mzda v oblasti pracovnoprávných vzťahov plní tieto funkcie (Barancova, 2013; Mackova, 2014):

- Sociálnu – ktorá slúži na zabezpečenie základných životných potrieb zamestnanca,
- Regulačnú – ktorá má ekonomickú povahu mzdy ako ceny práce. Výška mzdy sa musí odvíjať od rastu produktivity práce, pretože bez vzájomnej závislosti by bol nepriaznivý dopad na výsledok hospodárenia podniku a tiež aj na hospodársky rozvoj krajiny. To znamená, že ak by sa mzdy neprimerane zvyšovali, zvyšovala by sa aj cena vyrábaných produktov a konkurencieschopnosť podniku na trhu by klesla,

- Kompenzačnú – ide o mzdové zvýhodnenia za prácu nadčas, nočnú, v sťažených podmienkach a pod,
- Stimulačnú – ktorá slúži na mzdovú motiváciu zamestnancov pri pracovných výkonoch.

3.3 Priemerná mzda

Nárok na mzdu je základným právom zamestnanca garantovaný Ústavou Slovenskej republiky. Výška priemernej mzdy sa na Slovensku každoročne zvyšuje. Je to dané predovšetkým tým, že peniaze časom strácajú svoju hodnotu. O tom, či stúpa alebo klesá životná úroveň je rozhodujúcim faktorom inflácia. Pokiaľ mzda v nasledujúcom roku nebude rásť a výška inflácie je na úrovni 3%, reálne je nižším plat o 3 % (www.minimalna.mzda.sk).

3.4 Minimálna mzda

Zamestnávateľ je povinný vyplácať zamestnancovi mzdu vo výške minimálnej mzdy. Ak zamestnancova mzda bude nižšia ako je minimálna mzda, zamestnávateľ mu je povinný doplatiť rozdiel do výšky minimálnej mzdy (Matlovicova, 2014).

Štatút minimálnej mzdy predstavuje nástroj sociálnej politiky, prostriedok na ochranu nízko zárobkových skupín obyvateľstva. Naďalej je možné sledovať tendencie zrušiť minimálnu mzdu, ale vzhľadom na množstvo zákonov, ktoré využíva štatút minimálnej mzdy, by bola táto zmena komplikovaná. Súčasná situácia však nenaznačuje zmeny v tejto oblasti, naopak, môžeme sledovať posilnenie minimálnej mzdy (Kajanova, 2015). Výška minimálnej mzdy sa zvyšuje úmerne s rastom cien každý rok a jej platnosť je celý nasledujúci kalendárny rok. Valorizácia minimálnej mzdy sa vzťahuje pre všetkých zamestnancov v pracovnom pomere, ale aj pre tých, ktorí vykonávajú prácu na základe dohody o práci.

V nasledujúcej tabuľke je vývoj priemernej hrubej mzdy v národnom hospodárstve v SR k minimálnej mzde, na základe čoho sa počíta dôchodkový koeficient. Pričom uvádzaná suma minimálnej mzdy v SR platí pre 1. stupeň náročnosti práce (máme 6 stupňov). Ďalej je tu pre porovnanie zobrazená minimálna mzda v iných krajinách.

Table 1: Vývoj minimálnej mzdy vo vybraných krajinách

Rok	Priemerná mzda v €	Minimálna mzda SR v €	Minimálna mzda Poľsko v €	Minimálna mzda ČR v €	Minimálna mzda Maďarsko v €
2017	945	435	454	420	410
2016	912	405	444	369	353
2015	883	380	415	339	336
2014	858	352	387	328	344
2013	824	338	379	327	333

Source: www.minimalna.mzda.sk

Rovnosť v odmeňovaní a rovnosť pracovných príležitostí sa už dávno netýka len žien, ale do tejto skupiny zaradíme i Rómov, ženy po materskej dovolenke, starších ľudí. Ak by sme porovnávali platy mužov a žien na tých istých pracovných pozíciách, zistíme, že plat žien je o 7 % nižší ako priemerný plat mužov. Avšak ak by sme zisťovali rozdiel v mesačných mzdách, ženy zarábajú o 21 % menej ako muži, hoci pracujú na tej istej pracovnej pozícii (Glevicka, 2014). Rozdiely v odmeňovaní žien a mužov sú špecifikované ako rozdiely medzi priemernými hrubými hodinovými príjmami vyplácanými zamestnaným mužom a príjmami vyplácanými zamestnaným ženám. Predbežné výsledky ukazujú, že nadnárodné spoločnosti majú tendenciu byť lídrami pri zavedení opatrení na zosúladienie pracovného a rodinného života, avšak

nedosahujú výrazne lepšie výsledky v oblasti zastúpenia žien v rozhodovacích orgánoch (Mitkova & Kottulova, 2016).

Jednou z najviditeľnejších zmien je úsilie žien zapojiť sa rovnomernejšie do globálneho pracovného prostredia, dosiahnuť ekonomickú nezávislosť a preniknúť do stredného a vrcholového manažmentu (Sulikova & Strazovska, 2016).

Ľudia nemajú radi zmeny a pod úspešnou a efektívnou implementáciou systému riadenia sú prijímaní na zmenu spôsobu ich práce a môžu sa vyskytnúť problémy na pracovisku. Preto výška mzdy závisí od potreby uplatnenia uchádzača na trhu práce a z toho vychádza aj jeho profil, ktorým sú - osobnostný profil, jeho možný deň nástupu do zamestnania, platové očakávania, vzdelanie, prax, jazykové vedomosti, iné znalosti a v neposlednom rade motivácia (Lateckova, 2014).

Dosahovanie plnej slobodne volenej a produktívnej zamestnanosti je úlohou štátnej politiky zamestnanosti. pričom cieľom je najmä zabezpečovanie práva na zamestnanie, získanie spoločensky účelného zamestnania a zabezpečenie v prípade straty zamestnania (Vaska, 2014). Spojitosť medzi trhom práce a podnikateľským prostredím sa zaoberajú vo svojom príspevku Milošovičová a Stachová. Výskumy zistili, že vysoká miera nezamestnanosti môže viesť k začínajúcej činnosti samostatne zárobkovo činných osôb (efekt "utečenca"), alebo na druhej strane vyššia miera samostatnej zárobkovej činnosti môže naznačovať zvýšenie podnikateľskej aktivity v nasledujúcich obdobiach (Milosovicova & Stachova, 2016).

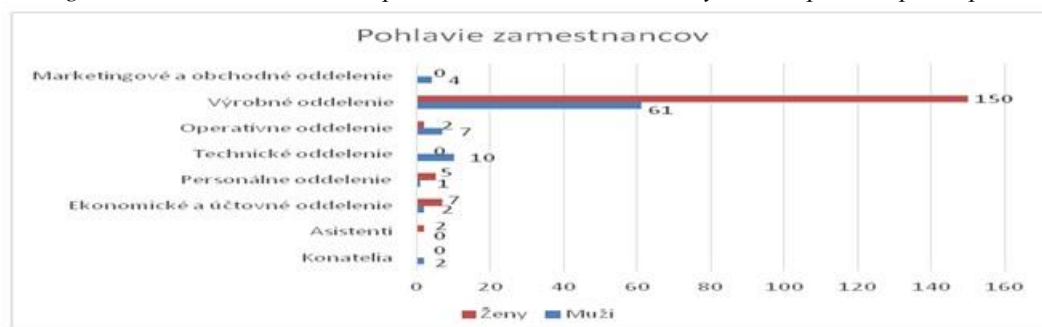
To znamená, že aktívna politika trhu práce je zameraná o návrat nezamestnaných na trh práce, poskytovanie pracovného miesta obyvateľstvu, ktoré ešte nepracovalo a poskytnúť mu odmeňovanie vo forme mzdy. Trh práce čoraz viac odmeňuje sociálne zručnosti. Návrat k sociálnym zručnostiam trhu práce bol v rokoch 2000-tych omnoho väčší ako v polovici 80. a 90. rokov (Deming, 2017).

Odmeňovanie zamestnancov je diferencované aj podľa regiónov, kde zamestnávateľia využívajú nezamestnanosť obyvateľstva, z čoho vyplýva aj podľa prieskumu, že za rovnako vykonávanú prácu v hlavnom meste dostane zamestnanec inú výšku mzdy v regióne mimo hlavného mesta. Je nevyhnutné, aby rastom hrubého domáceho produktu v regiónoch bolo možné dosiahnuť zvýšenie životnej úrovne krajiny (Subertova, 2011). Čiže výsledkom globalizácie a hľadania úspor nákladov je nielen hľadanie teritórií s nízkymi nákladmi na pracovnú silu, ale je to aj problém ako nájsť nové pracovné miesta, ktoré by existovali trvalo. Autorky Paškrťová, Saxunová sledujú cieľ implementácie regionálnej politiky súdržnosti, ktorá je v súlade s cieľmi stratégie Európa 2020 (Paškrťova & Saxunova, 2016).

4. Výsledky

Každý podnik si môže určiť stupne náročnosti pracovnej pozície zamestnancov. Ak by sme urobili prieskum nami vybranom výrobnom podniku, zistíme, že podnik si vytvoril päť stupňov náročnosti. Do piateho stupňa sú zaradení konatelia, lebo ich pozícia si vyžaduje vysokú mieru zodpovednosti a v každom nižšom stupni sa postupne znižujú nároky na zamestnancov, napr. v prvom stupni sú zamestnanci, ktorí zabezpečujú základné, pomocné práce. Keďže ide o drobnú manuálnu prácu, zistíme podľa prieskumu, že v podniku pracuje viac žien ako mužov, muži sú zaradení na vyššie pracovné pozície.

Figure 1: Znáznornenie rozdielu postavenia zamestnancov vo výrobnom podniku podľa pohlavia



Source: Spracované podľa vnútroorganizačných materiálov výrobného podniku

Tu zistíme, že žena v prvom tarifnom stupni dostane len základné ohodnotenie v sume 405,- €, ale muž k základnej mzde 405,-€. dostane aj osobné ohodnotenie vo výške 15,-€, čiže jeho celková hrubá mzda je vo výške 430,-€.

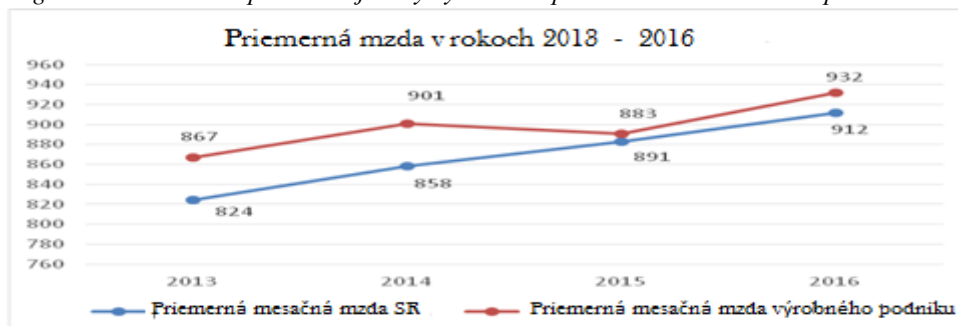
V tabuľke 2 je spracovaná priemerná mzda podniku a porovnaná so mzdou v národnom hospodárstve SR.

Table 2: Priemerná mzda za obdobie 2013 - 2016

	2013	2014	2015	2016
Mzdové náklady (hrubé mzdy) v €	3 017 160	2 897 616	2 811 996	2 829 552
Počet zamestnancov	290	268	263	253
Priemerná mzda v €	867,00	901,00	891,00	932,00
Národné hospodárstvo	824,00	858,00	883,00	912,00

Source: Vnútroorganizačné materiály výrobného podniku a štatistického úradu SR

Figure 2: Porovnanie priemernej mzdy výrobného podniku a národného hospodárstva

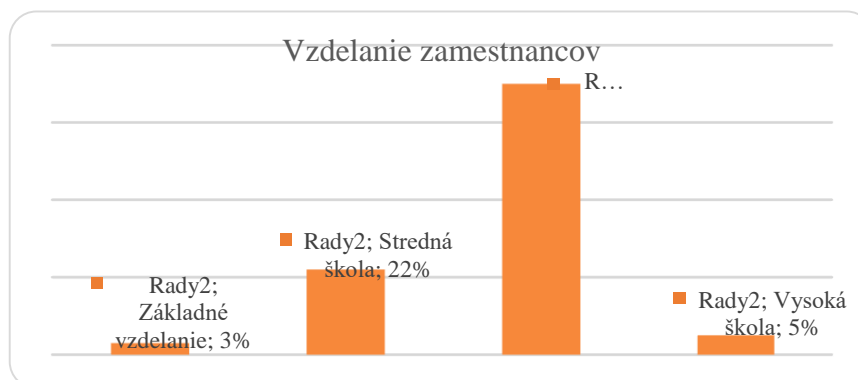


Source: Spracované podľa vnútroorganizačných materiálov výrobného podniku

Podľa grafu na obrázku 2 je zrejmé, že mzdy v národnom hospodárstve sa každoročne zvyšovali, vo výrobnom podniku boli síce vyššie ako v národnom hospodárstve, ale premenlivé.

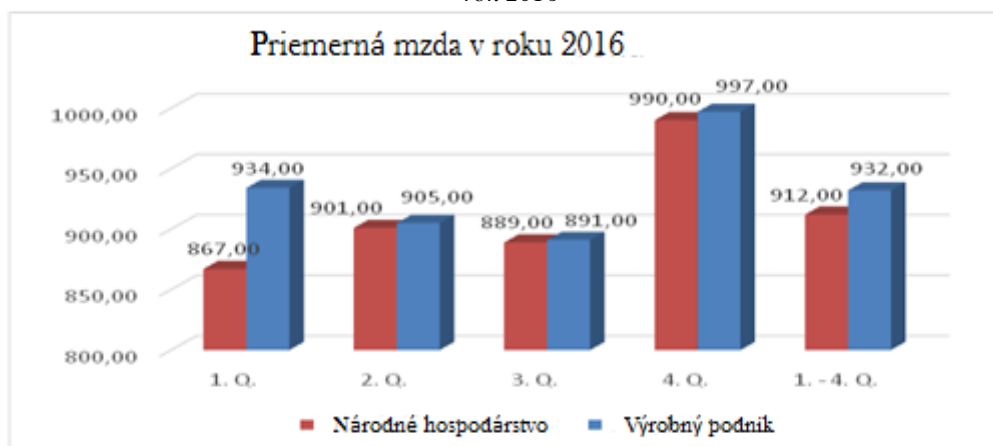
Výrobný podnik, v ktorom je robený prieskum je zameraný na spracovanie elektroniky, má vo svojom okolí strednú školu zameranú na túto oblasť, takže zamestnanci vítajú uplatnenie v danom podniku. Hoci majú maturitu, vzhľadom na nezamestnanosť daného regiónu, sú ochotní pracovať manuálne vo výrobe. V nasledujúcom grafe je zobrazený percentuálne počet zamestnancov s ukončeným vzdelaním.

Figure 3: Grafické znázornenie vzdelania zamestnancov v percentách



Source: Spracované podľa vnútroorganizačných materiálov výrobného podniku

Figure 4: Porovnanie priemernej mesačnej mzdy národného hospodárstva a výrobného podniku. kvartálne za rok 2016



Source: Spracované podľa vnútroorganizačných materiálov výrobného podniku

Na obrázku 4 je grafické znázornenie priemernej mesačnej mzdy výrobného podniku a v národnom hospodárstve.

Zo získaných informácií výrobného podniku treba doporučiť, aby zamestnávateľ si zastabilizoval zamestnancov prehodnotením nielen odmeňovania, ale aj benefitmi, ktoré im môže ponúknuť. Od toho sa bude odvíjať kladný vzťah zamestnanca k práci, bude si vážiť aj zo strany podniku ponúknuté rekondičné pobyty, aby nedochádzalo k jeho profesnému poškodeniu zdravia. Preto podľa Majerčáka, Barana, Majerčákovej je podpora zamestnancov v podnikoch dôležitá pre rozvoj štátu v Slovenskej republike (Majercak et al. 2015).

5. Conclusion

Súčasná vláda navrhuje zaviesť pre zamestnancov 13. plat povinne. Aby sa zabránilo špekuláciám, má byť strop platu vo výške mesačnej hrubej mzdy. Toto môže podnikom priniesť úspory, avšak za cenu dodatočnej byrokracie. Zavedenie inštitútu 13. platu pre zamestnávateľov z pohľadu uplatnenia nákladov znamená daňovo uznaný náklad, ktorý v účtovníctve pre podnikateľov je zaúčtovaný na účte 521 – Mzdové náklady. (Stangova et al., 2012.)

Návrhy ako môžu zamestnávateľia riešiť 13. plat (Prieskum Slovenskej asociácie malých a stredných podnikov, Zuzana Kollarova – Trend 7.9.2017) :

- ak bude 13. plat povinný, zachovajú celkové mzdové náklady,

- už pri nástupe zamestnanca bude treba počítať s týmito nákladmi a prispôbiť výšku jeho nástupného platu,
- zvyšovanie plátov môžu bude napr. podľa kolektívnej zmluvy posunuté do dlhšieho časového obdobia,
- vyplatenie 13. platu bude zruší vyplácanie prémie počas roka, prípadne vianočných odmien,
- zamestnávateľ sa môže rozhodnúť optimalizovať počet zamestnancov, avšak s plnením rovnakého pracovného výkonu, čo bude viesť k znižovaniu zamestnanosti.

Z uvedeného vyplýva, že zamestnávateľia dajú zamestnancovi nižší plat, prisľúbia však kompenzáciu v 13. plate. Zamestnávateľ má právo toto uplatniť aj zamestnancovi už pri existujúcej pracovnej zmluve. Dôležité je podľa analytikov nastaviť maximálnu hranicu, pretože mohla by nastať situácia, že by boli zvýhodňované lepšie zarábajúce skupiny daňovníkov než tí zamestnanci, ktorí zarábajú minimálnu mzdu. Ako povedal Martin Kahanec pre Trend: „Benefitovať budú najmä ťažko nahraditeľní zamestnanci“.

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References

- [1] Bajzik, P. (2016). *Current Problems of the EU Labour Market (the Case of Slovakia)*, pp. 65 – 73.
- [2] Barancova, H. and Schronk, R. (2013). *Pracovné právo*. Bratislava: Sprint 2 s.r.o.
- [3] Buchtova, B. et al. (2013). *Nezaměstnanost*. Praha: Grada Publishing.
- [4] Deming, D.J. (2017). The growing importance of social skills in the labor market. *Quarterly Journal of Economics*, pp. 1593-1640.
- [5] Glevicka, M. (2014). *Platové očakávania ľudí stúpili o 4 %*. [Online]. Available: <http://www.podnikam.webnoviny.sk/platove-ocakavania-ludi-vlani-stupli-o-4/>.
- [6] Joniakova, Z. and Blstakova, J. (2005). *Odmeňovanie a stimulovanie*. 1. vydanie. Bratislava: EKONÓM.
- [7] Kajanová, J. (2015). *Podpora zamestnanosti v kontexte regionálneho rozvoja*, Hradec Kralove: Gaudeamus, pp. 377 – 384.
- [8] Kajanová, J. (2016). *Globalization and its impacts on chemical enterprises performance in Slovakia*, pp. 808-815.
- [9] Kollarova, Z. and Kahanec, M. (2017). *Prieskum Slovenskej asociácie malých a stredných podnikov*, Trend, pp.18 – 19.
- [10] Krajnakova, E., Babynina, L. and Odehov, J. (2013). *Kompenzačný model odmeňovania v organizáciách*. Plzeň: Aleš Čeněk.
- [11] Kucera, M. and Lateckova, A. (2014). *Management Information Systems in the Process of Globalization*, pp. 531 – 537.

- [12] Mackova, Z. (2014). *Funkcie mzdy a história minimálnej mzdy*. [Online]. Available: <http://www.epi.sk/odborny-clanok/funkcie-mzdy-a-historia-minimalnej-mzdy.htm>.
- [13] Matousek, O. (2008). *Slovník sociální práce*. Praha: Portál.
- [14] Majercak, P., Baran, D. and Majercakova, E. (2015). *Theoretical Framework of Business Environment and its Impact on State Development*, pp. 713.
- [15] Milosovicova, P. and Stachova, P. (2016). *Slovak Business Environment in the Context of the Situation on the Labour Market*, pp 457 – 468.
- [16] Mitkova, L. and Kottulova, J. (2016). *Globally Valued, Locally Irrelevant? Gender Quality in the Multinational Companies Operating in Slovakia*, pp. 1411 – 1418.
- [17] MPSVR SR, ŠÚ SR., (2017). *Minimálna mzda*. [Online]. Available: <http://www.minimalna.mzda.sk/v-eu.php>.
- [18] Paskrtova, L. and Saxunova, D. (2016). *Investment Aid and Competitiveness of Regions in Slovakia*, pp. 307 – 321.
- [19] Sulikova, R. and Strazovska, L. (2016). *Women in Management*, pp. 2167 – 2173.
- [20] Stangova, N., Vighova, A. and Hajduchova, E. (2012). *Účtovníctvo v kontexte verejnej správy a malých a a stredných podnikov*, Trenčín: Inštitút aplikovaného manažmentu.
- [21] Subertova, E. (2011). *Competitiveness of the Slovak Regions*, pp. 508 – 512.
- [22] Vaska, L. (2014). *Služby zamestnanosti a vybrané aspekty sociálnej práce s nezamestnanými*. Bratislava: Iris.
- [23] Zákon č. 663/2007 Z. z. o minimálnej mzde v znení neskorších predpisov.
- [24] Zákonník práce č. 311/2001 Z. z. v znení neskorších predpisov.

INEVITABLE LEVEL OF LABOR MARKET REGULATION IN THE GLOBALIZATION ERA

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Abstract. The most comprehensive specification of perfectly competitive labor market was provided by Pigou who applied a number of assumptions for simplifications. However, in real economic environment labor market cannot exist without a system of regulations which constitute institutional order of this market. These are usually valid at a country level, however, some of them were established under standards introduced by international organizations such as ILO. They vary in complexity and differentiate economic systems. In the globalization era they became a subject to international analyses and comparisons. Additionally, they are regarded as a significant factor of business activity. Facing the contemporary economic practice the question arises what generally is understood under term “the free market”. This paper aims to present and explain the criteria to recognize the labor market as free, or, more precisely, as being little regulated. As a result, a set of features is defined, which will enable to identify the minimum indispensable extent of regulations in the labor market, and, at the same time, the maximum level of economic freedom in the labor market. The empirical verification of this freedom proves the relativity of this term as the model of perfectly competitive market should be regarded as a purely theoretical reference point. Accordingly to the analysis performed one may distinguish the least regulated labor markets on a global scale at the country level. The paper refers to indexes developed by international organizations, such as World Bank, Fraser Institute and other.

Keywords: labor market, regulations, labor law.

JEL Classification: J800, F660

1. Introduction

One of the most frequently referenced interpretations of the perfectly competitive labor market model is one authored by Pigou (1933). The precise description that the author proposed based on numerous simplifying assumptions became very popular. The socio-economic reality, however, proved that the labor market cannot work efficiently without a system of regulations creating its institutional order (North, 1991; Holmlund, 2014). These regulations are, as a rule, adopted on a national level, but due to their importance some of them are adopted by international organizations, e.g. ILO. They can be the subject of analyses and comparisons, because they differentiate the conditions in economies (Javorcik & Spatareanu, 2005; Gnocchi et al., 2015). As a consequence, the question arises how the concept of a free labor market is understood today. The paper aims to establish the criteria that will allow today for treating a labor market as relatively free, or – more precisely – possibly weakly regulated in particular areas. The contemporary definition of a labor market as a free market in real conditions assumes a certain necessary scope of regulation, determining at the same time the maximum scope of freedom in a labor market. Defined in this way, a free labor market becomes a relative concept.

The paper uses the indicators provided by international organizations such as the World Bank, the Fraser Institute, the Heritage Foundation.

2. The model of a perfectly competitive labor market vs. regulation in a labor market

The analyses of real processes occurring in a labor market relatively rarely refer to a perfect labor market, as it seems distant in factual terms and, as a result, not particularly useful. It is worthwhile, however, to recapitulate its main assumptions. Pigou (1933) proposed one of their most exhaustive compilations. He assumed that economic entities link their decisions with the need to maximize their own benefits, so entrepreneurs want to maximize profit, while workers – the utility from consumption and leisure time. In a labor market, demand for work is generated by a large number of small enterprises, whereas the supply of work comes from workers who are individuals unattached to any workers' organizations, which causes that neither of the parties can affect market processes. He also posited that a labor market is perfectly transparent, which means that its participants have access to full information on the conditions in the market. Another important assumption is the homogeneity of positions and workers, which leads to the treatment of positions and workers as identical in terms of non-wage characteristics. He also postulated that work is perfectly mobile, so it can be engaged in different industries, while pay responds to changes in demand and supply in a labor market in an unimpaired manner (Pigou, 1933; Boeri & Ours, 2008). If the market fulfilling all the above criteria actually existed, it would be referred to as a perfectly competitive labor market, in other words, a market completely free, of unhindered power ensuring the effective allocation of labor resources.

Conducting labor market analyses based on the above assumptions serves creating the model that can be used to develop a logically coherent and universal theory. It is, however, burdened with simplifications and remote from the complexity of real processes. Many authors argue for the impossibility of fulfilling the conditions of a perfectly competitive labor market, Kaufman (2007) points out. This does not mean, however, that the model is not useful. On one hand, it can be used to predict market processes in their pure form, on the other hand – to identify deviations of the course and effects of real market processes from model market processes (Machin & Manning, 2004). Real economic processes occur in the conditions of particular institutional order. Importance attached to realistic assumptions and emphasis put on gathering factual material remain the crucial characteristics of the methodological approach to economy, including a labor market, proposed by institutionalists (Kaufman, 2008; Fleetwood, 2014). Institutions are created to reduce uncertainty through arranging interpersonal relationships, which include relationships within economic processes (North, 1991). Institutional order in any market, also in a labor market, is made up of formal and informal institutions. This division, proposed by North, has attracted some criticism over the years (Voigt, 2013), but it still remains useful in the context of the institutional order of a labor market. Formal institutions in a labor market are also referred to as labor market regulations. They define the scope and kind of employee rights and obligations, employer rights and obligations towards employees and a state, the rules and mechanisms of industrial relations, laws concerning a minimum wage and welfare. In wider terms (Boeri & Ours, 2008), they also embrace family policy, migration policy, the system of education and training. Some researcher argue that the shape of certain labor market institutions is affected by globalization processes (Potrafke, 2010; 2013).

In the globalized world, it becomes necessary to conduct comparisons of institutional order, including the one in a labor market, between the country members of a given group (e.g. the

European Union), within one continent or even the whole world. Accordingly, numerous indicators have been developed to facilitate such comparisons or create rankings. This paper attempts to create a set of minimum labor market regulations adopted across the world, which will allow for the possibly most precise description of the actual characteristics of regulated labor markets and the identification of the attributes of a relatively free labor market in real conditions.

3. Methods

In order to pursue our research goals, we conducted the review of popular indicators characterizing the degree of labor market regulation. The list comprised the Labor Market Regulation Index – the component of the Economic Freedom of the World Index by the Fraser Institute, embracing the assessment of 6 components, the Labor Freedom Index by the Heritage Foundation (the component of the Index of Economic Freedom), calculated based on 7 variables, which partly overlap with the Labor Market Regulation Index. According to the Fraser Institute, it is Hong Kong and the USA that have the freest labor market (2016); according to the Heritage Foundation – the USA and Singapore (2017). The synthetic indicators of this kind accurately reflect the general level of labor market regulation in different countries on a global scale, enable the observation of changes over time for particular countries, and can be used to create country rankings. On the other hand, such aggregate indicators do not show the details concerning labor market regulation. Thus, we focused on the precise data of the World Bank made available in 2017. We conducted the review of the variables included in the Doing Business database, which groups them into five areas: hiring, working hours, redundancy rules, redundancy costs, job quality. Each area comprises a number of components. Some of them are assessed with yes/no answers; others are described with particular numeric values or expressed as “no limit”. The data and information required interpretation directed towards determining the minimum scope of labor market regulation or recognizing in which cases legal regulations do not lead to any restrictions. A certain problem arose from the incompleteness of data in some areas. Below we present the results of the review as a cross section of the above areas and the variables that they comprise.

4. Results

In the first area of labor market regulation according to Doing Business – hiring – the first variable concerns fixed-term employment contracts prohibited for permanent tasks. In 74 out of 204 countries in the database, such contracts are prohibited, so employer’s freedom is limited in this respect. In the remaining countries, so in the majority, such contracts are allowed. The second variable – the maximum length of a single fixed-term contract – is not limited in 84 countries, which means complete freedom in this respect. The maximum length of fixed-term contracts, referring to the total length of such contracts, is not determined in 108 countries, which constitutes the maximum scope of freedom in this respect (the absence of any limitations). The level of the minimum wage for full-time workers is not limited when a minimum wage in a given country does not apply. Such a situation occurs in 27 countries, but this refers to a national minimum wage, while some countries may have minimum wages for particular industries (e.g. Sweden or Denmark). Among the countries that have an official minimum wage, the lowest value is established in Uganda – USD 2.15 a month, which does not account, however, for its purchasing power, so cannot be treated as reliable information. The more reliable measure of a minimum wage is expressed as the ratio of minimum wage to value

added per worker. With the exclusion of the countries where minimum wage is not used, the lowest ratio is in Botswana and the Kyrgyz Republic – 0.12.

An important area of labor market regulation is the area concerning working hours. According to the guidelines developed by the International Labor Organization (Convention 1919, no. 1), a typical work day should not exceed 8 hours (ILO). The respective regulations are not consistent throughout the world, though the 8 hour long working day is prevalent. The longest standard work day, lasting 9 hours and constituting the smallest scope of restrictions in this respect, is allowed in Chile, Belize, the Congo Democratic Republic, India, Israel, Lesotho, Namibia, Norway, Oman, Pakistan, Tanzania, and South Africa. The working hours are also affected by the maximum working days per week. The ILO Convention, mentioned above, stipulates that there should not be more than 6 working days per week. There are countries in the world, on the other hand, that allow 7 working days per week. These are: Georgia, Guyana, Kiribati, the Marshall Islands, Micronesia, New Zealand, and Puerto Rico. Night work can be regarded as non-standard and then it requires extra remuneration, but it can also be remunerated according to the same rules as day work and then it does not require a premium, so it does not constitute an additional burden for an employer. This is the situation in more than 100 countries, so in the majority (including many European countries, e.g. Belgium, the Netherlands, the United Kingdom). Similar considerations concern work on weekly rest day. In about 80 countries, work on weekly rest day does not entitle to extra remuneration. Another important element of working time regulation is a premium for overtime work. It can be remunerated according to general rules, but an employee can also receive a premium for it. In 21 countries, overtime work is not paid extra (including such European countries as Denmark, Germany, the Netherlands, Spain). Night work, work on rest days, and overtime work can be additionally restricted, but most countries do not impose such restrictions. The regulation concerning working hours that strongly differentiates countries is paid annual leave, usually related to an employee's tenure. The shortest annual leave is normally granted to workers within one year of tenure. Globally, besides the USA, the Marshall Islands, Micronesia and Tonga, where statutory paid annual leave is not guaranteed at all, the shortest leave is in China and the Philippines – 5 working days. The length of annual leave tends to increase proportionally to tenure, but in the Philippines even workers with at least 10 years of tenure are still entitled to 5 days (when we exclude the countries which do not have statutory annual leave).

The area concerning redundancy rules includes the variable of the maximum length of probationary period. It can be assumed that the longer the probationary period is, the longer it takes for a worker to fall under legal regulations on regular employment and the more time an employer has to make a decision on signing such a contract with a worker. The longest probationary period is 24 months, the solution adopted in Cyprus. In the area of redundancy rules, an important issue is the possibility of employment reduction, as it is a typical method used by enterprises to adapt to changes in an economy. Dismissal due to redundancy is allowed by law in all the countries with the exception of Bolivia, Oman, and Venezuela. Another limitation for employers is the necessity to notify a trade union or another organization protecting employee rights or even to obtain its approval. In the case of dismissing one employee, third party notification is not required in most countries and neither is third party approval, which is used less frequently. They are not required in the case of the dismissal of a group of 9 employees as well. The regulation limiting an employer's freedom to terminate employment is also the retraining or reassignment obligation, but most countries do not apply it. Neither do they apply priority rules for redundancies or priority rules for reemployment.

The area of redundancy costs contains an important regulation concerning the notice period for redundancy dismissal. It varies according to tenure. In the case of tenure up to one year, the least rigorous solution is the lack of a notice period. This is the case of Colombia, Ecuador, El Salvador, Greece, Guatemala, Guinea Bissau, Indonesia, Iran, Iraq, the Marshall Islands, Mexico, Micronesia, the Netherlands, New Zealand, Panama, Peru, Puerto Rico, San Marino, Suriname, the USA, Uruguay, Vietnam. The length of a notice period tends to increase proportionally to tenure, but even the tenure of 5 or 10 years does not necessarily ensure a notice period, which applies to all the countries mentioned above. Another issue important for employers is severance pay for redundancy dismissal. Its amount is related to tenure, but it may as well not be provided by law, even for 5- or 10-year-long tenure. This is the case of Austria, Belgium, Bhutan, Brunei, the Congo Democratic Republic, Cyprus, Denmark, Dominica, Finland, Gambia, Haiti, Iceland, Iraq, Italy, Japan, Jordan, Kosovo, Malta, Marshall Islands, Micronesia, Nigeria, Norway, Puerto Rico, Romania, Singapore, Sweden, Switzerland, Timor, Tonga, Uganda, the United Kingdom and the USA. Moreover, one-year-long tenure without severance pay for redundancy dismissal is common in many more countries.

The final area under consideration is job quality. Despite the universal nature of the rules adopted by ILO, more than 100 countries have not yet introduced equal remuneration for work of equal value. Gender nondiscrimination in hiring is a similar regulation and it applies in approx. 70 countries, so still a minority. On the other hand, paid or unpaid maternity leave is mandated by law in almost all the countries in the world, with the exception of the Marshall Islands, Micronesia, and Tonga. The minimum length of maternity leave (42 days) is adopted in Haiti, whereas in the USA it has not been stipulated. Job quality also includes wages on maternity leave; in most countries women receive 100% of wages while on maternity leave, yet it is lower in about 70 countries. Another criterion to measure job quality is the right to five fully paid days of sick leave a year, to which workers are not entitled in more than 50 countries, including the United Kingdom, The USA, and Poland. The next component of job quality is unemployment protection after one year of unemployment. Most countries – more than 120 – do not provide such protection to the unemployed. The final variable in this area is minimum contribution period for unemployment protection. It can be assumed that the longer this period is, the later a state's commitment towards the unemployed has an effect and the less protection is granted to the unemployed. Data concerning this variable are incomplete, but the longest minimum contribution period, 36 months, is adopted in Algeria, Morocco and Myanmar. Table 1 presents the compilation of variables referring to minimum labor market regulation worldwide.

Table 1: Minimum labor market regulation on a global scale (2017)

Labor market regulation	Minimum regulation	Examples of countries
Fixed-term contracts prohibited for permanent tasks?	No	Austria, Belgium, Norway, Malaysia, New Zealand, USA
Maximum length of a single fixed-term contract	No limit	Austria, Denmark, Malaysia, Mexico, United Kingdom, USA
Maximum length of fixed-term contracts	No limit	Belgium, Colombia, Israel, Japan, Philippines, United Kingdom, USA
Minimum wage for a full-time worker	0,00	Bangladesh, Brunei, Egypt, Ethiopia
Ratio of minimum wage to value added per worker	0,00	Afghanistan, Cambodia, Gambia, Namibia

Standard workday	9 hours	Chile, Israel, Switzerland, Tanzania.
Maximum working days per week	7	Georgia, Guyana, Micronesia, Kiribati
Premium for night work	0	Canada, Germany, Hong Kong, Ireland
Premium for work on weekly rest day	0	Bulgaria, Canada, Estonia, Egypt
Premium for overtime work	0	Ireland, Hong Kong, United Kingdom
Restrictions on a night work?	No	China, Czech Republic,
Restrictions on weekly holiday work	No	Germany, Italy, Netherlands, USA
Restrictions on overtime work	No	France, Germany, Hong Kong, Hungary
Paid annual leave for a worker with 1 year, 5 years, 10 years of tenure	0; 0; 0 days	Kiribati, USA, Micronesia, Tonga
Maximum length of probationary period	24 months	Cyprus
Dismissal due to redundancy allowed by law?	Yes	All countries excluding Bolivia, Oman, Venezuela
Third-party notification/approval if one worker is dismissed	No	Belgium, Canada, Estonia, Malaysia, United Kingdom, USA
Third-party notification/approval if nine workers are dismissed	No	Brazil, China, Japan, Micronesia, Romania, Switzerland, United Kingdom
Retraining or reassignment	No	Canada, Chile, Denmark, Hungary,
Priority rules for redundancies	No	Canada, Chile, Indonesia, Israel, USA
Priority rules for reemployment	No	Belgium, Portugal, United Kingdom
Notice period for redundancy dismissal for a worker with: 1 year, 5 years, 10 years of tenure	0; 0; 0 salary weeks	Colombia, Denmark, El Salvador, Micronesia, New Zealand, USA
Severance pay for redundancy dismissal for a worker with 1 year, 5 years, 10 years of tenure	0; 0; 0 salary weeks	Austria, Denmark, Iceland, Italy, Micronesia, New Zealand, Singapore, USA
Equal remuneration for work of equal value	No	Chile, Estonia, Germany, Russia, Sweden, USA
Gender non-discrimination in hiring	No	Colombia, Micronesia, Singapore
Paid or unpaid maternity leave mandated by law	No	Micronesia, Tonga, Marshall Islands
Minimum length of maternity leave	0 days	USA, Papua New Guinea
Receive 100% of wages on maternity leave	No	Bulgaria, Ireland, Turkey, Malta, United Kingdom
Five fully paid days of sick leave a year	No	Micronesia, Philippines, Portugal, United Kingdom, Slovak Republic
Unemployment protection after one year of employment	No	Indonesia, Mexico, Micronesia, New Zealand, Philippines, Singapore

Minimum contribution period for unemployment protection	36 months	Algeria, Morocco, Myanmar
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Source: *Doing Business 2017. Labor Market Regulation (service sector)*,
<http://www.doingbusiness.org/data/exploretopics/labor-market-regulation> (02.08.2017)

The information discussed in the analysis and its synthetic presentation in Table 1 lead to the conclusion that in most areas of labor market regulation there are countries that do not apply any restrictions, although in some cases these are isolated examples, e.g. paid or unpaid maternity leave mandated by law or the minimum length of maternity leave of 0 days. The area regulated in all the countries concerns working hours, in particular with reference to the standard work day. Restrictions relating to the maximum length of probationary period and the minimum contribution period for unemployment protection are adopted in all the countries for which the data are available, but they reveal that sometimes the scope of protection is very limited. If all the minimum regulations presented in Table 1 were adopted in one country, this country would have the least regulated labor market. In no country, however, these minimum regulations are applied in all the areas. In every country labor market regulations make up a particular system of solutions, but we can point to the economies that adopt the majority of these regulations on the minimum level. These are, for example, the USA and Singapore, or – among the less developed countries – Micronesia, which is not present in the studies conducted by the Fraser Institute, whereas the Heritage Foundation ranks it on a remote place.

5. Discussion

In studies into labor market regulation from the European perspective, we rarely seek points of reference on other continents. In the context of globalization, however, it is worthwhile to broaden the scope of comparison to include solutions adopted in different countries in the world. In Europe, discussion still focuses on the need for labor market deregulation and the necessary range of protection for workers' rights (Kaufman, 2010; Holmlund, 2014). In the aftermath of the latest world crisis, researchers also undertake attempts to identify the relationships between labor market institutions and business cycles (Gnocchi et al., 2015). The compilation of the characteristics of a labor market presented in this study may be used as one of reference points for such analyses. Differences between the institutional systems of labor markets in different economic systems constitute a valid research field. Another important issue is the question concerning convergence or divergence of solutions adopted in labor market laws in the globalized world (Gahan et al., 2012).

6. Conclusion

The contemporary face of free labor market differs widely from the theoretical model, frequently criticized for its abstract character. Based on 37 empirical variables grouped into five areas according to the methodology of the World Bank using the data from all the countries, this study identified the set of minimum labor market regulations. It showed that on a global scale there are numerous example of complete freedom in the sphere of labor market regulation. Only in three areas of regulation restrictions are adopted in all the countries and they concern the standard workday, the maximum length of probationary period and minimum contribution period for unemployment protection. Irrespective of the fact that no country has adopted the complete minimum scope of regulation, the set of minimum regulations proposed in this paper may cast new light on the issue of labor market regulation and become a less abstract point of reference than the theoretical model.

References

- [1] Boeri, T. and Ours, J. (2008). *Economics of Imperfect Labor Markets*, Princeton University Press, US: Princeton, New Jersey.
- [2] Doing Business 2017. Labor Market Regulation (service sector). Available: <http://www.doingbusiness.org/data/exploretopics/labor-market-regulation> (02.08.2017).
- [3] Fleetwood, S. (2014). Do labor supply and demand curves exist? *Cambridge Journal of Economics*, vol. 38, pp. 1087-1113.
- [4] Gahan, P. et al. (2012), Economic globalization and convergence in labor market regulation: an empirical assessment. *American Journal of Comparative Law*, vol. 60, no. 3, pp. 703-742.
- [5] Gnocchi, S., Lagerborg, A. and Pappa, E. (2015). Do labor market institutions matter for business cycles? *Journal of Economic Dynamics & Controll*, vol. 51, pp. 299-317.
- [6] Holmlund, B. (2014). What do labor market institutions do? *Labor Economics*, vol. 30, pp. 62-69.
- [7] ILO. C001 – Hours of Work (Industry) Convention, 1919. Available: http://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C001 (05.08.2017).
- [8] Javorcik, B. S. and Spatareanu, M. (2005). Do foreign investors care about labor market regulations? *Review World Economics*, vol. 141, no 3, pp. 375-403.
- [9] Kaufman, B. E. (2007). The impossibility of a perfectly competitive labor market. *Cambridge Journal of Economics*, vol. 31, no. 5, pp. 775-787.
- [10] Kaufman, B. E. (2008). The non-existence of the labor demand/supply diagram, and other theorems of institutional economics. *Journal of Labor Research*, vol. 29, no. 3, pp. 285-299.
- [11] Kaufman, B. E. (2010). Institutional economics and the minimum wage: broadening the theoretical and policy debate. *Industrial Labor Relations Review*, vol. 63, pp. 427-453.
- [12] Machin, S. and Manning, A. (2004). A test of competitive labor market theory: The wage structure among care assistances in the south of England. *Industrial and Labor Relations Review*, vol. 57, no. 3, pp. 371-385.
- [13] North, D. C. (1991). Institutions. *Journal of Economic Perspectives*, vol. 5, no. 1, pp. 97-112.
- [14] Pigou, A. (1933). *The Theory of Unemployment*, Macmillan, U.K.: London.
- [15] Potrafke, N. (2010). Labor market deregulation and globalization: empirical evidence from OECD countries. *Review of World Economics*, vol. 146, no. 3, pp. 545-571.
- [16] Potrafke, N. (2013). Globalization and labor market institutions: International empirical evidence. *Journal of Comparative Economics*, vol. 41, no. 3, pp. 829-842.
- [17] Voigt, S. (2013). How (Not) to measure institutions. *Journal of Institutional Economics*, vol. 9, no 1, pp. 1-26.

GLOBAL FOCUS OF INNOVATIVE ACTIVITY IN THE HIGH-TECH BUSINESS

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Abstract. Problems of the global high-tech creation and use of accumulated scientific and technical, industrial, intellectual and human potential were decisive now, the process of development of Russian business has a historical choice of development strategy for many decades to come. We believe that an effective way of getting the trends of increase are high, resource-saving technologies and production facilities is the development and implementation of the whole complex of measures aimed at strengthening the competitiveness of industry in world and domestic markets through the creation of a favorable development of strategic sectors of innovation activity. It determines the orientation process in Hi-Tech business. The purpose of targeting-to create conditions that allow knowledge-based industries become "growth points" of traditional industries and the service sector, the creation of a developed export potential, to ensure production on a new technological level. And in this way, the development and implementation of a whole set of measures, directed to strengthening the competitiveness of the industry in the international and domestic markets based on creation of favorable development of strategic branches is necessary for a successful solution of the problem of creating the favorable conditions for the knowledge-intensive industries. It defines the importance of targeting which draws attention of politicians, government institutions, scientists, experts, businessmen, investors now. This study financed be a grant from the Plekhanov Russian University of Economics.

Keywords: targeting, innovative activity, high-tech business, "points of growth", strategic priorities.

JEL Classification: O10, O30, O33

1. Introduction

Over the years, the accelerated development of high-tech economic sectors is observed in the world. And the increase in value added of hi-tech productions in accordance with the OECD classification (Organization for Economic Cooperation and Development) by 4 times confirms it. According to our point of view the new innovative and technological way which is based on nanotechnologies, biotechnologies, ICT etc. is formed. However, this conviction is largely reflected in priorities of scientific research and the state strategies of the advanced countries accepted to the next decades (Sibirskaya et al., 2016).

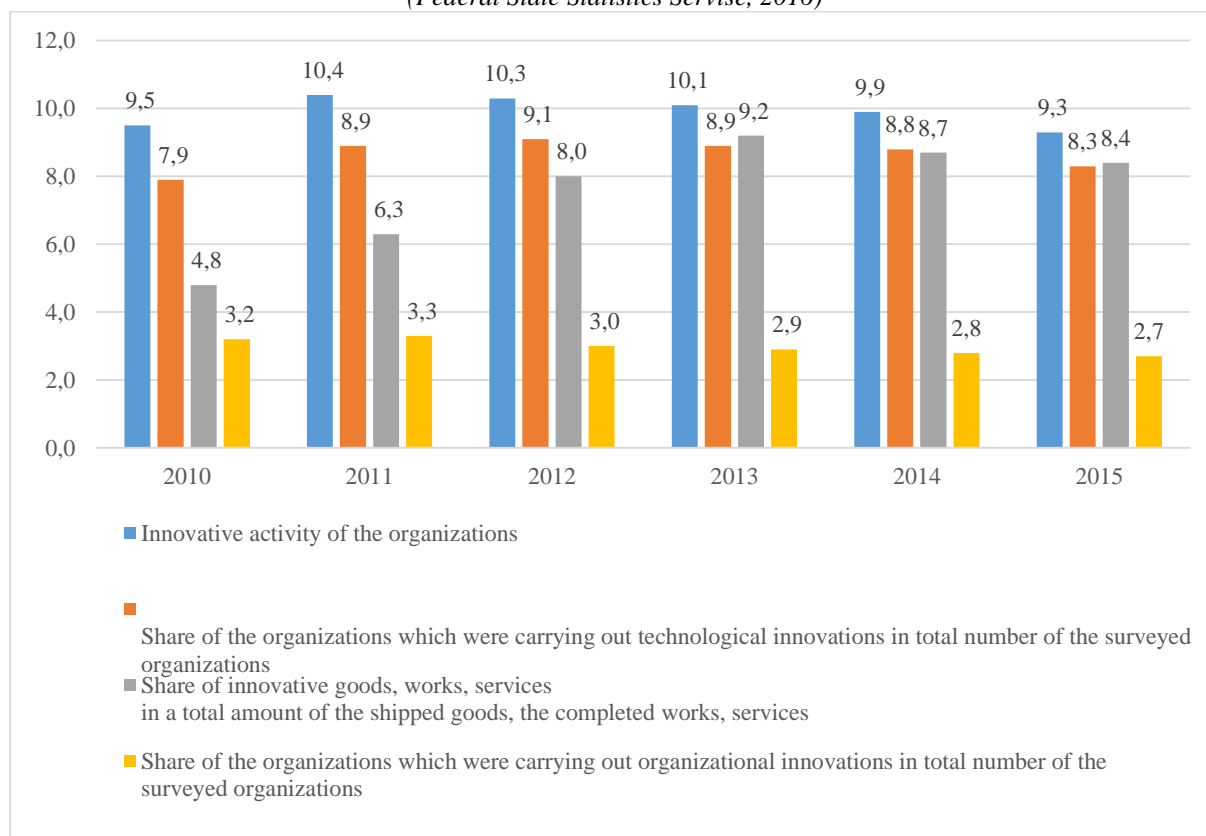
At the moment, the development of scientific and technical policy is important. It demonstrates the need of the government support for a national science; the stimulation the development of its priority areas; creating the conditions for effective application of science

and technology in the sphere of production. In this regard, the knowledge, abilities, technologies in "stock" are necessary for future practice. Scientific and technological capacity is not just used, but also at the same time there is a process of his creation (the training of future engineers and scientists, accumulation of new knowledge, the development of innovative technologies and production). The complexity of management the scientific and technical development is that objects of this policy are different and vary in the organizing, forms of ownership, structure, functions. There are such fields of activity as science, the knowledge-intensive production, education at the macro level . And there are the organizations which are connected with these activities (higher education institutions, research institutions, innovative business, consumers of high-tech products) at the micro level (Stroeva et al., 2015). The prevailing conditions at the present time necessitate the policy implementation in the choice of any economic "point of growth". And it is necessary to influence on it to achieve certain results which are connected with creation and distribution of new or advanced products and services, introduction in practice of new or advanced productions. The innovation targeting is a process of prioritization or identifying complex targets which are necessary for hi-tech business improvement.

2. Results

An analysis of Russian innovative organizations dynamics shows that only 9,9% of the surveyed organizations were engaged in innovation in 2014. At the same time the share of the technological innovation organizations has made 8,8%, organizational innovation organizations – 2,8%, marketing innovation organizations – 1,7% (Sibirskaya et al., 2015). Certainly, it isn't enough for transition to innovative economy (Figure 1).

*Figure 1: Indicators of the organizations innovative activity
 (Federal State Statistics Service, 2016)*

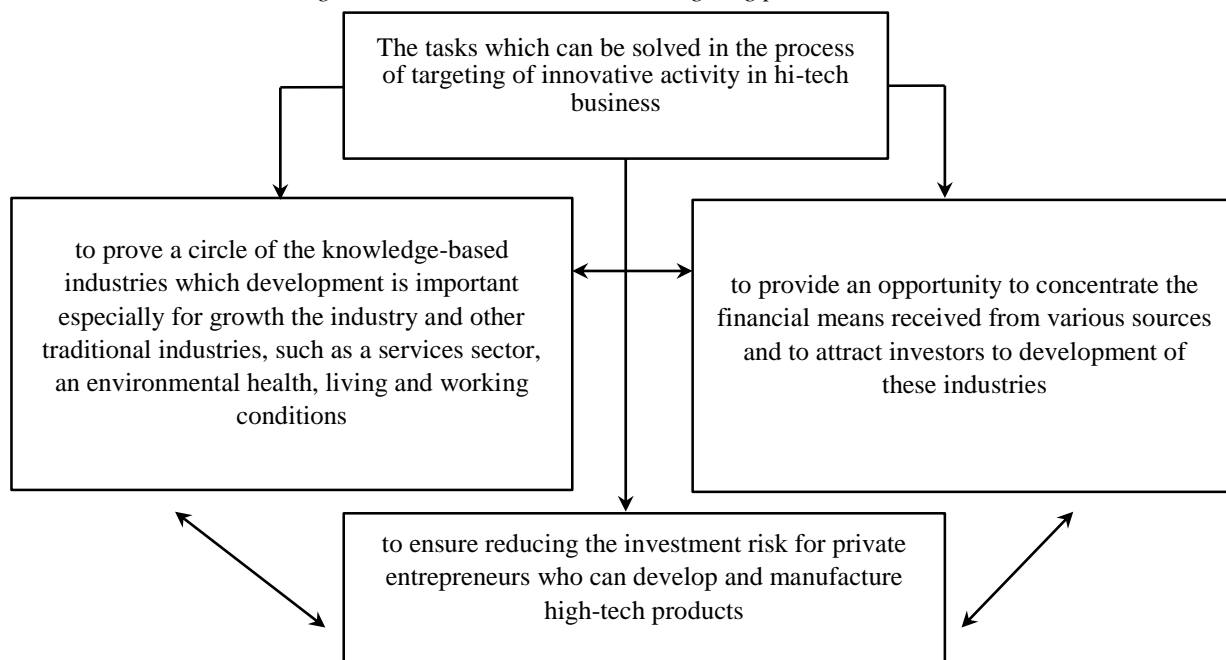


Source: own processing

In this regard, it is necessary to develop the innovative activity using the policy of effective transformation of new scientific ideas into finished products taking into account the time minimization of the cycle "scientific research-experimental development-innovative production". It calls for determining the strategically important "points of growth". The impact on it will allow to provide the development of competitive science-intensive production for the priorities in economic and social development (Jel'kanov, 2012; Neretina & Korokoshko, 2014; Rozhkov, 2014; Nesterova, 2015; Kharlamova, 2015; Grondys, 2015; Klein & Dawar, 2004; Öztekin & Flannery, 2012; Park et al., 2013; Piaw & Jais, 2012; Rajan & Zingales, 2012; Sen & Bhattacharya, 2001; Shyam-Sunder & Myers, 1999; Zauskova et al., 2013; Pece et al., 2015).

The USA and Japan have the wide experience of targeting in the context of the development of market relations. This experience analysis leads to the conclusion that the industry targeting allows to create a complex of competitive productions more effectively, than by market forces. Though there is a danger of damage to the branches which are resisted the targeting policy. Therefore, the knowledge-based industries targeting has to solve three main problems (Figure 2).

Figure 2: Tasks to which solution targeting process is directed



Source: own processing

Certainly, establishing strategic priorities of the development of innovative activity in hi-tech business may be taken as a key to favorable socio-economic trends in national economy. The vector of forming of strategic "points of growth" has to provide the dynamic growth and innovative activity which create the conditions for development of surrounding economic space (Ministry of Telecom and Mass Communications of the Russian Federation Service, 2016).

Targeting of innovative activity in hi-tech business is necessary to meet the challenges of the comprehensive socio-economic development program of the country, to improve the effectiveness of business opportunities, to support the employment and the quality of life of the population by means of creation new and development of traditional sectors of national economy through innovations. (Hittmar et al., 2015)

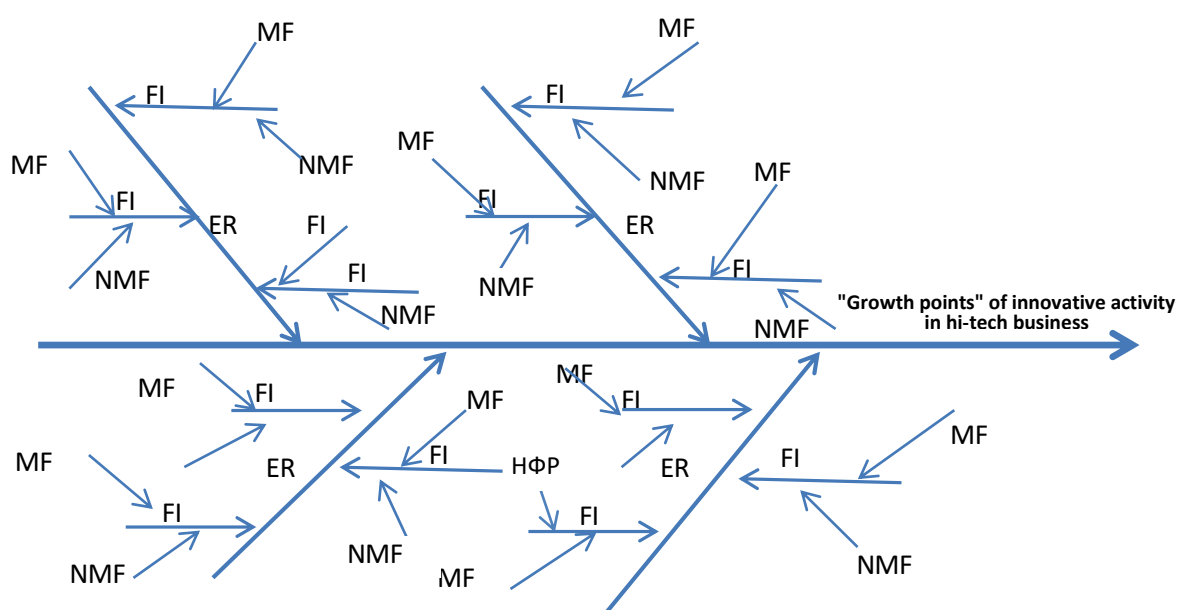
We propose to divide the strategic priorities of innovative activity development in hi-tech business into two types. On the one hand, there are the absolute priorities which allow to create the fundamental tasks which will affect the national economy, dynamics of national economy branches and indicators of innovative activity. On the other hand, there are the relative priorities defining the key strategic challenges of development which have the indisputable importance, but don't have the high priority at present time.

Generally speaking, there is a causal link – material and non-material factors of external and internal environment. With this it is possible to create a complex of useful effects and functions which promotes the establishment of an effective system of strategic priorities of innovative activity in hi-tech business which can be differentiated on two types – absolute and relative.

It is possible to schematize this causal link by means of the graphic way which allows to emphasize the linkages between factors and consequences of a situation or a problem.

The cause-and-effect diagram allows to investigate the connection and to understand the process of targeting (figure 3).

Figure 3: The cause-and-effect diagram of targeting of innovative activity in hi-tech business



Source: own processing

ER – the expected results defined as a key benchmark of innovative activity targeting in hi-tech business,

FI – factors of innovations development,

MF – the material factors influencing efficiency of knowledge-based industries development,

NMF – the non-material factors influencing efficiency of knowledge-based industries development.

It is important to note that it is necessary to consider the development factors of knowledge-based industries (Budget.ru Service, 2016), such as complex of the science-intensive industries, criteria of research intensity, indicators of their assessment, specifics of science-intensive industries production, external market entry conditions and development of domestic market of scientific and technical products for practical application of targeting.

3. Discussion

The distinction between absolute and relative priorities is rather conditional as the continuous changes in external and internal environment, transformations of a priority of certain innovative development factors can lead to the fact that absolute priorities can be considered further as relative and vice versa (table 1).

Therefore, following the offered strategic priorities and considering the stability of transition, we can notice that the priority can be considered absolute only in case of strong influence on his forming of external and internal environment factors which define his primacy in these economic conditions of business. During the implementation of "growth points" the innovative progress area as one of innovative strategy elements is formed. And the intensification in certain economic spheres of the region provides his innovative and socio-economic development. (Paksiova & Kubascikova, 2015)

We consider that innovative activity targeting in hi-tech business has to be formed taking into account a human factor (qualified personnel, education) and has to be based on the scientific and technical potential and synthesis of economic stimulation methods of business and innovative activity.

Such approach promotes the creation of competitive advantages of hi-tech business, solves the problems of minimization of transactional and production costs through development of integration of business activity subjects and development of innovative infrastructure. The innovative activity targeting in hi-tech business may come from executive authorities, as well as the interested economic entities.

Table 1: Conditions of strategic priorities transition from absolute into a relative form

Absolute priority	Conditions for the transition (influence of the external environment factors)	STRATEGIC PRIORITY	Conditions for the transition (influence of the internal environment factors)	Relative priority
+	Strong	Priority 1. Forming of various institutional tools providing the innovative infrastructure development	Strong	
	Weak		Weak	+
+	Strong	Priority 2. The emergence of new territorial forms of the science organizing – science parks, technical parks, industrial parks, technology parks, technopolises, the innovative centers.	Strong	
	Weak		Weak	+
+	Strong	Priority 3. Assistance of personnel efficiency in service industry: professional education and training, improvement of professional skills, staffing support, use of progressive forms of payment for labour and motivation of staff, high level of workers' income	Strong	
	Weak		Weak	+
+	Strong	Priority 4. Implementing investment projects in hi-tech business and financial support of the integrated scientific-industrial complexes	Strong	
	Weak		Weak	+
+	Strong	Priority 5. The support of private business providing favorable conditions for the consumer of the knowledge-intensive products and high technologies	Strong	
	Weak		Weak	+
+	Strong	Priority 6. Improving the effectiveness of the interregional, commercial and international	Strong	

	Weak	economic relations providing scientific and technical development of industrial production and business	Weak	+
+	Strong	Priority 7. Assistance to innovative development of small and medium business, stimulating of creation and development of the innovative enterprises	Strong	
	Weak		Weak	+
+	Strong	Priority 8. Creating conditions for accumulation of money promoting development of knowledge-intensive production and development of "high technologies"	Strong	
	Weak		Weak	+

Source: own processing

4. Conclusion

The analysis of targeting policy leads to the conclusion about, first, finding of the knowledge-intensive industries depending on qualitative criteria and knowledge intensity; secondly, the development of the general concept and the principles of targeting depending on a stage of development of the economy; thirdly, building of a system of means of influence on development of each industry.

And in this way the development and implementation of a whole set of measures, directed to strengthening the competitiveness of the industry in the international and domestic markets based on creation of favorable development of strategic branches is necessary for a successful solution of the problem of creating the favorable conditions for the knowledge-intensive industries. It defines the importance of targeting which draws attention of politicians, government institutions, scientists, experts, businessmen, investors now. At the same time the assessment of current situation and development of practical recommendations for creation of new model of the knowledge-intensive industries development has a paramount importance which defines the significance of targeting as one of new methods of the scientific and technical development regulation focused on support of business in the scientific and technical sphere.

References

- [1] Budjet.ru Service (2016). Strategy and strategic priorities [Online]. Available: <http://bujet.ru/article/193736.php>.
- [2] Federal State Statistics Service (2016). Investment. Access: http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/enterprise/investment/nonfinancial/.
- [3] Kharlamova, G. (2015). The European Union and the Eastern Partnership: Convergence of economies. Original research article. *Procedia Economics and Finance*, vol. 27, pp. 29-41.
- [4] Jel'kanov, R. Kh. (2012). Poles of development and point of growth of innovative economy: Russian and foreign experience Modern problems of the theory and practice 2012. No.2 [Online]. Available: <http://www.nauteh-journal.ru/index.php/---ep12-02/388>.
- [5] Grondys, K. (2015). Economic and technical conditions of selection of spare parts suppliers of technical equipment original research article. *Procedia Economics and Finance*, vol. 27, pp. 85-92.

- [6] Klein, J. and Dawar, N. (2004). Corporate social responsibility brand evaluations in and consumers' attributions and a product-harm crisis. *International Journal of Research in Marketing*, vol. 21, pp. 203-217.
- [7] Ministry of Telecom and Mass Communications of the Russian Federation Service (2016). The strategy of innovative development of Russian Federation to 2020 [Online]. Available: <http://minsvyaz.ru/common/upload/2227-pril.pdf>.
- [8] Neretina, E. A. and Korokoshko, I. O. (2014). The hi-tech enterprises of Russian innovative business in the sphere of energy-saving: situation and prospects. *Energy security and energy saving*, no. 6 [Online]. Available: http://www.endf.ru/60_1.php.
- [9] Nesterova, D. A. (2015). State scientific and technical policy [Online]. Available: http://society.polbu.ru/nesterova_gosreg/ch08_i.html.
- [10] Oztekin, O. and Flannery, M. J. (2012). Institutional determinants of capital structure adjustment speeds. *Journal of Financial Economics*, vol. 103, pp. 88-112.
- [11] Park, S. H., Suh, J. and Yeung, B. (2013). Do multinational and domestic corporations differ in their leverage policies? *Journal of Corporate Finance*, vol. 20, pp. 115-139.
- [12] Piaw, L. L. T. and Jais, M. (2012). The capital structure of Malaysian firms in the aftermath of Asian crisis 1997. *Journal of Global Business and Economics*, vol. 8, pp. 28-44.
- [13] Rajan, R. G. and Zingales, L. (2012). What do we know about capital structure? Some evidence from international data. *The journal of Finance*, vol. 50, pp. 1421-1460.
- [14] Rozhkov, G. V. (2014). *Genesis of innovative economy in Russia*. M.: MAKSS Press. pp. 888.
- [15] Sen, S. and Bhattacharya, C. B. (2001). Does doing good always lead to doing better? Consumer reactions to corporate social responsibility. *Journal of Marketing Research*, vol. 38, pp. 225-243.
- [16] Shyam-Sunder, L. and Myers, S. (1999). Testing static tradeoff against pecking order models of capital structure. *Journal of Financial Economics*, vol. 51, pp. 219-244.
- [17] Sibirskaya, E. V., Oveshnikova, L. V. and Sosedov G. A. (2016). Cluster typology of Russian regions based on their innovation and investment infrastructure evaluation. *Науковий економічний журнал: Актуальні проблеми економіки*, vol. 7, no. 181, pp. 231 – 239.
- [18] Sibirskaya, E., Stroeve, O. and Simonova E. (2015). The characteristic of the institutional and organizational environment of small innovative and big business cooperation. *22nd International Economic Conference of Sibiu (IECS 2015)*, Sibiu, Romania, pp. 507-515.
- [19] Stroeve, O., Sibirskaya, E. and Shmanev, S. (2015). The structural model of formation and realization of the proactive character regional innovative policy. *22nd International Economic Conference of Sibiu (IECS 2015). Economic Prospects in the Context of Growing Global and Regional Interdependencies, Procedia Economics and Finance*, Sibiu, Romania, pp. 516-522.
- [20] Zauskova, A. et al. (2013). Environmental protection and sustainable development in the Slovak republic. *European Journal of Science and Theology*, vol. 9, no. 6, pp. 153-159.

- [21] Paksiova, R. and Kubascikova, Z. (2015). Business property of company and investments. *22nd International Economic Conference of Sibiu (IECS 2015). Economic Prospects in the Context of Growing Global and Regional Interdependencies, Procedia Economics and Finance*, Sibiu, Romania, pp. 70-78.
- [22] Hittmar, S., Varmus, M. and Lendel, V. (2015). Proposal of evaluation system for successful application of innovation strategy through a set of indicators. *4th World Conference on Business, Economics and Management (WCBEM-2015), Procedia Economics and Finance*, Sibiu, Romania, pp. 17-22.
- [23] Pece, A. M., Oros, O. E. S. and Salisteanu, F. (2015). Innovation and economic growth: An empirical analysis for CEE countries. *4th World Conference on Business, Economics and Management (WCBEM-2015), Procedia Economics and Finance*, Sibiu, Romania, pp. 461–467.

CREDIT RATING OF CUSTOMERS UNDER THE CONDITIONS OF GLOBALIZATION

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Abstract. Practices in the industry, permanent fight for customers and technological development resulted into current situation, when almost all companies are offering trade credit, it means that they are delivering product or services with deferred maturity (per invoice) and in the same time they put themselves at risk of insolvency. One of the solutions how to avoid this kind of problem is to collect or evaluate basic information about the customer to create an image about his financial situation. Each company has to find a method how to evaluate the responsibility of customer. The general used method is “rating”, it means estimation of probability that the customer will delay with his payments or has no sources to pay out his debts. The company’s customers are according this estimation divided into different risk groups, Customer’s rating or categorization into risk groups according his insolvency is really useful tool for company with higher amount of customers. The move the rating’s process is automated or connect with other parts of company’s information system, the bigger benefit becomes for the company. The aim of this paper is to evaluate customer’s rating with the help of selected methods what makes administration of claims easier, the decision-making process quicker or introduces “alert system” when the risk of insolvency will not remain within normal limits. As result we will gain ability or experience to evaluate financial stability of customers under conditions of globalization or to minimize loss.

Keywords: claims, credit risk, evaluate customer’s rating, insolvency

JEL Classification: M20, M40, G17, G30

1. Introduction

Controlling of claims is using active co-operation of all departments in order to ensure liquidity of claims and solvency of company. It has emerged as a need to prevent the occurrence of claims after maturity, respectively bad debts. Its main targets are an increase of the company’s knowledge about current and potential customers, an evaluation of risks, company would face from insolvency of the customers, as well as an application of appropriate conditions for customers.

The competition on the market doesn’t allow most business to dictate their customers payment terms, because they can lose them. From this reason are the companies focusing on preventive measures against irrecoverable claims. One of these measures is a knowledge of business partners. If a trade credit will be not provided as the result of company’s blind trust to the customer, the company should have a “picture” about his financial situation, his payment

ability and at the same time also about his payment discipline and payment patterns, that means, if the customer is able and willing to repay the provided trade credit. (Zou & Zeng, 2012)

The first step in choosing a business partner is collecting and usage of customer information. (Ruckova, 2014) One of the most important indicators is the customer's credit rating. The information about the customer financial and payment situation can be obtained from different sources, for example from own data collection about customers (own monitoring of customers or experience with them), using services of rating agencies, ask the customer's bank for information (of course any other information than bank secrecy), from trade and business register, from customer account statements, from references from other companies, who are in a business relationship with our customers or other sources. (Barbosa et al., 2017; Melnyk, 2012)

Without proper staffing in controlling department, it would not be possible to report positive performance of a company as well as to manage the credit policy. (Gorczyńska, 2011) The company's staff is one of the greatest advantages in competitive battles. (Durana & Chlebkova, 2016). The authors Smrcka et al. (2017) and Jiang & Wang (2011) have also analysed problematic aspects of claims and insolvency.

2. Credit rating of customers

The received information about customers should be processed in order to give a clear picture about their financial situations. (deHaan, 2017) For the company decision-making process about providing or non-providing a trade credit to customers is important to evaluate not only their financial situation but also their non-financial aspects of their business. (Pustynick, 2017) According the estimation of probability (rating) that the customer will be able to meet financial obligations are customers divided into different risk groups. The qualitative and the quantitative methods are used to analyse the debtor's financial situation and the combination of these both is providing the overall evaluation debtor's credit rating. (Tokarcikova et al., 2016)

Mian & Smith (1992); Kubenka & Slavicek (2014); Misankova & Bartosova (2016); Altman et al. (2016); Gavurova et al. (2017) dealt with the solution of bankruptcy models and they try to choose a suitable model for determining the financial health of the company.

Model IN 05

In the year 2005, the couple Inka and Ivan Neumaier built the IN 05 bankruptcy model (also called the IN 05 index). The advantage of this model is its composition – the connection of creditor and ownership view on the company represents in one index. The next advantage is, that Neumaier's couple built the model according to enough representative sample of Czech companies, similar to the conditions in the Slovak republic. (Gazdikova & Sustekova, 2009) The model should be used to evaluate customer's financial situation in past years, as well as expected future performance and to introduce timely warning indicator. IN 05 is considered as the most accurate financial model that predicts the company's credit rating in measurable terms. (Kubenka & Boleckova, 2015)

Index IN 05 is calculated according to the following formula:

$$IN\ 05 = 0,13x_1 + 0,04x_2 + 3,97x_3 + 0,21x_4 + 0,09x_5 \quad (1)$$

x_1 = total assets / liabilities

x_2 = EBIT / interest paid

x_3 = EBIT / total assets

x_4 = revenues / total assets

x_5 = current assets / current liabilities

The result of IN 05 will be evaluated according to the following relations:

$IN\ 05 > 1,6$ the company creates profit and has a low chance of bankruptcy

$0,9 \leq IN\ 05 \leq 1,6$ the company does not create profit and does not enter bankruptcy,

$IN\ 05 \leq 0,9$ the company can enter bankruptcy (Kollar, 2015)

Calculating the probability of paying a trade credit

On the basis of the obtained information about the customer's financial situation, is possible to estimate the probability that the new customer will or will not reimburse the trade credit. When we know the probabilities, we can calculate the profit's changes by providing a trade credit. The profit change is calculated according to the following formula: (Freiberg, 1996):

$$\Delta P = p \times \left[\frac{R-C}{1+i \times \frac{d}{360}} \right] - (1-p) \times C \quad (2)$$

where:

ΔP the change of profit by providing a trade credit for one order

p the probability that the customer will pay

$(1-p)$ the probability that the customer will not pay

R the expected revenue from the trade with the given customer

C the expected cost of the delivered product

In this form, we compare the present value of the profit if the customer pays within the final maturity date, with a loss if the customer does not pay. In the case of a positive result, we can recommend a trade credit and the other way round. By modifying the form, we can determine the limit (minimum) probability of payment and by this value is trade credit recommendable. (Freiberg, 1996; Hsu, 2016)

$$p_p = \frac{N_0}{\left[\frac{R_0 - C_0}{1+i \times \frac{days}{360}} \right] + C_0} \quad (3)$$

where:

p_p the probability that the customer will pay

C_0 the expected cost of the product

R_0 the expected revenues from trade with a given customer

i the expected short-term interest rate

days number of days of the payment period (Moro, 2017)

The total amount of trade credit that company will provide to its customer depends on:
 - costs related to the provision of trade credit and the associated money in claims (costs of management of claims and losses from bad debts),
 - opportunity costs that represent loss of sales as a result of a trade credit rejection. (Wang, 2010)

If the company does not provide trade credit, its cost of liability on the claims would be zero. (Vagner & Bartosova, 2016) On the other hand, to provide a trade credit is nowadays a competitive advantage, and in some areas of business with high expenses is it a must. (Wang, 2011) It is therefore necessary to seek a compromise between these two types of costs and these determine the optimal amount of trade credit. (Fecenko, 1994; Gonis et al., 2012)

3. Results and discussion

In the following section, three companies providing services in the tertiary sector are analysed using the IN 05 model. To ensure the anonymity of subscribers, we give the names of businesses only under alphabetical order. The necessary input information for the analysis was obtained from the profit and loss statement and from the balance sheet of the individual companies.

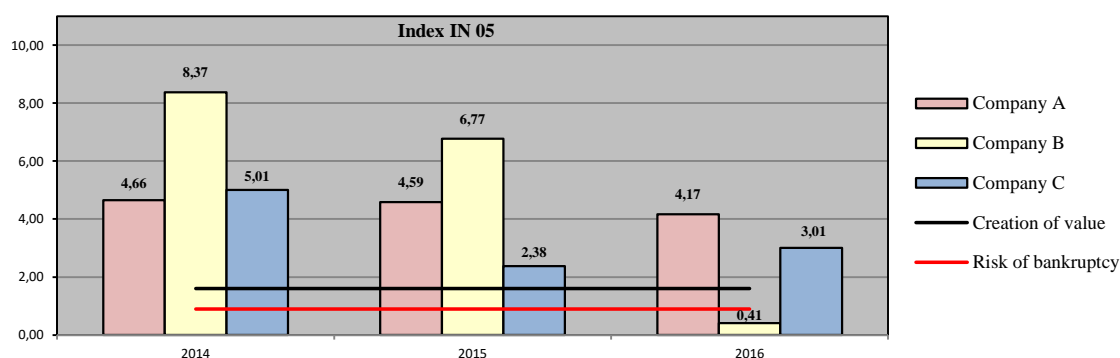
Table 1: Model IN 05

The indicator	Company A			Company B			Company C		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
total assets / liabilities	1,47	1,48	1,56	4,09	4,32	3,83	2,32	2,23	2,04
EBIT / interest paid	0,22	0,65	0,08	3,04	1,75	-4,10	-1,15	-0,67	-0,13
EBIT / total assets	0,005	0,014	0,002	0,017	0,006	-0,019	-0,009	-0,006	-0,001
revenues / total assets	0,33	0,34	0,33	0,24	0,22	0,34	0,15	0,13	0,14
current assets / current liabilities	2,63	2,11	2,19	0,99	0,48	0,37	3,71	0,69	0,96
Final index	4,66	4,59	4,17	8,37	6,77	0,41	5,01	2,38	3,01

Source: by author

The following figure 1. shows a graphical representation of the results of three companies in the years 2014 to 2016 analysed using the model IN 05.

Figure 1: IN 05 analysis in selected companies (2014 – 2016)



Source: by author

Based on achieved detailed customer information, we have divided them into two rating groups, as presented in the following table 2.

Table 2: Classification of companies into rating groups

The indicator	Company A			Company B			Company C		
	2014	2015	2016	2014	2015	2016	2014	2015	2016
Situation	very good	very good	very good	very good	very good	problems	very good	very good	very good

Classification of companies into rating groups	I. rating group	II. rating group	I. rating group
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Source: by author

I. rating group represents liquid customers who achieve excellent and very good financial status in the IN 05 model. We expect that these claims will be reimbursed with a probability of 80 - 100 %. In this group, on the basis of the analysis are **companies A and C**.

II. rating group consists of average customers who are assigned to an indefinite zone and there is the same risk that they will encounter financial problems and will not be able to pay their commitment under the agreed terms. We expect these claims to be reimbursed with a probability of 60 - 80%. We recommend to accept order also from customers with lower credit rating, but we suggest that the company will use different security measures such as a bill of exchange, a lien or a third party guarantee, which will minimize the risk of default of the claim. To this group belongs to the **company B**.

The calculation of the probability of payment of trade credit

Categorization of potential customers into rating groups will help the company better determine the probability of reimbursement of claims in terms of a business partner's financial situation, but it is still not possible to determine on 100 % whether a liquid customers will really pay out the claim or less solvent will not pay. This is also influenced by such a factor as customer's indignation to pay. (Kljucnikov et al., 2017; Gavlakova & Gregova, 2013)

By assigning a customer to a rating group, it is possible to estimate the probability of meeting the obligation and then determine the advantage of providing the trade credit from the relation. If the resulting value is positive, we can recommend a trade credit.

Then we can determine the limit (minimum) probability according the index, over which the order may be recommended.

The calculation of changes in profits, we can support decision-making on the provision, not to provide trade credit, or the use of security measures. (Weissova, 2017)

In the calculation, we are coming from the results of assigning customers to rating groups. The customers A and C, we rank the probability of payment to 80 % and for customer B included in II. rating group at 60 %. We calculate the maturity of 14 days and interest on short-term deposits of 0.9 % p. a. We received the customer cost data from the company's internal budgets.

The profit change (ΔP) and limit probability results are shown in the table 3.

Table 3: The calculation of profit change and limit probability

Company	The expected revenues (€)	The expected costs (€)	Δ Profit (€)	Limit probability (%)
Company A	1 291 716,03	860 472,14	172 900,68	66,61
Company B	502 221,72	321 025,64	-19 692,61	63,92
Company C	4 414 740,00	2 820 429,02	711 362,98	63,89

Source: by author

The calculations show that the trade credit can be provided by the analysed company to customers A and C, and in the case of company B, it is appropriate to provide the credit with the certain way of security.

4. Conclusion

If the company does not provide trade credit, its cost of liability on the claims would be zero. On the other hand, to provide a trade credit is nowadays a competitive advantage, and in some areas of business with high expenses is it a must. However, the more the claims become an increasingly risky component of the company's assets, which has an increasingly negative impact on the ability of the company to pay. For this reason, it is necessary to constantly obtain information about the customers and process them in order to give us a clear picture of their financial situation. (Shi, 2014)

To analyse the financial situation of customers, we used the IN 05 model, which provided to us not only information from the past years but also the estimation of the expected future performance. On the basis of comprehensive information on selected customers, the customers were categorized into two ratings groups. We determined the probability of paying a trade credit by dividing the selected companies into rating groups. From the probability data, we calculated the change in the profit on the provision of a trade credit, which showed us the advantage, respectively the disadvantage of providing trade credit. From the results, we can provide trade credit to customers A and C who have a positive change in profit. To customer B, with a negative value of profits change, we advised to provide a credit, but with some security measures, for example bill of exchange, a lien or a third party guarantee, and so on. On the basis of the knowledge gained and the ability to assess the financial stability of customers, the company may use the alert signals of the buyer's insolvency to minimize the loss of trade credit.

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References

- [1] Altman, E. et al. (2016). Financial and nonfinancial variables as long-horizon predictors of bankruptcy. *The Journal of Credit Risk*, vol. 12, no. 4, pp. 49-78.
- [2] Barbosa, K, Moreira, H. and Novaes, W. (2017). Interest rates in trade credit markets. *Journal of Money Credit and Banking*, vol. 49, no. 1, pp. 75-113.
- [3] deHaan, E. (2017). The financial crisis and corporate credit ratings. *Accounting Review*, vol 92, no. 4, pp. 161-189.
- [4] Durana, P. and Chlebkova, D. (2016). The influence of globalization for human resources education. *16th International Scientific Conference Globalization and its socio-economic consequences*, Rajecke Teplice, Slovakia, pp. 391-398.
- [5] Fecenko, J. (1994). Optimization of cleaning of claims and liabilities after maturity. *Ekonomicky Casopis*, vol. 42, pp. 360-374.
- [6] Franek, J. (2016). Application of selecting measures in data envelopment analysis for company performance rating. *34th International Conference Mathematical Methods in Economics (MME)*, pp. 219-224.
- [7] Freiberg, F. (1996). *Finančný controlling*, Bratislava: Elita, pp. 215 s. ISBN 80-44-020-4.

- [8] Gavlakova, P. and Gregova, E. (2013). CAPM and optimal portfolio. *7th International Days of Statistics and Economics*, Prague, Czech Republic, pp. 428-437.
- [9] Gavurova, B., Janke, F. and Packova, M. (2017). Analysis of impact of using the trend variables on bankruptcy prediction models performance. *Ekonomicky Casopis*, vol. 65, no. 4, pp. 370-383.
- [10] Gonis, E., Paul, S. and Tucker, J. (2012). Rating or no rating? That is the question: An empirical examination of UK companies. *European Journal of Finance*, vol. 18, no 8, pp. 709-735.
- [11] Gorczynska, M. (2011). Accounts receivable turnover ratio. The purpose of analysis in terms of credit policy management. *Proceedings of Financial Management of Firms and Financial Institutions*, Ostrava, Czech Republic, pp. 112-118.
- [12] Hsu, S. (2016). China's volatile stock market in the summer of 2015 and policy (in) effectiveness. *Journal of Self-Governance and Management Economics*, vol. 4, no. 4, pp. 7-15.
- [13] Jiang, Q. and Wang, Y Y. (2011). Loan value assessment of accounts receivable. *Proceedings of China-Canada Workshop on Financial Engineering and Enterprise Risk Management*, Toronto, Canada, pp. 55-59.
- [14] Kljucnikov, A., Kozubikova, L. and Sopkova, G. (2017). The payment discipline of Small and medium-sized enterprises. *Journal of Competitiveness*, vol. 9, no. 2, pp. 45-61.
- [15] Kollar, B., Weisssova, I. and Siekelova, A. (2015). Comparative analysis of theoretical aspects in credit risk models. *International conference on applied economics (ICOAE). Procedia Economics and Finance*, vol. 24, pp. 331-338.
- [16] Kubenka, M. and Boleckova, A. (2015). Determination and analysis of actual IN05 accuracy in prediction of creditworthiness. *Proceedings of International Scientific Conference on European Financial Systems 2015*. Brno, Czech Republic, pp. 335-342.
- [17] Kubenka, M. and Slavicek, O. (2014). Detection of cognation between creditworthy models and bankruptcy models. *Proceedings of International Scientific Conference on Managing and Modelling of Financial Risks*. Ostrava, Czech Republic, pp. 426-433.
- [18] Melnyk, O. G. and Logvynenko, Y. L. (2012). Companies rating methods. *Actual Problems of Economics*, no. 138, pp. 84-94.
- [19] Mian, S. L. and Smith, C. W. (1992). Accounts receivable management policy - theory and evidence. *Journal of Finance*, vol. 47, pp. 169-200.
- [20] Misankova, M. and Bartosova, V. (2016). Comparison of selected statistical methods for the prediction of bankruptcy. *Proceedings of International Days of Statistics and Economics*, Prague, Czech Republic, pp. 1260-1269.
- [21] Moro, R. A. et al. (2017). Company rating with support vector machines. *Statistics & Risk Modeling*, vol. 34, no. 1-2, pp. 55-67.
- [22] Pustylnick, I. (2017). Comparison of liquidity based and financial performance based indicators in financial analysis. *Oeconomia Copernicana*, vol. 8, no. 1, pp. 83-97.
- [23] Ruckova, P. (2014). Analysis of the relation between Liquidity and selected indicators from the view of Solvency in selected Business Branches. *Proceedings of International Conference on Finance and Banking*, Ostrava, Czech Republic, pp. 354-365.

- [24] Shi, M., Meng, F. and Song, Ch. (2014). The listed company's credit rating based on PCA-logistic regression model. *International Joint Conference on Applied Mathematics, Statistics and Public Administration (AMSPA)*, pp. 528-534.
- [25] Smrcka, L., Arltova, M. and Schonfeld, J. (2017). Quality of insolvency proceedings in selected countries – Analysis focused on recovery rates, costs and duration. *Administratívni Management Public*, vol. 28, pp. 116-132.
- [26] Tokarcikova, E., Ponisciakova, O. and Bartosova, V. (2016). Assessment of the Credibility of Key Business Clients. *Procedia Economics and Finance*, vol. 39, pp. 612-619.
- [27] Vagner, L. and Bartosova, V. (2016). The utilization rate of facility management in small and medium-sized enterprises in the Slovak Republic. *Proceedings of International Conference on Applied Social Science and Business*, Windsor, United Kingdom, pp. 26-30.
- [28] van Heerden, J. D. and van Rensburg, P. (2017). Common firm-specific characteristics of extreme performers on the Johannesburg securities exchange. *Economics, Management, and Financial Markets*, vol. 12, no. 3, pp. 25–50.
- [29] Wang, M. S. (2011). Measurement of the risk of receivable accounts based on Bayesian network. *Proceedings of International Conference on Construction & Real Estate Management*, Guangzhou, Peoples R China, pp. 419-422.
- [30] Wang, L. X. and Xie, J. (2010). The risk control of accounts receivable for SMEs. *Proceedings of International Conference on the Development of Small and Medium-sized Enterprises*, Haikou, Peoples R China, pp. 382-391.
- [31] Weissova, I. (2017). Applicability of selected predictive models in the Slovak companies. *New Trends in Finance and Accounting. Springer Proceedings in Business and Economics*, pp. 699-708.
- [32] Zou, Y and Zeng, Y. (2012). Measure and prevention of the risk of accounting receivable. *Proceedings of International Conference in Humanities, Social Sciences and Global Business Management (ISSGBM 2012)*, Singapore, Singapore, pp. 370-375.

ECONOMIC STRATEGY OF TRANSPORT COMPANY IN GLOBALIZATION CONTEXT

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Abstract. In modern conditions of globalization, the problem of competitiveness of transport companies, operating, as a rule, on the territory of several states is very important. In this regard, it is necessary to develop for them adequate economic strategy aimed at the effective achievement of the set strategic goals by economic methods and means. Economic strategy of the transport organization – from defining its mission, developing business profile and throughout the life-cycle period – should be focused on maintaining a competitive advantage, preventing the threat of bankruptcy, ensuring the long-term prosperity in globalization context. Because of limited resources the choice of main strategic aims, providing the greatest productivity of their use, is a fundamental management decision. Currently the concept of value-based management is being widespread which considers as a main strategic goal of the commercial organization in the process of making ongoing and strategic decisions – increase the company's value instead of maximizing profits. The article presents the dependence of transport organization's activities from the external and internal environment, and how they affect the choice of the particular strategy. The basic types of economic policies for a transport organization are presented. The author proposes to consider the growth strategy for the transport company because it provides the greatest possibility for extending life-cycle through the formation and use of company's potential. The basic components of transport company's economic strategy and financial-economic model to assess efficiency and effectiveness of its realization with regard to achieving the goal of increasing the company's value are proposed.

Keywords: competitiveness, economic strategy, globalization, transport company

JEL Classification: L92, M21, R42

1. Introduction

In the solution of modern problems of economic growth in the national economy in globalization context an important role belongs to accelerated balanced development of transport infrastructure as a backbone of industry, a powerful catalyst for positive change in socio-economic environment. The importance of large-scale modernization of transport system in Russia has been increasing constantly in connection with objectives of diversification, higher competitiveness and investment attractiveness of the domestic economy and the trajectory of innovation growth, and ensuring on this basis the high rates of socio-economic development of the country.

At the state level special attention is given to the problems of transport complex development in Russia. This is reflected in the formation and implementation of Transport strategy of the Russian Federation for the period till 2030, Federal programs, significant funding of transport infrastructure projects at the expense of the state budget. However, the positive trend of

activation of investment processes in transport have not been supported by business activity at the level of basic link of the branch – transport organizations. Analysis of strategic management practice in a number of Russian transport companies has identified significant risks of not achieving most of them target the economic growth even in the presence of strategic plans. The root causes of this are the use of control systems, insufficiently focused on the implementation of growth strategy. By the way, many scientists from different countries of the world have devoted their scientific works to research of transport companies development effects (Booth et al., 2015; Buehler & Hamre, 2014; Chatman & Noland, 2011; Djurhuus et al., 2015; Dries & Rietveld, 2015; Gallotti & Barthelemy, 2014; Gregova & Dengova, 2014; Mattrisch & Weiss, 2008; Palkina & Kazanskaya, 2016; Salonen et al., 2014; Savelsbergh & Woensel, 2016; Strano et al., 2015; Volkova, 2013).

2. Formation of transport company economic strategy

a. Content of company economic strategy

The economic strategy of a company is a long-term program of management, part of an overall development strategy, aimed at an effective achievement of the set strategic goals by using economic methods and means.

From the standpoint of business cycle the organization's economic strategy determines what should be done to prevent the crisis, to accelerate / extend the ascent or to reach a new growth trajectory. Economic strategy answers the following questions:

- What and how much to produce?
- What to produce?
- For whom and when to produce?

Developing rules and techniques of effective implementation of these activities, the economic strategy of the company – from defining its mission, the formation of its business profile during the entire period of operation – should be focused on maintaining a competitive advantage, prevent its bankruptcy, ensuring the long-term prosperity in a rapidly changing global environment.

Description of transport organization economic strategy should include five main sections, which reflect logic of the management aimed at achieving the main strategic objectives:

- strategic goals – targets that define the desired state, the achievements of the organization, promising landmarks in the external and internal environment, resource allocation priorities,
- identification of the business cycle,
- principles of work and interaction with internal and external environment, main stakeholders,
- organizational-economic mechanism of achieving long-term goals – priority activities (with estimates of the resources needed for their implementation, defining the implementation deadlines, responsible), which will be translated to the operational level through the system of budgeting, work plans of departments, etc.,
- key performance indicators (KPIs) – an expected result of the implementation of the economic strategy.

The economic strategy of the organization for its content related to the following functional strategies:

- strategy of foreign economic activities,
- cost saving strategy,
- financial strategy of the organization,
- investment strategy,
- strategy of behavior in the market of production resources,
- pricing policy (Palkina, 2015),
- market strategy,
- policy of motivating personnel.

b. Rationale for the selection of the main strategic objective

In view of limited resources it is important to define the main strategic goal for providing the greatest productivity of their use. Currently the concept of value-based management (VBM, Value-Based Management) is widespread, which in contrast to the concepts of profit as a main strategic goal of the commercial organization considers not maximizing profits but increase the company's value in the process of making ongoing and strategic decisions. In this regard, the welfare of shareholders is not measured by the volume of commissioned capacities, the number of employees or turnover, but the market value of the company they own. Moreover, the increase of shareholder value does not contradict long-term interests of other stakeholders (customers, employees, suppliers, state). (Weissova et al, 2015)

As a key performance indicator, allowing to estimate the degree of achievement of main strategic goal, it is advisable to establish Economic Value Added (EVA), which is developed and registered as a trademark by the consulting company Stern Stewart & Co and most clearly defines the key determinants of the increase in value of the company in operating, investing and financing activities and it is the best tool of broadcasting the strategy at the operational level. Formula to calculate EVA for any period t:

$$EVA = NOPAT - IC * WACC \quad (1)$$

or

$$EVA = (ROIC - WACC) * IC \quad (2)$$

where:

NOPAT – Net Operating Profit after Taxes before Interest

WACC – Weighted Average Cost of Capital

ROIC - Return on Invested Capital

IC – Invested Capital

Spread EVA is the difference between ROIC and WACC.

The formula for calculating the return on invested capital (ROIC):

$$ROIC = NOPAT / IC \quad (3)$$

The formula for calculating invested capital (IC):

$$IC = E + D \quad (4)$$

Where:

E – equity

D – long-term debt capital

The formula for calculating weighted average cost of capital (WACC):

$$WACC = (C_e * E + C_d * D) / IC \quad (5)$$

Where:

C_e – the cost of equity

C_d – the cost of capital

The main idea of EVA is as follows: the investor should receive return on his investment, which would offset the risk taken by him, reflected in the cost of capital invested. This approach makes a new focus on minimizing the magnitude of capital involved in operating process and its maintenance.

c. Types of transport organizations' economic strategies

The dependence of transport organization activities from external and internal environment affects the choice of a particular strategy. Despite the uniqueness of the economic strategy of each organization (how many firms thus there are many specific strategies), there are general approaches to determine strategy. There are the following basic types of economic strategies:

1. *strategy of limited growth* is characterized by goals set at the level of previous achievements, adjusted for inflation and in accordance with changing conditions,
2. *growth strategy* – strategy in which the level of short-term and long-term goals is increasing each year significantly relative to the previous year. There are several varieties of such a strategy:
 - strategy of concentrated growth, which is associated with a change in services and (or) market (in the case of following this type of strategy the organization seeks to improve its service or to start providing new services changing the industry),
 - strategy of integrated growth, which involves the expansion of the firm through vertical backward, vertical line or horizontal integration by creating new structures (property acquisition and/or expansion inside), while remaining within the industry,
 - strategy of diversified growth, which involves the development of the organization through the penetration in other sectors (horizontal diversification means the implementation of technologically new products on existing market; conglomerate diversification – implementation of technologically new products in new markets, concentric diversification – creation of new industries coincides with the profile of the organization), as the company cannot continue to develop in this market with this product within this industry,
3. *reduction strategy* – targeted reduction in connection with changes in the external or internal environment, is realized in the form of liquidation, reorganization,
4. *combination strategy* is a feasible combination of all the above strategies,
5. It is important to note, possibility of extending the life cycle of the company through the creation, development and use of potential capabilities of transport organization, expressed in the form of its competitive advantage, represents growth strategy.

d. Determinants of economic policy

The factors that determine the economic policies of transport organization, are the factors of external and internal environment.

External factors:

- state policy in various areas (transport, industry, customs, investment, depreciation, monetary),
- level of economic development of a country (Lyakina, 2014),
- degree of integration of Russia into the world economic system,
- tax system,
- budget spending on transport,
- investment climate,
- demand for transport services,
- competition,
- claims of owners of capital to yield,
- economic and financial standing of the main consumers of transport services,
- risks for the country, industry, region,
- legislative and regulatory framework,
- duration of the consideration, coordination and approval of some regulatory legal acts;
- degree of development of financial institutions and markets (credit, equity, currency, insurance),
- interests of all stakeholders.

Internal factors:

- life cycle stage of the transport organization,
- current financial-economic state of transport organization,
- organizational structure of the company,
- strategy development organization (target setting, etc.),
- company market position (market share),
- competitiveness,
- client base,
- list of services,
- level of corporate governance,
- form of ownership,
- type of transport,
- scale of operation,
- quality of labor resources,
- ability of transformation of knowledge into new knowledge,
- investment, depreciation, financial, dividend, personnel policy, policy of cost management (Zhuravleva, 2014), pricing,
- credit rating,
- investment potential of the company.
- internal risks of the company (investment, marketing, financial, production, organizational, etc.),
- the potential of firms and their areas of application.

e. Principles of transport company economic strategy formation

The basic principles that define strategic outline of economic activities of transport organization, are the following:

The principle of comprehensiveness at formation of economic policy it is important to consider all activities of the company in their relationship: operating, investing and financing. For example, the increase in value of transport company is based on assets management (or invested capital), operating efficiency that determines ROIC, financial policy, which defines the structure and cost of capital, i.e. WACC. Accordingly, the size and structure of the invested capital (IC) is the area of making investment decisions; return on invested capital (ROIC), characterizing the efficiency of use of investment resources, specifies the scope of operational decisions and operational efficiency; weighted average cost of capital (WACC), the cost and structure of investment resources determine the outline of financial decision-making.

The principle of integration involves the integration of company as a system with the exogenous environment through the study of influencing factors, interrelations. In this respect, macro - and micro-environment of the company is considered as a socio-economic system.

The principle of consistency involves the formation of a holistic view on transport organization economic strategy and identifying diverse relationships between its components, formed on the basis of their subordination to the main strategic objectives. (Pashkus, 2016)

The principle of equilibrium provides for compliance to achieve the main strategic goal of equilibrium proportions on all aspects of the economic strategy implementation and the balancing of stakeholder interests. This balance is achieved through establishing boundary values of the key performance indicators at the strategic perspectives of the Balanced Scorecard (BSC) (Satcuk, 2014).

The principle of limiting economic growth by criterion of company value increasing – increasing the company's value becomes the main criterion of the effectiveness of economic growth (Palkina, 2015, B). In view of the fact that economic growth does not always lead to an increase in value, the feasibility of introducing restrictions on the growth rates of sales and assets (invested capital) of the company in the form of thresholds of return on invested capital (ROIC) that exceed the cost of its maintenance (WACC), in other words, the EVA spread, in general, should be positive.

The principle of harmonization implies that all components of the economic strategy need to be adapted to the modern paradigm – the VBM and should be aimed at achieving the main strategic goal.

The principle of pro-activity – suggests the rapid formation and use of investment potential of transport organizations in comparison with companies in other sectors of the economy, they initiate changes in the exogenous environment, an active provisioning throughput and capacity and unique products, which are the basis of their competitive advantages.

3. Conclusion

The results of research present a set of scientific decision-making methodology for managing the transport company economic growth based on the concept of Value-Based Management. Management of economic growth is considered in conjunction with value of a firm, the principles of implementation of growth strategy; the key integrated indicators of growth that formed the basic vectors of proposed implementation of the strategy of a growing organization

have been identified. Focuses on the issues of balanced economic development organizations, coordinate the objectives of its growth with other strategic installations have been set up.

The prospects for further development of the problems can be associated with the creation of scenario models, methods of risk management due to the growing influence of uncertainty of the environment on the activities of transport organizations.

In general, scientific provisions, conclusions and recommendations of the studies reflect a broad range of key management issues growth of transport organizations of Russia, which forms the economic basis for advancing a balanced development of domestic transport and increase the pace of socio-economic development of the country.

References

- [1] Booth, J., Eugenio, B. D., Cruz, I. F. and Wolfson, O. (2015). Robust natural language processing for urban trip planning. *Applied Artificial Intelligence*, vol. 29, no. 9, pp. 859-903.
- [2] Buehler, R. and Hamre, A. (2014). The multimodal majority? Driving, walking, cycling, and public transportation use among American adults. *Transportation*, vol. 42, no. 6, pp. 1081-1101.
- [3] Chatman, D. G. and Noland, R. B. (2011). Do public transport improvements increase agglomeration economies? A review of literature and an agenda for research. *Transport Reviews*, vol. 31, no. 6, pp. 725-742.
- [4] Djurhuus, S., Hansen, H. S., Aadahl, M. and Glu Mer, C. (2015). Building a multimodal network and determining individual accessibility by public transportation. *Environment and Planning B: Planning and Design*, vol. 43, no. 1, pp. 210-227.
- [5] Droes, M. I. and Rietveld, P. (2015). Rail-based public transport and urban spatial structure: The interplay between network design, congestion and urban form. *Transportation Research Part B: Methodological*, vol. 81, pp. 421-439.
- [6] Forecast of long-term socio-economic development of the Russian Federation for the period till 2030. Available: <http://government.ru/media/files/41d457592e04b76338b7.pdf>.
- [7] Gallotti, R. and Barthelemy, M. (2014). Anatomy and efficiency of urban multimodal mobility. *Sci. Rep. Scientific Reports*, vol. 4, pp. 6911.
- [8] Gregova, E. and Dengova, E. (2014). Integrated transport system - a form of improving public passenger transport. *Proceedings of 2nd International Conference on Social Sciences Research (SSR 2014)*, Hong Kong, China, pp. 20-25.
- [9] Lyakina, M. A. (2014). "The great recession" and reasons for stagnation in the Russian economy. *14th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic.
- [10] Mattrisch, G. and Weiss, D. M. (2008). Advanced bus transit systems – “best practice” mobility solutions for emerging agglomerations. *Urban Transport XIV*.
- [11] Palkina, E. S. (2015). Methodological principles of managing the implementation of a company's growth strategy. *Bulletin of the Tomsk state University. Economy*, vol. 2, no. 30, pp. 78-86.

- [12] Palkina, E. S. (2015). New approach to transportation service pricing based on the stakeholder model of corporate. *Mediterranean Journal of Social Sciences*, vol. 4, pp. 299-308.
- [13] Palkina, E. S. and Kazanskaya, L. F. (2016). Innovative imperatives for competitiveness of national transport systems in conditions of globalization. *Globalization and Its Socio-Economic Consequences: 16th International Scientific Conference*, Rajecke Teplice, Slovak Republic, pp. 839-846.
- [14] Pashkus, V., Pashkus, N. and Pashkus, M. (2016). Strong cultural brand formation in the global economy on the basis of Russian art market (the example of St. Petersburg). *Ekonomicko-manazerske spektrum*, vol. 10, no 2, pp. 49-61.
- [15] Salonen, M., Broberg, A., Kytta, M. and Toivonen, T. (2014). Do suburban residents prefer the fastest or low-carbon travel modes? Combining public participation GIS and multimodal travel time analysis for daily mobility research. *Applied Geography*, vol. 53, pp. 438-448.
- [16] Satcuk, T.P. (2014). Assessment of qualitative indicators in a balanced system of indicators. *Life Science Journal*, vol. 11, no. 7s, pp. 417-422.
- [17] Savelsbergh, M. and Woensel, T. V. (2016). 50th Anniversary invited article—City logistics: Challenges and opportunities. *Transportation Science*, vol. 50, no. 2, pp. 579-590.
- [18] Strano, E., Shai, S., Dobson, S. and Barthelemy, M. (2015). Multiplex networks in metropolitan areas: Generic features and local effects. *J. R. Soc. Interface Journal of the Royal Society Interface*, vol. 12, no. 111.
- [19] Transport strategy of the Russian Federation for the period till 2030. Available: <http://rosavtodor.ru/documents/119>.
- [20] Volkova, E. M. (2013). Railway transport competitiveness valuation on existing commuter routes. *Globalization and Its Socio-economic Consequences 13th International Scientific Conference*, Rajecke Teplice, Slovak Republic, pp. 858.
- [21] Weissova, I., Siekelova, A. and Kollar, B. (2015). Issue of rating and credit risk in the selected transport company. *19th International Scientific Conference on Transport Means*, Kaunas, Lithuania, pp. 641.
- [22] Zhuravleva, N. A. (2014). Cost rate in global transportation system. *14th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic.

THE ROLE OF THE NARRATIVE REPORTING IN CONTEMPORARY ACCOUNTING

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Abstract. Globalisation and rapid socioeconomic changes have a significant impact on business activity. Modern enterprises operate in an international environment, offering opportunities for growth and development, but featuring a danger of aggressive competition at the same time. Accounting is also affected by the consequences of globalisation. In recent years, the awareness among users of financial statements has been observed to increase. As a result, their expectations regarding the financial statements and the amount of information disclosed continuously grow. Another important change in accounting systems emerges in nonfinancial information disclosure. For several years, theorists and practitioners of accounting have been debating whether the financial data presented in financial statements is a sufficient source of knowledge for the decision-making process. Global trends unanimously indicate that besides traditional financial information, investors pay attention to business model issues, social responsibility and employment policy. The Directive 2014/95/UE implemented into national legislation systems forces the largest enterprises to publish some non-financial information. The data can also be disclosed in narrative reporting, also called management commentary. The main aim of this article is to present a conceptual framework for narrative reporting, matching both the polish accounting law and the international regulations. The results of performed researches on the forms of presentation in management commentary are to be presented. The research methods applied in the article are a critical analysis of the available literature on the topic, content analysis and disclosure abundance method. The narrative reporting is scrutinised basing on selected companies listed on the Warsaw Respect Index.

Keywords: narrative reporting, management commentary, financial statement, accounting

JEL Classification: M41, M48, M21

1. Introduction

Economic activities could not exist without accounting, which is also called the language of business. Since ancient times, people have used simplified forms of registration to facilitate the management. The accounting system is responsible for evidencing every economic process (Morgan, 1988). Nowadays it is supported by IT financial systems. Invariably the final result of accounting evidence is a financial statement. Both polish Act of Accounting and International Regulations mention the following, traditional elements of financial statement: balance sheet, income statement, cash flow statement and statement of changes in owner's equity (Lehman, 2017). Besides cited statements, the biggest stock-market companies should prepare the management commentary. What is more, a management commentary, also called narrative reporting, has become increasingly popular among financial statement recipients (Hamrouni et al., 2017). This is caused by rapid changes in business environment and the biggest information requirements (Sahay, 2004). Observed changes are also a result of the process of globalization

(Hudakova & Luskova, 2016). What is more, literature studies underline that management commentary plays a significant role in the annual reporting (Ginesti et al., 2017; Tan, Y., & Liu, Y., 2017). Investors and other recipients of financial statement pay attention to the volume of elaborated reports as well as form and quality of data presented (Lundholm et al., 2014). Despite the progressive globalisation, regulations regarding preparation of narrative reporting differ between countries. The main aim of this article is to present and compare polish regulations which are included in KSR 9 (*National Accounting Standard No 9*) and IFRSs (*International Financial Reporting Standards*). The paper is also enriched with an empirical part with the analysis of management commentary published by polish companies listed on Warsaw Respect Index.

1.1 Management Commentary according to KSR 9 vs IFRSs

In recent decades more and more companies started to be interested in the concept of CSR (*Corporate Social Responsibility*), not only from the marketing point of view, but also in the area of accounting (Fuente et al., 2017). Investors need more disclosures, connected not only to the traditional finance data but also with nonfinancial information, such as environmental issues, working conditions, research and development strategy etc. (Villiers and Van Staden, 2011). Such information is presented in management commentary.

As far as international regulation is concerned, there is no defined standard resolving the issue of Management Commentary. However, in 2010 IASB (*International Accounting Standard Board*) published Practice Statement Management Commentary. The objective of this document is to assist management, financial and accounting departments in companies in presenting useful management information for financial statement recipients. One should underline that the Practice Statement is not an IFRS. In short, companies do not have to treat this document as an obligatory source of law. According to Practice Statement, management commentary should be clear and straightforward and be presented with a focus on the most important information (Practice Statement Management Commentary, 2010). Other advice which is included in Practice Statement connected with management commentary are as follows:

- a) It should be consistent with financial statement,
- b) It should avoid duplicating disclosures,
- c) It should avoid generic and immaterial disclosures.

The conceptual framework connected to Management Commentary assumes that it will be a voluntary report. That is why IASB decided to publish Practice Statement instead of a traditional standard. It has features more like a guide than a source of law. Although the particular focus of management commentary will depend on the entity, management commentary should include information that is essential for better understanding of the five following elements:

- a) The nature of the business,
- b) Management's objectives and its strategies for meeting those objectives,
- c) The entity's most significant resources, risks and relationships,
- d) The results of operations and prospects,
- e) The critical performance measures and indicators that the management uses to evaluate the entity's performance against stated objectives.

In response to IASB and having into consideration that narrative reporting is a neglected field of regulation in Poland, Accounting Standard Committee published in 2014 KSR 9 (*National Accounting Standard No 9*). Similarly, as in Practice Statement Management Commentary, this document is a kind of guide for accountants and persons responsible for preparing narrative reporting. In KSR 9, the role of nonfinancial disclosure in investor's decision-making process is emphasised. One should also notice the voluntary character of the disclosures. According to KSR 9, nonfinancial information should be classified according to the following key:

- a) General information, macroeconomic environment,
- b) Description of risk factor,
- c) Results of enterprise operation,
- d) Prospects and future plans,
- e) Corporate governance (National Accounting Standard No 9, 2014).

Comparing the scope of disclosures presented by Polish and international Institution allows observing a very close area of information. The problem is the structure of narrative reporting because the analysed regulations do not impose an obligation of standardised reporting. There is no doubt that the management commentary should not be as standardised as for example balance sheet, but taking into consideration the usefulness and comparability of the statement, it should have at least pervasive draft.

What is more, one should notice that narrative reporting differs significantly from a traditional financial statement (Stede, 2016; Catafalo & Wulf, 2016). A review of literature shows that modern accounting starts to use new forms of communication such as visual rhetoric, which is present within management commentary (Courtis, 2004). It is defined as a form of human communication chosen from a range of options such as picture, word or colour (So & Smith, 2002). This approach is often used in advertising. It is scientifically proven that using different forms and colours of data presented can attract attention and emphasise or highlight a distinctive piece of information (Barens, 1990). In times of very rapid globalisation changes, which also affect accounting, the usage of techniques derived from marketing and sales has been observed. Graphs, bar charts and colourful pictures attract attention, producing less eye strain and fatigue (Christ, 1975). As far as communication role of accounting is concerned, narrative reporting with the use of visual rhetoric is a crucial source of information (Brennan & Merkl-Davies, 2017). Visual elements convey meanings and the effects of the message and help the recipient of annual reports in the decision-making process (Harrison & Van der Laan Smith, 2015). From the investor's point of view, clear data presentation is a crucial factor, which can also reduce the time spent searching for information. On the other hand, using too much visual elements in financial statement (especially in narrative reporting) might be abused by accountants and managers to distract from unfavourable information. The study surveyed in 2012 on Thai Corporate Annual Reports shows that the most common form of disclosure were graphs, tables, charts and photographs (Stanton & Suttipun, 2012).

2. Methods

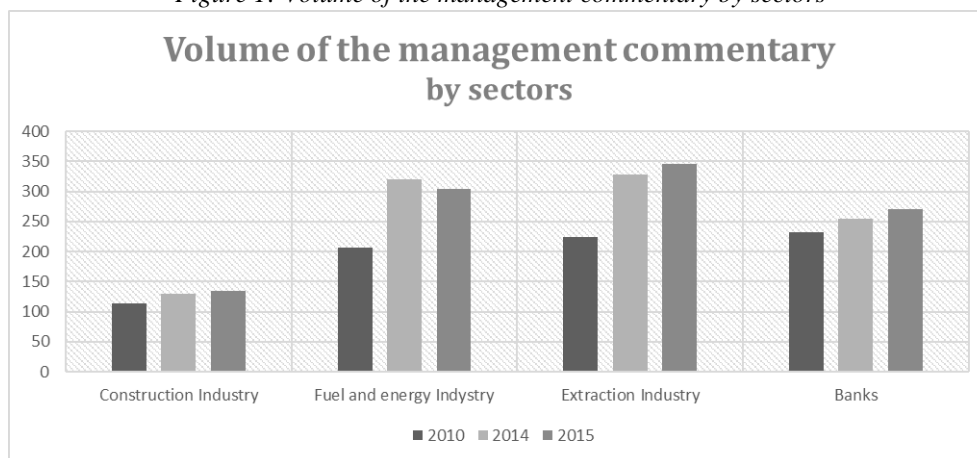
The study presented in the article investigated the extent and content of management commentary of companies listed on the Warsaw Respect Index. The period of researches covered 3 years: 2010, 2014 and 2015. Altogether 36 reports were examined. This choice was

intentional to present the changes in modern accounting. The study has examined the Narrative Reporting of companies from business areas including Construction Industry, Fuel and Energy Industry, Extraction Industry and Banks. Each business sector has been represented by 3 companies. The research was divided into two fundamental stages. In the first part of the examination, the total volume (in pages) of narrative reporting has been measured. The purpose of this stage was to observe trends in changes of the volume of reports presented by companies. It is also associated with the question connected with the usefulness of reports for its recipients. The idea for the second part of this research was taken from the publications by Stanton & Suttipun (2012) and Courtis (2004). The aim of the author was execute the mentioned research on the ground of Polish business. One should also notice, that there is a lack of research in Polish accounting literature connected with the forms of disclosures in management commentary. While examining, the use of visual evidence such as graphs, bar charts and colourful pictures was analysed. Traditional, numerical data, usually presented in tables were also the area of research.

3. Results and Discussion

As it has been already mentioned, narrative reporting has a growingly popular part of annual reporting. All companies listed on Warsaw Respect Index have published management commentary, which are research samples for this article. The volume of the management commentary by sectors has been presented in figure 1.

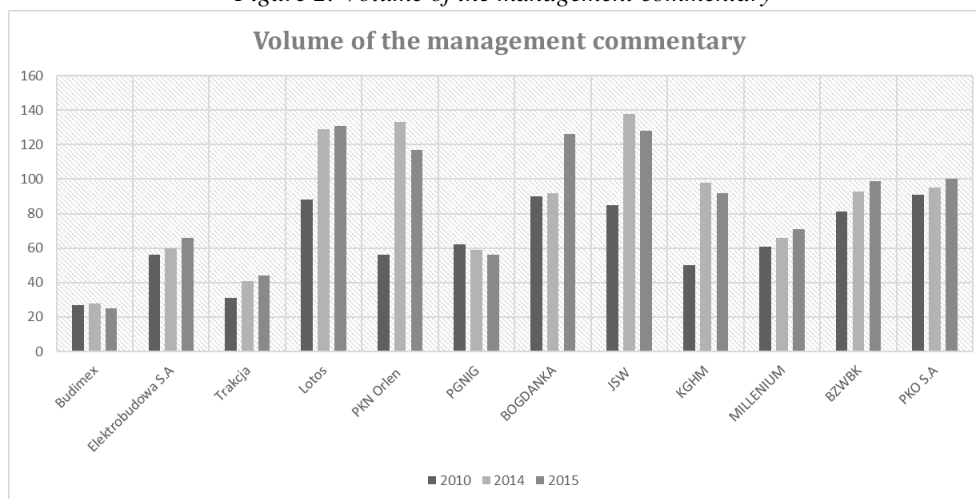
Figure 1: Volume of the management commentary by sectors



Source: Own elaboration

Following figure 1, one should pay attention that the sectors with the highest volume of management commentary in the analysed period are Extraction Industry, Fuel and Energy Industry and Banks. The lowest volume of reports concerned the Construction Industry. The figure presented above was supplemented by an analysis of the volume of reports in individual companies. Figure 2 presented the volume of management commentary in 12 companies over three years covered by this study. The first three companies represent the construction industry, next fuel and energy industry, next extraction industry and the last three banks.

Figure 2: Volume of the management commentary

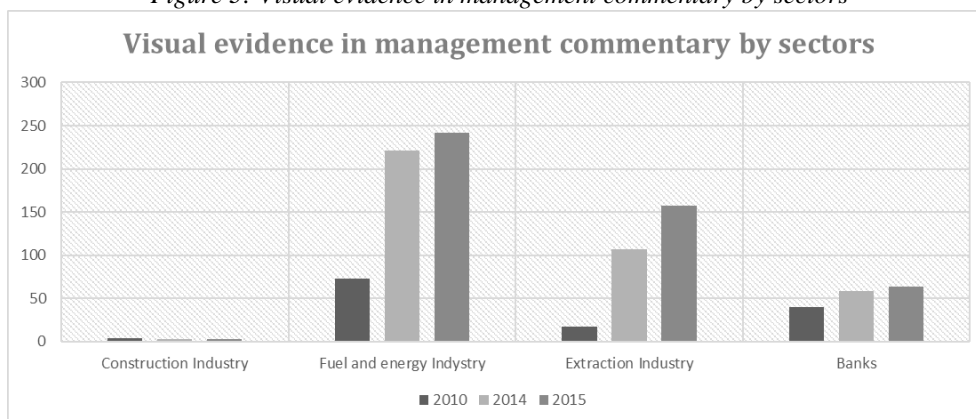


Source: Own elaboration

The analysis of figure 2 is particularly significant in terms of the dynamics of changes in the volume of management commentary. It is worth to observe that although banks sector do not have the biggest volume of management commentary, the changes over three years covered by this study were the mildest. The opposite was to be observed in the extraction and fuel and energy industries. In those cases the changes in the volume of reports were very noticeable for their recipients. Stable growth was observed in Budimex, Elektrobudowa S.A, as well as in Trakcja, though the whole construction industry is characterized by the lowest volume of reports. (Catalfo & Wulf, 2016)

The second part of the research was connected with the usage of visual evidence. Figure 3 shows the number of graphs, bar charts and colourful pictures, which were used in the management commentary.

Figure 3: Visual evidence in management commentary by sectors

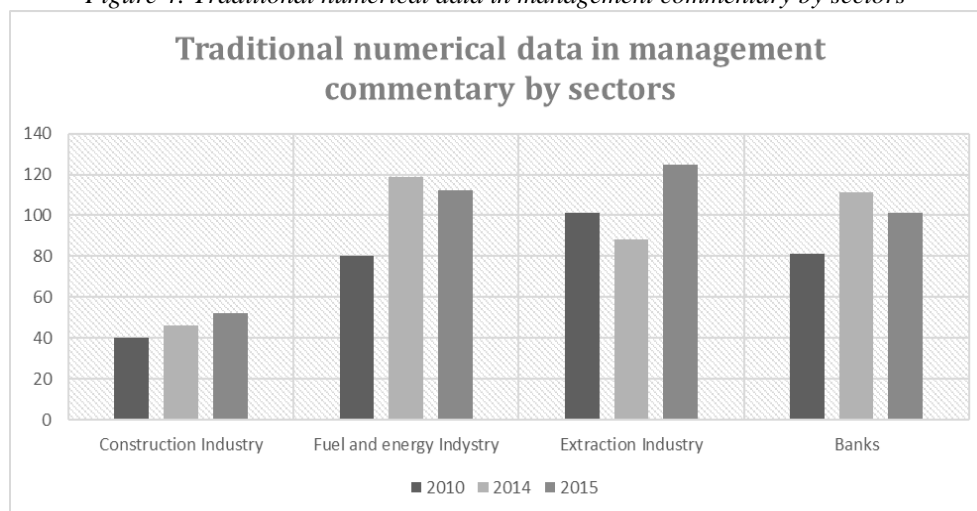


Source: Own elaboration

As it has been presented in figure 3, the use of visual forms of communications was the most popular in fuel and energy industry. It might be connected with the idea of environmental disclosure. Companies representing fuel and energy industry, such as Lotos, PKN Orlen and PGNIG conduct business activity which is often harmful to the natural environment. Being aware of the responsibility for the damage they cause, a very detailed reports have been prepared. Another interesting aspect, that was observed during research not only in fuel and energy industry but also in banks, is branch dictionary. It is an increasingly widespread practice

in the modern accounting. The advantage of implementing a branch dictionary is a positive attitude toward the recipients of accounting reports. Investors, employees and other recipients of financial statement often do not have enough knowledge about some industry, to properly understand the report. A brief explanation of the most important concepts in the industry undoubtedly affects the usefulness of the report. Similarly, as it was in the first part of the research, construction industry used the smallest number of visual evidence. Taking into consideration modern form of communication in accounting, it is also worth to observe the usage of the traditional form of disclosure, which is presented in figure 4.

Figure 4: Traditional numerical data in management commentary by sectors



Source: Own elaboration

Analysing the data presented in figure 4 shows that the usage of traditional numerical data in management commentary tended to decrease in fuel and energy industry as well as banks between 2014-2015. In construction and extraction industry however, the number of traditional numerical data grows. In general, the global tendency is to decrease the number of traditional numerical data and increase the amount of new forms of presentation such as visual evidence. It is also worth to notice that these declines do not have very rapid character. It is also a very relevant aspect of this examinations. As far as the most basic function of accounting is concerned, it is impossible and even groundless to eliminate the numerical data at all, especially taking into consideration the classical informational function of accounting, which is expressed in financial measures. However, from the financial statements recipients' point of view, the decrease in the traditional, numerical data in favour of visual evidence can support the accessibility and easier understanding these reports. (Barnes, 1990)

4. Conclusion

There is no doubt that globalisation and worldwide changes in business activities are also reflected in modern accounting. The last few years show a very high awareness of financial statements' recipients not only in the area of financial information but also as far as corporate social responsibility is concerned. Different perception of business activities is also related to the desire of simplification of life. Every effort is taken in order to improve and facilitate the process of conducting business activity. Such a tendency is also visible in accounting. Nowadays, besides the classic financial statements, management commentary is constantly gaining popularity. As it was mentioned in the article, a crucial factor is also social responsibility awareness and nonfinancial information disclosure. Accounting makes every

effort to make the financial statements, that are the end result of the accounting process, more reader-friendly. The research carried out in the frames of this article presented that management commentary (also called narrative reporting) begins to fulfil these assumptions. The biggest number of visual evidence is observed in companies from fuel and energy industry. What is more, the slow tendency of decrease in usage of traditional numerical data is also visible. Another aspect that comes out of this article is the volume of management commentary. As it was analysed on figure 1, a general growth of volume is observed. This phenomenon should be interpreted from two points of view. The increasing volume of reports can mean more disclosures and can be seen as a positive result. However, one should notice that too high volume of reports may discourage the recipients from careful analysis. The above-mentioned reflections can form a basis for further scientific work.

References

- [1] Barnes, J. H. (1990). Using color preferences in magazine advertising. *Journal of Advertising Research*, vol. 29, no. 6, pp. 25-30.
- [2] Brennan, N. M. and Merkl-Davies, D. M. (2017). A theoretical framework of external accounting communication. *Accounting, Auditing & Accountability Journal*, vol. 30, no. 2, pp. 433-469.
- [3] Catalfo, P. and Wulf, I. (2016). Intangibles disclosure in management commentary regulation in Germany and Italy. *Journal of Intellectual Capital*, vol. 17, no. 1, pp. 103-119.
- [4] Courtis, J. K. (2004). Colour as visual rhetoric in financial reporting. *Accounting Forum*, vol. 28, no. 3, pp. 265-281.
- [5] Christ, R. E. (1975). Review and analysis of color coding research for visual displays. *Human Factors: The Journal of the Human Factors and Ergonomics Society*, vol. 17, no. 6, pp. 542-570.
- [6] Fuente, J., García-Sánchez, I., and Lozano, M. (2017). The role of the board of directors in the adoption of GRI guidelines for the disclosure of CSR information. *Journal of Cleaner Production*, vol. 141, pp. 737-750.
- [7] Ginesti, G., Sannino, G., and Drago, C. (2017). Board connections and management commentary readability: The role of information sharing in Italy. *Corporate Governance: The international journal of business in society*, vol. 17, no. 1, pp. 30-47.
- [8] Harrison, J. S., and Smith, J. V. (2015). Responsible accounting for stakeholders. *Journal of Management Studies*, vol. 52, no. 7, pp. 935-960.
- [9] Hudakova, M. and Luskova, M. (2016). Global environment impacts on enterprise risk management, *Proceedings of 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*. Rajecke Teplice, Slovak Republic, pp.694-701.
- [10] IFRS Practice Statement Management Commentary (2010).
- [11] Hamrouni, A., Benkraiem, R. and Karmani, M. (2017). Voluntary information disclosure and sell-side analyst coverage intensity. *Review of Accounting and Finance*, vol. 16, no. 2, pp. 260-280.
- [12] Lehman, G. (2017). The language of environmental and social accounting research: The expression of beauty and truth. *Critical Perspectives on Accounting*, vol. 44, pp. 30-41.

- [13] Lundholm, R. J., Rogo, R. and Zhang, J. L. (2014). Restoring the Tower of Babel: How Foreign Firms Communicate with U.S. Investors. *The Accounting Review*, vol. 89, no. 4, pp. 1453-1485.
- [14] Morgan, G. (1988). Accounting as reality construction: Towards a new epistemology for accounting practice. *Accounting, Organizations and Society*, vol. 13, no. 5, pp. 477-485.
- [15] National Accounting Standard No 9, (2014).
- [16] Sahay, A. (2004). Environmental reporting by Indian corporations. *Corporate Social Responsibility and Environmental Management*, vol. 11, no. 1, pp 12-22.
- [17] So, S. and Smith, M. (2002). Colour graphics and task complexity in multivariate decision making. *Accounting, Auditing & Accountability Journal*, vol. 15, no. 4, pp. 565-593.
- [18] Stede, W. A. (2016). Management accounting in context: Industry, regulation and informatics. *Management Accounting Research*, vol. 31, pp. 100-102.
- [19] Suttipun, M. and Stanton, P. (2012). Determinants of environmental disclosure in Thai corporate annual reports. *International Journal of Accounting and Financial Reporting*. vol. 2, no. 1, pp. 99.
- [20] Tan, Y. and Liu, Y. (2017). How do investors view information disclosure quality rating? *Nankai Business Review International*, vol. 8, no. 2, pp. 210-230.
- [21] Villiers, C. D. and Staden, C. J. (2011). Where firms choose to disclose voluntary environmental information. *Journal of Accounting and Public Policy*, vol. 30, no. 6, pp. 504-525.

UNIVERSITY COMPETITIVENESS IN TERMS OF THE NEW ECONOMY

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Abstract. In the conditions of the New Economy and the globalization of the educational field, the factors of the competitiveness of educational institutions are changing. Assessing the competitiveness of a university in a New Economy is not an easy task, because of the difficult competition in the market of educational services, new market requirements and problems of assessing the quality of education. The factors of resource potential, the most important of which is quality, come to the forefront. The article presents approaches to the assessment of the global competitiveness of the university with the help of the author's modification of the strategic positioning model, which provides the identification of three types of competitive positions: competitive, parity and noncompetitive, which includes three competitive positions. The evaluation of the university's competitiveness in the model is given in terms of its qualitative and quantitative characteristics, which together form the university's competitiveness potential (factors that depend on the actions of the university's management system in response to changes in environmental factors) and external factors that influence the functioning of the university's competitiveness, taking into account the synergistic effects that may develop under their influence. With the help of the proposed model it is possible to take into account all these factors and to conduct a comprehensive analysis of the university's competitiveness, evaluate the effectiveness of its chosen strategy, formulate recommendations for choosing the mechanism for developing the university's resource potential and to adapt its strategy to the existing conditions of the competitive environment.

Keywords: system of higher education, estimation of higher education institutions' competitiveness, educational institutions positioning, McKinsey's model, quality of education.

JEL Classification: I25, M31

1. Introduction

Requirements for universities competitiveness are changing in the New Economy characterized by high level of globalization risks and uncertainty, greater competition with a trend towards cooperation, growth of the service sector and an increased role of intangible asset, first of all, a human capital and its innovative component (Alpatov & Bortnikova, 2016; Aliaskarova, 2017). New tasks in line with current economic policy appear before education system today (Gregova & Dengov, 2015). Low global competitiveness of higher education system, low quality of education services and its noncompliance with a real market requirements and new perspective requirements of all Russian economic sectors slows down an innovative development (Korostyshevskaya & Urazgaliev, 2016). Also note same problems in financial sphere, which have a negative impact on education system (Altunyan & Kotcofana,

2016). Therefore, universities must develop fundamentally new abilities to ensure their competitive status, despite the presence of certain imbalances in the socio-economic system, for realization their social and economic role.(Plotnikov et al, 2015). National education system can be described as a complex of institutions engaged in the search for an acceptable compromise between educational opportunities (accessibility), level of costs and quality of education. Three this axis, figuratively speaking, determine the breadth, height and depth of the "educational building" in the walls of which each country introduces elements of its own style into decorations. This axis affects both on competitiveness of education system and competitive characteristics of this country's universities including their positions on a global market (Bulina, 2013).

Universities are in rather difficult conditions today. On the one hand, it's not free to choose a behavior strategy and forced to follow the state policy and controlling structures requirements. On the other hand, universities forced to compete both on the resources and education services consumers. (Alpatov, 2013) The requirements of state policy are associated with the achievement of high real quality of educational services and a number of control indicators of the university's activities in accordance with regulatory requirements. (Khalin & Chernova, 2015) University's orientation to the market and the consumers demands from it the development of high perceived quality of educational services, formation of an attractive university's image and the development of consumer's loyalty. Thus, the assessment of the university's competitiveness in the new economic conditions should take into account both the level of the formation of its resource potential and the effectiveness of the mechanisms for the financial, organizational, economic and strategic functioning of universities.

2. University Competitiveness Assessment Model

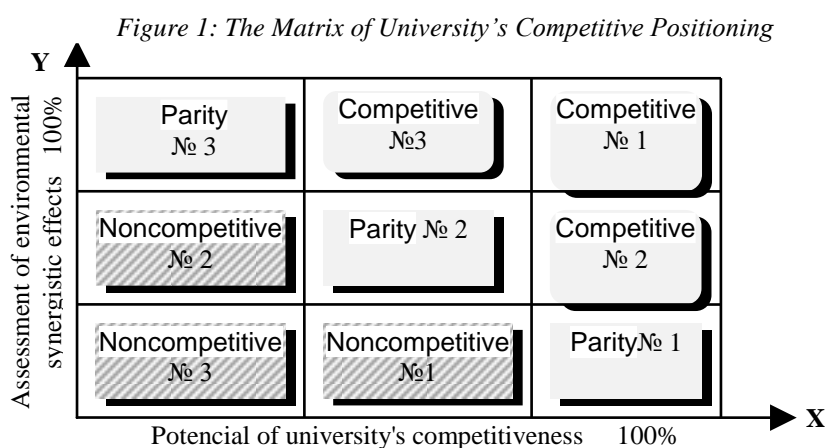
The model for analyzing the university's competitive status is built on the basis of modified McKinsey's model of strategic positioning, which implies an assessment of the strategic potential of universities and the construction of an effective strategy to ensure their competitiveness. However, a specific of educational services market imposes a significant imprint on the classical methodology. A classical McKinsey's technique works mainly with profitable processes and involves evaluating the competitive advantages of the product in the context of changes in the attractiveness of certain economic sectors.

This modified technique allows to evaluating and comparing a university's competitiveness in accordance with a competitive strategy implemented by it and the features of the university's competitive environment. At the same time, assessments will be made under the influence of external positive and negative trends influencing a university's competitive status. Modified methodology will allow not only to compare the competitive positions of universities and their competitive strategies, but also to develop with its help specific strategic recommendations for the future activities of universities.

University Competitiveness Assessment Model involves setting two integrated indicators in the space of which a positioning matrix can be built. The axes (integrated indicators) are set on the basis of the assumption that internal factors (potential of university's competitiveness, including resource and strategic potentials) are the abscissa (X). In particular, this integral indicator can include those factors, the change of which depends on the actions of the university's management system in response to changes in environmental factors. Environmental factors that influence the functioning of university's competitiveness and those synergistic effects that can develop under their influence, determine the integral estimate of the

ordinate (Y). Each university or its structural unit engaged in the implementation of a closed service package can be applied to the plane of the positioning matrix. The areas of competitiveness assume different approaches to the strategy of developing the resource potential and the implementation of various activities aimed at increasing the real and perceived quality of educational services.

All positioning plane is divided into nine equal rectangles. For each of them, they set their own strategies for developing the resource potential and prioritize competitive strategies. For each of them are given their own strategies for developing the resource potential and foreground competitive strategies. Then, above the main diagonal of the matrix will be the most competitive universities. At the same time, the university's competitive position will be achieved in response to the implementation of a specific set of environmental conditions, depending on the integral index of the competitive status or environmental impact (Figure 1). Universities are placed on the matrix plane in the form of points with coordinates (X, Y).



Source: own processing

3. Results and Discussion

The model distinguishes 3 types of competitive positions: the first type - competitive, the second type - parity, the third type – noncompetitive. Each of them includes 3 competitive positions. The most competitive universities will be located above the main diagonal of the matrix. Let's consider in more detail a brief description of the positions.

Competitive №1: The high potential of competitiveness and the high level of synergistic environment effect's influence. It is the highest priority area only for the strongest and the most well-known universities which are able to effectively implement innovative competitive strategies, including breakthrough strategies for promoting educational services and the university as a part of their competitive strategies. The educational services of such universities have high real and imaginary quality, and the consumer strives to make a priority choice regarding them both in terms of budgetary and extra budgetary educational services. At the same time, there is a high selection threshold in such universities, which limits the consumer's ability to choose the program due to extremely high prices for university services. This position assumes retention and strengthening of competitive status. State and stakeholders inclined to investing in educational institutions and educational programs of universities that fall into this cluster.

Competitive №2: Average share of environmental synergetic effects and high competitive potential. This university is not a leader in terms of competitiveness, but it is quite promising and attractive in the educational services market. His educational services have quite high real and imaginary quality. The selection in such universities is slightly less tough, which expands the consumer audience and contributes, on the one hand, to a certain decrease in the real quality of services, on the other hand, to the growth of imaginary quality due to the consumer's confidence in the absence of excessive, from his point of view, costs of obtaining an education. As a rule, the development of the resource potential of such a university is uneven; therefore, for universities corresponding to this competitive position, it is necessary to clearly identify strengths and weaknesses of the university itself and its educational programs.

Competitive №3: Average competitive potential and high share of synergistic externalities. Position requires a clear definition of the most promising quality directions for the development of the university's resource potential. Describes the university, which became quite attractive in the market due to some positive circumstances for it and managed to use its current position to develop and strengthen the image. As a rule, the educational services of such universities in terms of their real qualitative characteristics do not differ from the average level of the market, but their imaginary characteristics are much higher than those of competitors.

Parity №1: High competitive potential and low impact of environmental synergistic effects. These are institutions that have a high real quality of educational services and are characterized by developed abilities in certain areas of educational activity. At the same time, their image potential is almost not developed. That is why activities aimed at enhancing the image can have a diverse nature, for example, using some “exotic” tool of modern marketing, such as marketing impressions (Koltsova & Starobinskaya, 2014).

Parity №2: Average competitive potential and average impact of environmental synergistic effects. It is university which is average for all indicators. Its educational services do not differ either by high real or imaginary quality. The selection by consumers of such universities or educational areas is carried out on a residual principle. Level of requirements of such universities is compulsorily low (they are not inclined to expel unsuccessful students), which again weakens the real quality of educational services. In this competitive area are those universities, in relation to which only extremely selective investment is possible (minimum permissible from state and very limited by stakeholders) in very promising and least risky activities of the university. Due to the instability of this competitive position, the university should pay attention to the fact that a long stay in this position contributes to a further decline in the competitive status and a decrease in the real quality of educational services.

Parity №3: Low competitive potential and high impact of environmental synergistic effects. As a rule, these are universities (or individual educational programs), which experienced a sharp increase in the image for a short period of time. This was due to the positive influence of environmental factors. At the same time, the growth of the image of such universities, as a rule, is not justified by the real actions of the university. However, targeted actions to develop the resource potential in such universities have a chance for a breakthrough in ensuring competitiveness. For do this it has a means, although it has no motivation and ability to use them effectively.

Noncompetitive №1: Average competitive potential and minor positive environmental synergistic. This is a medium competitive university, whose image is not really developed. Moreover, there may be a general negative opinion about the activities of this university. The strategy of the university in this case should be aimed at developing programs with a minimum

level of risk and to obtain realistic (minimal) competitiveness and acceptable quality of educational activity at the expense of certain strengths of the university. As a rule, such universities implement a niche strategy. (Vodak & Mikesova, 2016)

Noncompetitive №2: Low competitive potential and average impact of environment synergistic. As a rule, these are weak universities with an inadequate level of educational services quality. Image of these universities is low, but is average in the market. For such universities, it is necessary to concentrate efforts on reducing the risk and protecting the position of the university in some of the most promising areas for it.

Noncompetitive №3: Low competitive potential and low average impact of environment synergistic. These are the weakest universities, which are at the extreme stage of survival. For such universities, it is required to develop realistic measures to get out of this position, but on their own they are not able to cope with this task.

For educational institutions that are in the position of Noncompetitive 1 and 2 (if there are necessary resources - it is also Noncompetitive 3), the anti-crisis marketing device can be used. (Surgikova et al., 2016) However, in order to ensure that these events are effective, you need a fairly “tough” leadership position, original approaches and a good motivation for employees, including motivation for risk. (Kliestik & Dengov, 2015)

So, we have considered all the basic positions of the matrix. However, the real positioning of universities gives significant errors, if not to take into account the “third dimension” - the quality of education. The assessment of education quality has a strong impact on either strategic potential and the choice of consumers or the global competitiveness of the university. (Zaboev & Meleshkin, 2015) In this sense, globalization affects the quality of the institutional educational environment. (Lyakin & Benson, 2016)

The quality of education is an extremely difficult concept, connected with many aspects of social life, and, besides, it does not have a generally recognized system of assessments. It is logical to assume that any innovations in this area, especially those related to the reduction of public resources channeled to this sphere, should have an evolutionary character and a developed feedback system.

4. Conclusion

The proposed methodology for assessing the competitive status of the university allows not only to carry out a comprehensive analysis of the university's competitiveness in terms of its qualitative and quantitative characteristics, but also to evaluate the effectiveness of its strategy. This technique allows formulating recommendations for choosing the mechanism for developing the university's resource potential and adapting its strategy to the existing conditions of the competitive environment. When implementing the proposed methodology, it is necessary to take into account the indicators of education quality, which significantly affect the result. Implementation of this methodology will allow university to move from a static competitiveness assessment to dynamic strategic assessments in new economic conditions. It allows the university to adjust its development vector in conditions of environmental uncertainty.

References

- [1] Aliaskarova, Z. A. (2017). New economy: New reality and motivation of consumers. *Marketing MBA. Journal marketing management firms*, no. 1, pp. 5-15.
- [2] Alpatov, G. E. and Bortnikova, H. G. (2016). Globalization and the unification of tertiary education. *Globalization and its Socio-Economic Consequences. 16th International Scientific Conference Proceedings*, Rajecke Teplice, Slovak Republic, pp. 25-32.
- [3] Alpatov, G. E. (2013). How to raise the ratings of Russian universities. *Vestnik of the St. Petersburg University, Series 5: Economics*, no. 3, pp. 110-117.
- [4] Altunyan, A. and Kotcofana, T. (2016). Global political and economical processes, monetary policy of the bank of Russia and development of the Russian economy. *Globalization and its Socio-Economic Consequences. 16th International Scientific Conference Proceedings*, Rajecke Teplice, Slovak Republic, pp. 33-40.
- [5] Bulina, A. O. (2013). Transformation of institutions in the new economy. *Marketing MBA. Journal Marketing Management Firms*, no. 3, pp. 148-166.
- [6] Gregova, E. and Dengov, V. (2015). The practical economic policy in transition economies of V4 countries at the present stage of globalization. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 150-156.
- [7] Khalin, V. G. and Chernova, G. V. (2015). Jamil salmi model of establishing world-class universities and implementation of salmi model for higher education in Russia. *Systems Analysis in Engineering and Management. Proceedings of the XVIII International scientific and practical conference. Best papers of the conference*, pp. 160-170.
- [8] Klietstik, T. and Dengov, V. (2015). Quantitative approach to risk as a social phenomenon. *2015 5th International Conference on Applied Social Science*, vol. 80, pp. 28-33.
- [9] Koltsova, A. A. and Starobinskaya, N. M. (2014). Improve the quality and effectiveness of education in the new economy. *Marketing MBA. Journal Marketing Management Firms*, no. 3, pp. 137-149.
- [10] Korostyshevskaya, E. M. and Urazgaliev, V. Sh. (2016). Russia in European innovation space in the context of globalization. *Globalization and its Socio-Economic Consequences. 16th International Scientific Conference Proceedings*, Rajecke Teplice, Slovak Republic, pp. 970-979.
- [11] Lyakin, A. N. and Benson, I. N. (2016). Does globalisation lead to the unification of the institutional environment quality? *Globalization and its Socio-Economic Consequences. 16th International Scientific Conference Proceedings*, Rajecke Teplice, Slovak Republic, pp. 1220-1227.
- [12] Plotnikov, V., Vertakova, Yu. and Polozhentseva, Yu. (2015). Methods of detecting imbalances in the structure and dynamics of socio-economic system. *SGEM 2015. International Multidisciplinary Scientific Conference on Social Sciences and Arts Political Sciences, Law, Finance, Economics and Tourism Conference Proceedings*, pp. 821-828.
- [13] Surgikova, A. V., Ermakov, Y. V. and Kirillovskaya, A. A. (2016). Modern organizations in the sphere of culture: From resource approach to benchmarking. *Marketing MBA. Journal Marketing Management Firms*, no. 1, pp. 132-143.

- [14] Vodak, J. and Mikesova, S. (2016). Emotional intelligence and its role in the work of a manager. *Ekonomicko-manazerske spektrum*, vol. 10, no 2, pp. 26-34.
- [15] Volkova, A. V. (2014). State manageability and civil competence. *Historical, Philosophical, Political and Law Sciences, Culturology and Study of Art. Issues of Theory and Practice*, no. 4, pp. 44-47.
- [16] Zaboev, M. and Meleshkin, M. (2015). Evaluation of the prospects Russian universities to be among the first hundred of the world's leading universities with the use of neural network methods clustering of data. *Applied Informatics*, vol. 10, no. 3, pp. 52-61.

SOURCES OF ORGANIZATIONAL DYSFUNCTIONS

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Abstract. Dysfunctions understood as long-term, significant inefficiencies causing wastage have accompanied organizations since their beginnings. A dysfunction disrupts the smooth functioning of organizations, hinders or even prevents proper management of a selected organizational system. Sources and areas of organizational dysfunctions are varied, but some regularities can be observed. It is vital to come to know them in the context of globalization, which forces companies and their managers worldwide to deal with similar problems. This paper aims to present selected dysfunctions in organizations and management, with particular emphasis on the sources and mechanisms of their formation. The paper was written on the basis of qualitative partially-structured interview surveys. The intended outcome of the surveys was the development of an open catalogue of such dysfunctions. The choice of the research method was a consequence of the purpose and object of the study. Gaining knowledge of organizational dysfunctions requires the closest, sometimes even informal, contact with respondents. The surveys were conducted among 35 purposefully selected entrepreneurs, managers, and specialists of various levels. The interviews, ranging from 30 minutes to 6 hours in duration, were recorded and transcribed. The respondents were asked about and requested to indicate dysfunctional phenomena in their organizations, at the interface between the organization and its environment, or in the immediate surroundings. The surveys allowed for identifying certain organizational dysfunctions, finding their sources, and determining areas of occurrence. The most crucial identified sources of dysfunctions include: autonomization, conflict between long- and short-term perspectives, extreme economization, organizational mismatch, lack of systems thinking, fragmentation, and lack of binding actions.

Keywords: dysfunctions, autonomization, fragmentation, inefficiency

JEL Classification: L22, M14, M20

1. Introduction

This article is based on research conducted in 2014–2017. The studies fall within the interpretive approach. Works are continuing; however, research material gathered to date allows for drawing first conclusions and identifying some regularities. Studies on organizational dysfunctions were inspired by the author's experience from working in organizational counselling, which allowed him to see long-term, serious, and recurring problems faced by many organizations. Oftentimes, such problems arose also in organizations that apply sophisticated management solutions. Phenomena and mechanisms that prevent organizations from achieving their goals are most frequently termed: dysfunctions, pathologies, or inefficiencies. However, a more precise definition is needed to analyse these phenomena. A dysfunction is a phenomenon that adversely affects a particular social system. Long-term effects of a dysfunction can lead to pathological conditions. In simple terms, a dysfunction can

be regarded as a mechanism that disrupts the smooth operation of an organization. An organizational pathology is a relatively permanent inefficiency causing wastage that in economic and/or moral terms surpasses the limits of social tolerance. Likewise, a management pathology will be a long-lasting, significant inefficiency in the processes of organization management. However, the boundary between dysfunction and pathology is sometimes difficult to grasp, as reflected in the related literature. An organizational inefficiency is a term of a praxeological origin and is the opposite of efficiency – a praxeological evaluation of good performance. The (gradable) attributes of efficiency are effectiveness, advantageousness, and economy. Hence, inefficiency stands for an insufficient degree of efficiency attributes possessed by an organization or a particular process.

2. Methods and research limitations

The study consisted of two stages. The first stage was devoted to an analysis of the related literature. The literature dealing with dysfunctions in organizations exists, but it is surprisingly scarce, given the importance of the topic and real needs. Many of the works represent concise contributions to the topic and have a “how to” profile; therefore, they are without much value from the point of view of conducted research. Daily press or high-volume magazines, which occasionally describe examples of pathological phenomena in selected institutions, were not analysed. Relatively poor is the literature devoted exclusively to pathologies, dysfunctions, and other manifestations of organizational issues. Quite a few works tackle these issues while discussing other problems.

The second stage of the study – partially-structured interviews – also required confronting specific difficulties and overcoming certain barriers. The first difficulty relates to the specificity of the topic being addressed, which triggers off numerous interpretation concerns. The researched issues are perceived and valued subjectively. The organizational role of the interlocutor and their subjectively seen position in a formal and informal structure are of great importance. This means that certain organizational phenomena are perceived and evaluated differently by various organizational actors: executives of various levels, subordinates, or union activists. In addition, on occasion the same persons dissimilarly assess certain issues in private conversations than during official addresses, in the presence of co-workers, supervisors, or subordinates. In general, scores of organizational phenomena evade unambiguous evaluation. The second difficulty was technical and was expressed in the respondents’ reluctance to take part in the study. This is a universal problem, known to almost all researchers. Hence, studying pathologies, dysfunctions, errors, or inefficiencies seems to be particularly difficult. The “do not badmouth your company” approach is deeply motivated by the sanctions threatened by the organization. Potential respondents generally refuse to participate in an interview or do not consent to it being recorded. Sometimes, respondents do agree to give an interview, provided its content will not be used in any manner whatsoever – even anonymously – in any publicly available publications. The study covered 35 interviewees: entrepreneurs, managers, and specialists. The 10 entrepreneurs were dominated by micro-entrepreneurs operating on the Internet. The group of 21 managers comprised both company presidents and middle managers. Organizations they headed employed from a dozen or so to several thousand persons. Some of the presidents were also business owners. The respondents represented such industries as: construction, protection of property, facility cleaning, communal services, footwear, financial services, and legal services. Specialists were employed in a housing cooperative, a large provider of commercial medical services, and a global car manufacturer.

The objective of the study determined the research methods used. The researcher's intention was to create an open catalogue of dysfunctions and to identify their sources, but this would have not been achievable using quantitative methods that, by definition, restrict the scope of research. Partially-structured interviews allowed for obtaining extensive and varied information, although a weakness of such a study is that it lacks representativeness and has a limited generalizability. In spite of the difficulties and research constraints mentioned above, a high repeatability of opinions was achieved.

3. Findings

3.1 Areas of dysfunctions

The analysis of dysfunctions in business is difficult and very often confined to selected (hierarchical, problem-based, functional) areas of enterprises and their environment. Depending on the adopted assumptions, dysfunctions can be analysed in the context of the population ecology of organizations (Scott, 1992), the life cycle of organizations (Samuel, 2010), psychopathology (Kets de Vries & Miller, 1984), or by applying a systemic metaphor of the organism (Miller & Miller, 1991). There is also a substantial body of works by the representatives of the diagnostic approach, which seeks and develops instruments for identifying and analysing dysfunctions in specific situational conditions (e.g. Launsby, 2016; Gouliemos, 2005; Dello Russo et al., 2017; Otto & Bolle, 2016). This group of authors includes, among others: M. Gestmann (Gestmann, 2001); M. Guy (Guy, 1989) as well as S. Robinson and R. Benett (Robinson & Benett, 1995), who have created an interesting typology of organizational behaviours deviating from standards.

The first area of dysfunctions, identified by the majority of study participants, is a broadly understood social system of the organization. This is consistent with the widest stream of research on dysfunctions. This group comprises authors who analyse various dysfunctional and pathological behaviours. The burnout issues are researched, among others, by: W. Awa, M. Plaumann, and U. Walter (Awa et al., 2010); D. W. Chan (Chan, 2011); J. Halbesleben, H. Osburn, and M. Mumford (Halbesleben et al., 2006); and others. R. D. White considers the pursuit of excessive detail in the managers' activities as a source of dysfunction (White, 2010). The dysfunctions of various types of organizational cultures are analysed by G. Fink, D. Dauber, and M. Yolles (Fink et al., 2012). The problems of bullying and intimidating in the workplace are discussed, among others, by: D. Archer (Archer, 1999); B. Ashforth (Ashforth, 1984); K. Bjorkvist, K. Osterman, and M. Hjelt-Back (Bjorkvist et al., 1994); S. Einarsen (Einarsen, 2000); and others. The issues raised by the respondents during the interviews partially overlapped with the topics seen and analysed by the researchers. The interlocutors noticed reluctance or resistance to change, decline in responsibility and commitment, lack of trust, fear of conflicts, dishonesty, greed, etc. Bad interpersonal relations arising from the abuse or improper manner of exercising power by superiors were considered to be sources of dysfunctions. Several interviewees from among older managers pointed to burnout, seeing it as a significant organizational problem caused by heavy workload imposed on employees. This issue was not, however, raised by the entrepreneurs at all. One of the managers encountered a case of mobbing accusation in his company, made by two employees being dismissed. Still, in his opinion, it was more of an attempted defence against dismissal.

Numerous respondents pointed to dysfunctional organizational games that organization participants engage in. These games were manifested in certain persons or groups seeking to extend their scope of power, control over resources, or the scope of organizational autonomy.

Other observed behaviours included "empire-building" (efforts to expand the organizational cells managed), behind-the-scenes manoeuvres in informal groups, looking for allies among senior executive staff, simulated activity, and more. A specific type of a game noticed by the interlocutors is the reluctance to share experience and knowledge. Another manifestation of the game is the deliberate under-formalization of the organization which provides superiors with greater opportunities for influencing subordinates and enables them to move "down" the responsibility for possible failures.

The social areas of dysfunction were least frequently pointed to by entrepreneurs, which is understandable, given the small size of teams they headed and – often – a relatively short life of their companies. Only a few of them referred to the problem of dishonesty, but – interestingly – they linked it either to the activities of officials or to the terms of cooperation with huge corporations. In their view, there is a serious contradiction between the declarative sphere (for example, codes of ethics in corporations) and unfair practices applied in the cooperation between large enterprises and small companies.

Managers and few entrepreneurs who had had the opportunity to work in an international environment pointed to dysfunctions related to cultural domination. This is particularly evident in international corporations, which experience such phenomena as: promotions based on the criterion of nationality, differences in remunerations in favour of employees from the country of headquarters, and – which only indirectly refers to the social area of the organization – unofficial transfers of funds to headquarters abroad. Some of the interviewees saw differences in the level of honesty and varying levels of tolerance for corruption in Poland and in other countries.

The problem whose scale of occurrence makes it dysfunctional is low level of trust. This is recognised by both entrepreneurs and managers. The consequences of low level of trust are felt in internal and external relations of the organization, and this pathology – in its economic dimension – leads to an increase in transaction costs.

Slightly fewer respondents saw dysfunctions in the subsystems of the organization other than the social area. Frequently mentioned was the problem of constraints in decision-making, but – instead of being interpreted in terms of existence of dysfunctional systems – it was rather viewed as an individual ability of respective persons to make decisions.

On the other hand, the interviewees were concerned by the extreme economization demonstrated in the excessive use of external labour resources, the widespread use of flexible forms of employment, the reduction or lack of investments in the material and social spheres of the organization, or the purchases from the cheapest sources, etc. The immoderate economization is also made manifest through the pathological exploitation of widely understood organizational resources. Hence, resources turn sterile, which gives rise to various dysfunctions and, consequently, brings about effects such as: deteriorated quality, diminished motivation, and loosened emotional relationship with the company. Resource sterilization is also dysfunctional from the point of view of further functioning – organizations do not have enough resources to adequately respond to development challenges. Interlocutors from larger businesses signalled the existence of a dysfunctional blindness to the relationship between inputs and effects. This was the case in those companies where cost centres were organizationally separated from revenue centres. This dysfunction can be reflected in investments in low-profitability projects, disposal of key resources, or dysfunctional organizational sub-optimizations.

Communication is defective in numerous organizations, as pointed out by almost all interviewees from major companies. The main barrier are not technical issues, but the lack of knowledge or absence of motivation among executives to communicate effectively. Improper communication results in misunderstandings within the organization and with the entities from its environment, in conflicts, and sometimes also in a decline in productivity.

Numerous survey participants pointed to dysfunctional mechanisms in the environment that conduce to organizational issues. The respondents who took part in the survey saw reasons for many of the problems in the actions of the state. Virtually all entrepreneurs pointed to the state as an institution that is dysfunctional and generates dysfunctions. They perceive the state as a uniform external entity that creates burdens and uncertainty. Bureaucratism, disclosure requirements, extensive control activities are – according to the respondents – but some of the manifestations of the dysfunctionality of the state. Interestingly, all the interviewed entrepreneurs took advantage of material reliefs and incentives offered by the state.

3.2 Sources of dysfunctions

Analysis of the literature and material from the conducted interviews leads to specific conclusions.

1. The differences in the assessment of the rationality of action from the perspective of the whole organization and from the point of view of its selected parts are related to the very severe dysfunction of the organization, i.e. autonomization. This phenomenon consists in the internalization of organizational regulations which, introduced to achieve specific organizational goals, become a value in themselves, irrespective of whether or not these goals are achieved. Autonomization is, among others, the cause of bureaucratization of state institutions, as indicated by both entrepreneurs and managers participating in the study. Some of the organizational games referred to by the interviewees (for example, games for augmenting or relieving burdens, games for increasing the budgets of specific organizational units, “passing on costs” to the budgets of “others”) are also manifestations of autonomization.

2. The second dysfunctional mechanism is a derivative of the conflict between short- and long-term perspectives. Decisions whose implementation brings current positive effects may in the long run contribute to the occurrence of unfavourable phenomena and consequences. In their decisions, managers usually follow a short-term perspective, as they are assessed for the attainment of short-term goals. The focus on short-term actions and the above-described mechanism of goal displacement are the source of, for example, feigned activity. This is particularly noticeable in large corporations, where managers take feigned actions such as, for example, relocation of a corporate seat, reorganization, renaming of positions, etc. Such efforts allow them to show their activity to stakeholders, but they do not really affect the fate of their company. Subordinating decisions to short-term rationality may be a condition for the manager to continue in his post, but at the same time it may adversely affect future development processes of the organization. Such irrational conduct can be exemplified by succumbing to fashion and herd behaviours. On the other hand, actions that are irrational from the point of view of the long-term interests of organizations may be a rational choice for managers who thus strive to legitimize themselves (Hensel, 2008). Assuming the prevailing assumption that the goal of an organization is to survive and develop, decisions leading to the maximization of short-term benefits at the expense of the future should be considered inappropriate. It cannot be ruled out, however, that as a result of changing reality, not only will the average life cycle of the organization shorten, but the basic assumptions about its goals will be re-evaluated as well.

3. The tendency towards extreme economization of action is a major source of dysfunctions. Pathological consequences of economization are described above. The lack of investments, continuous increase in the intensity of the use of factors of production, flexible forms of employment, and other methods of "cost optimization" are nearly omnipresent. This often brings about a short-term improvement in financial performance, but can in the longer term lead to the so-called organizational anorexia – a situation where the organization does not have any surpluses that would allow it to launch new processes. What is more, incessant cost reduction does not further a change in the competition strategy. A substantial part of enterprises defend the cost strategy they apply. It seems that for many companies such a strategy is not sustainable over a long time, but – as pointed out above – there is a serious conflict between the rationality of the short and long terms.

4. A widely understood organizational mismatch is a rarely perceived dysfunction. The organizational mismatch can manifest itself through the use of dysfunctional solutions and through numerous pathologies that organizations have to face. The organizational mismatch can be considered in different dimensions of the organization. As concerns the strategy, a mismatch can mean an inconsistency between the strategy and tactical/operational actions (e.g. an attempt to create a premium brand and expand territorially coupled with a simultaneous pathological economization resulting in a decline in quality). In the structural aspect, a mismatch may be expressed by an excessive centralization or decentralization as compared to current and future needs. Mismatching may also be demonstrated in the improper selection of systems for the existing organizational conditions (e.g. the use of incentive systems that contradict company objectives). An organizational mismatch results in such unfavourable phenomena as organizational conflicts, decline in commitment, job quitting, decreases in productivity.

5. The lack of systems thinking and failure to see the relationship between inputs and outputs are sources of dysfunctions associated with organizational mismatches. This dysfunction is typical of larger organizations with an extensive functional structure in place. The consequences that ensue from this phenomenon are, for example, slowed down processes and bottlenecks. The absence of systems thinking results in disadvantageous suboptimizations. As a rule, all types of units working to cater for "internal needs", i.e. not working directly with the customer, are more vulnerable to the effects of this dysfunction. The role of these units in the organization tends to be disregarded, which is reflected in employees being overlooked for promotion or in lower earnings. Such units are frequently "the first to economize" – it is there that organizational savings are looked for.

6. The reason for many problems lies in the fragmentation of the organization. Fragmentation concerns larger organizations, but its implications are visible in small human teams as well. Fragmentation consists in the formation of informal barriers between the parts of an organization. The larger the organization, the higher the likelihood of fragmentation. Fragmentation can be considered as a catalyst for autonomization. The stronger the barriers within an organization, the greater the tendency for the goals to be displaced, as described above. The consequences of fragmentation coupled with autonomization can be very painful for the organization. Such companies lose flexibility, experience difficulty in making changes, abound in conflicts, dysfunctional games, and rivalry. At the same time, fragmentations is very hard to avoid, as it is a simple derivative of labour division in the organization.

7. The effects of fragmentation are more acute when there are no binding solutions, which can be termed an organizational binder. Organizational binders can include systemic solutions

such as: mechanisms of mutual arrangements, committees, cross-functional teams, matrix structures, etc. Leadership, and especially an organization-wide vision of development, can play a pivotal role as an organizational binder. However, this is not facilitated by routine, uncontrolled organizational games, obstructed communication channels. Good organizational procedures can serve as a binding agent, although excessive belief in their effectiveness carries the risk of bureaucratization.

4. Conclusion

The sources of dysfunctions are systemic and complex. Individual dysfunctions interact with one another, mutually reinforcing and leading to pathologies. Although the body of theoretical works remains relatively limited, the practice of fighting organizational dysfunctions is widespread. Indeed, management would not have been identified as an area of interest for theorists, a subject of numerous studies, and later as a scientific discipline, if it not been for the experienced practical problems related to the functioning of organizations. These problems were, among others, the effect of recurring errors and irregularities in management. Nearly all authors putting forward recommendations for (ancient or contemporary) managers warned against them. While writing what to do, they also pointed to things to avoid. Unfortunately, many of the promoted solutions comprise dysfunctional elements. This means that attempts to eliminate some dysfunctions give rise to the emergence of new ones. According to M. Gestmann, “at times of despair entrepreneurs reach for each, even half-reliable, theory of management. All known principles of management – from Total Quality Management through Human Relations to Reengineering – are instructions that promise help in eliminating organizational, communication, dependency, and other disruptions encountered in the workplace, without exhaustively investigating their reasons” (Gestmann, 2001, p. 18). This critical, perhaps not fully fair assessment, is undoubtedly an expression of concern about the lack of reflection in using simple solutions that streamline organizations.

References

- [1] Archer, D. (1999). Exploring „bullying” culture in para-military organisation. *International Journal of Manpower*, vol. 20, pp. 94-105.
- [2] Ashforth, B. (1984). Petty tyranny in organizations. *Human Relations*, vol. 47, pp. 755-778.
- [3] Awa, W. and Plaumann, W. U. (2010). Burnout prevention: A review of intervention programs. *Patient Education and Counseling*, vol. 78, pp. 184-190.
- [4] Benett, R. and Robinson, S. (1995). Development of a measure of workplace deviance. *Journal of Applied Psychology*, vol. 85, pp 555-572.
- [5] Bjorkvist, K., Osterman, K. and Hjelt-Back, M. (1994). Aggression among University employees. *Aggressive Behavior*, vol 22, pp. 173-184.
- [6] Chan, D. W. (2011). Burnout and life satisfaction: Does gratitude intervention make a difference among Chinese school teachers in Honk Kong? *Educational Psychology*, vol. 31, pp. 809-823.
- [7] Dello Russo, S., Miraglia, M. and Borgogni, L. (2017). Reducing organizational politics in performance appraisal: The role of coaching leaders for age – Diverse employees. *Human Resource Management*, vol. 56, pp. 769-783.

- [8] Einarsen, S. (2000). Harassment and bullying at work: A review of the Scandinavian approach. *Aggression and Violent Behavior*, vol 5, pp. 16-27.
- [9] Fink, G., Dauber, D. and Yolles, M. (2012) Understanding organizational culture as a trait theory. *European Journal of International Management*, vol. 6, pp. 199-220.
- [10] Gestmann, M. (2001). *Sabotaż w miejscu pracy*. Kraków: Wydawnictwo Profesjonalnej Szkoły Biznesu.
- [11] Gouliemos M. (2005). Applying the organizational failure diagnosis model to the study of information systems failure. *Disaster Prevention Management*, vol. 14, pp. 362-377.
- [12] Guy, M. (1989). *From Organizational Decline to Organizational Renewal: the Phoenix Syndrome*. New York: Quorum Books.
- [13] Halbesleben J.R.B., Osburn H.K., Mumford M.B. (2006). Action research as a burnout intervention: Reducing burnout in the federal service. *Journal of Applied Behavioral Science*, vol. 42. pp. 244-266.
- [14] Hensel, P. (2008). *Transfer wzorców zarządzania*. Warszawa: Dom Wydawniczy Elipsa.
- [15] Hill, R. M. (1997). The single-vendor single-buyer integrated production–inventory model with a generalized policy. *European Journal of Operational Research*, vol. 97, pp. 493-499.
- [16] Kets de Vries, M. F and Miller, D. (1984). Neurotic style and organizational pathology, *Strategic Management*, vol. 5, pp. 35-55.
- [17] Launsby, R. G. (April 2011). Medical device challenges, launsby consulting [Online], p.1-6. Available <http://www.launsby.com/Articles/MedDeviceChallenges.pdf>.
- [18] Miller, J. G. and Miller, J.L. (1991). A living system analysis of organizational pathology, *Behavioral Science*, vol. 36, pp. 239-252.
- [19] Otto, P. E, Bolle, F. (2016). Organizational power: Should remuneration heterogeneity mirror hierarchy? *Review of Economic Design*, vol. 20, pp. 187-205.
- [20] Robinson, S. L. and Bennett, R. J. (1995). A typology of deviant workplace behaviors: A multidimensional scaling study. *Academy of Management Journal*, vol. 38, pp. 555-572.
- [21] Samuel, Y. (2010). *Organizational Pathology. Life and Death of Organizations*, New Brunswick: Transaction Publishers.
- [22] Scott, W.R. (1992). *Organizations: Rational, Natural and Open Systems*. Englewood Cliffs, NJ: Prentice-Hall., pp. 25.
- [23] White, R. D. (2010). The micromanagement disease: Symptoms, diagnosis and cure. *Public Personnel Management*, vol. 39, pp. 71-76.

ECONOMIC AND TRADE AGREEMENT BETWEEN THE EU AND CANADA IN GLOBALIZED WORLD

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Abstract. Trade policy has always been the exclusive competence of the EU. The recently concluded Comprehensive Economic and Trade Agreement (CETA) between Canada and the European Union is qualified as the most panoptic international trade and investment agreement entered into force by European Union. It should make it easier to export goods and services, benefitting people and businesses in both the EU and Canada. CETA is an example of how Europe can leverage new partnerships in the world to promote an open and social economy. Of course, CETA also creates winners and losers, highly unequal distribution of benefits and costs of globalization. There is much scepticism about both globalization and trade these days – across Europe as well as in North America and elsewhere. The difficulties in getting the deal done showed that scepticism about globalization is a big global trend. However, blocking the treaty in European history would not substantially increase democracy and instead make it impossible for Europe to continue to promote its model of an open and social economy. It is now for the EU to utilise the opportunity for greater competition, trade and enhanced strategic partnerships in a manifestly globalized world. The aim of this article is to analyse the EU – Canada trade agreement CETA, summarise the trade-liberalising achievements and its possible consequences.

Keywords: CETA, FTA, trade, European Union, Canada, globalisation

JEL Classification: F10, F68

1. Introduction

Europe has become deeply integrated into global markets. The EU is the world's biggest trader, accounting for 16.5% of the world's imports and exports. It counts for the world's biggest exporter of manufactured goods and services, and it is the biggest import market for over 100 countries (European Union, 2017).

In the past 20 years, the conditions for global trade and business have improved tremendously. Many political, ideological and customs-related borders between countries and regions of the world have been dismantled (Ceniga & Sukalova, 2015).

Enter to the European Union has brought benefits to Visegrad states. Benefits was in form as growth of their economic power, it increased exports and improved the quality of living standards. Export was one of the most important advantages in the region (Gregova & Dengov, 2015).

European Union trade policy is made exclusively at EU level. In accordance with Article 3(1)(e) of the Treaty on the Functioning of the European Union (TFEU), the European Union

has exclusive competence with respect to the common commercial policy. Accordingly, only the Union may legislate and adopt legally binding acts within that area. The Member States are able to do so themselves only if so empowered by the Union, in accordance with Article 2(1) TFEU (Official Journal of the EU C 326, 2012).

The European Union has achieved a strong position by acting together with one voice on the global scene, rather than with 28 separate trade strategies. EU has also a secure legal investment framework that belongs to the most open in the world.

Thanks to the simplicity of modern transport and communications, it is nowadays easier to produce and trade goods and services around the world which gives European companies the potential to deal also outside Europe, across the world.

Elimination of communication barriers and trade barriers has resulted in the creation of an open and free world market. The competition of companies is growing and competition growth on a global scale has a great impact on the economies and labour markets of individual countries (Trelova, 2016).

According to Kajanova, one of key roles of enterprises is to maintain their competitiveness, adapting to the global markets, and thus successfully supply their products, goods and services to their customers. (Kajanova, 2016)

The development of trade is an opportunity for economic growth. EU trade policy seeks to create growth and jobs by increasing the opportunities for trade and investment with the rest of the world. Canada and Europe have been stable trading partners for centuries. Their formal trade relationship began in 1976 with the Framework Agreement for Commercial and Economic Cooperation, the EU's oldest such agreement with an industrialized country.

The EU negotiates agreements through its network of trade relations. It engages with its partners also through free trade agreements (FTA). The promotion of FTAs is an active policy of the Common Commercial Policy conducted by the European Union. The new generation FTAs are very comprehensive with regards to trade liberalization, including the elimination of tariff and non-tariff barriers, further liberalization in services, investment, enforcement of intellectual property rights, and so on.

The Comprehensive Economic and Trade Agreement brokered between Canada and the European Union represents the largest free trade agreement in the wealthy industrialized world to date. 'Largest', in this sense, refers to the sizes of the combined Canadian market and EU Single Market, as well as the scope of the areas under agreement. (D'Ermann, 2016).

2. The Comprehensive Economic and Trade Agreement (CETA)

The Comprehensive Economic and Trade Agreement, or CETA is the EU's latest and most ambitious new generation free-trade agreement between Canada and the European Union. The negotiations were concluded in August 2014. All 28 European Union member states approved the final text of CETA for signature, with Belgium being the final country to give its approval. The European Parliament voted in favour of CETA on 15 February 2017. CETA must be ratified by EU national parliaments before it can take full effect.

According to accessible sources, transatlantic markets represent transactions worth around 2 billion euros every day (European Union, 2017).

For a better understanding of a trade between the EU and Canada, see figures in the tables below: EU-Canada trade in goods, trade in services and foreign direct investments.

Table 1: EU-Canada: Trade in goods 2014-2016, € billions

Year	EU imports	EU exports	Balance
2014	27,4	31,6	4,2
2015	28,3	35,1	6,8
2016	29,1	35,2	6,1

Source: European Commission, 2017, Available: <http://ec.europa.eu/trade/policy/countries-and-regions/countries/canada/>

Table 2: EU-Canada: Trade in services 2013-2015, € billions

Year	EU imports	EU exports	Balance
2013	11,6	17,7	6,0
2014	11,2	16,4	5,1
2015	12,1	18,0	5,9

Source: European Commission, 2017, Available: <http://ec.europa.eu/trade/policy/countries-and-regions/countries/canada/>

Table 3: EU-Canada: Foreign direct investment 2015, € billions

Year	Inward stocks	Outward stocks	Balance
2015	228,1	249,2	21,2

Source: European Commission, 2017, Available: <http://ec.europa.eu/trade/policy/countries-and-regions/countries/canada/>

Following the Institute of Export and international trade, with the value of goods traded between the two partners in 2015 valued at €63.5 billion, this FTA presents massive savings and growth potential. When the EU or Canadian customs officials confer preferential origin on goods being traded between the two blocs, the rate of duty can be reduced up to zero, providing immediate costs savings (Institute of Export and international trade, February 2017).

CETA is expected to remove all tariffs between the EU and Canada, except those charged on public services, audiovisual and transport services and a few agricultural products. It would also lead to the mutual recognition of certifications for a wide range of products.

The Agreement applies for the European Union, to the territories in which the Treaty on European Union and the Treaty on the Functioning of the European Union are applied. The parties established a free trade area in conformity with Article XXIV of General Agreement on Tariffs and Trade (GATT, 1994) and Article V of the General Agreement on Trade in Services (GATS). The parties affirm their rights and obligations with respect to each other under the World Trade Organisation Agreement (WTO) and other agreements.

Both, EU and Canada, shall progressively liberalise trade in goods in accordance with the provisions of CETA over a transitional period starting from the entry into force. Each party shall accord national treatment to the goods of the other party in accordance with Article III of the GATT 1994. Each party shall reduce or eliminate customs duties on goods originating in either party in accordance with the tariff elimination schedules in Agreement.

When it comes to duties, taxes or other fees and charges on exports, each party may not adopt or maintain any duties, taxes or other fees and charges imposed on, or in connection with, the export of a good to the other party, or any internal taxes or fees and charges on a good exported to the other side, that is in excess of those that would be imposed on those goods when destined for internal sale.

Except as otherwise provided in the Agreement, one of the party shall not adopt or maintain any prohibition or restriction on the importation of any good of the other party or on the exportation or sale for export of any good destined for the territory of the other party, except in accordance with Article XI of the GATT 1994.

As stands in the Treaty, the EU and Canada shall strengthen their cooperation in the areas of technical regulations, standards, metrology, conformity assessment procedures, market surveillance or monitoring and enforcement activities in order to facilitate trade between each other, as set out in Chapter Twenty-One (Regulatory Cooperation). This may include promoting and encouraging cooperation between the parties' respective public or private organisations responsible for metrology, standardisation, testing, certification and accreditation, market surveillance or monitoring and enforcement activities; and, in particular, encouraging their accreditation and conformity assessment bodies to participate in cooperation arrangements that promote the acceptance of conformity assessment results.

Both sides shall regularly review relevant international initiatives on trade facilitation, including the Compendium of Trade Facilitation Recommendations developed by the United Nations Conference on Trade and Development and the United Nations Economic Commission for Europe, to identify areas where further joint action would facilitate trade between the partners and promote shared multilateral objectives (Official Journal of the EU, 2017).

Free Trade Agreements, if approached with care, can build on WTO rules by going further and faster in promoting openness, by tackling issues which are not ready for multilateral discussion and by preparing the ground for the next level of multilateral liberalisation. Many key issues, including investment, public procurement, competition, regulatory issues and intellectual property rights enforcement, which remain outside the WTO at this time, can be addressed through FTAs (European Commission, 2013).

a. Opportunities for European Union businesses in Canada

Canada was the 4th most important investment destination for EU companies (€274.7 billion) in 2015. EU – Canada trade deal should give Europeans more opportunities regarding jobs, business growth and investment.

Opening markets should lead to more choice and lower prices, so from the Comprehensive Economic and Trade Agreement could benefit mainly consumers.

When it comes to workers, it should become easier for certain European Union professionals to supply legal accounting, engineering, architectural or similar services in Canada. CETA provides a framework for the European Union and Canada to recognise each other's qualifications in such professions. It would also make it easier for firms to temporarily move staff to the other side.

By simplifying procedures, it will become easier for European companies to expand in the Canadian market. Under CETA, Canada would open its government tenders to EU firms more than with any of its other trading partners, both at federal and municipal levels.

Canada would also commit to making its tendering process more transparent by publishing of all its public tenders on a single procurement website. Currently lack of access to information is one of the biggest obstacles for smaller companies in overseas markets.

Although the EU will be able to export nearly 92% of its agricultural and food products duty free, this would not come at the expense of protection for European products. Canada has agreed

to protect 143 European products that are associated with a specific town or region and that enjoy a great reputation because of their qualities.

All imports from Canada should still have to meet EU rules and regulations. CETA would not lower or change European Union health and safety, environment and social or consumers rights standards. It wouldn't change how the EU regulates food safety, including on genetically modified organism products or the ban on hormone-treated beef.

CETA doesn't cover public services, so EU countries will be able to keep public monopolies and continue to decide which services (such as water supply, health and education) they want to keep public and which ones they want to privatise (Europea Parlament Article, 2017).

b. Key sectors for Canada

The European Union with its 28 member states and a total population of over 500 million, is the world's largest single market, and trader. The EU was Canada's second most important trading partner after the US in 2015. The Canada-EU Comprehensive Economic and Trade Agreement should create jobs, strengthen economic relations and boost Canada's trade with the world's second-largest market. CETA is a progressive free trade agreement which covers virtually all sectors and aspects of Canada-EU trade in order to eliminate or reduce barriers.

The Canadian government has disclosed information for Canadian firms about opportunities in the EU in 12 key sectors that could benefit from CETA: aerospace, agriculture and agri-food, automotive, clean technologies, fish and seafood, forestry and wood products, information and communications technologies, infrastructure, medical devices, metals, mining and minerals, oil and gas, pharmaceuticals (Government of Canada, 2017).

c. Causes of global poverty, inequality and injustice

Globalization has resulted in increased international trade, easier movement of capital, goods and services and a greater dependence on the global economy. Opponents of globalisation say, that it creates losers, highly unequal distribution of benefits and costs.

Globalization processes, due to which markets and production in different countries become interdependent, has brought fundamental changes in the inequalities of society. In all economically developed countries the impacts of globalization have significantly changed the proportion of distribution of socially created wealth for the benefit of the highest social classes. The processes of economic globalization affect selectively. We can say that globalization makes inequality, poverty and social exclusion more visible and increases the sensitivity of their perception (Sipikalova, 2016).

Also the structure of business, services, investments and business etiquette is changing as the consequence of the globalization processes (Milosovicova & Paskrtova, 2015).

In the International Journal of Political Economy, Dr. Kohler and Dr. Storm stated their results. They show that cost-cutting and competitiveness-enhancing measures induced by CETA have negative long-term effects. (Independent, 2017).

British economist David Ricardo, who came up with the Theory of comparative advantage, recommended to the nations to specialize and concentrate solely on those industries in which they are more competitive relative to other nations, and trade with other countries for all other products.

Looking at the current wave of globalization, Nobel Laureate Eric Maskin of Harvard University arrives at a different conclusion than Ricardo. He theorizes that while average income has been rising as a result of more trade and global production, so has inequality within countries. How skills match between workers, lies at the crux of understanding why globalized production leads to an increase in inequality.

How does one reconcile the visible benefits of globalization with the apparent downside? The answer, according to Maskin, lies in contrasting the benefits to an economy as a whole against the negative effects on a certain segment of workers.

„What we want to do, says Maskin, is allow the low skilled workers of the world to share in the fruits of globalization.” The most viable option, how to do it according to Maskin, is for third parties like governments, multilateral institutions, non government organisations (NGOs) and private foundations to step in (Maskin, 2014).

The debate about pros and cons will probably never end. Why do we have the opponents of globalization and what is the problem of this term? The Problem is that the globalization, it means, liberalization of trade, does not benefit everybody as we have the winners and losers and we do not have any other alternative to this system (Buno, 2016).

3. Conclusion

Ever increasing pace of globalisation of world economy brings changes, as well as the new challenges for all national economies, especially for their economic and international business policy, as well as for the development of international business (Bajzikova & Novackova, 2016).

Implementation of international trade and entry into foreign markets in practice is in today's turbulent time under the influence of strong competition (Drahosova, 2013).

The European Union is in prime position when it comes to global trade. Free trade among its members was one of the EU's founding principles. Foreign trade brings European consumers more choice, higher quality goods and lower prices. International trade also strengthens the competitiveness of Europe's businesses.

Comprehensive Economic and Trade Agreement between the EU and Canada is a major business deal which represents one of the new generation of trade treaties, that should make it easier to trade goods and services, benefitting people and businesses in both the EU and Canada. CETA is progressive deal that goes beyond just removing customs duties, it aims at further liberalizing trade, investment and other sectors of society so far protected from market competition. By doing so, it sets a new global standard for future trade agreements.

The Trade Agreement is set to be ambitious, but it is also causing controversy and critics.

Some consequences of the globalization process can be predicted and measured, however, the globalization process of a worldwide range is very complex. Globalization, on the one hand, is a process which provides the EU countries with many benefits, on the other hand though, it can also cause threats (Mastalerz-Kodzis & Pospiech 2016).

The openness of European trade regime means that the EU is the big player on the global trading scene. The European Union is ongoing to complete its present ambitious trade strategy, believing in open markets and free trade. It has a strong interest in open markets and clear regulatory frameworks. The EU would lose more, than it would gain while adopting

protectionism, since it is dependent on many imported products. CETA is a case of an open global trading system through free trade agreement. It is now up to the European Union to utilise the opportunity for greater competition, trade and enhanced strategic partnerships in a manifestly globalized world.

References

- [1] Bajzikova, L. and Novackova, D. (2016). Globalization and its impact on business activities. *International scientific conference*, University of Hradec Kralove, Czech Republic, pp. 57-66.
- [2] Buno, M. (2016). The role of World Trade Organisation in the globalization process. *Globalization and its Socio-Economic Consequences 16th International Scientific Conference*, Rajecke Teplice, Slovakia, pp. 159-167.
- [3] Ceniga, P. And Sukalova, V. (2015). The relations and the impact of globalization on logistics. *Globalization and its Socio-Economic Consequences 15th International Scientific Conference*, Rajecke Teplice, Slovak Republic, pp. 439-447.
- [4] Collins, D. A. (2015). Globalized Localism: *Canada's Government Procurement Commitments under CETA*.
- [5] D'Erman, V. J. (2016). Comparative intergovernmental politics: *CETA negotiations between Canada and the EU*. Politics and Governance, vol. 4, no. 3.
- [6] Drahosova, M. (2013). International trade - forms and barriers of entering international companies into foreign markets. *Current Trends and Problems in Management*. Bratislava, Slovak Republic, pp. 31-49.
- [7] European Commission. (April 2013). Contribution from the Commission to the European Council. Debate on Trade, Growth and Jobs. Trade, Growth and Jobs. [Online]. Available: <http://ec.europa.eu/trade/policy/eu-position-in-world-trade/>.
- [8] European Union, Trade. (March 2016). Trade. [Online]. Available: https://europa.eu/european-union/topics/trade_en.
- [9] Gregova, E. and Dengov, V. (2015). The practical economic policy in transition economies of V4 countries at the present stage of globalization. *Globalization and its Socio-Economic Consequences 15th International Scientific Conference*, Rajecke Teplice, Slovak Republic, pp. 439-447.
- [10] Government of Canada. (October 2016). CETA: A progressive trade agreement for a strong middle class -Key sectors. [Online]. Available: (http://www.international.gc.ca/gac-amc/campaign-campagne/ceta-aecg/key_sectors-secteurs_cles.aspx?lang=eng).
- [11] Independent. (March 2017). Ceta trade deal between EU and Canada will cost 300,000 jobs and cause greater inequality. [Online]. Available: <http://www.independent.co.uk/news/world/europe/ceta-trade-deal-eu-canada-report-job-losses-inequality-a7615891.html>.
- [12] Institute of Export and International Trade. (2017). CETA passes important vote in European Parliament: provisional application in April 2017. [Online]. Available: <https://www.export.org.uk/news/331104/ETA-passes-important-vote-in-European-Parliament-provisional-application-in-April-2017.htm>.

- [13] Kajanova, J. (2016). Globalization and its impacts on chemical enterprises performance in Slovakia. *Globalization and its Socio-Economic Consequences 16th, International Scientific Conference*, pp. 808-815.
- [14] Maskin, E. (Jun 2014). The World Bank, globalization is increasing inequality. [Online]. Available: <http://www.worldbank.org/en/news/feature/2014/06/23/theorist-eric-maskin-globalization-is-increasing-inequality>.
- [15] Mastalerz-Kodzis, A. and Pospiech, E. (2016). Socio-economic consequences of globalization – spatial analysis of economic characteristics in European union countries. *Globalization and its Socio-Economic Consequences 16th International Scientific Conference*, pp. 1313-1321.
- [16] Milosovicova, P. and Paskrtova, L. (2015). Development of slovak-german economic relations. *Globalization and its Socio-Economic Consequences 15th International Scientific Conference*, pp. 439-447.
- [17] Official Journal of the EU. C326. (2012) Consolidated versions of the Treaty on European Union and the Treaty on the Functioning of the European Union, 2012/C 326/01.
- [18] Official Journal of the EU. (2016). The Council of the European Union. Comprehensive Economic and Trade Agreement between Canada and the European Union and its Member States.
- [19] Sipikalova, S. (2016). Material deprivation and its reflection in Slovak society. In: *Globalization and its socio-economic consequences 16th International Scientific Conference*, pp. 2014-2021.
- [20] Trelova, S. (2016). The requirement of flexibility and labour mobility as a result of globalization. *Globalization and its socio-economic consequences 16th International Scientific Conference*, pp. 2228-2235.

GLOBAL SOCIETY OF THE XXI CENTURY: SELF-ORGANIZATION OR SELF- DESTRUCTION? THE PROBLEM OF COLLECTIVE INTELLIGENCE IN THE EVOLUTION OF HUMAN CULTURE AND CIVILIZATION

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Abstract. Modern society is firmly connected with the notion of globalization. Since the end of the last century, this phenomenon has been scrupulously studied, analyzed, and investigated. One of the basic features of today's culture is its contradictory nature. While society as a whole, from a planetary perspective, is constantly evolving, demonstrating progress in almost all areas with which it has to deal, individuals in this society are experiencing grave health, work, and elementary literacy problems. The whole world human history shows that any development and transition to a new stage has always been accompanied by a crisis situation. The article deals with the phenomenon of social stigmerging, as spontaneous, mediated interaction between individuals through the left in the environment marks, traces and signs that can stimulate the activity of other individuals. Modern scientists are convinced that we see stigmerging around ourselves every day. In human society, it manifests itself in a variety of ways at different levels. The author is convinced that stigmergia is phenomenon which gives an answer to the question of how develops human society in the global world.

Keywords: crisis, stigmergia, globalization, marginalization, inconsistency

JEL Classification: D83, F01, I18

1. Introduction

According to some thinkers of our time, humankind lives in conditions constantly compressed by temporal spirals. (Shtompel, 2014) According to this theory, the historical time of human civilization is steadily shrinking.

What does the term «compressed time» mean? It means that the processes in social development (change of outlook, an overall picture of the world, the achievements changing life of people, progress in discoveries and thinking) start to occur two, three, fifty times faster. (Shtompel & Konstantinova, 2010)

The human being has lived in invariable, cyclic conditions. His life experience has been reproduced again and again, scooping stability and comfort in invariable realities of the existence. (Zizek, 2013; Fedotova, 2011; Salecl, 2015)

We have no time to follow all technological novelties - when we buy one fashionable toy, through of some time we understand that it is already obsolete. We have no time to get timely education - knowledge which we receive in the educational institutions, become outdated by the moment when we graduate from them. Many concepts and categories gradually lose their substantial value. The mankind faces necessity of development of new norms again. (Snowdon, 2015; Shoemaker, 2016)

2. Methodology

Theoretical interpretation of the transformation of social self-organization in the context of globalization requires an integrated approach.

The inclusion of the phenomenon of a new type of social self-organization in the broad context of individual and collective worldview creativity, the assertion of the social nature of personal identity and the principles of the personalistic interpretation of this phenomenon, - this complex of mutually complementary fundamental ideas and positions will be the starting point for the development of the author's understanding of public self-organization. The method of temporal analysis and the method of personalistic and ideal-typical reconstruction, a tool that is adequate to the author's interpretation of social self-organization in the era of globalization as a process of constituting the temporal and ethical dominance of individuals and collectivities that formalize the integrity of the cultural epoch, will become the immediate, applied methodological basis.

3. Results

3.1 Ambivalence of modern society: personal and social aspects

The reason to write this paper is to contemplate a book by a famous Soviet and Russian composer Vladimir Dashkevich “Velikoe kulturnoe odichanie: art-analiz”.

In his book Dashkevich discusses the importance of music in the evolutionary development of mankind. By the way, many authors write about the social role of music today (Krims, 2003; Rondarev, 2016), many authors write about the role of the cognitive approach to the study of humanitarian culture in general (Sekatskaya, 2012), but only Dashkevich shows that music in its multidimensional retrospective can be considered a model of evolution. He is convinced that music was the primal verbal language of humanity, because it contains the most important intonational codes which our society has developed over its evolution. In Dashkevich's opinion, these intonational codes bear an essential meaning: creation of these informational structures was the reason of human survival.

The main idea of Dashkevich is as follows. According to his meticulous mathematical calculations, upon reaching a record number of eight and a half billion people humanity will cease growing, the spiral of evolution will come to a full stop and humans will lose all incentives to produce any new ideas.

Indeed, even a quick glance at several activity spheres of contemporary humanity (such as medicine, education, social security system) suggests an unpromising picture. The famous

russian philosopher, Dubrovsky in one of his article writes that *for a long time already almost at anybody from thinking people there are no doubts that our civilization is experiencing a steadily deepening global crisis, leading, in the final analysis, to its degradation and destruction.* (Dubrovsky, 2017)

These processes entail a number of changes in the way of life of Western and Russian society, its values and national identity. (Burgess, 2017; Fletcher, 2016)

And what is happening to the social security system? According to Director of the Institute of Sociology of the Russian Academy of Sciences, member of the Academy of Sciences, Mikhail Gorshkov, every fifth Russian can be characterized by all attributes of a person below the poverty line.

An easy analysis suggests that the general (global) development of humanity is not that bad. (Benatar, 2017)

Over the past fifteen years, about one hundred revolutionary discoveries have been made in all spheres of science.

Eventually medicine has managed to cure the major communicable diseases; surgery has reached great results in organ transplantation. Modern technologies enable laser-beam operations, computer-assisted wellness screening. New pharmaceutical drugs are being constantly developed. Modern technologies help create more natural medical drugs.

Educational programs are being improved; access to information has become hugely easier and faster than, say, a quarter of a century ago. In the comfort of your home today you can order food and clothes, hairdressing and housecleaning services, read about what's happening on the other side of the globe, watch an online broadcasting of the World Football Cup.

Consequently, there is an ambivalent, contradictory situation, which can be conveyed through the following question: if taken separately it is so bad, why is it so good as a whole?

3.2 The progress of society and the crisis of culture: history and modernity

All human history shows that any development and transition to a new level is always necessarily accompanied by a crisis situation. In other words, a crisis always walks alongside of human development, however, the fact that today the crisis is seen not as an infelt uncontrollable feeling or a subconscious perception of discomfort, but as a phenomenon demanding a separate (conscious) analysis and studying, shows changes of the collective public conscience. Since prehistoric times people have been looking for ways out of critical situations and, consequently, people have been developing.

In the 5th century BC Confucius tried to analyze the reasons of ongoing internal wars in China on a higher theoretical level - he discovered a correlation between people's behavior and social processes. His theory of the Rectification of Names ("zhèngmíng") was an attempt to overcome the crisis of the Chinese society by means of behavior and conscience regulation.

We would like to point out one interesting detail: Confucius was not content with connections and interrelations among people in the society he was part of. He believed that the society of his own time was in major crisis. However, it was the time when agricultural areas were expanding in China, irrigation systems were increasing, crafts were developing, military arts were experiencing great changes.

So, can this ambiguity be characteristic for human society in general? How can general constant development of society and particular decline of morals and culture be explained otherwise?

3.3 Stigmergy in nature and society: genesis, characteristics, types

The modern world lives in the conditions of globalization and this is an indisputable fact. Russian philosophers note that the *transition from an industrial society to a postindustrial one, the spread of new high technologies, new types and levels of inter-public communications, close economic interaction and cooperation from space projects to cultural exchanges and even a certain interdependence of states - all this in its time formed a context for posing the question not only about the need, but also about the possibility of a higher level of integration of the world that began on the basis of strengthening the interconnectedness and interdependence of its parts.* (Samohvalova, 2016)

In 1959 a French zoologist Pierre-Paul Grassé introduced the concept of stigmergy (from the Ancient Greek words “stigma” and “ergon” meaning “mark, sign” and “action, work” respectively) to describe behavior of termites. (Parunak, 2005) He was studying how the insects construct their nests, and came across a few interesting facts during his observations. It turned out that termites roll soil particles into balls and, while doing this, they mark these balls with their pheromones. Arrangement of balls is not systematic, but if they accidentally pile up at some place (like a hollow) the smell intensifies. This attracts other termites, and they start leaving their soil balls at that place. As a result, the pile of balls gets bigger and the nest grows tremendously. (Robert & Williams, 2014)

In other words, every separate termite knows nothing about the actions and intentions of his fellows, but nevertheless these insects know enough to construct termite castles.

In biologists' point of view, stigmergy enables even primitive species (termites, ants, bees) to organize productive and efficient cooperation, even though they possess neither human intelligence nor memory. As a result of this phenomenon, complex superstructures are created on different biological levels without planning and control. (Afanasyeva & Anisimov, 2015)

Otherwise speaking, stigmergy, in its essence, is a primitive indirect interaction among individuals through marks, traces and signs left in the environment, which can stimulate other individuals' (termites or people) activity.

Modern scientists argue that we can see stigmergy around us every day. Human society reflects it in many ways on different levels.

For example, researcher H. Van Dyke Parunak from Michigan University in his “Survey of Environments and Mechanisms for Human-Human Stigmergy” proves that it is hard to find a sphere of social life functioning without the stigmergy principle. (Parunak, 2005) For instance, if a broken window is not replaced with a new one quickly, all windows of the building will soon be broken. It becomes clear if you look at deserted houses and factories.

There's one interesting detail. Stigmergy can vary. For example, ants have a mechanism of taking their dead fellows to cemeteries - which is a matter of self-organization as well - but the key point is different. Thus, removing rubbish out of elevators, broken windows from buildings' facades and bad language out of speech all apply to the same type of spontaneous collaboration.

Science also knows positive stigmergy. The role of signs in the environment is taken by articles published in journals containing research results and new hypotheses. Some of these

works become the points where “termite nests” start growing. Few scientific articles encourage large scale studies of this or that phenomenon. The interaction of scientists and scientific groups happens in this context competitively, on a noncentralized basis and indirectly - through publications. (Davydov, 2016).

This spontaneous, nonconscious interaction, these invisible social marks make society evolve, move towards new discoveries, keep going.

And this also means that each of us is capable of changing the world we live in completely, with the help of stigmergy. Our modern world and contemporary society demand a proactive approach to life.

4. Discussion

The work adjoins the main thematic areas developed within the domestic and foreign schools dealing with the phenomenon of social self-organization in modern society and is the result of many years of the author's work on the problems of theory, practice and methodology of socio-philosophical problems of culture and society. The discussion nature of the work is related to the specifics of its object, object and purpose and is determined by the nature of its tasks. The work is aimed at systematization, deepening and refining of modern philosophical knowledge about the essence of social self-organization in modern Russia in the conditions of globalization.

5. Conclusion

The society is constantly self-improving. It happens so because there are some defects in the society that prevent people from living comfortably. The society, socialization are the most necessary things in life of any person. But development of a society occurs today without direct participation of people. Neither progress nor a developing society depend on a separate person. However, society progress is obvious - the state, ideologies, process of welfare.

Yes, our knowledge is imperfect also we can't embrace the unembraceable. But the person wouldn't be the person if he didn't aspire to the impossible. To learn and understand the unknown, to improve the knowledge are those purposes for the sake of which it is necessary to live and which presence distinguishes us from animals. (Moore, 2015; Robert at al, 2014)

Summarizing our contemplations, we can say that, in our point of view, stigmergy offers the answer to the question of how human society self-organizes and why our world keeps turning despite a huge amount of contradictions.

References

- [1] Afanasyeva, M., Anisimov, N. (2015). Post-Classical Ontology. *Voprosy filosofii*, vol. 8. pp. 28-42.
- [2] Benatar, D. (2017). *Better Never To Have Been*. USA. Oxford University Press, pp. 237.
- [3] Burgess, A. (2017). *The Things We Do with Identity*. Mind. USA. Oxford University Press, pp. 42.
- [4] Dashkevich, V. S. (2013). *Velikoe kulturnoe odichanie: art-analiz*. Russkij shahmatnyj dom, Moscow, Russia, pp. 720.

- [5] Davydov, I. P. (2016). Structural and functional analysis of archetypes of the collective unconscious. *Vestnik Moskovskogo universiteta. Seriya 7: Filosofiya*, vol.6, pp. 82-97.
- [6] Dubrovsky, D. I. (2017). The main issue of consciousness. *Russian Journal of Philosophical Sciences*, vol 1, pp. 57-71
- [7] Fedotova, V. G. (2011). Unity and the diversity of cultures in the context of globalization. *Voprosy filosofii*, vol. 9, pp. 45-54.
- [8] Fletcher, G. (2016). *The Philosophy of Well-Being: An Introduction*. USA. New York. Routledge, pp. 178.
- [9] Krims, A. (2003). *Marxist Music Analysis without Adorno: Popular Music and Urban Geography. Analyzing Popular Music*. A. Moore (ed.). United Kingdom. Cambridge, MA: Cambridge University Press, pp. 131.
- [10] Moore, C. (2015). *Socrates and Self-Knowledge*. United Kingdom. Cambridge, MA: Cambridge University Press, pp. 294.
- [11] Parunak, H. and Van Dyke. (2005). A survey of environments and mechanisms for human-human stigmergy. *Environments for Multi-Agent Systems II*, Berlin, vol. 3830, pp. 163-188.
- [12] Robert, J. and Williams, G. (2014). Nonclassical minds and indeterminate survival. *Philosophical Review*, vol. 123, no. 4, pp. 379-428.
- [13] Rondarev, A. (2016). A different philosophy of music. *Logos. Philosophical and Literary Journal*, vol. 4. pp. 1-6.
- [14] Samohvalova, V. I. (2016). The reality of the globalized world and the image of man. *Russian Journal of Philosophical Sciences*, vol 4. pp. 7-17.
- [15] Salecl, R. (2015). The future is not too rosy. *Logos. Philosophical and Literary Journal*, vol. 2, pp. 219-223.
- [16] Sekatskaya, M. A. (2012). What do we know about consciousness? Commentary on the controversy of D. Chalmers and D. Dennett. *Voprosy filosofii*, vol. 11, pp. 147-158.
- [17] Shoemaker, S. (2016). Self-Knowledge for humans. *Philosophical Review*, vol. 125, no. 4, pp. 589-592.
- [18] Shtompel, O. M. (2014). Sociokul'turnyj krizis i vozmozhnye puti vyhoda iz nego. *Nauchnaja mysl' Kavkaza*, vol. 3, no. 79, pp. 45-53.
- [19] Shtompel, L. A. and Konstantinova, T. V. (2010). Vremja kul'tury i temporal'nyj nigilizm. *Formy i smysly vremeni. Sbornik nauchnyh trudov*, Novocherkassk, NOK, pp. 399-408.
- [20] Snowdon, P. F. (2015). Personal Identity: Complex or Simple? *Philosophical Review*, vol. 124, no. 3, pp. 425-430.
- [21] Zizek, S. (2013). Collision of civilizations in one particular country («Listening»). *Logos. Philosophical and Literary Journal*, vol. 3. pp. 55-74.

SIMULATION OF DRYING PROCESS OF A MOIST POROUS SOIL

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Abstract. Global climate changes caused by global warming have critical consequences on the quality of arable land. A drying process of a moist porous sample of arable soil is studying in this contribution on the bases of the model of air and moisture transfer. The transfer considers from the porous sample to the external environment. In addition, the model also takes to the account the phase transition of water to saturated water vapor in the pores of the sample. Using the variables separation method, we determine an exact model solution that includes the concentration of dry air, the concentration of water, the concentration of water vapor and the evaporation rate function. The model consists of four equations. Three of them describe diffusion processes for air, water, and water vapor in the soil sample including phase transition. The fourth equation is algebraic one and describes three complementary parts of the soil pores volume space, the parts, where air, water, and water vapor are present. The dynamics of the solution changes in the sample is also determined. The dynamics give us a notion about the entire sample drying process. The presented methodology may be partially used to determine the quality of arable land in the global soil market.

Keywords: globalization, arable land, moisture, transfer model

JEL Classification: C63, Q15, Q54

1. Introduction

Soil revitalization (Huttmannova et al., 2015), (Jelusic et al., 2014), (Bleicher & Gross, 2010) is one way how to improve the quality of the land including arable one. However, the mass transfer soil properties are also important.

In the past, several authors have studied the problem of mass transfer in porous media which is tied mostly with moisture. Let us mention at least the following works (Lykov, 1980), (Philip & De Vries, 1957), (Glasser, 1958), (Reeves & Celia, 1996), (Reshetin & Orlov, 1998), (Prat, 2002), (Korjenic & Bednar, 2011). Some of these works view the moisture as a set of water molecules regardless of their phase state. One reason is that the experimental methods for moisture detection, like neutron radiography method (Pleinert et al., 1998) or magnetic resonance method (Valckenborg et al., 2001), cannot distinguish between different phases. In reality, however, different phases of water in the pores of a soil are present and should be considered. Moreover, the pores space involves other air molecules like oxygen, nitrogen, argon

etc. which form, so called, dry air (air). During moisture transfer modeling in the first place, the air is neglected. (Amirkhanov, 2009, 2015), (Litavcova, 2011)

The present work provides moisture transfer model, in which the moisture is subdivided into a liquid component (water) and a saturated water vapor (vapor). This subdivision has a practical significance in the fact that during the drying of a wet soil sample the evaporation occurs in the pores of the soil as well as the diffusion of vapor to the soil surface where the vapor releases into the external environment. In addition, we take to account the air transfer in the pores of the material which was neglected in the past. (Amirkhanov, 2009, 2015), (Litavcova, 2011)

In this work we formulate a problem of drying of a moist soil sample and looking for the exact solution using the method of separation of variables. The received formulas of exact solution are programmed and displayed in the corresponding figures.

2. Model

Let us consider a moist sample consisting of a solid phase while in the pores of the soil some air, water, and vapor are present. Let us introduce the function of concentration of air $w_a(x, t)$, the function of concentration of liquid water $w_l(x, t)$, the function of concentration of vapor $w_v(x, t)$, and the source function $S(x, t)$ characterizing the rate of a phase transition which takes positive values if water is evaporating to vapor and negative values, if vapor condenses into water while x is independent spatial variable and t is independent time variable. Let us denote by Π the porosity, ρ_i and D_i the density and the diffusion coefficient for air ($i = a$), for liquid water ($i = l$), and for vapor ($i = v$). We shall assume that all these parameters are positive constants and that $\rho_l > \rho_a > \rho_v$.

Then we can describe the model of drying of a moist soil sample by the following system of four equations (all used quantities are dimensionless)

$$\frac{\partial w_a}{\partial t} = \frac{\partial}{\partial x} \left(D_a \frac{\partial w_a}{\partial x} \right), \quad 0 < x < 1, \quad t > 0, \quad (1)$$

$$\frac{\partial w_l}{\partial t} = \frac{\partial}{\partial x} \left(D_l \frac{\partial w_l}{\partial x} \right) - S, \quad 0 < x < 1, \quad t > 0, \quad (2)$$

$$\frac{\partial w_v}{\partial t} = \frac{\partial}{\partial x} \left(D_v \frac{\partial w_v}{\partial x} \right) + S, \quad 0 < x < 1, \quad t > 0, \quad (3)$$

$$\Pi = \frac{w_a}{\rho_a} + \frac{w_l}{\rho_l} + \frac{w_v}{\rho_v}, \quad 0 \leq x \leq 1, \quad t \geq 0. \quad (4)$$

Equation Eq. 1 describes the air diffusion with the diffusion coefficient D_a . Equation Eq. 2 describes the water diffusion with the diffusion coefficient D_l , equation Eq. 3 describes the vapor diffusion with the diffusion coefficient D_v , and these two equations Eq. 2-Eq. 3 are tied with the function S , ($S > 0$ is a source of vapor, resp. $S < 0$ is a source of water). Equation Eq. 4 can be understood so that the pores volume consists of three complementary volumes, namely, the air volume, the water volume, and the vapor volume. The similar equation was used also by other authors, e.g. see (Reshetin & Orlov, 1998).

Finally, in order to ensure the uniqueness of the solution of Eq. 1-Eq. 4 and to simulate the conditions of experiment presented in the work (Pleinert et al., 1998), we formulate the initial conditions

$$w_a(x, 0) = 0, \quad w_l(x, 0) = \rho_l \Pi, \quad 0 \leq x \leq 1, \quad (5)$$

which express that at the process beginning the pores are completely filled with water and no vapor and no air are present, and the boundary conditions

$$\frac{\partial w_i}{\partial x}(0, t) = 0, \quad i = a, l, \quad t > 0, \quad (6)$$

$$w_a(1, t) = \Pi \rho_a (1 - e^{-\alpha_a t}), \quad w_l(1, t) = \Pi \rho_l e^{-\alpha_l t}, \quad (7)$$

for $t > 0$, where $\alpha_l \geq \alpha_a > 0$, $\alpha_l \gg 0$. Conditions Eq. 6 mean that the left end of the sample is isolated and conditions Eq. 7 mean that after a relative short time the volume of water in the right end of the sample is decreasing to the minimal zero value.

3. Solution

We shall solve the problem Eq. 1-Eq. 7 in the following steps.

1. We shall express unknown functions w_v , S by the functions w_a , w_l . From Eq. 4 it is clear that

$$w_v = \rho_v \left(\Pi - \frac{w_a}{\rho_a} - \frac{w_l}{\rho_l} \right), \quad 0 \leq x \leq 1, \quad t \geq 0. \quad (8)$$

When we multiply Eq. 1 by $1/\rho_a$, Eq. 2 by $1/\rho_l$, Eq. 3 by $1/\rho_v$ and we add together these multiplied equations after a short arrangement using equation Eq. 8 and the fact that Π is a constant we get

$$S = -\frac{\rho_l \rho_v}{\rho_l - \rho_v} \left[\frac{D_a - D_v}{\rho_a} \frac{\partial^2 w_a}{\partial x^2} + \frac{D_l - D_v}{\rho_l} \frac{\partial^2 w_l}{\partial x^2} \right], \quad 0 < x < 1, \quad t > 0. \quad (9)$$

Note, if w_a and w_l are known then unknowns w_v and S can be determined from Eq. 8 and Eq. 9 correspondingly.

2. Equation Eq. 1 with initial condition Eq. 5 and boundary conditions Eq. 6, Eq. 7 for unknown w_a can be easily solved by the separation method. One can receive

$$w_a = \Pi \rho_a \left[1 - e^{-\alpha_a t} + 2\alpha_a \sum_{k=1}^{\infty} \frac{(-1)^{k-1} (e^{-\alpha_a t} - e^{\lambda_k D_a t})}{\sqrt{|\lambda_k|} (\alpha_a + \lambda_k D_a)} X_k(x) \right] \quad (10)$$

$$\lambda_k = -\left[(2k-1) \frac{\pi}{2} \right]^2, \quad X_k(x) = \cos(\sqrt{|\lambda_k|} x), \quad 0 \leq x \leq 1, \quad t \geq 0.$$

3. Substituting Eq. 9 into Eq. 2 and Eq. 3 we get two equations which can be rewritten to one equivalent form

$$\frac{\partial w_l}{\partial t} = D_0 \frac{\partial^2 w_l}{\partial x^2} + D_1 \frac{\partial^2 w_a}{\partial x^2}, \quad 0 < x < 1, \quad t > 0, \quad (11)$$

where

$$D_0 = \frac{\rho_l D_l - \rho_v D_v}{\rho_l - \rho_v}, \quad D_1 = \frac{\rho_l \rho_v}{\rho_l - \rho_v} \frac{D_a - D_v}{\rho_a}. \quad (12)$$

4. Instead of unknown function w_l we will introduce a new one w by the following expression

$$w_l(x, t) = w(x, t) + \Pi \rho_l e^{-\alpha_l t}, \quad 0 \leq x \leq 1, \quad t \geq 0. \quad (13)$$

Then it is easy to convince that this new function satisfies the equation

$$\frac{\partial w}{\partial t} = D_0 \frac{\partial^2 w}{\partial x^2} + D_1 \frac{\partial^2 w_a}{\partial x^2} + \alpha_l \Pi \rho_l e^{-\alpha_l t}, \quad 0 < x < 1, \quad t > 0. \quad (14)$$

with the homogeneous initial and boundary conditions

$$w(x, 0) = 0, \quad 0 \leq x \leq 1, \quad (15)$$

$$\frac{\partial w}{\partial x}(0, t) = 0, \quad w(1, t) = 0, \quad t > 0. \quad (16)$$

5. The problem Eq. 14-Eq. 16 we will solve applying separation of variables method. If we analyze the space differential operator then we find that it has the same negative eigenvalues λ_k and the corresponding eigenfunctions X_k like in Eq. 10 forming the complete orthogonal system. So, we shall look for the solution of Eq. 14-Eq. 16 in the form

$$w(x, t) = \sum_{k=1}^{\infty} T_k(t) X_k(x), \quad 0 \leq x \leq 1, \quad t \geq 0. \quad (17)$$

We can easily verify that such function satisfies the boundary conditions Eq. 16. Writing number 1 in the form

$$1 = \sum_{k=1}^{\infty} \frac{2(-1)^{k-1}}{\sqrt{|\lambda_k|}} X_k(x), \quad 0 < x < 1 \quad (18)$$

and substituting Eq. 17 and Eq. 18 to Eq. 14 after little arrangement we obtain the equation

$$0 = \sum_{k=1}^{\infty} \left[T'_k(t) - D_0 \lambda_k T_k(t) - \varphi_k e^{-\alpha_l t} - \psi_k (e^{-\alpha_a t} - e^{\lambda_k D_a t}) \right] X_k(x), \quad (19)$$

where $0 < x < 1, t > 0$, and

$$\varphi_k = 2\Pi \alpha_l \rho_l (-1)^{k-1} / \sqrt{|\lambda_k|}, \quad \psi_k = 2\Pi \alpha_a \rho_a D_1 (-1)^{k-1} \sqrt{|\lambda_k|} / (\alpha_a + \lambda_k D_a).$$

The equation Eq. 19 and the initial condition Eq. 15 due to orthogonality of the eigenfunctions X_k lead to the system of linear equations

$$T'_k(t) - D_0 \lambda_k T_k(t) = \varphi_k e^{-\alpha_l t} + \psi_k (e^{-\alpha_a t} - e^{\lambda_k D_a t}), \quad T_k(0) = 0, \quad (20)$$

where $t > 0, k = 1, 2, 3, \dots$. Solving Eq. 20 using the classical methods we obtain for each k

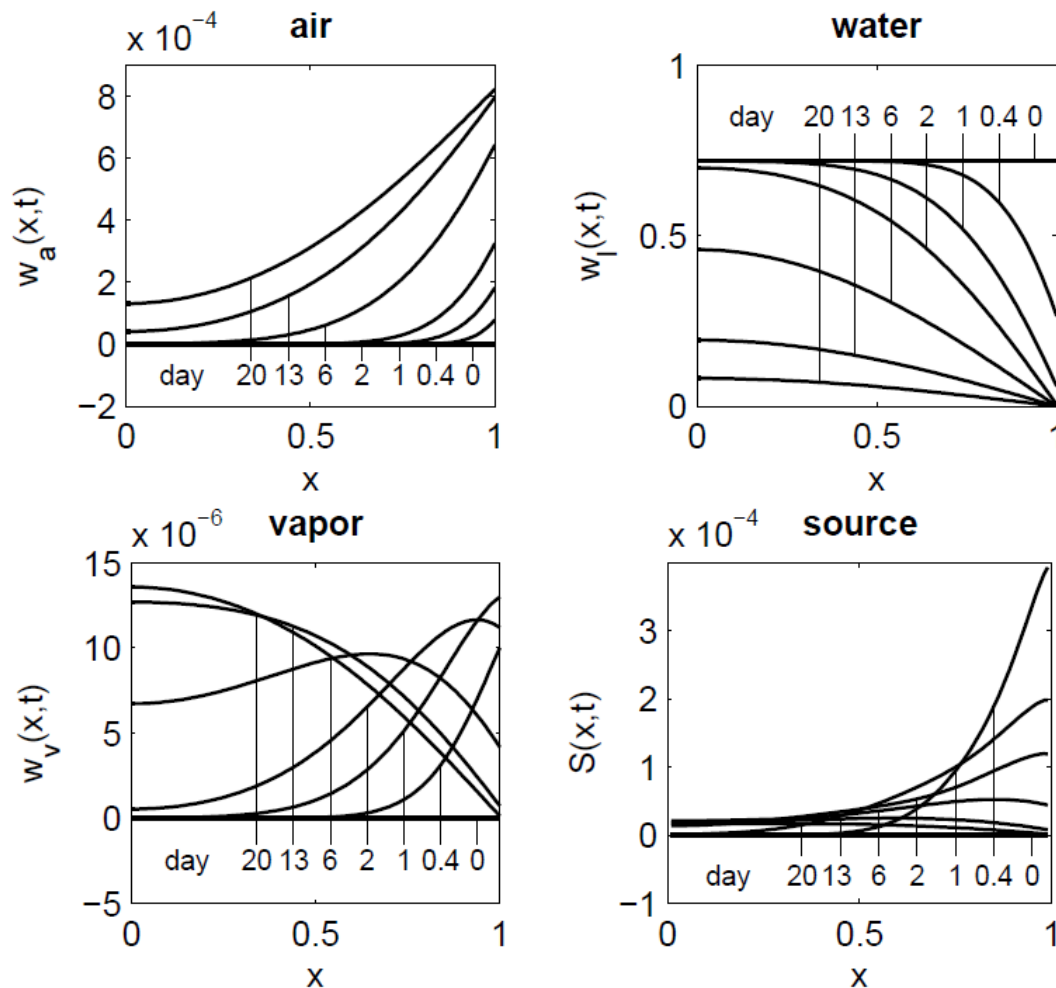
$$T_k(t) = \left[\frac{\varphi_k}{\alpha_l + \lambda_k D_0} - \psi_k \left(\frac{1}{\lambda_k (D_a - D_0)} + \frac{1}{\alpha_a + \lambda_k D_0} \right) \right] e^{\lambda_k D_0 t} - \quad (21)$$

$$-\frac{\varphi_k}{\alpha_l + \lambda_k D_0} e^{-\alpha_l t} + \psi_k \left(\frac{e^{\lambda_k D_a t}}{\lambda_k (D_a - D_0)} + \frac{e^{-\alpha_a t}}{\alpha_a + \lambda_k D_0} \right), \quad t \geq 0.$$

6. Finally, using equalities Eq. 13 and Eq. 17 we obtain

$$w_l = \Pi \rho_l e^{-\alpha_l t} + \sum_{k=1}^{\infty} T_k(t) X_k(x), \quad 0 \leq x \leq 1, \quad t \geq 0. \quad (22)$$

Figure 1: Solutions received for air, water, and vapor concentrations w_a , w_l , w_v , and for source function S .



Source: Authors' calculations

4. Conclusion

We have used relations Eq. 10, Eq. 22, Eq. 8, and Eq. 9 to calculate the curves of functions $w_a(x,t)$, $w_l(x,t)$, $w_v(x,t)$, and $S(x,t)$ at the time moments 0/20, 0.4/20, 1/20, 2/20, 6/20, 13/20, 20/20 corresponding to the state of the wet sample at the time 0, 0.4, 1, 2, 6, 13 and 20 days from the beginning of the drying process. We have made calculations for the following dimensionless parameter values $\Pi = 0.72$, $\rho_l = 1.39$, $\rho_v = 0.000036$, $\rho_a = 0.0016$, $D_l = 1$, $D_v = 0.5$, $D_a = 0.2$, $\alpha_l = 50$, $\alpha_a = 5$. In doing so, we approximately replaced ∞ in \sum with a sufficiently large N (we have used $N = 10000$).

The results of calculations are shown in Fig.1. We can see that the profiles of air concentration w_a are successively increasing while the profiles of water concentration w_l are successively decreasing. The profiles of vapor concentration w_v and source function S at the beginning of the process are rapidly increasing and after they are slowly decreasing. Very close results were obtained for the similar problem in works (Amirkhanov, 2009), (Rovnak, 2013) by means of another method, the finite difference method, or in work (Litavcova, 2014). Thus, we can conclude that the obtained exact solution Eq. 10, Eq. 22, Eq. 8, and Eq. 9 adequately reflects the main physical features of the drying process with phase transition.

The gained solution can be applied to mathematical description of drying processes including determination of the quality of arable land in the global soil market, mass transfer processes, civil engineering processes, environmental management, etc.

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References

- [1] Amirkhanov, I. V. et al. (2009). *Numerical modeling of heat-and-mass transfer process in a porous material*. Preprint of the Joint Institute for Nuclear Research, Dubna, pp. 11.
- [2] Amirkhanov, I. V, Pavlus M., Puzynina T.P. et al (2015). Scheme of slitting with respect to physical processes for a model of heat and moisture transfer. *Physics of Particles and Nuclei Letters*, vol. 12, no. 3, pp. 371-374.
- [3] Bleicher, A. and Gross, M. (2010). Sustainability assessment and the revitalization of contaminated sites: operationalizing sustainable development for local problems. *International Journal of Sustainable Development and World Ecology*, vol. 17, no. 1, pp. 57-66.
- [4] Glasser, H. (1958). Wärmeleitung und feuchtigkeitdurchgang durch khlraumisolierungen. *Kältetechnik*, vol.3, pp. 86.
- [5] Huttmanova, E., Adamisin, P., Hronec, O. et al (2015). Possibilities of soil revitalization in Slovakia towards sustainability. *European journal of sustainable development*, vol. 4, no. 2, pp. 121-128.
- [6] Jelusic, M., Vodnik, D. and Lestan, D. (2014). Revitalization of EDTA-remediated soil by fertilization and soil amendments. *Ecological Engineering*, vol. 73, pp. 429-438.
- [7] Korjenic, A. and Bednar, T. (2011). Developing a model for fibrous building material. *Energy and Buildings*.
- [8] Litavcova, E., Pavlus, M., Seman, J. and Sarhadov, I. (2011). Exact solution of a moisture drying system with phase transition. *Lecture Notes in Computer Science 7125*, Springer, pp. 168-173.
- [9] Litavcova, E., Pavlus, M., Seman, J., et al. (2014). Moisture presence in building materials: deterioration of building energy properties. *5th Central European Conference in Regional Science – CERS, 2014*. pp. 500-508, Kosice: University of Technology.

- [10] Lykov, A. V. (1980). *Heat and mass transfer*. Mir Publisher, Moscow, pp. 623.
- [11] Philip, J. R. and de Vries, D. A. (1957). Moisture movement in porous materials under temperature gradient. *Transactions. American Geophysical Union*, vol. 38, p. 222.
- [12] Pleinert, H., Sadouki, H. and Wittmann, F. H. (1998). Determination of moisture distribution in porous building materials by neutron transmission analysis. *Materials and Structures*, vol. 31, pp. 218.
- [13] Prat, M. (2002). Recent advances in pore-scale models for drying of porous media. *Chemical Engineering Journal*, vol. 86, pp. 153.
- [14] Reeves, P. C. and Celia, M. A. (1996). A functional relationship between capillary pressure, saturation, and interfacial area as revealed by a pore-scale network model. *Water Resources Research*, vol. 32, no. 8, pp. 2345.
- [15] Reshetin, O. L. and Orlov, S. Yu. (1998). Theory of heat and moisture transfer in a capillary porous body. *Technical Physics*, vol. 43, no. 2, pp. 263.
- [16] Rovnak, M., Pavlus, M. and Chovancova, J. (2013). Model of drying of a wet porous sample. *13th International Multidisciplinary Scientific Geoconference, SGEM 2013, Book Series: International Multidisciplinary Scientific GeoConference-SGEM*, vol. 1, pp. 701-708.
- [17] Valckenborg, R. M. E, Pel, L., Hazrati, K., Kopinga, K. and Marchand, J. (2001). Pore water distribution in mortar during drying as determined by NMR. *Materials and Structures*, vol. 34, pp. 599.

CAUSE AND EFFECT RELATIONS BETWEEN AN INTERNATIONAL MIGRATION AND LABOUR MARKET INDICATORS – AVERAGE INCOME, LABOUR PRODUCTIVITY, AND SOCIAL SECURITY

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Abstract. The immigration into the European Union is the main socio-cultural process of the last decade and factor influencing many important areas of EU life as security, labour market, political stability and a relationship among member countries, strategic priorities, quality of life and more. The immigration is generally classified as legal and illegal, war refuge, and economic. The most of immigrants are considered as economic applying for asylum in the most welfare western countries as Germany, Sweden, and the UK. The main question is, what the principal cause of accelerated immigration into specific countries of EU is. Presented paper concerns and discovers cause and effect relations between selected indicators of labour market and EU immigration as an important contemporary international phenomenon. The migration is described as asylum applicants in selected countries - annual aggregated data. The presumption of the research is that the major migration motivations are some from selected monitored indicators particularly average annual wage, labour productivity index and expenditure on social protection per inhabitant. The paper is focused on the evaluation of mentioned indicators in comparison to EU countries. The aim of the paper is to identify certain relations and their connections as reasons of motivation. Data obtained from Eurostat, CSO, and OECD are evaluated by descriptive statistics and statistical analysis as Spearman correlation indices using IBM SPSS statistical software. Results will be interpreted and discussed.

Keywords: international migration, labour market, labour productivity, average income, social security, correlation analysis

JEL Classification: C15, F22, J61, O52

1. Introduction

Contemporary trends

The economic and also general public community is strongly interested in the escalated migration phenomenon and its' development in the last few years especially because it is closely connected with the level of the real wages and life standards of the traditional population.

External or internal immigration aspects in EU can be characterized by recent high quality (WoS) publications: Focusing on the asylum system in Germany, Shittenhelm & Schneider (2017) seeks to understand asylum procedures with regard to officially claimed standards and

the still varying practices of decision-making. Poertner (2017) argue that, in order to understand the governing of asylum and its sometimes contradictory effects, it is necessary to be attentive to the material-discursive configurations of everyday legal and administrative practice. Hatton (2015) chart the progress of harmonization and burden-sharing in the development of the Common European Asylum System and explore its effects. He also studies the political feasibility of deeper policy integration by analysing public attitudes in the European Social Survey. He concludes that deeper integration is both desirable and politically possible.

Gorinas & Pytlikova (2015) investigate whether anti-immigrant attitudes affect migrant inflows in Organisation for Economic Co-operation and Development (OECD) countries. Using longitudinal exhaustive data, they find that natives' hostility, particularly natives' propensity to discriminate on the labor market, reduces immigration. Dustmann et al. (2017) study the labour market integration of past refugee migrants to EU countries and draw conclusions for the current situation. They turn to the economics of refugee migrations, contrasting economic and refugee migrants, discussing the trade-offs between long-term asylum and temporary protection and highlighting the benefits of well-coordinated national asylum policies. Dorrenbacher (2017) investigates what motivates the use of European Union (EU) law at the street level of migration law implementation. The main findings are that uses of EU law vary across contexts and individual implementers. Particularly when national regulatory frameworks are ambiguous, substantive moral norms and instrumental motivations trigger some implementers to rely on EU law. By examining the spaces created by the EU's ambiguous initiatives on social issues - in areas like child welfare, poverty or migration - it will be shown that social rescue' attempts might only serve to legitimate exclusion and to further the decline of social solidarity within European states - and ultimately the disintegration of the European Union itself (Lorenz, 2016).

Sorhun (2011) aims to develop a generally applicable model to examine the eventual motivations both for internal migration and external immigration. The purely economic factors are three times bigger in internal migration and about four times bigger in the external immigration. Income motivation is the principal motivation of Turkish im/migrants. And the second motivation is the economic size (Sorhun, 2011). Hussein et al. (2012) investigate reported individual motivations and the decision making process while accounting for macro factors, specifically ease of labour mobility within the EEA versus a more elaborate process when migrating to work in social care in the UK from outside the EEA. The current analysis shows that migrants take up jobs in social care for a number of reasons, including an attraction to the host country, a desire to take up opportunities for professional or career development, a need for income or a wish to learn or improve English in one dimension as well as ease of migrating for some and availability of jobs for others (Hussein et al., 2012). For most of participants, the decision to migrate was not professional but situation dependent. Austria was not their first choice as a destination country. Several study participants left their countries to improve their overall working situation. The main motivation for migrating to Austria was partnership with an Austrian citizen. Other immigrants were refugees. Most of the immigrants found the accreditation process to work as a health professional to be difficult and hindering. This resulted in some participants not being able to work in their profession, while others were successful in their profession or in related fields. There have been experiences of discrimination, but also positive support (Jirovsky et al., 2015).

With regard to former studies there is still a lack of papers concerning immigrants' exodus to EU motivation while some corporations invites and expect new promising work force.

Primary motivation of the paper is better answer the question: Do immigrants primarily want to work?

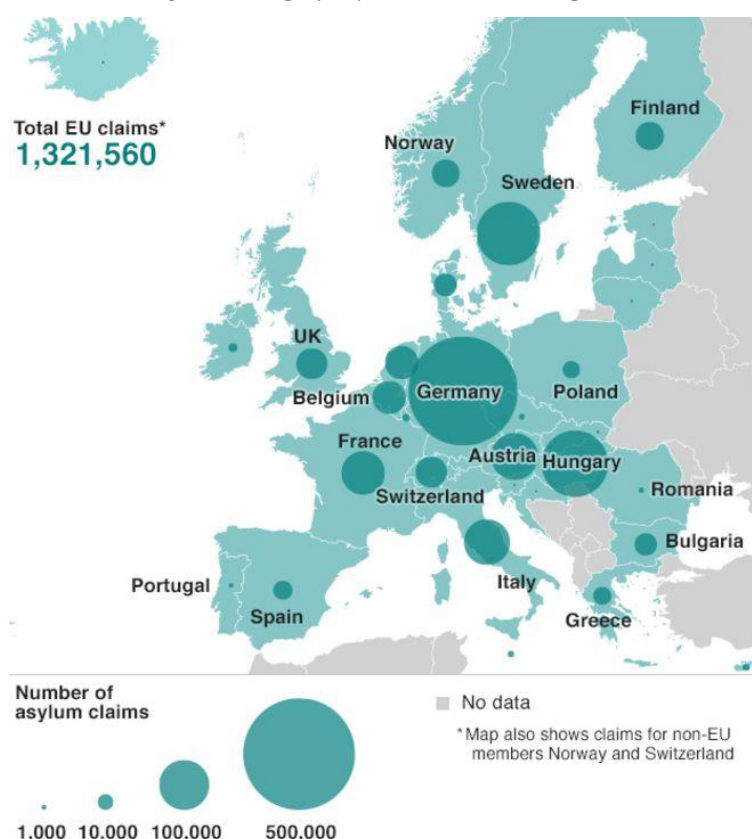
Researched parameters

The four indicators were used for the analysis: asylum applicants, labour cost, labour productivity, social protection.

Asylum applicant means, according to Eurostat (2017, A), a person having submitted an application for international protection or having been included in such application as a family member during the reference period. New asylum applicant means a person having submitted an application for international protection for the first time.

Figure 1 represents approximate numbers of migrants claiming for asylum in 2015.

Figure 1: Map of asylum claims in Europe, 2015



Source: Eurostat

The labour costs are defined as total labour costs divided by the corresponding number of hours worked by the yearly average number of employees, expressed in full-time units. Labour Costs (D) cover Wages and Salaries (D11) and non-wage costs (Employers' social contributions plus taxes less subsidies: D12+D4-D5).

Productivity measures the efficiency with which production inputs, such as labour and capital, is being used in an economy to produce a given level of output, and is considered a key source of economic growth and competitiveness. One of the most widely used measures of productivity is labour productivity. It reflects output per worker, here in terms of Gross Domestic Product (GDP) over persons employed. The labour productivity = GDP/ETO with GDP = Gross domestic product, chain-linked volumes reference year 2010 ETO = Total

employment, all industries, in persons. The GDP per person employed is intended to give an overall impression of the productivity of national economies expressed in relation to the European Union (EU28) average. If the index of a country is higher than 100, this country's level of GDP per person employed is higher than the EU average and vice versa. Basic figures are expressed in PPS, i.e. a common currency that eliminates the differences in price levels between countries allowing meaningful volume comparisons of GDP between countries. Please note that persons employed do not distinguish between full-time and part-time employment. The input data are obtained through official transmissions of national accounts' country data in the ESA 2010 transmission programme. Data are expressed as percentage change comparing year Y with year Y-1 and as Index 2010 (OECD, 2017).

The expenditure on social protection is the fourth indicator which we used. The expenditure on social protection contain: social benefits, which consist of transfers, in cash or in kind, to households and individuals to relieve them of the burden of a defined set of risks or needs; administration costs, which represent the costs charged to the scheme for its management and administration; other expenditure, which consist of miscellaneous expenditure by social protection schemes (payment of property income and other).

2. Objectives and methods

The aim of the paper is to identify certain relations and connections between the indicators of asylum applicants, labour costs, labour productivity and expenditure of social protection and compare the EU countries from the perspective of these indices.

As to the theory, the paper is based on the positivist economics and uses the general scientific methods of analysis, comparison, deduction, and synthesis. Statistical-mathematical methods of the regression and correlation analysis were used to find out the relationship between both monitored indicators and were crucial for the determination of the results. For the analysis, data from the Eurostat of the EU countries was used.

Research question

1. Is primary motivation of immigrants' host country social protection or labour costs?

Spearman's rho

Spearman's rank correlation coefficient (Spearman's rho – see Eq. 1) is a nonparametric measure of rank correlation. It assesses how well the relationship between two variables can be described using a monotonic function. The Spearman correlation between two variables is equal to the Pearson correlation between the rank values of those two variables; while Pearson's correlation assesses linear relationships, Spearman's correlation assesses monotonic relationships (whether linear or not). If there are no repeated data values, a perfect Spearman correlation of +1 or -1 occurs when each of the variables is a perfect monotone function of the other. Intuitively, the Spearman correlation between two variables will be high when observations have a similar (or identical for a correlation of 1) rank between the two variables, and low when observations have a dissimilar (or fully opposed for a correlation of -1) rank between the two variables (Dodge, 2010). For verbal interpretations of correlation coefficients see table1.

The following formula is used to calculate the Spearman rank correlation:

$$\rho = 1 - \frac{6 \sum d_i^2}{n(n^2 - 1)} \quad (1)$$

ρ ... Spearman rank correlation

d_i ... the difference between the ranks of corresponding values X_i and Y_i

n ... number of value in each data set

Table 1: Values of correlation coefficients and theirs interpretation

Value	Interpretation
-1.	A perfect downhill (negative) relationship
-0,70	A strong downhill (negative) relationship
-0,50	A moderate downhill (negative) relationship
-0,30	A weak downhill (negative) relationship
0	No relationship
0,30	A weak uphill (positive) relationship
0,50	A moderate uphill (positive) relationship
0,70	A strong uphill (positive) relationship
1	A perfect uphill (positive) relationship

Source: Rumsey, 2016

IBM SPSS 11.5 software was utilized to provide presented calculations. Significance of correlation calculated is on $\alpha = 0,05$ and $0,01$ levels.

3. Results and discussion

Following chapter presents researched data results and their interpretations respecting IMRaD structure. First most and less immigrants' popular EU countries are presented. Later descriptive statistics and correlation between four researched parameters V1 to V4 including comments can be found.

i. States with highest and lowest immigration

Table 2 presents 5 most immigrants' popular countries of destination and 5 less immigrants' popular countries of destination in years 2013 to 2016 including number of asylum applicants and EU28 sums and totals. We can clearly see, that Germany's „Wir schaffen das“ approach brought it almost 43 % percent if total EU immigrants' population in researched period. Compare to figure 1.

Table 2: Countries with the highest and lowest number of asylum applicants in years 2013 - 2016

GEO/TIME	2013	2014	2015	2016	Total
European Union (28)	431 090	626 960	1 322 825	1 259 955	3 640 830
Most immigrants' popular countries of destination					
Germany	126 705	202 645	476 510	745 155	1 551 015
Sweden	54 270	81 180	162 450	28 790	326 690
Italy	26 620	64 625	83 540	122 960	297 745

France	66 265	64 310	76 165	84 270	291 010
Hungary	18 895	42 775	177 135	29 430	268 235
	Less immigrants' popular countries of destination				
Lithuania	400	440	315	430	1 585
Latvia	195	375	330	350	1 250
Slovakia	440	330	330	145	1 245
Estonia	95	155	230	175	655
Liechtenstein	55	65	150	80	350

Source: Eurostat

ii. Correlations

Table 3 characterizes descriptive statistics of four researched variables' data sample. We can see arithmetical means, standard deviations and numbers of values in each data set. The difference of number of applicants in EU countries is high.

Definition of values and units:

V1.Number of asylum applicants (person).

V2.Labour costs (EUR/hourFTE).

V3.Labour productivity (EUR/person).

V4.Social protection (EUR/person).

Table 3: Descriptive statistics of data in the year 2014

Descriptive Statistics

	Mean	Std. Deviation	N
V1	40131,36	118232,169	33
V2	21,50	13,629	29
V3	1,193	1,7129	28
V4	24,094	5,7901	31

Source: Own processing – SPSS output table

Table 4 presents 2-tailed SPSS calculations of Spearman's correlations of above presented variables V1 to V4.

Strongest correlations

We can easily identify three correlations over 0,500 significant at 0,01 level. These are:

1. Labour costs to social protection ($\rho = 0,823$ – very strong positive correlation). We can see that labour costs are very closely correlated to social protection and vice versa.
2. Number of applicants to social protection ($\rho = 0,661$ – moderate to strong positive correlation). We can see that social protection is primary immigrants' motivation in year 2014 regarding selected researched factors.

3. Number of applicants to labour costs ($\rho = 0,509$ – moderate positive correlation). We can see that labour costs is secondary immigrants' motivation in year 2014 regarding selected researched factors.

Table 4: Spearman's correlations in the year 2014

Correlations			V1	V2	V3	V4
Spearman's rho	V1	Correlation	1,000	,509(**)	-,393(*)	,661(**)
		Coefficient				
		Sig. (2-tailed)	.	,005	,039	,000
	V2	N	33	29	28	31
		Correlation	,509(**)	1,000	-,103	,823(**)
		Coefficient				
		Sig. (2-tailed)	,005	.	,600	,000
	V3	N	29	29	28	29
		Correlation	-,393(*)	-,103	1,000	-,488(**)
		Coefficient				
		Sig. (2-tailed)	,039	,600	.	,008
	V4	N	28	28	28	28
		Correlation	,661(**)	,823(**)	-,488(**)	1,000
		Coefficient				
		Sig. (2-tailed)	,000	,000	,008	.
		N	31	29	28	31

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Source: Own processing – SPSS output table

Correlations in the years 2015 and 2016

We performed the same correlation calculations also in the years 2015 and 2016. We can confirm only one correlation bond significant at 0,01 level and it is number of applicants to labour costs. The coefficients are $\rho = 0,557$ – moderate positive correlation in year 2015 and $\rho = 0,427$ – weak to moderate positive correlation in year 2016.

4. Conclusion

Presented paper brought the answer to research question if primary motivation of immigrants' host country selection is social protection or labour costs on the base of correlation of Eurostat statistical data through years 2014-2016. In 2014 is statistically closer to number of applicants social protection but later in 2015, 2016 is more statistically closer labour costs. However labour costs very strongly positively correlate to social protection.

We can state that goals of the paper were fulfilled. Contribution of the paper lies in better understanding of immigrants primarily motivations of selecting the host country. With the fact that other important factors had to be neglected we can say that social protection is important motivation factor approximately on the same level as labour costs (incl. salaries). From that point of view immigrants generally probably want to work in their host countries.

Further research could cover correlation analyses of more parameters and evaluation of most recent data as well as applications of further sophisticated analytic techniques.

References

- [1] BBC NEWS. (2016). Migrant crisis: Migration to Europe explained in seven charts. [cited 08-09-2017] Available: <http://www.bbc.com/news/world-europe-34131911>.
- [2] Dodge, Y. (2010). *The concise encyclopedia of statistics*. New York: Springer.
- [3] Dorrenbacher, N. (2017). Europe at the frontline: analysing street-level motivations for the use of European Union migration law. *Journal of European Public Policy*, vol. 24, no. 9, pp. 1328-1347.
- [4] Dustmann, C., Fasani, F., Frattini, T., Minale, L., and Schnenberg, U. (2016). On the economics and politics of refugee migration. *SSRN Electronic Journal*.
- [5] EUROSTAT. (2017). Asylum and first time asylum applicants - annual aggregated data. [Online]. [cited 06-09-2017] Available: <http://ec.europa.eu/eurostat/tgm/table.do?tab=table&init=1&language=en&pcode=tps00191&plugin=1>.
- [6] Gorinas, C. and Pytlikova, M. (2015). The influence of attitudes toward immigrants on international migration. *International Migration Review*, vol. 51, no. 2, pp. 416-451.
- [7] Hatton, T. J. (2015). Asylum policy in the EU: The case for deeper integration. *CESifo Economic Studies*, vol. 61, no. 3-4, pp. 605-637.
- [8] Hussein, S., Stevens, M. and Manthorpe, J. (2012). Migrants' motivations to work in the care sector: experiences from England within the context of EU enlargement. *European Journal of Ageing*, vol. 10, no. 2, pp. 101-109.
- [9] Jirovsky, E., Hoffmann, K., Maier, M. and Kutalek, R. (2015). "Why should I have come here?"—A qualitative investigation of migration reasons and experiences of health workers from sub-Saharan Africa in Austria. *BMC Health Services Research*, vol. 15, no. 1.
- [10] Lorenz, W. (2016). European policy developments and their impact on social work. *European Journal of Social Work*, vol. 20, no. 1, pp. 17-28.
- [11] OECD. (2017). Trend labour productivity. [Online]. [cited 06-09-2017] Available: <http://www.oecd.org/global-forum-productivity/data/>.
- [12] Poertner, E. (2017). Governing asylum through configurations of productivity and deterrence: Effects on the spatiotemporal trajectories of cases in Switzerland. *Geoforum*, vol. 78, pp. 12-21.
- [13] Rumsey, D. J. (2016). *Statistics for dummies*. Hoboken, NJ: John Wiley & Sons.
- [14] Schittenhelm, K. and Schneider, S. (2017). Official standards and local knowledge in asylum procedures: decision-making in Germany's asylum system. *Journal of Ethnic and Migration Studies*, vol. 43, no. 10, pp. 1696-1713.
- [15] Sorhun, E. (2011). Economic and social motivation-based im/migration modeling: The case of Turkey. *Review of Development Economics*, vol. 15, no. 2, pp. 356-369.

THE GLOBALIZATION IMPACT ON THE TOURISM MARKET IN THE CZECH REPUBLIC

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Abstract. The article tackles the causes of globalization and describes its consequences on the tourism. Globalization is understood as an irreversible process that affects all spheres of the society life and influences various areas of tourism such as economic, technological or ecological. Particularly the current global threat, such as the migration crisis, terrorism, attacks, related increasing crime together with media and the internet influence the tourism market. Therefore, globalization has an impact on the tourism industry, both on supply and demand sides. Due to globalization factors tourists change their destination requirements with the feeling of safety being one of the deciding factors. This is the reason for businesses offering tourism services' respond to the changing demand. Firstly, the article focuses on the analysis of the impacts of globalization on the development of secondary supply in the Czech Republic. This means attendance of tourist facilities and a range of services that have allowed visitors to stay at the destination for the last 10 years. The dynamics of globalization have an impact on the tourism customers by offering them the possibility to choose the country and the manner of spending their holiday. The following is an analysis of the impact of globalization on the development of tourism demand in the Czech Republic over the monitored period. The outcome of this analysis is a change in customer behaviour about the ratio of domestic and outbound tourism. The anticipated development of supply and demand in tourism in the Czech economy is captured by their prediction.

Keywords: globalization, tourism market, supply in tourism, demand in tourism

JEL Classification: R11, Z39, Z30

1. Introduction

Pojem „globalizace“ poprvé použil americký ekonom Theodore Levitt v roce 1985 k popisu vývoje světového hospodářství v období sedmdesátých let 20. století. Podle OECD je globalizace procesem zvyšujícím závislost trhů a národních ekonomik, vyvolaným vysokou dynamikou obchodu se zbožím, kapitálem, službami a transferem technologií a know-how. Za skutečnou „zlatou dobu globalizace“ považují někteří autoři druhou polovinu 19. století. Soudobou globalizaci můžeme dle Mikolas et al. (2016) vymezit jako celosvětový jev, dlouhodobý ekonomický, kulturní a politický proces, který rozšiřuje, prohlubuje a urychluje pohyb zboží, lidí, myšlenek přes hranice států a kontinentů. Typickými soudobými důsledky a projevy odlišných projevů globalizace jsou například difúze, globalizace, selekce, deglobalizace, atd. Mezi hlavní aspekty globalizace patří mezinárodní obchod, pohyb investic a kapitálu, migraci osob a šíření znalostí. Globalizace je proces vytvářející prostředí, kde dochází k odstraňování bariér obchodu, liberalizaci, vzájemné závislosti jednotlivých národních ekonomik, což má vliv na lokální trhy i produkty cestovního ruchu (CR). Cílem článku je

analyzovat vývoj sekundární nabídky a poptávky v CR v České republice (ČR) od roku 2003, identifikovat změny v chování zákazníka a predikovat vývoj nabídky a poptávky.

2. Globalizace a cestovní ruch

V souvislosti s cestovním ruchem jsou uváděny dva základní prvky globalizace (Palatkova & Zichova, 2014). Prvním je teritoriální expanze turismu v globálním měřítku, která souvisí s rozvojem technologií, které urychlily spolu s liberalizačními procesy a s nárůstem konkurenčních tlaků jevy nazývané globalizace. Druhým prvkem je vzrůstající standardizace a homogenizace trhu jako důsledek celosvětového sjednocování vkusu, životních stylů a oblíbených produktů. Na jedné straně dochází k projevům globalizace, jako je akulturace či kulturní difúze (výhody globalizace – nízké náklady, vysoká kvalita standardizovaný produkt), na druhé straně dochází k diferencovaným požadavkům plynoucím z individualizace, osobnosti každého jednotlivce. Podle Chalupy (2015) je CR významným nositelem globalizačních procesů. Je to proto, že úroveň jeho internacionalizace narůstá nejen na straně nabídky ve formě nových destinací, ale i na straně poptávky.

Globalizace probíhá spíše ve dvou až ve třech rovinách¹ (Kapuscinsky, 2001): globalizace oficiální, globalizace negativní a globalizace zahrnující nevládní organizace, hnutí. Problematikou globalizace a CR se věnuje například Gucik & Vetrakova (2013), Kostkova et al., (2015), Jakubikova et al., (2016), Szajt (2016), Marakova et al., (2016). Tlak na racionalizaci a standardizaci v CR způsobuje, že některé destinace se svou infrastrukturou začínají podobat, mají stejné budovy hotelů, restaurací, obchodu apod. Ministerstvo pro místní rozvoj v Konceptu státní politiky cestovního ruchu v České republice na období 2014 – 2020 uvádí, že CR je v první řadě nositelem globalizačních procesů. Míra jeho internacionalizace se zvyšuje, a to nejen na straně nabídky (nové destinace), ale také na straně poptávky (do CR se zapojuje stále více obyvatel naší planety). Objevují se nové, rychle rostoucí trhy, které mění představy o charakteru poptávky, její struktuře a kvalitě. CR není pouze příčinou těchto procesů, ale je jimi i ovlivňován. Působí na něj vlivy exogenního i endogenního charakteru.

Globalizace má pozitivní a negativní dopady na odvětví CR, a to jak na nabídku, tak i na poptávku. Projevuje se v různých oblastech, např. v ekonomické, technologické, ekologické, působí na management CR, globalizace médií ovlivňuje chování zákazníků, apod. Mezi pozitivní stránky globalizace zařazujeme: zvyšování objemu a kvality produktu, redukce nákladů, vývoj technologií, vznik nových pracovních příležitostí, zvyšující se životní úroveň, svobodnější přístup k informacím, rozšiřující se možnosti komunikace, příležitost firem expandovat na nové trhy, apod. Negativa procesu globalizace zahrnují: větší náchylnost světové ekonomiky ke kolapsům, prohlubují se rozdíly mezi bohatým Severem a chudým Jihem, roste ekonomická, ekologická a politická migrace, roste ekonomický a politický vliv nadnárodních společností zejména na pokles mezd, pokles daňových výnosů, zhoršuje se životní prostředí, uniformní marketing může redukovat adaptaci na chování zákazníka; ohrožení kulturní identity a hodnot, degenerace národních kultur, vysoké pracovní nasazení vede ke vzniku stresu a ke

¹Globalizace oficiální – volný pohyb kapitálu, volný přístup k trhům, komunikace nadnárodní korporace, masová kultura, masová produkce, masová spotřeba.

2. Globalizace negativní, rozkladná, ale silná, těžce kontrolovatelná – globalizace podsvětí, mafie, drog, obchodu se zbraněmi, s ženami, praní špinavých peněz, daňových úniků a finančních podvodů.

3. Globalizace zahrnující nevládní organizace, hnutí, sekty – lidé hledají nové zdroje uspokojení potřeb, které jim již neuspokojí stát, národ, církev. Dochází k oslabení státu a rozvoji různých typů nestátních a nevládních forem. Tato společenství nelze kontrolovat.

zkracování volného času, což má dopady na strukturu poptávky v oblasti CR, rychloobslužné restaurace vytlačují tradiční pokrmy regionu a mění gastronomické zvyklosti.

Jaké je řešení negativních důsledků? Jedná se především o regulaci některých aktivit nadnárodních společností, zdanění kapitálových převodů a užití jejich zdrojů pro ekonomické a sociální účely v chudých zemích, zpřísnění pravidel pro ochranu životního prostředí a sladění ekonomického růstu s principy trvalé udržitelnosti, aj.

3. Analýza sekundární nabídky² a poptávky v cestovním ruchu v ČR

Turistické destinace se mění vlivem globalizačních procesů, mění se nabídka produktů, životní styl i kultura obyvatel regionu. Na destinaci působí řada vlivů včetně prolínání místních a nadnárodních. Poptávka i nabídka v oblasti CR spějí v současné době k racionalizaci. Díky globalizaci se vytvářejí například národní a mezinárodní hotelové řetězce, které hotely provozují formou franchisingu, prostřednictvím smlouvy o řízení, nebo vznikají skupiny vytvořené na základě dobrovolné spolupráce členských hotelů. Globalizace působí na straně nabídky rovněž z pohledu značky v CR. Například hotel jako součást hotelového řetězce, pokud nemůže uspořádat plánovanou akci, osloví hotel, který patří do řetězce – tedy hájí zájmy značky, neosloví konkurenční hotel.

V rámci analýzy sekundární **nabídky** je zkoumána kvantita a struktura hromadných ubytovacích zařízení (HUZ) v České republice (ČR). Významem ubytovacích zařízení v ČR se zabývali Svec & Solarova (2016). Z HUZ lze zjistit úroveň nabídky, tj. počet lůžek (cca 533 tisíc) a jejich skladbu, lůžkovou kapacitu připadající jednotlivým kategoriím ubytovacích zařízení. Na základě projektu Ministerstva pro místní rozvoj Zkvalitnění informací o vybraných sektorech CR byl aktualizován Registr HUZ ČSÚ, došlo k revizi dat kapacit i návštěvnosti za roky 2012, 2013. Proto nejsou údaje před rokem 2012 srovnatelné, viz následující tabulka. Struktura HUZ se mění, zlepšuje se kvalita nabídky, roste počet lůžek a pokojů v hotelích a podobných zařízeních, klesá počet lůžek v kategorii ostatní ubytovací zařízení. Dochází ke stabilizaci nabídky ubytování a přizpůsobování její struktury poptávce. Mění se kvalita nabídky ubytování nejen vlivem globalizačních faktorů, ale i konkurenceschopnosti podniků. Nabídce v CR se věnují například Jena & Jog (2017), Zamparini et al., (2017), Margaryan & Fredman (2017).

Poptávka se přesouvá k ubytovacím zařízením s vyšším standardem služeb. Hrozbou pro domácí podniky je globální produkt s vysokou kvalitou, vyhovující mnoha cílovým skupinám, a to umožňuje budování globální značky. Proto jsou podniky nuceny využívat moderní informační a komunikační technologie, aby byli konkurenceschopní budování globální značce.

Table 1: Struktura hromadných ubytovacích kapacit podle kategorie ubytovacího zařízení

	2003	2004	2005	2006	2007	2008	2009
Ubytovací zařízení	7 926	7 640	7 605	7 616	7 845	7 705	7 557
v tom podle kategorie:							
hotely a podobná ubyt. zařízení	4 377	4 311	4 278	4 314	4 559	4 482	4 469
v tom:							
hotely *****	21	28	34	35	39	41	46
hotely ****	219	241	252	274	321	360	425

²Sekundární nabídka je soubor zařízení a jejich služeb umožňující návštěvníkům se v cílovém místě ubytovat, stravovat a rekreační a kulturní aktivity. Tvoří ji turistická infrastruktura a suprastruktura, všeobecná infrastruktura. Zahrnuje dopravní, ubytovací, stravovací, sportovně rekreační a další služby.

ostatní hotely	1 639	1 601	1 596	1 631	1 659	1 622	1 627
penziony	2 498	2 441	2 396	2 374	2 540	2 459	2 371
kempy	475	476	499	512	516	509	485
chatové osady a turis.ubytovny	1 069	984	968	946	959	941	892
ostatní jinde neuvedená	2 005	1 869	1 860	1 844	1 811	1 773	1 711
Pokoje	170 717	164 675	164 516	167 582	172 560	180 162	181 026
Lůžka	446 096	433 214	433 211	441 968	451 707	466 832	463 087
	2010	2011	2012	2013	2014	2015*	2016*
Ubytovací zařízení	7 235	7 657	10 057	9 970	9 013	9 163	9 168
v tom podle kategorie:							
hotely a podobná ubyt. zařízení	4 300	4 612	6 350	6 301	5 833	5 992	6 022
v tom:							
hotely *****	47	50	56	56	57	58	60
hotely ****	442	467	539	553	557	601	621
ostatní hotely	1 579	1 618	1 987	1 977	1 868	1 927	1 891
penziony	2 232	2 477	3 768	3 715	3 351	3 406	3 450
kempy	480	487	514	506	513	516	510
chatové osady a turis. ubytovny	843	918	1 117	1 113	993	995	1 013
ostatní jinde neuvedená	1 612	1 640	2 076	2 050	1 674	1 660	1 623
Pokoje	176 403	180 838	217 188	215 048	202 482	206 258	207 309
Lůžka	449 068	461 434	560 401	554 523	519 909	529 250	533 507

Note: Od roku 2000 jsou zjišťovány údaje za HUZ s 10 a více lůžky nebo 5 a více pokoji. V letech 2003-2007 byla HUZ zjišťována k 31.12., od roku 2008 je uvedena maximální kapacita.

Source: vlastní zpracování dle údajů ČSÚ, https://www.czso.cz/csu/czso/cru10a_cr

Turista tvořící **poptávku** má možnost zvolit si zemi, kde stráví dovolenou, dopravní prostředek i úroveň služeb. Poptávku v ČR specifikuje Bisova (2015), Croes & Ridderstaat, (2017), Cro & Martins (2017), Malachovsky (2014) zmiňuje předpokládanou poptávku. Turisté využívají na cestách služby, které mohou být vybavením a sortimentem stejné v jakékoliv destinaci. Poptávka v ČR je v ČR dlouhodobě statisticky sledována v rámci Satelitního účtu cestovního ruchu. Vývoj poptávky ČR v ČR je uveden v tabulce 2, 3. Vnitřní spotřeba ČR je souhrnným ukazatelem poptávky všech návštěvníků, kteří tráví svou dovolenou v ČR (bez ohledu na to, zda se jedná o českého turistu nebo o návštěvníka ze zahraničí). Rozeznáváme proto domácí a zahraniční poptávku, které tvoří celkovou poptávku. V roce 2015 dosáhla spotřeba 250 miliard korun, což bylo meziročně o 5,3 % více. Objem *domácí poptávky* se v letech 2007- 2010 pohyboval kolem 100 mil. účastí ročně (viz tab. 2) s určitými výkyvy jako např. vlivy počasí, ekonomické stagnace, apod. V letech 2011 - 2014 se pohyboval na nižší úrovni a v roce 2015 dosáhl opět hodnoty přes 100 mil. účastí ročně. Vlivem projevů globalizace mění poptávající své požadavky na destinaci, přičemž hlavní důraz je kladen na bezpečnost destinace. Proto roste počet domácích návštěvníků, trávících dovolenou v ČR způsobené zvláště vlivem bezpečnostní situace v některých destinacích. Změnu ve zvycích domácích turistů ukazuje zájem o dovolené v loňské sezoně. Kvůli obavám z teroristických útoků dle BusinessInfo.cz turisté výrazně omezili nákupy letních dovolených v zemích severní Afriky a v Turecku. Naopak skokově vzrostl zájem o tuzemské dovolené, ale i některé zahraniční destinace, které byly dlouhou dobu stranou hlavního zájmu turistů.

Table 2: Vývoj domácího cestovního ruchu - spotřeba domácího cestovního ruchu podle kategorie návštěvníků v tis.

	2003	2004	2005	2006	2007	2008	2009
Jednodenní návštěvníci	24 352	27 852	28 903	27 946	28 845	30 423	28 815
Turisté	54 748	57 053	58 428	59 887	63 232	66 276	64 439
Služební cesty	8 333	8 762	10 076	11 051	12 745	11 126	10 862

Návštěvníci celkem	87 433	93 667	97 406	98 884	104 821	107 825	104 116
	2010	2011	2012	2013	2014*	2015*	
Jednodenní návštěvníci	27 035	23 274	21 252	20 411	21 562	24 125	
Turisté	63 060	61 368	63 337	64 342	64 798	70 416	
Služební cesty	10 441	9 360	7 989	9 245	7 139	7 269	
Návštěvníci celkem	100 536	94 002	92 578	93 998	93 499	101 810	

Note: * Předběžná data. Source: ČSÚ Cestovní ruch, časové řady. https://www.czso.cz/csu/czso/cru_cr

Zahraniční poptávka (tab. 3) je větší, má větší ekonomický význam a potenciál růstu než domácí. V roce 2015 dosáhla hodnoty přes 140 mil. účastí ročně. Zahraniční návštěvníci utrací v ČR asi o 1/4 více prostředků než domácí, v roce 2015 utratili v průměru celkem 2796,- Kč na den. Ekvivalentem 1 zahraničního příjezdu jsou 4 domácí příjezdy. Jednodenní návštěvnost tvoří 1/74 výkonů příjezdového CR a cca 27 % výkonu domácího CR.

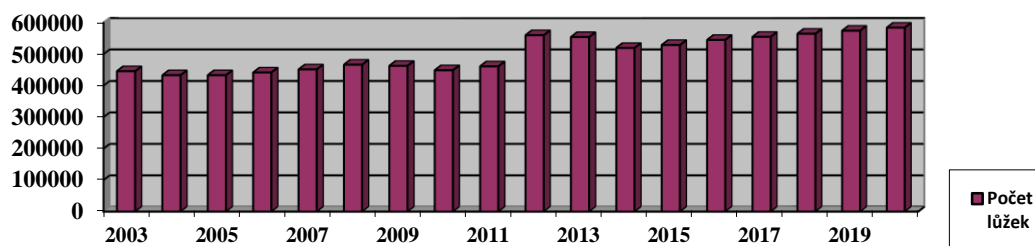
Table 3: Vývoj domácího cestovního ruchu - spotřeba příjezdového cestovního ruchu podle kategorie návštěvníků v ČR v tis.

	2003	2004	2005	2006	2007	2008	2009
Jednodenní návštěvníci	20 664	24 445	25 360	25 762	27 907	27 289	23 783
Turisté	81 063	94 177	97 146	99 196	100 662	90 783	83 789
Tranzitující	10 708	14 399	15 537	16 542	17 551	18 452	17 479
Zahraniční návštěvníci celkem	112 434	133 020	138 043	141 500	146 120	136 524	125 051
	2010	2011	2012	2013	2014*	2015*	
Jednodenní návštěvníci	16 280	17 505	20 711	21 393	21 223	22 191	
Turisté	81 094	80 614	89 034	102 865	106 554	108 999	
Tranzitující	16 106	16 563	15 982	15 983	16 257	17 033	
Zahraniční návštěvníci celkem	113 479	114 683	125 727	140 241	144 034	148 224	

Note: * Předběžná data. Source: ČSÚ Cestovní ruch, časové řady. https://www.czso.cz/csu/czso/cru_cr

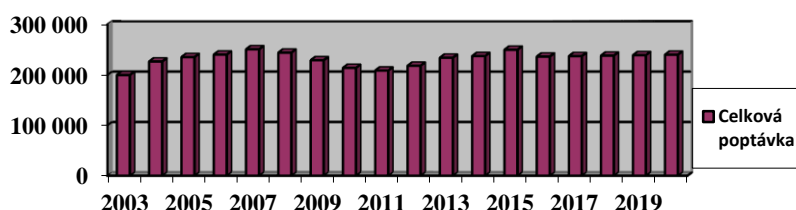
Příjezdový cestovní ruch odráží rostoucí oblíbenost destinace ČR a celkovou ekonomickou situaci v Evropě a ve světě. Příjezdovým CR do ČR se zabývali například Kostková (2016), aj. Počet příjezdů v letech 2000 - 2007 rostl mimo roku 2002 (povodně), ekonomická krize v letech 2008-2010 se promítla do poklesu ubytovaných hostů v každé destinaci (Palatkova, 2010). Rok 2012 se počty příjezdů vrátili na předkrizovou úroveň a dále rostou. Růst počtu zahraničních hostů není doprovázen adekvátním růstem přenocování. Jaký bude předpokládaný vývoj nabídky a poptávky v cestovním ruchu v české ekonomice zachycuje jejich predikce, viz následující obrázky. Trend byl vypočten pro léta 2016-2020 na základě statistické funkce LINTREND v programu MS Excel. Tato funkce vypočítá hodnoty v budoucnu na základě hodnot z minulých let dle údajů zpracovaných podle ČSÚ o sekundární nabídce (tab. 1), domácí a zahraniční poptávce (tab. 2 a 3). Výsledky prognózy jsou pouze matematickou předpovědí a nezohledňují faktory působícími jak na nabídku, tak na poptávku v cestovním ruchu. Oba trendy jsou rostoucí a predikce nabídky koresponduje s Makroekonomickou predikcí ČR z července 2017, která předpovídá pro letošní i příští rok mírné zrychlení globálního ekonomického růstu. Tomu by měl napomoci další rozvoj světového obchodu, větší intenzita investování a zlepšená situace u některých exportérů komodit. Globálně jsou cenové tlaky na trzích práce i produktů stále nízké.

Figure 1: Predikce nabídky v cestovním ruchu



Source: (vlastní zpracování a výpočty dle údajů ČSÚ)

Figure 2: Predikce celkové poptávky v cestovním ruchu



Source: (vlastní zpracování a výpočty dle údajů ČSÚ)

Koncepce státní politiky CR ČR období 2014–2020 popisuje globalizaci ekonomiky, internacionalizaci pracovního prostředí, větší míru pracovní migrace, rozvoj sociálních sítí jako faktory, které budou segmenty CR podporovat. Silné stránky vidí v tematicky bohaté nabídce CR, poměrně vysoké spokojenosti s trávením dovolené v ČR, postupném nárůstu aktivní turistiky, atraktivní nabídce památek UNESCO, vysokým kulturněhistorickým a přírodním potenciálem. Příležitostí je tvorba a nabídka inovativních produktů CR, aktuálních trendů v CR. Subjekty strany nabídky se snaží o tvorbu produktů s podmínkami šitými na míru jednotlivým spotřebitelům. V současné společnosti existuje obrovská variabilita životních hodnot a preferencí. Poptávka se tak čím dál více polarizuje a diferencuje. Subjekty strany nabídky pak soutěží v tom, kdo vyhoví nejlépe požadavkům příslušné skupiny spotřebitelů. Konkurenceschopnost podniků je určována řadou faktorů: kvalita nabídky, flexibilní a vzdělané lidské zdroje, kvalitní uspořádání a funkce institucí v CR a efektivní destinační řízení a marketing. Tento pohled není nový, ale stále platný, ověřený desetiletími rozvoje CR. Aby se nabídka dostala na trh k potenciálním spotřebitelům, je nezbytné neustále zkvalitňovat podnikatelské prostředí, které bude generovat konkurenceschopné produkty CR.

4. Conclusion

Pojem globalizace lze chápat jako deskripce změn ve společnosti a v celém světě, jako důsledek rozvoje a růstu mezinárodního obchodu a sbližování kultur. Vzdálenost přestává být důležitá, protože lidé se pohybují ve fyzickém, ale také ve virtuálním prostoru, stejně se mohou pohybovat některé zboží i služby. Během prvního pololetí 2017 tvořila zahraniční poptávka 4,6 mil. zahraničních turistů (meziroční růst o 12,8 %), tzn. počet turistů, kteří přijeli do HUZ v ČR. Vzrostl také počet přenocování o 13 %. Pro udržení a případně i navýšení stávající návštěvnosti ČR zahraničními turisty uspořádala agentura CzechTourism na konci června Czech Republic Travel Trade Day, kde propojila přes 70 zahraničních nákupčů z 27 zemí, kteří přijeli s cílem rozšířit svou nabídku služeb a zájezdů do ČR, s osmi desítkami českých podnikatelů a zástupců

regionů. Strategií agentury CzechTourism je rozšiřování portfolia, zaměření na nové, perspektivní trhy, které dlouhodobě vykazují stabilní růst.

Cestovní kanceláře uvádějí rostoucí zájem o domácí dovolené, naopak cesty do rizikových regionů se propadají. Tento trend změnila situace posledních let ovlivněná zejména teroristickými útoky na turistická letoviska v mnoha zemích. Čeští turisté se proto přestali orientovat jen podle atraktivity cílové destinace a cenové dostupnosti a primárním kritériem se stala bezpečnost. Nabídka podniků služeb CR je ovlivněna řadou faktorů, včetně globalizace, a proto se jí musí podniky přizpůsobovat a zohledňovat nejen tyto faktory, ale i poptávku (rovněž reagující na procesy globalizace spojené s CR). Podle koncepce státní politiky CR ČR je vhodné zkvalitňovat podnikatelské prostředí, aby nabídka byla schopna generovat konkurenceschopné produkty CR. Příští rok je predikováno mírné zrychlení globálního ekonomického růstu, což odpovídá trendům vypočteným pro nabídku i poptávku v CR.

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References

- [1] Bisova, S. B. (2015). Impact of German economic growth on Czech tourism demand. *Conference: 33rd International Conference on Mathematical Methods in Economics (MME)*. Cheb, Czech Republic, pp. 56-61.
- [2] Cro, S. and Martins, A. M. (2017). Structural breaks in international tourism demand: Are they caused by crises or disasters? *Tourism Management*, vol. 63, pp 3-9.
- [3] Croes, R. and Ridderstaat, J. (2017). The effects of business cycles on tourism demand flows in small island destinations. *Tourism Economics*, vol. 23, pp. 1451-1475.
- [4] ČSÚ, (2017). Cestovní ruch, časové řady. [Online]. Available: https://www.czso.cz/csu/czso/cru_cr.
- [5] Gucik, M. and Vetrakova, M., (2013). Vplyv globalizácie na spotrebné správanie návštevníkov v cestovnom ruchu. *13th International Scientific Conference Globalization and its socio-economic consequences*, Rajecké Teplice, Slovensko, pp. 167 – 177.
- [6] Jakubikova, D. et al. (2016). Komunikace historického města v moderní době v oblasti cestovního ruchu. *11. mezinárodní konference – Aktuální problémy cestovního ruchu. Communication of a historical town in modern times in tourism*, Jihlava, Czech Republic, pp. 147-157.
- [7] Jena, S. K. and Jog, D. (2017). Price competition in a tourism supply chain. *Tourism Economics*, vol. 23, pp. 1235-1254.
- [8] Kapuscinski, R. (2001). Co se stalo, není správně čteno. HN 2.11.2001, Víkend, pp. 4-10.
- [9] Kostkova, M. (2016). Změny turistické návštěvnosti destinace Česko, *17. medzinárodná vedecká konferencia Medzinárodné vzťahy 2016 - Aktuálne otázky svetovej ekonomiky a politiky*, Bratislava, Slovensko, pp. 661-672.

- [10] Kostkova, M., Pellesova, P., Botlikova, M. and Botlik, J. (2015). Changes in employment and business structures in tourism sector in the Czech Republic under the influence of globalization. *Globalization and its socio-economic consequences 15th International Scientific Conference*, Rajecké Teplice, Slovensko, pp. 325-333.
- [11] Malachovsky, A. (2014). Goals of tourism development in Slovakia in the context of regional development and selected tourism markets. *17th international colloquium on regional sciences*, Hustopece, Czech Republic, pp. 787-795.
- [12] Marakova, V., Kvasnova, D. and Wolak-Tuzimek, A. (2016). The impact of globalization on tourism destination marketing management in Slovakia. *Globalization and its socio-economic consequences 15th International Scientific Conference*, Rajecké Teplice, Slovensko, pp. 1296-1304.
- [13] Margaryan, L. and Fredman, P. (2017). Natural amenities and the regional distribution of nature-based tourism supply in Sweden. *Scandinavian Journal of Hospitality and Tourism*, vol. 17, pp. 145-159.
- [14] Ministerstvo financí, (2017). Makroekonomická predikce České republiky červenec 2017. [Online]. Dostupné na internetu: <http://www.mfcr.cz/cs/verejny-sektor/makroekonomika/makroekonomicka-predikce/2017/makroekonomicka-predikce-cervenec-2017-29299>.
- [15] Mikolas, Z. et al. (2016). Jak se dívám na svět: Soudobé projevy globalizace, TZ-one.
- [16] Palatkova, M. (2010). Passing financial crisis using a concept of destination marketing management (the case of Prague). *3rd International Scientific Conference on Management - Knowledge and Management in Times of Crisis and Ensuing Development*, Presov, Slovakia, pp. 606-628.
- [17] Palatkova, M. and Zichova, J. (2014). *Ekonomika turismu: Turismus České republiky – 2. Aktualizované a rozšířené vydání*. Grada Publishing, Praha.
- [18] Szajt, M. (2016). Illusion euro or the price-quality ratio - Changes in the market of tourist services in Slovakia. *Proceedings of the 3rd International Conference on European Integration 2016 ICEI 2016*, Ostrava, Czech Republic, pp. 935-942.
- [19] Svec, R. and Solarova, P. (2016). The Importance of Accommodation Establishments in Tourism and Their Localization: The Case of the Chosen Area in the Czech Republic. *27th International Business Information Management Association Conference*, Soliman KS, Milan, Italy, pp. 1454-1467.
- [20] Zamparini, L., Vergori, A. S. and Arima, S. (2017). Assessing the determinants of local tourism demand: A simultaneous equations model for the Italian provinces. *Tourism Economics*, vol. 23, pp. 981-992.

CHANGES IN FAMILY AND EDUCATION OF YOUNG PEOPLE IN GLOBAL SOCIETY

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Abstract. We are currently living in a situation of extreme economic complexity that is transforming family configurations and their duties in financially supporting their dependent members. Economic changes transform the *NEET* by expanding their education cycles. The education cycle has been extended and that has several consequences on the family and on training these individuals for work. It also involves the increasing incorporation of unconventional students, with very specific interests and preferences that educational systems must value. The current analysis firstly sets out the data for dependent young people in Europe. After a comparative analysis of the available data, alternatives are offered regarding the future of training. Statistical data on families and social welfare budgets are presented as well as the cost of training in different countries. It deals with a possible mismatch in terms of integrating models developed by the Higher Education system in Europe. The debate also arises on a financial level suggesting subsidy lines or strategies to support the role of families. Families have been transformed from production units to consumer units and are now moving closer to becoming maintenance units. This is an innovative function of families. It corresponds to a level of specialisation that is difficult to sustain. It also implies substituting services that welfare states could initially offer.

Keywords: Economic Changes by Globalisation- Transformation of Dependence- Youth and Training- Financing Studies- Globalization

JEL Classification: Z1

1. Introduction

The concept of family has undergone a major transformation in recent years and this has made other family structures possible. Alternative forms of understanding the concept of family are increasingly accepted and recognised even if some sectors of society continue to resist these new family models. We must not forget that family groups are diverse and constitute dynamic units that cannot be analysed using rigid conceptual tools (Chant, 1997).

As shown by Alemán Bracho (2005), the family changes in form and structure with new shapes and models of family emerging. The range of family models has expanded with economic changes, fostering and adoption as well as blended or single-parent families. These have been gaining social legitimacy slowly but surely and subsequently have gained legal legitimacy too.

The existence and increase in family types and forms that break away from the traditional model of family seem to be part of a much broader process of change, which includes but is not limited to the institution of the family. The risks of child poverty are substantially higher in countries with higher rates of working-age unemployment, (Chzhen, 2017) so the economic crisis has had a direct impact on family structure. These multiple transformations are already a reality and many innovations will take place both in the short and long term.

In all of this, we can see the effects of economic stability/instability and dual residence within the process of forming new ways of being family. The traditional model of a couple with children is losing its prominence and within apparently similar family types, new ways of living as family and new family relationships are emerging as shown by Esping-Andersen & Billari (2015) young couples are establishing as a common-law partner not only as initial trial periods, but also as alternative forms of family life. In addition to the uncertainty and flexibility of the relationships heralded by Bauman (2009) the increasing attention given to diverse conceptual frames of reference (Donati, 2007) is reflected in the intention to involve the family in social policies, but only with regards to the underlying issue of family transformation. Yet, the alleged disappearance of the family, regardless of ideological or moral perspectives, is very unlikely due both to its relevant significance and to its development in diverse forms and functions that are growing within the second modernity where intermittent and diverse structures are adopted.

In the midst of this panorama, young people can be found who are not synchronised with the various stages of life. According to Requena (2013) this emphasizes the conflict between aspirations and expectations among dependent youth. If we really thought in such a way that is consistent with the lives of young people and new times of modernity that are more flexible and adaptable to precariousness, economic fluctuations, social and work mobility, we would come up with the types of family that are developing in today's world. It includes protection, dependency, responds to job instability (not only among young people) and is opposed to scant or inefficient social policies. Family as a social group is interested in the needs and well-being of their offspring. This is experienced in diverse ways and in Spain it causes the longest period of dependency in Europe, which is even more apparent when compared with other cultural systems.

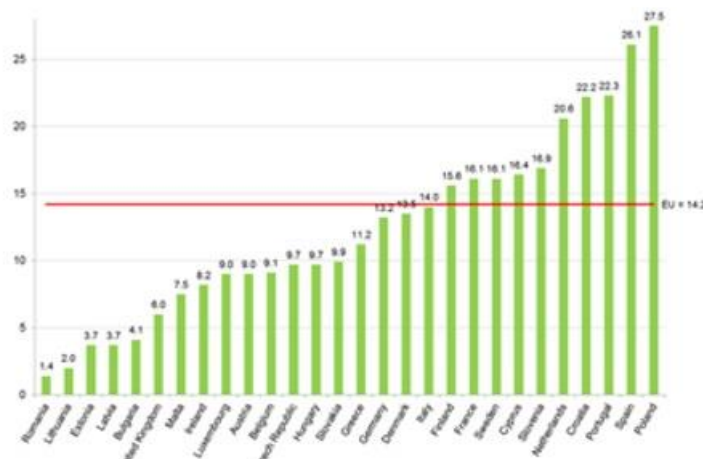
2. Data analysis and interpretation

Data presented by Eurostat (2017) shows that Spain is at the later end of the scale regarding when children from different countries leave their parents' home with the average age in Spain being 29.4. We can find a significant difference between men (30.4) and women (28.3).

The age at which children become independent affects their parents' evolution into the older adult stage of life as well as prolonging the adolescent stage for the children who remain under their influence. This prevents the development of individuality and creates new family structures and networks. Added to this is the problem of delayed parenthood. Samir & Lutz (2017), they consider the dimensions of gender, age and education influence the social vulnerability of people. According to the 2014 report on social exclusion and development in Spain, Spanish women have one of the lowest birth rates (1.27 children per woman in 2013), with women having their first child at the average age of 30.3 years old and men at 33.5. Similarly, the data shows that since the 80s when almost all children were born after marriage, today 39% of babies are born outside the legal framework of marriage, for example in domestic partnerships.

The age of university students has been broadened as more undertake postgraduate studies (this will be developed further below). This is another element that encourages extended periods at home, as well as economic instability and the proliferation of an employment system based on temporary work.

Figure 1: Share of temporary employees aged 15-64 in the EU Member States, 2016(%)



Source: Eurostat (2017)

The 2016 Eurostat report, points to Spain as one of the EU countries with the highest incidence of temporary employment. All of this leads to a new family and social structure that risks leading us into a process of naturalising poverty and establishing permanent mediocrity. In the *VIII Observatorio de Realidad Social* (Social Reality Observatory) report (2013:5) it is expressed in this way:

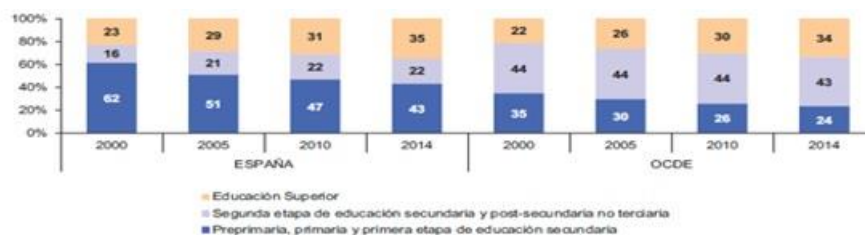
Growing social inequality and economic impoverishment are two processes that are affecting Spanish society, fracturing its structure and putting its cohesion at risk. (...) this trend highlights the construction of a new social model which moves the focus away from the social elements and towards commercial engagement, away from collective solidarity and towards meritocratic individualism, changing the welfare structure which was founded on rights".

The spread of poverty and the existence of extreme poverty in our country, along with the permanent situation of low resources, inevitably halts a social issue that should not escape the university sphere; either as a generator of social research or to respond to a reality that affects, makes difficult and influences both access to and continuity in university programs. On the other hand, obtaining good grades, not leaving school and not being excluded, is important for young people's future transition. (Sanders et al., 2017)

2.1 Changes in youth and student profile in higher education. Knowledge society and young people

Education has been made more democratic with a high percentage of young people accessing higher education (Elzo et al., 2008). Also could be possible educational transition rates by country (Lutz & Goujon, 2001). However, in the last ten years there has been a significant shift in the student profile. The consequences are very diverse, and the causes are not only due to the economic crisis with important events such as what happened with the Lehman Brothers. Instead, they feature a fusion of complex changes which have taken place simultaneously in various world regions.

Figure 2: Evolution in the level of training in the adult population between 25 and 64 years old in Spain in %



Source: Integrated Training System in Data and Figures from the Spanish Educational System from 2015-2016

Since the political uncertainty according to Baker et al. (2016) presage declines in investment, production and employment

Cultural work (economic activity and jobs related to the cultural sector), estimated in percentages for Spain in 2015, is characterised by higher rates of higher education nationally, reaching 67% according to the 2016 *Anuario de Estadísticas Culturales* (Annual Cultural Statistics for Spain) (MECD, 2015). Spending linked to press, magazines and books has risen in relation to the Consumer Price Index from 2011.

The number of students registered at Spanish universities according to the Data and Figures from the Spanish Educational System (2005-2006) is going down due not only to a visible population decrease in the birthrate since the 80s but also to the increasingly popular choice to attend private universities. This is one of the symptoms of the change in the university student body.

The change in the university student body is not so much related to the starting features or competences of students but more to a highly significant demographic change in university populations. According to data from the *Sistema de Formación Integrada* (Integrated Training System) (Data and Figures from the Spanish Educational System from 2015-16), the widest percentages of the adult population (in other words the biggest difference between the level attained by 25-34 year olds and that of those aged 55-64) are found in Spain, France and Ireland (this final example has the highest percentage within the EU and the OCDE). However, the narrowest percentages are those from Germany and Finland and when compared, for example, with the USA, this would be the non-European country with the highest percentage among the least broad.

Levels of adult education between 2004-2014 have been gradually transformed both in Spain and Europe.

The evolution of the student body in Spain between 1994 and 2005 according to the Data and Figures report from the Spanish Educational System 2005-2006 has varied among age groups, moving from 16.6% in the first period (1994-95) to 22% in 2004-05 for 25-30 year olds. The over 30s also saw a change in the first period from 8.9% to 13.5%. Therefore, if we consider the age group 25-30 year olds and over (16.6% +8.9%) it has gone from 25.5% to 35.5% (22% +13.5%) for this cohort. In ten years, the change has been surprising but this transformation has remained consistent.

The latest data published in the report on the Integrated Training System in Data and Figures from the Spanish Educational System (2015-16) states that during the year 2014-15, the number of students registered in Spain between the age of 22-30 years old was 519,529 whilst those between the ages of 18-21 years old, (the age when studies are usually finished), totalled 624,081. In this period, the percentage of women aged 22-25 years old was 53%. One of the

greatest consequences of this ageing student population is that the class group is less homogenous, both in terms of age and also in prior educational levels, training interests and especially with regards to skills such as self discipline and self motivation. In addition to all this, we must add the increase in the teacher/student ratio as a consequence of economic restrictions as public universities tend to have large class sizes which make teaching more difficult. This is an issue which is not only related to university financing and teaching quality but also with the internal management of the university itself.

From the analysis, it is also impossible to ignore the striking fact that in a period of serious financial crisis, which has been the case since around 2007, private universities have seen an unexpected increase according to the CRUE Report for 2014/15.

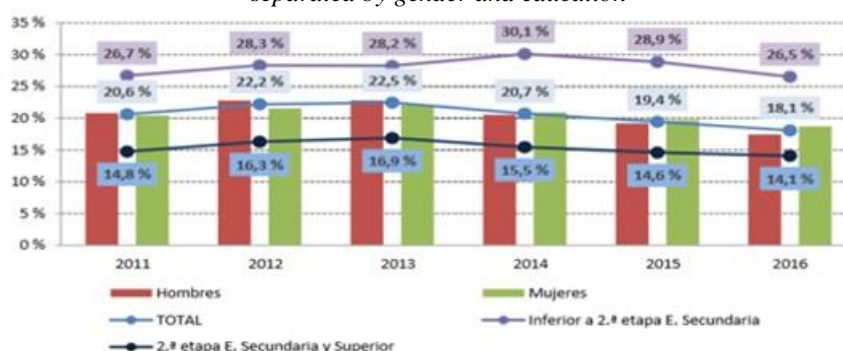
The data shows that on-site courses at public universities were down by 10.74% and all courses by 9.24%. However, private institutions have recorded an increase of up to 20.99% in distance courses and 14.27% in on-site ones. The data really leads to important questions as this increase in private universities in an impoverished society as previously described, was not expected. Angoitia and Rahona (2007) suggest that the reasons for this increase are diverse and include the non-requirement of a specific mark in university entrance exams or even the ability to access certain studies without having to sit these exams. The authors believe that the marketing campaigns for these institutions have sought to differentiate their product by offering smaller class sizes to favour the teacher-student relationship, extensive connections between private universities and the business world which makes it easier for graduates to gain employment, a wide range of sporting facilities and new technologically equipped buildings.

3. Results and Discussion

Consequences of the crisis: Youth in an era of crisis and globalisation

Features which characterise young people born in Spain from 1994 onwards, known as Generation Z, include influence and connection; immediacy and short-term thinking; innovation and creativity; irreverence and contrast; and concern, change and capacity to share as set out by Espiritusanto (2017). They are present on social networks and specifically on those where they are understood, their conversation is heard and they can share content. They also dictate rules for new media, new consumers and producers and new "zitizens". These aspects are related to the global world in which they are growing up in. Christensen (2017) also talks about the public sphere and the participation of citizens.

Figure 3: Evolution in the percentage of the population of 15 to 29 year olds who neither study nor work separated by gender and education



Source: Survey of Working Population. INE (National Statistics Institute)

In addition, it is important to emphasize the high percentage of young people aged 15-29 years old who neither work nor study. Therefore, we find ourselves faced with a social situation that is difficult to understand from a socio economic perspective: on the one hand, there is the upward trend in continuing university education, whilst on the other hand, there is a large cohort of inactive young people and a third who are unemployed or employed in precarious temporary work. A difficult social scene for overcoming a financial crisis.

Employment rates according to employment statistics from Eurostat (2015) for all EU-28 also vary depending on level of training (broken down by level of studies). Among 24-65 year olds it shows that 83.4% completed higher education in 2014, much higher than the rate of those who only have primary education or the first half of secondary. Comparing 2008 to 2014, the most significant decreases in employment rates since the start of the financial and economic crisis correspond to those with primary education or the first half of secondary. Institutionally, the European Commission has introduced several measures to incentivise the youth market, disillusioned with their future expectations at this time of crisis. Uncertainty and issues with flexibility and security are a curse which has impacted our young people. The support strategy has been revised in Copenhagen (2002), Maastricht (2004) and Helsinki (2006) with the revision of strategies and formulation of challenges recorded in the Helsinki communication (2006) on European cooperation in terms of professional training.

4. Conclusion

The context of the economic crisis in Spain is leading us to a new society where a new type of family structure is being established. In addition, the employment system is fundamentally based on salary precariousness linked to temporary employment, backed by a law of free dismissal. All this leads, as the data shows, to the later economic independence of their children. In addition, the promotion system makes it necessary to extend their time spent at university in postgraduate studies which may further delay young people from embarking on their working life. Furthermore, the delay in having the first child leads to the ageing family which remains under the influence and/or financial aid of their respective families due to the fact that total independence and purchasing housing is impossible.

The recovering economic situation has educational and social repercussions and we could be close to discovering a mass of young people who have completed university education but also display dubious personal development and job training. According with Beck (2016) it is important aspect to consider in order to keep their own educational foundations.

The fact that private universities have grown unexpectedly reveals the prevalence of the informal economy and the failure of the Spanish education system where some young people leave secondary education without the necessary knowledge and qualifications to attend public university. This brings us to question what profile of professionals will be available in the future.

Finally, it seems that Spanish universities are not responding to social developments. The increase in university fees, the obligatory attendance to class and the lack of modernisation in teaching and learning methods are turning it into a qualifications dispatcher which has lost its mission. In addition, even though the number of registered students is increasing in Spanish universities in general, data from the Spanish Educational System (Data and Figures 2014/15) shows that a high number of them are abandoning their university studies. According to the report, 22.1 % leave their courses in the first year at public universities. This percentage goes down to 15.9 % at private universities for those who began their studies in 2010/11. This could

be due to financial motives; an increase in fees and the price of degrees in public universities; the need to enter the world of work earlier than expected; or simply due to being disappointed by the course and having little hope of finding employment.

One way or another, the scenario we are faced with demonstrates that we are not experiencing the sustainable social development that we should be; students and their family income types are being polarised; inequality is becoming commonplace; and we have an overqualified population as described by Perales & Hernandez (2015). We understand and propose that the university takes responsibility to transition to incorporating qualifications to the workplace.

References

- [1] Angoitia Grijalba, M. and Rahona Lopez, M. (2007). Evolución de la educación universitaria en España: diferentes perspectivas y principales tendencias (1991-2005). *Revista de Educación*, vol. 344, pp. 245-264.
- [2] Anuario de Estadísticas Culturales de 2016. Elaborado por la Subdirección General de Estadística y Estudios, Secretaría General Técnica. Ministerio de Educación, Cultura y Deporte. España. Available: <http://cort.as/zd4B>.
- [3] Baker, S. R., Bloom, N and Davis, S. J. (2016). Measuring economic policy uncertainty. *Quarterly Journal of Economics*, vol. 13, no. 4, pp.1593-1636.
- [4] Bauman, Z. (2012). *Amor líquido: acerca de la fragilidad de los vínculos humanos*. Madrid: Fondo de Cultura Económica.
- [5] Beck, U. (2016). Varieties of second modernity and the cosmopolitan vision. *Theory, Culture and Society*, vol. 33, no. 7-8, pp. 257-270.
- [6] Bracho, A. C. (2005). La familia como prestadora de servicios. El Derecho Público de Acción Social (Separata). Enero-agosto 2005, *Documentación Administrativa del Instituto Nacional de Administración Pública*, Madrid, Spain, pp. 238-239.
- [7] Comunicado de Helsinki (2006). Sobre cooperación europea en materia de formación profesional. Available: <http://cort.as/zDqK>.
- [8] Donati, P. (2007). Old and new family policies: The perspective of relational sociology. *Anciennes et nouvelles politiques familiales: l'approche de la sociologie relationnelle. Sociología, Problemas e Práticas*, no. 54.
- [9] Elzo J. et al. (2008). *Jóvenes y valores, la clave para la sociedad del futuro*. Barcelona: Ed. Obra social, Fundación la Caixa.
- [10] Espiritusanto, N. O. (2017). Introducción. Los auténticos nativos digitales: ¿estamos preparados para la generación Z? Monográfico. *Revista de Estudios de Juventud INJUVE*, no. 114, Available: <http://cort.as/zD98>.
- [11] Esping-Andersen, G Billari, FC. Re-theorizing Family Demographics. *Population And Development Review*, vol. 41, no. 1, pp.1-31.
- [12] Eurostat (2017). Your key for European Estadistic. Data Base Estimated average age of young people leaving the parental household by sex. Available: <http://cort.as/zDIO> and <http://cort.as/zDkP>.

- [13] Chant, S. (1997). Women-headed households: Poorest of the poor? - Perspectives from Mexico, Costa Rica and the Philippines. *Ids Bulletin-Institute Of Development Studies*, Brighton, England, vol. 28, no. 3, pp. 26-48.
- [14] Christensen, HS., Jaske, M. and Laitinen, E. (2017). The Finnish citizens initiative: towards inclusive agenda-setting? *Scandinavian Political Studies*, vol. 40, no. 4, pp. 411-433.
- [15] Chzhen, Y. (2017). Unemployment, social protection spending and child poverty in the European Union during the Great Recession. *Journal of European Social Policy*, vol. 27 no. 2, pp.123-137.
- [16] Informe Datos y Cifras del sistema universitario español. Curso 2005-2006. Editado por el Ministerio de Educación, Cultura y Deporte. España. Available: <http://cort.as/zd3P>.
- [17] Informe Datos y Cifras del sistema universitario español. Curso 2015-2016. Editado por el Ministerio de Educación, Cultura y Deporte. España. Available: <http://cort.as/zd3P>.
- [18] Lutz, W. and Goujon (2001). The world's changing human capital stock: Multi-state population projections by educational attainment. *Population and Development Review*, vol. 27, no. 2.
- [19] Marques Perales, I. and Gil- Hernandez, C. J. (2015). Origen social y sobre educación en los universitarios españoles: ¿Es meritocrático el acceso a la clase de servicio? *Revista Española de Investigaciones Sociológicas*, vol. 150, pp. 89-112. Available: <http://cort.as/zD9M>.
- [20] Requena, M. (2013). Los jóvenes en la sociedad contemporánea en Mingote, C. & Requena, *El Malestar de los jóvenes*, Madrid: Eds. Diaz Santos.
- [21] Samir, K. C. and Lutz, W. (2017). The human core of the shared socioeconomic pathways: Population scenarios by age, sex and level of education for all countries to 2100. *Global Environmental Change*, vol. 42, pp.181-192.
- [22] Sanders, J., Munford, R. and Boden, J. (2017). In Transition – Patterns of Development and Change Among Vulnerable Young People. *Child Ind Res*, vol. 10, pp. 761–780.
- [23] VII Informe del Observatorio de la Realidad Social (2013). Equipo de estudios de Cáritas España. Available: <http://cort.as/zd5Z>.
- [24] La Universidad Española en cifras. Informe de la CRUE 2014/15. Available: <http://cort.as/zDsw>.

ECONOMIC PARADIPLMACY - FORMS AND FEATURES OF COOPERATION WITH THE STATE ADMINISTRATION

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Abstract. The increase in activity of sub-state actors in the economic field is one of the changes accompanying the process of globalization. Economic paradiplomacy has become a hot topic in contemporary economic diplomacy discussions. An important question is to what extent the goals, strategies and tools used by economic paradiplomacy are identical or compatible with those elements used by the state administration. A significant aspect is the attitude of the state administration towards the activities of the regions and the nature of their cooperation. This paper focuses on economic paradiplomacy in the Czech Republic and introduces a new perspective – the mutual relations of regions and the central state administration. In the introductory part, it takes a detailed look at the system of economic diplomacy and role of both state and non-state actors from the perspective of economic paradiplomacy. The text develops the expectations and aims of the mutual cooperation between regions and the state administration (based on analysis of strategic documents and available empirical data). Further, the contribution concentrates on the activities of the state administration towards regions in the area of economic diplomacy, their strategies and available instruments, and the degree of cooperation of other non-state participants. The main aim of the contribution is to assess the attitude of the state administration to the economic paradiplomacy and involvement of non-state actors (other than regions) in this area.

Keywords: economic diplomacy, economic paradiplomacy, state administration, Czech Republic,

JEL Classification: R11, F10, R50

1. Introduction

Paradiplomacie je jedním z důležitých trendů vývoje současných mezinárodních vztahů. V tematickém zaměření se aktivity regionů dotýkají mnoha oblastí. Motivy pro aktivity regionů jsou jak ekonomické, tak také politické a ekonomika je v nich jenom prostředkem (Lecours, 2008; McHugh, 2015). Jako důležitý aspekt jsou v současnosti v mezinárodní rovině brány například i zahraniční aktivity velkých měst (viz Mendes & Figueira, 2017).

Zejména poslední desetiletí je v české praxi příkladem vysokého tempa růstu řady paradiplomatických aktivit. Tento příspěvek navazuje na typové vymezení aktivit ekonomické paradiplomacie (Travnickova & Peterkova, 2014, také Travnickova & Zemanova, 2016) a soustředí se zejména na zahraniční aktivity na úrovni regionů v ekonomické rovině. Text také reaguje na aktuální trendy ve vývoji ekonomické diplomacie, kterým je mimo například sektorového zaměření podpory exportu také regionalizace přístupu státní správy (MZV, 2016).

Spolupráce mezi státními a nestátními aktéry v oblasti ekonomické diplomacie (potažmo paradiplomacie) a její podoby jsou tématem tohoto textu, se zvláštním zaměřením na oblast spolupráce státní správy a samosprávy zejména v oblasti podpory exportu a přílivu investic. Zkoumány jsou především používané nástroje a rovněž i zapojení dalších, například nestátních aktérů. V rovině strategií je pozornost zaměřena především na tzv. rámcové dokumenty, které poskytují pohled právě na vizi strategického rozvoje daného státu, regionu či instituce v delším časovém vymezení. V následujícím textu budou na úrovni samosprávy zkoumány tzv. strategie regionálního rozvoje a míra pozornosti jakou explicitně věnují podpoře exportu. Cílem příspěvku je zhodnocení postojů státní správy k regionalizaci ekonomické diplomacie, zmapování okruhu používaných nástrojů a také podílu dalších zúčastněných aktérů, především nestátních, v této oblasti. Systém ekonomické diplomacie je v tomto textu představen na příkladu české praxe, pro kterou je jistá regionalizace přístupu jedním z nových aspektů současného vývoje.

2. Ekonomická diplomacie – uplatňované modely

Ekonomická dimenze zahraničních či diplomatických aktivit je důležitou součástí praxe zahraniční služby a mezinárodních vztahů obecně (např. Lee & Hudson, 2004). V současné praxi panuje určitá terminologická nejednotnost, objevují se také pojmy jako hospodářská nebo obchodní diplomacie (Mattos, 2014). Česká praxe je v tomto ohledu zatím neukotvená a není zde přítomna obecně přijímaná definice tohoto pojmu. Ekonomická diplomacie je také často zmiňována v souvislosti s vývojem mezinárodních vztahů a reakcí na proces globalizace (Bohac & Lipkova, 2016). S ohledem na českou praxi je důležité připomenout i význam ekonomické diplomacie právě pro menší státy a jejich působení na mezinárodní scéně (Bohac, 2015).

Zároveň je vhodné brát v potaz také obsahový přesah ekonomické diplomacie s dalšími tématy zahraniční politiky jako je například péče o dobrou pověst země. Ekonomická diplomacie se zde prolíná s diplomacií veřejnou, nation brandingem a mimo podpory exportu či přílivu investic zahrnuje také propagaci země či regionu jako destinace cestovního ruchu. Neméně významné je například i propojení ekonomické diplomacie a národní bezpečnosti, které se může projevit například v bilaterálních vztazích (srov. Papadimitriou & Pistikou, 2014).

Pro výzkum vzájemných kontaktů či spolupráce různých aktérů ekonomické diplomacie je důležité zmínit i způsoby, jakými jsou členěni. Literatura zná několik variant tzv. organizačních modelů ekonomické diplomacie, které se věnují především způsobu dělby kompetencí a koordinace činnosti na úrovni státní správy. Například Stouracova uvádí tři základní modely pro organizaci kompetencí ekonomické diplomacie. Jsou jimi za prvé jednotný - unifikovaný model, který veškeré kompetence v oblasti ekonomické diplomacie soustřeďuje u jednoho orgánu státní správy, za druhé model duální, kde jsou kompetence rozděleny mezi dva státní orgány a za třetí model třetí agentury, kde jsou kompetence delegovány na jinou státní instituci, obvykle v podobě státní agentury (Stouracova, 2008). Definice organizačního modelu je důležitá i z pohledu nestátních aktérů a mezi nimi i regionů.

a. Aktéři, strategie a používané nástroje ekonomické diplomacie

V obecné rovině lze systém veřejné správy členit na státní správu a samosprávu. Celkový obraz systému doplňuje rovina nestátních aktérů. Toto jednoduché rozlišení lze použít také pro potřeby ekonomické diplomacie. Základní úroveň představuje státní správa reprezentovaná

především ministerstvy a dalšími ústředními orgány státní správy. Další úroveň je samospráva, kterou představují v první řadě různé substátní celky, především regiony, města a obce. Dále také obchodní a výrobní aktéři, kteří jsou často zastoupeni svazy, komorami, asociacemi, případně vytváří různé skupiny a reprezentace (srov. Csabay, 2005).

V Česku je rovina státních aktérů reprezentována v první řadě ministerstvy, kde je nutné zmínit především ministerstvo zahraničních věcí a ministerstvo průmyslu a obchodu. Na výkonu ekonomické diplomacie se v rámci svých kompetencí podílí také další resorty, z poslední doby lze zmínit například ministerstva obrany, zemědělství, školství nebo místního rozvoje. Na tuto úroveň navazují specializované státní agentury jako je CzechTrade – zaměřený na podporu exportu, CzechInvest – podpora přílivu investic nebo CzechTourism – věnující se propagaci země jako destinace turismu.

Druhou rovinu systému zkoumání ekonomické diplomacie představují strategie. Podle jejich zaměření je lze dělit na dokumenty rámcové, institucionální a obsahové. Na úrovni státní správy patří do skupiny rámcových dokumentů například programové prohlášení vlády, koncepce zahraniční politiky nebo Strategie konkurenceschopnosti ČR. Dokumenty institucionální jsou reprezentovány řadou dohod, kde jednotlivé instituce vymezují své kompetence, případně rozsah a formy spolupráce. Z poslední doby lze uvést například Rámcovou dohodu mezi Ministerstvem průmyslu a obchodu (MPO) a Ministerstvem zahraničních věcí (MZV) o zásadách spolupráce nebo Memorandum o spolupráci mezi MZE a MZV. Obsahové dokumenty představují obvykle vymezení zásadních cílů a priorit jednotlivých institucí. Lze uvést například Desatero služeb MZV pro český byznys v zahraničí (MZV, 2013). Důležitým dokumentem na vládní úrovni, který poskytuje zastřešení celé řadě aktivit právě i směrem k regionům je Akční plán na podporu hospodářského rozvoje a zaměstnanosti ČR, schválený vládou v roce 2014 (Vláda ČR, 2014). V lednu 2017 schválila vláda ČR jeho již druhou aktualizaci, tentokrát pro rok 2017.

Škála nástrojů používaných v ekonomické diplomacii je poměrně rozsáhlá a pestrá, nicméně lze vysledovat určité typy nástrojů, které se při pohledu na mezinárodní scénu opakují v řadě případů, samozřejmě v různých modifikacích a v různém rozsahu. V české praxi je užíváno členění na obsahu činnosti u jednotlivých okruhů služeb, které jsou poskytovány českým subjektům. Podle obsahu činnosti lze tyto služby rozdělit do tří základních okruhů¹ :

- 1) Informační a analytické služby – představují sběr, zpracování a poskytování relevantních informací. V praxi to jsou například teritoriální analýzy, sektorové analýzy, mapování potenciálu trhů nebo usnadnění přístupu do odborných databází,
- 2) Asistenční a logistické služby – konzultace exportních případů, zprostředkování kontaktů, doprovod a záštita akcí, organizace obchodních misí, také organizace výstav a veletrhů,
- 3) Vzdělávací služby – organizace vzdělávacích programů, seminářů, workshopů, prezentací i diskusí.

Ve vztahu ke státní správě jsou tyto služby poskytovány jak jednotlivými ministerstvy (MZV a MPO především) na území Česka, tak také Jednotnou zahraniční sítí, kterou tvoří jak české

¹Tento text abstrahuje od skupiny finančních nástrojů, které jsou poskytovány specializovanými institucemi. V obsahové rovině jde především o financování a pojišťování exportu. Zúčastněnými institucemi jsou (v české praxi) Česká exportní banka, Exportní garanční a pojišťovací společnost a také Českomoravská záruční a rozvojová banka.

zastupitelské úřady, tak také zahraniční kanceláře CzechTrade, CzechInvest a CzechTourism. Ať už jednotlivými institucemi samostatně nebo v různé míře spolupráce.

Velmi důležitou roli mají v této oblasti nestátní aktéři, především jejich odborná společenství, která v řadě případů velmi úzce spolupracují se státem především v oblasti asistenčních a logistických a také vzdělávacích služeb. V české praxi se jako významní hráči projevují především Hospodářská komora ČR, také Svaz průmyslu a dopravy a rovněž Asociace malých a středních podniků. Jejich aktivity směřují, ve spolupráci se státní správou, především do oblasti asistenčních a logistických služeb a také do služeb vzdělávacích.

b. Aktéři, strategie a používané nástroje ekonomické paradiplomacie

Rovinu samosprávy představuje především 14 krajů Česka a o určitém zastřešení a koordinaci jejich aktivit lze hovořit u Asociace krajů České republiky. Jednotlivá města a obce nejsou v této oblasti významnějšími aktéry a jejich propojení s ekonomickou diplomacií je spíše nepřímé v rovině podpory regionálního a místního rozvoje, který následně může přispět, například v podobě fungující infrastruktury, ke zvýšení exportního výkonu nebo přílivu investic v místě. Jako zastřešující pojem je možné v tomto ohledu zmínit regionální ekonomickou konkurenceschopnost (viz Zebroková, 2014)

Na úrovni samosprávy jsou klíčovými dokumenty především strategie regionálního rozvoje, které jsou zaměřeny, jak odpovídá názvu, na vizi celkového rozvoje daného regionu v delším časovém období. V daném kontextu je důležitá především míra zájmu, která je věnována přímo podpoře exportu, případně přílivu investic. Většina krajů má také specializované koncepce, které se týkají rozvoje podmínek cestovního ruchu, především v rovině infrastruktury a také v oblasti propagace. Následující tabulka spíše přehledově mapuje přítomnost jednotlivých témat, pojených s ekonomickou diplomacií na státní úrovni, ve strategických dokumentech regionů.

Table 1: Export ve strategiích rozvoje krajů ČR

Kraj	Konkurenceschopnost	Investice (PZI)	Export	Cestovní ruch
Hl. m. Praha	x	x	N	x
Jihočeský	x	x	x	x
Jihomoravský	x	x	x	x
Karlovarský	x	x	N	x
Kraj Vysočina	x	x	x	x
Královéhradecký	x	xV	x	x
Liberecký	x	xR	x	x
Moravskoslezský	x	x	x	x
Olomoucký	x	x	x	x
Pardubický	x	xR	N	x
Plzeňský	x	x	x	x
Středočeský	x	xR	x	x
Ústecký	x	x	x	x
Zlínský	x	xR	x	x

Note: PZI – přímé zahraniční investice; x – prvek je přítomen; N – prvek přítomen není; xR – investice směřovány převážně na obecný rozvoj; xV – investice směřovány převážně na vzdělání.

Source: Vlastní zpracování

V mezinárodní rovině se nicméně řada měst a obcí Česka angažuje prostřednictvím členství v euroregionu nebo evropském regionu, kde lze v některých případech dohledat i přímé zmínky o podpoře exportu, například u Jihočeského kraje v případě evropského regionu Vltava - Dunaj (Peterkova & Travníková, 2016). Důležitým prvkem je i rozvoj spolupráce regionů v ČR s partnerskými regiony v zahraničí. Jakkoli je taková spolupráce zaměřena obecně na rozvoj

vzájemných vztahů v oblasti kultury, ekonomiky, školství nebo cestovního ruchu, může znamenat i významný přínos pro podnikatelskou spolupráci a také export regionálních výrobků. Příkladem může být Moravskoslezský kraj, který jako běžnou součástí navazované spolupráce uvádí také spolupráci partnerských hospodářských komor. Podobně jako na státní úrovni bývají podnikatelské mise součástí zahraničních cest představitelů kraje.

c. Přístup státní správy vůči regionům na poli ekonomické diplomacie

V minulých letech byla pozornost státní správy soustředěna především na celostátní úroveň, potažmo aktivity nestátních aktérů, které byly realizovány ve spolupráci se státní správou. Docházelo také k mnoha změnám ve snaze o zlepšení fungování české ekonomické diplomacie. Namátkou lze zmínit důraz na vyšší míru koordinace doma i v zahraničí, efektivní rozdělení kompetencí, nové formy spolupráce s podnikatelskou sférou nebo uplatnění sektorového přístupu v ekonomickém zpravodajství i při přípravách oborových misí do zahraničí. Mezi jinými novinkami se například v letech 2015 až 2016 také zvýšil počet akcí, které byly pro podnikatele realizovány přímo v regionech. Důležitou součástí těchto změn byla také snaha o získání zpětné vazby směrem od podnikatelů ke státní správě a současně i zlepšení systému hodnocení prováděných aktivit (MZV, 2016).

Mezi priority, které byly definovány právě na základě hodnocení, patří i výraznější aktivita směrem k domácím regionům. V současnosti funguje celá řada informačních nástrojů, kde mohou exportéři získat informace potřebné k nastartování exportní činnosti nebo získání adekvátní asistence státu pro své aktivity. Je organizováno i velké množství vzdělávacích či prezentačních akcí. Na straně podnikatelské sféry nicméně byla pocíťována určitá omezená dostupnost těchto služeb právě na regionální a místní úrovni.

Pro stát existuje v takové chvíli několik možností, jak tuto situaci řešit:

- 1) Vlastní akce státních subjektů na regionální úrovni;
- 2) Spolupráce s nestátními aktéry a využití jejich regionálních sítí;
- 3) Užší spolupráce státní správy a samosprávy.

První z nich jsou vlastní akce státních subjektů na regionální úrovni. V této rovině je možné zmínit jak ad hoc akce, jako je například účast představitelů státních subjektů na výstavách či veletrzích, které se konají v regionech. Lze zde zmínit například společný Exportní dům, který realizovalo Ministerstvo zahraničních věcí a EGAP na 58. mezinárodním strojírenském veletrhu v Brně nebo teritoriálně zaměřené semináře o exportních příležitostech v konkrétních zemích. Organizace takových seminářů není novinkou, nicméně nově jsou organizovány nejenom v pražském ústředí MZV, ale také v regionech. Příkladem může být seminář zaměřený na exportní příležitosti na ruském teritoriu, který se uskutečnil na přelomu února a března 2017 v Ostravě a v Praze, podobně seminář orientovaný na Thajsko a Myanmar, který se uskutečnil v květnu 2017 v Praze a v Olomouci. Například na ostravském semináři nicméně nevystupovali pouze zástupci státu (MZV, MPO a další), ale také představitelé Moravskoslezského kraje, Hospodářské komory ČR, Krajské hospodářské komory Moravskoslezského kraje a další. Rozšíření informací o možnostech a potenciálu české ekonomické diplomacie do regionů České republiky je také zmiňováno jako jedna z výzev současné ekonomické diplomacie.

Jiným příkladem státních aktivit jsou kanceláře státních agentur CzechTrade a CzechInvest, které přináší nabídku služeb těchto institucí přímo do regionů. Legislativní ukotvení představuje výše zmiňovaný Akční plán na podporu hospodářského rozvoje a zaměstnanosti

ČR. CzechInvest zřídil 13 regionálních kanceláří², které se mimo rozvoje investic v regionech zaměřují i obecně na podporu rozvoje podnikání malých a středních firem. V souladu s uvedeným Akčním plánem byla také vytvořena zatím čtyři tzv. exportní místa v regionech³, kde pracují exportní konzultanti agentury CzechTrade.

V určitém souběhu s aktivitami státních agentur pracují regionální sítě nestátních aktérů, v tomto případě především Hospodářské komory ČR a její rozsáhlé a fungující sítě krajských a okresních komor. Hospodářská komora je dlouhodobě formována jak podle oborového, tak také regionálního principu. V oblasti služeb ekonomické diplomacie participuje především u asistenčních a logistických služeb, kde spolu se Svazem průmyslu a dopravy patří k významným organizátorům či spoluorganizátorům jak outgoingových, tak i incomingových podnikatelských misí. Důležitou roli nicméně hraje, právě díky široké regionální síti také v oblastech vzdělávacích a informačních služeb. Právě zvýšení povědomí o možnostech české ekonomické diplomacie v regionech patří k současným výzvám ekonomické diplomacie tak, jak je formuloval náměstek ministra zahraničních věcí Martin Tlapa v loňském vystoupení na Konferenci ekonomických diplomatů na MZV v červnu 2016 (MZV, 2016). Ve spolupráci s Hospodářskou komorou MZV také připravilo sérii již zmiňovaných krajských exportních seminářů.

Užší a především dlouhodobá spolupráce státu a regionů má od června 2017 také své legislativní vyjádření. Ministr Lubomír Zaorálek 16. června 2017 podepsal, spolu s předsedkyní Asociace krajů ČR, hejtmankou Karlovarského kraje Janou Vildumetzovou, Memorandum o spolupráci MZV a krajů v oblasti ekonomické diplomacie. Jako zásadní cíle nové úrovně spolupráce jsou uváděny vyšší výrobní potenciál a také vyšší zaměstnanost v regionech. V institucionální a koordinační rovině je důležitým prvkem zřízení pozice tzv. koordinátorů kraje, odpovědných za ekonomickou diplomacii. Partnerem jim na straně MZV bude odbor ekonomické diplomacie. Tato nová role na regionální úrovni je nesmírně důležitá ve vztahu ke koordinaci a vzájemné informovanosti mezi partnery. Na regionální úrovni vytváří pro státní správu stabilní kontaktní síť. V minulosti byla právě komunikace, s ohledem na rozdílné priority a struktury jednotlivých krajů, určitým problémem ve vzájemných vztazích. Státní správa tímto získává stabilního partnera.

Pro kraje pak tato spolupráce představuje možnost intenzivnějšího propojení s Jednotnou zahraniční sítí i cíleného zohledňování zájmů jednotlivých regionů například při realizaci tzv. PROPEDů⁴, tedy projektů ekonomické diplomacie. Jako další možný přínos této spolupráce je vhodné zmínit cílenou prezentaci investičních příležitostí v jednotlivých krajích a jejich prezentaci prostřednictvím Jednotné zahraniční sítě.

3. Conclusion

V celkovém pohledu na vzájemnou interakci státní správy a samosprávy v oblasti ekonomické diplomacie je možné identifikovat několik zásadních trendů. Základní vějíř možností a opatření na podporu exportu a investic je v kompetenci státní správy. Regiony v tomto ohledu kopírují činnost státní správy ve smyslu přebírání fungujících nástrojů a jejich rozvoj v regionální dimenzi. Zásadní rovinou ekonomické diplomacie je podpora exportních aktivit malých a středních podniků, kde existuje výrazná možnost efektivní participace právě

²Středočeský kraj a Praha mají kancelář společnou.

³Jihomoravský kraj, Moravskoslezský kraj, Pardubický kraj, Ústecký kraj.

⁴PROPED – projekty ekonomické diplomacie, nový nástroj ekonomické diplomacie, cílená spolupráce ZÚ a dalších subjektů.

pro samosprávu, která má, na rozdíl od státní správy, detailní a přesný přehled o situaci v regionu.

Nastupující trend partnerství státní správy, samosprávy a také nestátních aktérů ve snaze přiblížit informace o možnostech ekonomické diplomacie a také konkrétní projekty na regionální úrovni představuje slibný potenciál pro exportní aktivity právě malých a středních podniků.

Na regionální úrovni je velmi důležitý také akcent na regionální rozvoj obecně, v souvislosti s vytvořením vhodného prostředí a zejména infrastruktury jak pro rozvoj podnikání, tak také cestovního ruchu. Obě oblasti představují důležitý segment rozvoje regionů a zlepšování životní úrovně obyvatel i prostředí.

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References

- [1] Bohac, R. (2015). International developments and their impact on the formation and functions of economic diplomacy in smaller countries. *International Relations 2015: Current Issues of World Economy and Politics*, Smolenice, Slovak Republic, pp. 73-82.
- [2] Bohac, R. and Lipkova, L. (2016). Cataracts of globalization and the economic diplomacy of small states. *Economic Annals-XXI*, vol. 159, no. 5-6, pp.16-19.
- [3] Csabay, M. (2005). Expanding the number of actors with influence on economic diplomacy and export-promoting policy. *Proceedings from the 5th International Conference: Economic Policy in the New EU Member Countries*, Ostrava, Czech Republic, pp. 56-62.
- [4] Lecours, A. (2008). *Political Issues of Paradiplomacy: Lessons from the Developed World*. Discussion Papers in Diplomacy. Netherlands Institute of International Relations "Clingendael", The Hague.
- [5] Lee, D. and Hudson, D. (2004). The old and new significance of political economy in diplomacy. *Review of International Studies*, vol. 30, pp. 343-360.
- [6] Mattos, B. (2014). Definition specification of economic dimension of diplomacy. *International Relations 2014: Contemporary Issues of World Economics and Politics*, Smolenice, Slovak Republic, pp. 366-370.
- [7] McHugh, J. T. (2015). Paradiplomacy, protodiplomacy and the foreign policy aspirations of Quebec and other Canadian provinces. *Canadian Foreign Policy*, vol. 21, no. 3, pp. 238-256.
- [8] Mendes, M. V. I. and Figueira, A. F. (2017). Paradiplomacy and the international competitiveness of cities: The case of Rio de Janeiro. *Revista Brasileira de Política Internacional*, vol. 60, no. 1, 2017.
- [9] Papadimitriou, P. and Pistikou, V. (2014). Economic diplomacy and security in Sovereign states. *Procedia Economics and Finance*, vol. 9, pp. 42 – 65.

- [10] Peterkova, J. and Travnickova, Z. (2016). Multilateral aspects of economic paradiplomacy in the Czech Republic. *16th International Scientific Conference Globalization and its Socio-economic Consequence*, Rajecké Teplice, Slovak Republic, 2016, pp. 1681-1688.
- [11] Stouracova, J. (2008). *Ekonomická diplomacie České republiky*. Praha: Professional Publishing.
- [12] MZV (2016). Ekonomická diplomacie jako nástroj podpory exportu. *Konference ekonomických diplomatů*. MZV ČR. Praha. 21.6.2016. Available: http://www.mzv.cz/file/2004732/Tlapa___MZV.pdf
- [13] Travnickova, Z. and Peterkova, J. (2014). Meze a možnosti ekonomické paradiplomacie. *Region v rozvoji společnosti 2014*, Brno: Mendelova univerzita v Brně, Czech Republic, pp. 911-920.
- [14] Travnickova, Z. and Zemanova, S. (2016). Ekonomická paradiplomacie českých krajů v komparativní perspektivě. *Auspicia*, vol. 1, pp. 57-64.
- [15] Vláda ČR (2014). *Akční plán na podporu hospodářského rozvoje a zaměstnanosti ČR*. Praha: Úřad vlády, 2014. [Online] Available: https://www.vlada.cz/assets/media-centrum/dulezite-dokumenty/141120_AP_2material_po_vlade.pdf.
- [16] Zebroková, V. (2014). Selected aspects of competitiveness of Moravian-Silesian Region. *International Relations 2014: Contemporary Issues of World Economics and Politics*, Smolenice, Slovensko, pp. 560-566.

SUSTAINABILITY REPORTING IN THE CONTEXT OF GLOBALIZATION: LITHUANIAN CASE

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Abstract. The strong orientation to profit creates a lot of new problems in organizations related to the environment, social issues and economic challenges. The desires to safeguard the environment and human well-being, are only a few of the many reasons why organizations are trying to develop the sustainability. It helps to solve social and environmental problems, promotes to increase profits and competitiveness, to solve socio-economic problems caused by globalization. Sustainability reporting is a great way to provide information about the organizations activities in the global context, which takes into account the economic, social and environmental aspects. One of the most popular reporting instruments are the standards of Global Reporting Initiative (GRI). GRI is an international and independent organization whose main objective – to compare the voluntary sustainability reporting with the mandatory financial reports. Therefore, it is important to raise awareness about sustainability reporting of all employees and managers that would create sustainable development of organizations. Research problem – employees and managers don't have sufficient knowledge about sustainability reporting in organizations in Lithuania. Purpose of study – to determine the perception of sustainability concept and to explore the approach to sustainability reporting in organizations of Lithuania. Research methods - systematic scientific literature analysis, survey, quantitative research, analysis of empirical data. The results of the study in organizations of Lithuania showed that there is not much information about sustainability and that the majority rarely use the GRI sustainability reporting instrument.

Keywords: sustainability, sustainability reporting, globalization, development

JEL Classification: M12, M14, M51, M53, M54

1. Introduction

The pursuit of protecting nature and human well-being is just one of the many reasons why managers are trying to develop sustainability in their organizations. Sustainability development helps to solve not only social or global environmental concerns, but also helps to overcome various organizational challenges more effectively. It helps to attract new talented and competent employees into the organization, also increases mutual understanding, cooperation, security and interest of interested parties or attraction of new investments.

Sustainability accounting are increasingly gaining ground on a global scale. Sustainability reporting is a great way to provide information to all internal and external stakeholders about the activities and results of organizations, taking into account economic, social and environmental aspects. Sustainability reporting can also be identified as an opportunity to seek transparency in the organization's activities and to develop trust or risk management (Ahmadi

et al., 2017). The most popular and commonly used are the standards of the Global Reporting Initiative (GRI), which assesses four key principles, i.e.: relevance, stakeholder involvement, coherence and completeness. GRI is an international independent organization whose main objective is to integrate sustainability accountability into all processes of the organization's operations. GRI proposes guidelines for sustainability reporting that helps organizations to provide information to interested parties about their environmental, social and economic performance (Friedman, 2011; Carayannis et al., 2015).

If describing the practice of organizations in the issues of sustainability reporting, it can be stated that many organizations in foreign countries have joined the GRI, but in Lithuania this is not practiced very widely (Dobrovolskiene et al., 2017). There are just a few organizations that have submitted sustainability reports according to the latest set of GRI-G4 standards in Lithuania (Streimikiene & Balezentis, 2013). The study about sustainability reporting in Lithuanian organizations showed that sustainability reporting is often poorly perceived and underestimated phenomenon to Lithuanian organizations.

2. Sustainability reporting in the global context

2.1 Global Reporting Initiative (GRI)

In order to describe the transparency of the activities of organizations over the last decades, there has dominated many different concepts in literature. At first, emerged the social responsibility of the organizations, then the business ethics, the citizenship of the organizations, the responsibility of the organizations, sustainable development and, finally, the coherence assessment, accountability (Radomska, 2015; Goela & Ramanathanb, 2014; Barnard & Van Der Merwe, 2016; Kopnina, 2016, Ciegis et al., 2009). All concepts describe the results sought by organizations, and the rapid emergence of new concepts shows that there is a strong interest in the organization's activities towards sustainability. Sustainability reporting is a way to provide information to all internal and external stakeholders on the organization's performance, also not only from the financial perspective (Streimikiene & Balezentis, 2013). According to GRI (2015), sustainability report is an opportunity to increase the transparency of the organization's activities and build trust in it, as well as the ability to manage risks. The Sustainability report can be described as a document containing information that includes various data on the organization's economic, environmental and social aspects. According to the Global Reporting Initiative - GRI (2015), report may also include the organization's vision, mission, governance structure or other non-financial data. From the other side, sustainability is a new approach to the meaning and importance of the company's work in the globalized world in which we are living today (Verjel & Schmid, 2015).

Sustainability reports are very diverse in all countries, depending on the needs of the countries concerned or the specifics of the organization, the cultures or values fostered. In addition, in view of the sustainability reports, it can be seen that the majority of them are compulsory and much less statements are presented voluntary by organizations. Now the base is a mixed reporting model where prevails mandatory and voluntary reporting (Redclift, 2008).

All reports published to the public are voluntary, and those that are required by the political authorities are mandatory and related to the environment. Its must be provided by savages, industrial plant users, car maintenance and repair centers, material processors and all other organizations that pollute the environment with various harmful substances. According to W. Bartels et al. (2016), it is possible to notice that the mandatory reports still prevail, but at the

same time the publication of voluntary reports is increasing. According to the data provided by authors (Bartels et al., 2016) in 2013 at the 44 countries of the world, were used 180 sustainability reporting tools, of which 130 (72 %) were compulsory and 50 (28 %) voluntary initiatives. In 2016 the number of sustainability reporting tools in the 64 countries was 383 units, of which 248 (65 %) were mandatory and 135 (35 %) were - voluntary. By the provided data, it can be argued that the reporting instruments have been developing very rapidly in recent years. However, according to W. Bartels et. al. (2016), Lithuania is attributable only to those countries that use less than 5 accountability instruments.

There are many reasons why organizations should use sustainability reporting. Global Reporting Initiative (GRI), provides external and internal benefits of the organization through sustainability reporting (GRI, 2015). *Internal organization benefits* through sustainability reporting according to GRI: better understanding of risks and opportunities; reflects the interface between financial and non-financial performance; affects the long-term organizational strategy; simplifies processes, reduces costs and increases efficiency; analyzes and evaluates results in accordance with laws, norms or standards of conduct; compare activities within the organization and between different sectors; reduces the risk of failures related to environmental protection, sociology and management. *External benefits* to the organization through sustainability reporting: reduces negative environmental, social and management impacts; improves reputation; external stakeholders are more aware of the value of the organization; shows how the organization meets its expectations of sustainability. But there could be more benefits of reporting (GRI, 2015). GRI also identifies number of statements that describe the benefits of sustainability reporting to an organization, but more and more goals can be set out to publish sustainability reports (GRI, 2015). According to the mentioned benefits, it can be concluded that sustainability reporting greatly increases the efficiency of the organization's operation, taking into account the long-term perspective, helps to clearly see the results of the work or to spot the emerging problem areas (Iwu et al., 2015).

GRI can be identified as a pioneer in sustainability reporting, an international independent organization whose primary objective is to integrate sustainability accountability into all processes of the organization's operations. Also, as a goal, it may be mentioned that GRI seeks to align the use of voluntary sustainability reporting with mandatory financial statements. GRI has developed guidelines for sustainability reporting that helps organizations to provide information to interested parties on their environmental, social and economic performance (Moneva et al., 2006). According to L. Dagilienė (2014), in the latest GRI standard version "GRI G4", released in 2013, reflects the four content principles that organizations must follow when submitting sustainability reports: significance, stakeholder engagement, sustainability, the completeness.

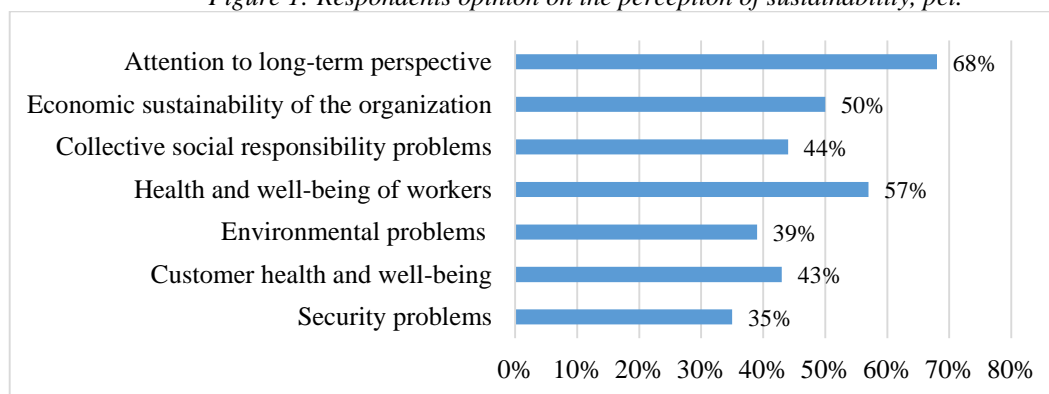
GRI standards are considered as a global sustainability reporting tool, also are often used as an audit tool. GRI (2015) in its publication on trends 2025 release the fact that in the future there will be more sustainability reporting elements, more attention will be given to interested parties to sustainability reporting. The standards are certainly useful, but there are a few criticisms to consider. First of all, the standards are rather broad and complex, covering a wide range of areas. Moneva et al. (2006), the standards should include more elements, and not just the three main dimensions of sustainability, i.e. environmental protection, sociology and economics. There is no specific structure for a report, which may make it difficult to compare the results of different organizations. According to Dingwerth & Eichinger (2010), sustainability reporting under GRI provides a lot of information, but when it is not comparable, it becomes completely useless for the interested parties.

2.2 Analysis of the study about Sustainability reporting: Lithuanian case

In order to implement the study, the questionnaire was filled out by 204 people who works in different organizations and in different positions. The study was conducted on the basis of the project "Joint Program for Sustainability Leadership". The survey was carried out for the implementation of the project through a mass media, i.e. a questionnaire that was distributed on the web. The questionnaire was designed to find out the understanding of the organizations employees about the sustainability reporting. Also, there are presented questions related to the sustainability practices in organizations and the difficulties encountered in organizing sustainability reporting. The last part of the survey shows the skills that are required for sustainability reporting.

When reporting a study on how the Lithuanian organizations understood sustainability, primarily it shows that the majority of the respondents - 139 (68 %), sustainability associated with attention to long-term perspective, much less relevant considered a health and well-being - 116 (57 %) and according 102 (50 %) respondents it is described as economic sustainability of the organization (Fig.1). The lower number of organizations takes into account security problems - 71 (35 %), environmental problems - 80 (39 %) and the health or well-being of customers - 88 (43 %).

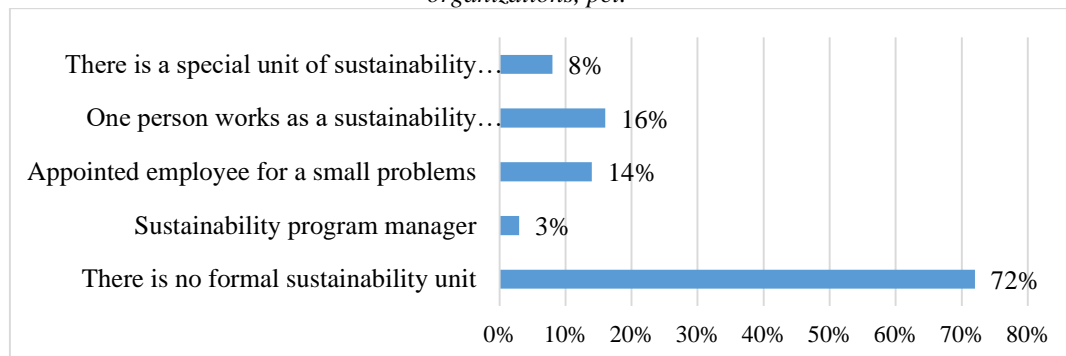
Figure 1: Respondents opinion on the perception of sustainability, pct.



Source: compiled on the basis of authors' calculations

In the context of sustainability in organizations, it is important for them to have an appropriate leader of sustainability, who will engage fostering in this aspect. Sustainability leadership can be managed not only by one person, but also by the group or even the entire unit. According to respondents' answers, it can be argued that organizations do not pay much attention to the elements of sustainability management. The figure 2 demonstrates that, even 147 (72 %) respondents say that they do not have any formal unit of consistency or responsible person. Only 16 (8 %) of organizations respondents have an appropriate sustainability unit, 33 (16 %) organizations have sustainability managers, 29 (14 %) of respondents say that they have been assigned a worker who solves minor problems and just 6 (3 %) claimed that they have the sustainability program managers (Fig. 2).

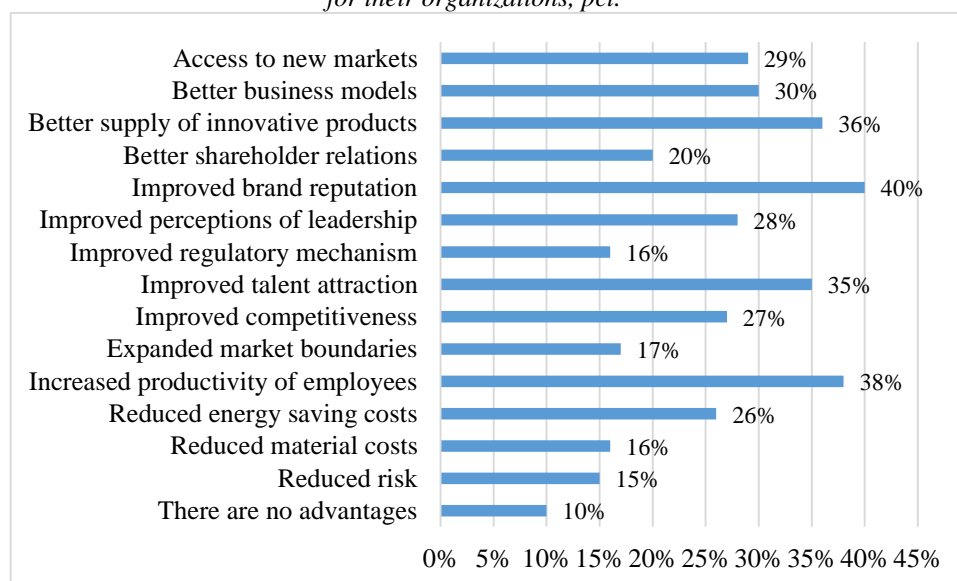
Figure 2: Distribution of respondents opinion about the implementation of sustainability reporting in the organizations, pct.



Source: compiled on the basis of authors' calculations

In order to analyse respondents opinion about the benefits of sustainable development, it have been distributed in a variety of ways. The most part of the surveyed employees distinguished brand reputation improvement - 82 (40%), as well as increase of productivity of employees - 78 (38%) and better offer of innovative products - 73 (36%). At least were identified benefits like risk reduction - 31 (15%), improvement of the regulatory mechanism - 32 (16%) and reduction of costs related to substances - 33 (16%) (Fig. 3). In the context of globalization, it's important to understand that all aspects which more or less there identified by the respondents are quite important.

Figure 3: Distribution of respondents opinion according to the main advantages of sustainable development for their organizations, pct.

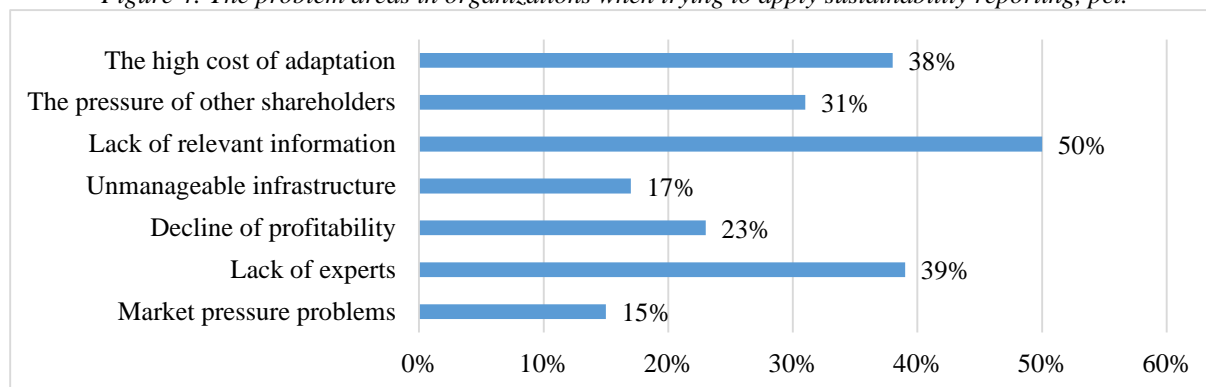


Source: compiled on the basis of authors' calculations

The study shows that most organizations practice sorting, even 47 (23 %) respondents mentioned it. Moreover, respondents think that their organizations are relevant professional health and safety, ethical business and trade (respectively 42 (21 %) and 39 (19 %)). A little less attention is paid to energy saving - 36 (18 %), development of innovative products - 37 (18 %) and long-term liabilities to employees - 37 (18 %). At least organizations are practicing activities such as the use of renewable energy - 58 (28 %), reporting of sustainability practices - 56 (27 %) and control of sustainability practices - 52 (25 %).

Further, respondents were asked to indicate what difficulties are encountered when they practically are trying to apply sustainability in their organizations (Fig. 4).

Figure 4: The problem areas in organizations when trying to apply sustainability reporting, pct.



Source: compiled on the basis of authors' calculations

Figure 4 demonstrates that, even for 102 (50 %) respondents there is not much relevant information about sustainability. This can be confirmed in the view of the fact that very few studies on sustainability and sustainability of research has been done and also in Lithuania, relatively few organizations applied sustainability reporting tools. There are cases of difficulties such as lack of experts - 79 (39 %) or higher adaptation rates - 78 (38 %). The least difficulties is the following: uncomplicated infrastructure - 35 (17%), market pressure problems - 31 (15 %) and profitability decrease - 47 (23 %) (Fig. 4).

Visser and Courtice (2011), in their developed sustainability leadership model, singled out the personal characteristics of a sustainability leader that includes personality skills, knowledge, features, and styles. According to the results of the research, communication skills are the most important competencies, which is indicated by 114 (56 %) respondents. It is very important to be able to communicate clearly, comprehensively and effectively with all interested parties. Also, respondents mentioned the importance of competences such as long-term planning - 107 (52 %), team management - 104 (51 %), analytical and systematic thinking - 96 (47 %) and implementation of changes - 91 (45 %). Accordingly, respondents emphasize the same skills in the last research question as to which of the skills these days should be developed in order to foster sustainability reporting in Lithuanian organizations. Sustainability reporting and its development should be an integral fragment of daily operations.

3. Conclusions

Sustainability reports are described as a document presenting information that includes various data about the organization's economic, environmental and social aspects. Also in it can be provided information about the organization's goals, strategies or other non-numeric data. Organizations are developing the practice of providing voluntary sustainability reporting. GRI's standards are recognized as the best sustainability reporting tool (Bartels et al., 2016; Dagiliene, 2014; Moneva et al., 2006). Taking into account the results of the study on sustainability reporting in Lithuanian organizations, there prevails the correct but incomplete understanding of sustainability. Obviously, there is a lack of information on sustainability, its development and its benefits. Employees and managers of Lithuanian organizations do not have enough knowledge and skills to develop sustainability. Similarly, organizations do not formalize the elements of sustainability management, there are no designated persons for the implementation

of this activity. Thus, Lithuanian organizations do not have a widely developed sustainability and do not provide sustainability reports.

It is important to work actively on sustainability reporting, taking into account the increasing opportunities and challenges of globalization in the areas of economy, environment and social development.

References

- [1] Ahmadi, H. B., Kusi-Sarpong, S. and Rezaei, J. (2017). Assessing the social sustainability of supply chains using Best Worst Method. *Resources Conservation and Recycling*, vol. 126, pp. 99-106.
- [2] Bartels, W., Fogelberg, T., Hoballah, A. and Lugt, C. T. (2016). Global trends in sustainability reporting regulation and policy, *Carrots & Sticks*.
- [3] Barnard, Z. and Van Der Merwe, D. (2016). Innovative management for organizational sustainability in higher education. *International Journal of Sustainability in Higher Education*, vol. 17. pp. 208-227.
- [4] Carayannis, E. G., Sindakis, S. and Walter, CH. (2015). Business model innovation as level of organizational sustainability. *The Journal of Technology Transfer*, vol. 40, pp. 85-104.
- [5] Ciegis, R., Ramanauskiene, J. and Martinkus, B. (2009). The concept of sustainable development and its use for sustainability scenarios. *Engineering Economics*, vol. 62, pp.28-37.
- [6] Dagiliene, L. (2014). *Socialinė apskaita: teorinė argumentacija ir vertinimas*. Mokslo monografija. KTU: Technologija.
- [7] Dobrovolskiene, N., Tvaronaviciene, M. and Tamosiuniene, R. (2017). Tackling projects on sustainability: A Lithuanian case study. *Entrepreneurship and Sustainability Issues*, vol. 4, pp. 477- 488.
- [8] Dingwerth, K. and Eichinger, M. (2010). Tamed transparency: How information disclosure under the global reporting initiative fails to empower. *Global Environmental Politics*, Massachusetts, vol. 10, no. 3, pp. 74-96.
- [9] Friedman, L. (2011). Sustainability driving innovation/innovation driving sustainability. *International Journal of Innovation Science*, vol. 3, pp. 1-2.
- [10] Global Reporting Initiative's (GRI) Reporting 2025 Project (2015). Sustainability and Reporting Trends in 2025. Preparing for the future. Available: <https://www.globalreporting.org/resource/library/Sustainability-and-Reporting-Trends-in-2025-1.pdf>.
- [11] Goela, M. and Ramanathanb, P.E. (2014). Business ethics and corporate social responsibility – Is there a dividing line? *Procedia Economics and Finance*, vol. 11, pp.49 – 59.
- [12] GRI. Available: <https://www.globalreporting.org/information/sustainability-reporting/Pages/reporting-benefits.aspx>.

- [13] Iwu, Ch. G., Kapondoro, L., Twum-Darko, M. and Tengeh, R. (2015). Determinants of Sustainability and Organisational Effectiveness in Non-Profit Organisations, *Sustainability*, vol. 7, no. 7, pp. 9560-9573.
- [14] Kolk, A. (2004). A decade of sustainability reporting: developments and significance. *Int. J. Environment and Sustainable Development*, vol. 3, no. 1, pp. 51-64.
- [15] Kopnina, H. (2016). The victims of unsustainability: A challenge to sustainable development goals. *International Journal of Sustainable Development & World Ecology*, vol. 23, no. 2, pp. 113-121.
- [16] Moneva, J. M., Archel, P. and Correa, C. (2006). GRI and the camouflaging of corporate unsustainability. *Accounting Forum*, vol. 30, no. 2, pp.121-137.
- [17] Redclift, M. (2008). Weak versus strong sustainability: Exploring the limits of two opposing paradigms. *Progress in Human Geography*, vol. 32, pp. 311-312.
- [18] Radomska, J. (2015). The concept of sustainable strategy implementation. *Sustainability*, no. 7, pp. 15847-15856.
- [19] Streimikiene, D., Baležentis, A. (2013). Integrated sustainability index: The case study of lithuania. *Intellectual Economics*, Vilnius: MRU, vol. 7, no. 3(17), pp. 289-303.
- [20] Visser, W. and Courtice, P. (2011). Sustainability leadership: Linking theory and practice. SSRN Working Paper Series. Available:https://papers.ssrn.com/sol3/papers.cfm?abstract_id=1947221.
- [21] Verjel, A. and Schmid, J. (2015). Possibilities of increasing business sustainability in the context of globalization. The case of the SMEs. *Procedia Economics and Finance*, vol. 32, pp. 716-720.

NORMATIVE APPROACH TO WASTE MANAGEMENT AS PUBLIC SERVICE IN GLOBAL PERSPECTIVE

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Abstract. The waste treatment, as it is not cheap matter, cannot be apprehended without bindings on people's health, as well as on environment for their full-value lives. This approach is, among others, fully in intentions of interests of supra - national communions, for example – UN, World banks, OECD, EU etc., when according to WB is expected doubling of creation the solid municipal waste by the year 2025. The creation of firm municipal solid waste is influenced not only by economic growth and development, but also by degree of industrialization, local customs and climate. Regarding the creation and processing wastes, there is obvious permanent tendency (in developed countries) towards to limitation of waste disposal vice versa towards to searching alternative waste processing methods. There is the interest within this context of waste treatment not only from economists, but also from environmentalist which is concentrated on assessing influences waste disposal and operation of waste landfill on environment. The valuation of environmental estates, services also environmental impact can afford suitable instrument for integration of the environment problems into decision - making and consequently also developing processes. Despite of considerable progress, which was achieved in recent years, externalities quantification and evaluation involved in solid waste dispose are still connected with great uncertainty as well as with considerable limitations theoretical and practical. These limitations are taken into considerations when dealing with alternative technologies and procedures of waste dispose, suitable allocation of needed infrastructure and setting effective price policy for services in the field waste treatment etc.

Keywords: solid waste, normative approach, waste management, waste policy

JEL Classification: Q53, O44, H23

1. Introduction

Nakládání s odpady, ačkoliv není levnou záležitostí, nemůže být vnímáno bez vazby na zdraví lidí, stejně jako na prostředí pro jejich plnohodnotné životy. Tento přístup je, mimo jiné, plně v intencích zájmů nadnárodních společenství, za všechny – OSN, Světová banka, OECD, EU apod., když podle Světové banky je očekáváno zdvojnásobení tvorby pevného komunálního odpadu do roku 2025. Tvorba tuhého komunálního odpadu je ovlivňována nejen ekonomickým růstem a rozvojem, ale také stupněm industrializace, místními zvyklostmi a klimatem. Globální

rozměr uvedené problematiky implikuje možnost využívání postupů dobré praxe v oblasti odpadového hospodářství, na které lze nahlížet částečně jako na veřejnou službu.

Pokud jde o vznik a zpracování odpadů, je ve vyspělých zemích, rovněž tedy v zemích EU, stále zřetelnější trend směrem k omezování skládkování a naopak k hledání alternativních způsobů zpracování odpadů. Zájem nejen ekonomů, ale také ekologů či environmentalistů se v této souvislosti koncentruje na posuzování vlivů skládkování a provozu skládek na životní prostředí. Ocenění environmentálních statků, služeb a také environmentálních dopadů může poskytnout vhodný nástroj pro integraci problematiky životního prostředí do rozhodovacích a následně také rozvojových procesů. Navzdory značnému pokroku, jehož bylo dosaženo v posledních letech, kvantifikace a oceňování externalit spojených s nakládáním s pevnými odpady jsou stále spojeny s velkou nejistotou a také se značnými omezeními teoretickými i praktickými, které se promítají do úvah týkajících se alternativních technologií a postupů nakládání s odpady, vhodné alokace potřebné infrastruktury, nastavení efektivní cenové politiky pro služby v oblasti nakládání s odpady apod., a jsou tedy vysoce aktuálními otázkami normativního charakteru.

Na procesy nakládání s odpady lze nahlížet jako na prevenci významných ztrát materiálu, energie a cenných zdrojů jako takových, takže legislativní i ekonomické stimuly jsou implementovány s cílem obnovení cenných zdrojů, stejně jako s cílem omezení znečištění prostředí. Regenerace materiálů a využívání odpadního tepla cestou využití mechanických a biologických procesů skýtají nemalý potenciál nejen v průmyslu. Odpadové hospodářství by tak, analogicky jako jiná odvětví, mohlo fungovat efektivněji s využitím procesů, využívajících analyticko-technologické nástroje. Existující technologie by mohly být využity na opatření v oblasti kritických charakteristik odpadů, poskytovat data dle platné legislativy, přispívat k procesům zpracování odpadů a také by mohly vlastníkům poskytnout informace pro rozhodování. Optické technologie nabízí nejflexibilnější řešení sběru informací v reálném čase s tím, že mohou být aplikovatelné v každém procesu mechanického nebo biologického zpracování odpadů v průmyslu (Vrancken et al., 2017).

Přínejmenším v kontextu výše uvedeného je zřejmé, že realizace komunálního odpadového hospodářství představuje složitý systém s mnoha vnitřními kauzalitami. Integrovaný systém odpadového hospodářství se proto stává novým trendem již při jeho provozování na komunální úrovni s cílem dosažení udržitelného rozvoje těchto municipalit. Je proto žádoucí věnovat zvýšenou pozornost výběru analytických metod založených nejen na řadě pozorování, jenž umožní vzájemně propojit hlediska krátkodobá i dlouhodobá, stejně jako hlediska lokální s hledisky globálními (Aparcana, 2016, Ma & Hipel, 2016). Dlouhodobý charakter odpadového hospodářství, nejen v souvislosti s životním cyklem odpadů vytváří nutnost sestavovat formalizované strategie pro hospodářskou politiku vč. těch, které budou zaměřeny také na překonávání bariér pro efektivní odpadové hospodářství. Proto akceptování lokálních zvláštností v politické, ekonomické i institucionální rovině představuje klíčový faktor pro tyto strategie, se kterými stoupá šance na úspěch, a které skutečně představují cestu k dokonalejšímu fungování v oblasti odpadů nejen pokud jde o jejich produkci stejně jako o nakládání s nimi.

Odpadové hospodářství zahrnuje velký počet subjektů, které reprezentují různé zájmové skupiny. Všichni se však v realitě podílejí na formování vzhledu měst, i když to může být vnímáno pouze optikou zodpovědnosti vůči lokálním aktérům (Guerrero et al., 2013, de Souza Melare et al, 2017). V nejlepším případě jsou poté občané vtaženi do spolurozhodování o podobě municipality. Detailní vymezení pravomocí a zodpovědnosti každého zainteresovaného představuje důležitý krok v nastolení efektivního systému. Komunikace mezi těmito subjekty

představuje klíčový aspekt funkčního systému odpadového hospodářství v každém městě nebo obci. Vzhledem k otázkám, souvisejícím s umístěním a velikostí odpadového hospodářství, je nezbytné v procesu rozhodování při zohlednění očekávání všech aktérů využít variantní přístup, který umožní minimalizovat konflikty mezi environmentálními a ekonomickými aspekty při současné redukci počtu řešení s cílem usnadnit sblížení stanovisek a dosáhnout optimální řešení. Rovněž se ukazuje být nezbytným systémový přístup pracující s různými rámci. Chifari et al. (2016) v této souvislosti navrhuje rámec, který zohledňuje širokou škálu oblastí a současně je koncepčně hodnotí dle:

1. Proveditelnosti ve vztahu k vnějším omezením (provázanost kapacit v kontextu platné legislativy daného území).
2. Životaschopnosti ve vztahu k vnitřním omezením (ekonomické náklady, technické podmínky a omezení).
3. Vhodnosti ve vztahu k normativnímu vymezení a hodnotové orientaci zainteresovaných sociálních aktérů.

Zájem nejen ekonomů, ale také ekologů či environmentalistů se koncentruje rovněž na posuzování vlivů skládkování a provozu skládek na životní prostředí (Gaglias et al., 2016, Eshet et al., 2006). Ocenění environmentálních statků, služeb a také environmentálních dopadů může poskytnout vhodný nástroj pro integraci problematiky životního prostředí do rozhodovacích a následně také rozvojových procesů. Navzdory značnému pokroku, jehož bylo dosaženo v posledních letech, kvantifikace a oceňování externalit spojených s nakládáním s pevnými odpady jsou stále spojeny s velkou nejistotou a také se značnými omezeními teoretickými i praktickými. Vedle nejistoty ohledně dostupných dat a používaných metod, která souvisí s vymezením základních předpokladů, jsou zde další vlivy politického nebo etického charakteru. Jakkoli je hodnocení externalit kontroverzním, nejednoznačným procesem, poskytuje prostor pro hledání užitečných řešení. Zejména v otázkách nakládání s odpady umožňuje využití tohoto přístupu v rámci analýzy nákladů a přínosů stanovit priority alternativních technologií a postupů nakládání s odpady, vhodně alokovat a instalovat potřebnou infrastrukturu, nastavit efektivní cenovou politiku pro služby v oblasti nakládání s odpady apod.

Ukazuje se, že výběr míst pro ukládání a shromažďování odpadů je nemalým problémem nejen při samotných úvahách, týkajících se sběru komunálního odpadu, ale také např. při nutnosti přemístit stávající skládku. Monitorování různých schémat sběru může proto poskytnout užitečnou informaci pro příští rozhodování, přičemž by měla být zohledněna nejen tradiční nákladová kritéria a novější kritéria udržitelnosti (Ferreira et al., 2017, Faltova Leitmanova & Petrach, 2015). Umístění skládek je přitom, i přes kompenzace hostitelské komunity dalším ožehavým tématem, které je diskutováno politiky stejně jako akademiky. Detailní zkoumání, prováděné v Irsku (Ferreira & Gallagher, 2010) ukazuje, že se projevují dva postoje ohledně kompenzace v komunitách s přímými dopady infrastruktury odpadového hospodářství (skládky a spalovny). Komunity v plánovací, resp. stavebně přípravné fázi jsou méně vstřícné ohledně kompenzací těchto projektů než komunity, v blízkosti kterých již existovala tato zařízení.

2. Body of paper

2.1 Material and Methods

V tomto příspěvku je analyzována jako klíčová kategorie objem komunálního odpadu a jeho vývoj ve vybraných zemích Evropské unie v pětiletých intervalech dvou dekád 1995 – 2015. Konkrétně se jedná o roky 1995, 2000, 2005, 2010, 2015. Autoři si položili dvě výzkumné otázky:

- výzkumná otázka 1 – výše HDP je korelována s objemem komunálního odpadu,
- výzkumná otázka 2 – podíl opětovného využití odpadu je korelován s objemem komunálního odpadu.

V rámci výzkumné otázky 1 je sledován vztah mezi vytvořeným hrubým domácím produktem v běžných cenách na jednoho obyvatele ($\frac{HDP}{obyv.}(t)$ v EUR) a objemem komunálního odpadu na jednoho obyvatele ($\frac{OD}{obyv.}(t)$ v kg).

Tento vztah byl zkoumán pomocí regresní analýzy v software Statistica 12 na vzorku 23 zemí (Rakousko, Belgie, Česko, Dánsko, Estonsko, Finsko, Francie, Německo, Řecko, Maďarsko, Irsko, Itálie, Lotyšsko, Lucembursko, Nizozemí, Norsko, Polsko, Portugalsko, Slovensko, Slovinsko, Španělsko, Švédsko, Velká Británie) s výjimkou let 1995 (pouze 22 zemí – není zde Irsko) a 2015 (pouze 20 zemí – není zde Řecko, Irsko, Portugalsko) v důsledku absence dat ve zmíněných letech. Zdrojem dat byly databáze Eurostat a OECD. Závislost mezi oběma proměnnými byla zkoumána na hladině významnosti $\alpha = 0.05$.

Lineární regresní model

$$y_t = \beta_1 + \beta_2 x_{t2} + \dots + \beta_k x_{tk} + \varepsilon_t, \quad t = 1, \dots, T \quad (1)$$

byl využit v upraveném formálním maticovém zápisu

$$y = X\beta + \varepsilon, \quad (2)$$

kde

$$X = \begin{pmatrix} x_{11} & x_{12} & \dots & x_{1k} \\ x_{21} & x_{22} & \dots & x_{2k} \\ \vdots & \vdots & \dots & \vdots \\ x_{T1} & x_{T2} & \dots & x_{Tk} \end{pmatrix} = \begin{pmatrix} 1 & x_{12} & \dots & x_{1k} \\ 1 & x_{22} & \dots & x_{2k} \\ \vdots & \vdots & \dots & \vdots \\ 1 & x_{T2} & \dots & x_{Tk} \end{pmatrix}, \beta = \begin{pmatrix} \beta_1 \\ \beta_2 \\ \vdots \\ \beta_k \end{pmatrix}, \varepsilon = \begin{pmatrix} \varepsilon_1 \\ \varepsilon_2 \\ \vdots \\ \varepsilon_k \end{pmatrix}, \quad (3)$$

přičemž X je matice ($T \times k$), β je vektor ($k \times 1$), ε je vektor ($T \times 1$).

Vztahy mezi objemem odpadu a HDP jsou poté také graficky ilustrovány pomocí 2D Bag Plot grafů v letech 1995 a 2015 s vyjádřením mediánu obou proměnných.

Výzkumná otázka 2 představuje další vysvětlení výsledků zkoumaného stavu je také ve stejných letech sledován vztah mezi $\frac{OD}{obyv.}(t)$ v kg a podílem recyklovaného a kompostovaného odpadu na celkovém objemu odpadu ($REC(t)$ v %). Tento vztah je však sledován na menším vzorku zemí Evropské unie s ohledem na dostupná data. V tomto případě se jedná o Rakousko, Belgii, Česko, Dánsko, Estonsko, Finsko, Francii, Německo, Maďarsko, Itálii, Lucembursko, Nizozemí, Norsko, Polsko, Slovensko, Slovinsko, Švédsko a Velkou Británii. Závislost mezi

oběma proměnnými byla zkoumána na hladině významnosti $\alpha = 0.05$. A poté také graficky ilustrována pomocí 2D Bag Plot grafů v letech 1995 a 2015.

3. Results

Pro zkoumání trendu byla uvažována lineární funkce, kterou uvádí vztah (2), kde koeficienty β a ε vychází z minimalizace čtverců odchylek (rozdíl mezi daty a modelem – metoda nejmenších čtverců). Tvar funkce je odůvodněn přetrvávajícím růstem ve sledovaném období. Vzájemné závislosti ve sledovaných obdobích uvádí Table 1.

Table 1: Popisné charakteristiky

Exogenní proměnná	b*	Sm. chyba z b*	b	sm. chyba z b	t-stat	p-hodnota	R	R ²	N
konstanta			329,68	31,82	10,36	0,000000			
HDP/obyv. (1995)	0,69	0,16	0,01	0,00	4,32	0,000333	0,69	0,48	22
konstanta			356,57	29,43	12,12	0,000000			
HDP/obyv. (2000)	0,78	0,14	0,01	0,00	5,63	0,000014	0,78	0,60	23
konstanta			350,04	38,74	9,03	0,000000			
HDP/obyv. (2005)	0,70	0,16	0,01	0,00	4,46	0,000215	0,70	0,49	23
konstanta			356,19	38,81	9,18	0,000000			
HDP/obyv. (2010)	0,66	0,16	0,00	0,00	4,00	0,000653	0,66	0,43	23
konstanta			339,38	41,98	8,09	0,000000			
HDP/obyv. (2015)	0,64	0,18	0,00	0,00	3,58	0,002143	0,64	0,42	20

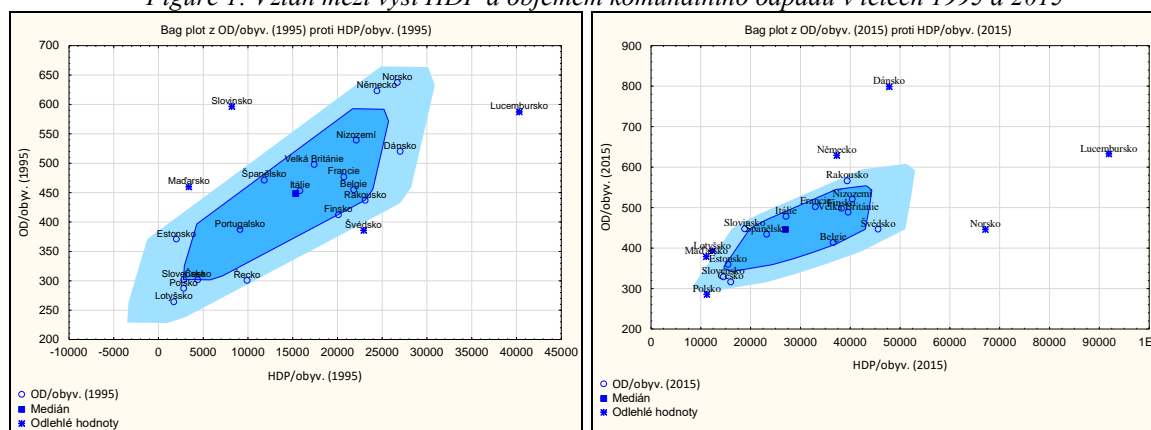
Source: Eurostat, OECD, vlastní výpočty

Potvrzení výzkumné otázky 1 není jednoznačné, ačkoli byla tato závislost statisticky významná, nebyly vztahy mezi výší vytvořeného HDP a objemy komunálního odpadu u všech sledovaných zemí v celém sledovaném období stejné. Na základě vzájemného vztahu mezi těmito proměnnými tak bylo možné identifikovat tři vzájemné závislosti:

- vyšší HDP doprovázený vyšším objemem komunálního odpadu,
- vyšší HDP doprovázený nižším objemem komunálního odpadu,
- nižší HDP doprovázený vyšším objemem komunálního odpadu.

Ve sledovaném období let 1995 – 2015 došlo k vývoji vztahu mezi HDP a odpady (Figure 1), když v roce 1995 vykazovalo extrémní hodnoty Lucembursko (vyšší HDP, vyšší objem komunálního odpadu), Slovinsko (nižší HDP, vyšší objem komunálního odpadu), Maďarsko (nižší HDP, vyšší objem komunálního odpadu) a Švédsko (vyšší HDP, nižší objem komunálního odpadu). V roce 2015 vykazovalo extrémní hodnoty opět Lucembursko (vyšší HDP, vyšší objem komunálního odpadu) a dále Dánsko (vyšší HDP, vyšší objem komunálního odpadu), Polsko (nižší HDP, nižší objem komunálního odpadu), Německo (vyšší objem komunálního odpadu) a Norsko (vyšší HDP, nižší objem komunálního odpadu).

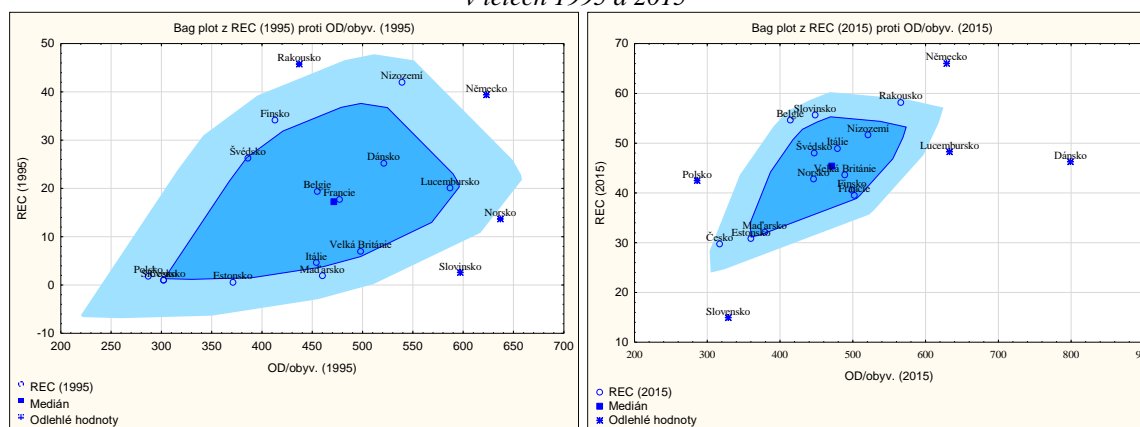
Figure 1: Vztah mezi výší HDP a objemem komunálního odpadu v letech 1995 a 2015



Source: Eurostat, OECD, vlastní zpracování

Dalším výzkumnou otázkou, která je autory zkoumána, je vztah podílu opětovně využitého odpadu formou recyklace a kompostování z celkového objemu komunálního odpadu a množství komunálního odpadu. Vztah mezi těmito dvěma proměnnými není statisticky signifikantní na hladině významnosti $\alpha = 0.05$. Bylo selektováno 18 států Evropské unie, dvě období, tedy rok 1995 a 2015. V těchto dvou obdobích je zásadní jak se změnila proporce podílu recyklování odpadu. Z tohoto pohledu (Figure 2) je na tom nejlépe Estonsko, které zaznamenalo nárůst podílu o 30,3 procentních bodů, dále pak Česká republika s nárůstem 28,7 procentních bodů. Nezbytné je si pochopitelně uvědomit výchozí hodnotu podílu, která je u obou států velmi nízká. Oproti tomu státy jako je např. Rakousko či Nizozemsko měly podíl recyklace v roce 1995 již přes 40 % a zvýšení podílu k roku 2015 nebylo logicky tak markantní, přičemž některé státy (Estonsko, Česká republika, Slovensko) ani v roce 2015 nedosahují hranice 40 %. Druhý analyzovaný údaj je množství komunálního odpadu na obyvatele (v kg). U vybraných států je možno sledovat tři zásadní odlišnosti, resp. rozdělit státy do tří skupin. První skupina, z pohledu tvorby odpadů nejlepší, je skupina států, kde množství odpadu v časovém horizontu 1995 – 2015 klesá. Konkrétně se jedná od Norsko a Slovinsko. Druhou skupinou jsou státy, kde množství odpadů výrazně vzrostlo, například Dánsko – 53 % nárůst a Rakousko 30%. Poslední skupinu tvoří země, kde množství odpadů relativně zůstává na stejné úrovni, tedy procentuální změna do 10%.

Figure 2: Vztah mezi objemem komunálního odpadu a podílem recyklovaného a kompostovaného odpadu v letech 1995 a 2015



Source: Eurostat, OECD, vlastní zpracování

Z ekonomického a enviromentálního pohledu lze považovat za ideální stav protichůdné trendy obou sledovaných ukazatelů. Tedy zvyšovat podíl recyklace a snižovat množství

komunálního odpadu. Z této perspektivy jsou nejlepší státy Belgie, Norsko, Maďarsko a Slovinsko.

4. Conclusion

Uvedená analýza je dalším příspěvkem řešení globálního problému, kterým je udržitelný rozvoj se zaměřením na možný vývoj v oblasti vzniku odpadů a nakládání s nimi, v rámci rozhodování tvůrců hospodářských politik na úrovni obcí přes centrální orgány na úrovni národních ekonomik až po globální úroveň. Předpokladem tohoto normativního přístupu by měl být detailnější pohled, založený na zohlednění dalších faktorů. Za všechny pouze pro ilustraci dalších úhlů pohledu v kontextu komunálního odpadu např. Somplak et al. (2016) na základě analýzy trendů odhadují potenciál pro navýšení míry separace jednotlivých složek tříděného sběru v budoucnosti (obsah vytríditelných složek komunálního odpadu v rámci směsného komunálního odpadu) v závislosti na typu zástavby.

Rybova (2017) analyzovala 13 nezávislých socio-demografických proměnných, ovlivňujících komunální odpad a separaci jeho složek, z nichž byly jako statisticky významné hodnoceny tyto: průměrná velikost domácností, podíl osob s vysokoškolským vzděláním, podíl rodinných domů, parita kupní síly, podíl osob zaměstnaných v zemědělství a index maskulinity. Nebylo potvrzeno, že by na produkci tříděného sběru odpadu měl vliv věk.

Obtížnost měření vlivu jednotlivých faktorů na zájem, resp. potenciál aktivního zapojení se do třídění odpadu zdůrazňují také Blomér a Jansson (2015), když doporučují zkoumat typy domácností a demografické charakteristiky. V neposlední řadě je nezbytné zohlednit rovněž odpovídající infrastrukturu, zejména pak silniční, která je významně ovlivňuje nakládání s odpady (Halova & Alina, 2015).

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References

- [1] Aparcana, S. (2016). Approaches to formalization of the informal waste sector into municipal solid waste management systems in low-and middle-income countries: Review of barriers and success factors. *Waste Management*, vol 61, pp. 593-607.
- [2] Blomér, F. and Jansson, A. (2015). Improving waste sorting-and collection systems. Chalmers university of technology Gothenburg, *Report no. 2015:3*.
- [3] Chifari, R., Piano, S. L., Bukkens, S. G., and Giampietro, M. (2016). A holistic framework for the integrated assessment of urban waste management systems. *Ecological Indicators*.
- [4] Eshet, T., Ayalon, O., and Shechter, M. (2006). Valuation of externalities of selected waste management alternatives: A comparative review and analysis. *Resources, Conservation and Recycling*, vol. 46, pp. 335-364.

- [5] Faltova Leitmanova, I. and Petrach, F. (2015) Waste management business aimed at municipal solid waste. *Aktuálne problémy podnikovej sféry*, Bratislava: Ekonóm, pp. 98-105.
- [6] Ferreira, F. et al. (2017). Assessment strategies for municipal selective waste collection schemes. *Waste management*, vol. 59, pp. 3-13.
- [7] Ferreira, S., and Gallagher, L. (2010). Protest responses and community attitudes toward accepting compensation to host waste disposal infrastructure. *Land Use Policy*, vol. 27, pp. 638-652.
- [8] Gaglias, A., Mirasgedis, S., Tourkolias, C., and Georgopoulou, E. (2016). Implementing the Contingent Valuation Method for supporting decision making in the waste management sector. *Waste Management*, vol. 53, pp. 237-244.
- [9] Guerrero, L. A., Maas, G., and Hogland, W. (2013). Solid waste management challenges for cities in developing countries. *Waste management*, vol. 33, pp. 220-232.
- [10] Halova, P. and Alina, J. (2015). The economic effects of investments in road infrastructure in Czech republic. *Sborník z konference MSED 2015*, Praha, pp. 12 – 2.
- [11] Ma, J. and Hipel, K. W. (2016). Exploring social dimensions of municipal solid waste management around the globe – A systematic literature review. *Waste Management*, vol. 56, pp. 3-12.
- [12] Rybova, K. (2017). Jak ovlivňují socio-demografické proměnné produkci tříděného sběru komunálního odpadu? Případová studie České republiky. *Waste management*, pp. 102.
- [13] de Souza Melare, A. V., Gonzalez, S. M., Faceli, K., and Casadei, V. (2017). Technologies and decision support systems to aid solid-waste management: a systematic review. *Waste management*, vol. 59, pp. 567-584.
- [14] Somplak, R., Pavlas, M., and Smejkalova, V. (2016). Pokrok ve vývoji nástroje pro predikci produkce a složení komunálních odpadů. In *Sborník konference*. Praha: CEMC, pp. 1-16.
- [15] Vrancken, C., Longhurst, P. J. and Wagland, S. T. (2017). Critical review of real-time methods for solid waste characterisation: Informing material recovery and fuel production. *Waste Management*, vol. 61, pp. 40-57.

ASSESSMENT OF SOCIO-ECONOMIC DEVELOPMENT IN POLAND IN THE YEARS 2010-2015

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Abstract. Socio-economic development is commonly treated as a foundation for sustainable development concept, which is currently considered as an objective of every government in developed countries. Improving conditions for socio-economic development is a major contributor to building countries international competitive advantage in globalized economy. In addition to instruments to stimulate socio-economic development, an important element of this policy should be also instruments allowing for its measurement. Assessing the level of socio-economic development of a country relative to a selected group of countries, or assessing development at regional level, is a fundamental determinant of the overall economic policy of the state. It is therefore important to develop procedures for systematic monitoring of the level of economic development, both at national or regional level. The aim of this article is to evaluate the socio-economic development in Poland at NUTS 2 regional level in the years 2010-2015. Due to the fact that the phenomenon of socio-economic development can be treated as multidimensional, in the study TOPSIS method was used. Four key diagnostic variables were identified in the study, which enabled to assess a synthetic measure of socio-economic development for the country. In the research data provided by Central Statistical Office of Poland was used. Gross domestic product per capita, investments outlays per capita, relative poverty risk index, and participation of individuals in households benefiting from social welfare were included in the set of variables. The results showed that within six years there was an increase in the level of development for most voivodships.

Keywords: TOPSIS, socio-economic development, regional analysis, NUTS 2, Poland

JEL Classification: P25, C38

1. Introduction

The balanced development of all EU member states is considered to be the most important goal of EU internal policies. This goal was stated in the Europe 2020 plan (see: Balcerzak, 2015). The policy for the implementation of the Europe 2020 plan assumes the use of EU funds and the use of own funds by member states. Sustainable development of a chosen country (region) consists of economic, social and environmental orders (see: Bajdor, 2012; Shuaibu & Oladayo, 2016; Kuc, 2017A; Kuc, 2017B; Kułyk et al., 2017). The implication is that it is difficult to establish one measure that would reflect the level of sustainable development. For

every single order we can distinguish a set of variables describing the properties of a region relative to the considered order. Undoubtedly, the most crucial factor influencing the level and changes in sustainable development is the economic order as well as another one that is directly associated with it - the social order. These orders make up a socio-economic development. Only a sufficiently high level of socio-economic development enables an effective implementation of the policy related to increasing the level of the environmental order (Pietrzak & Balcerzak, 2016A; 2016B).

The most important determinants of the economic aspect for the socio-economic development considered in terms of economic aspects are gross domestic product per capita and investments outlays per capita. Studying conditional economic convergence and Total Factor Productivity related to the analysis of these variables allows to assess countries in terms of the use of specific factors (investment in innovation, capital investment) in creating economic growth (see: Pietrzak & Balcerzak, 2016c; Meluzin & Zinecker, 2014; 2016; Furkova & Chocholata, 2017). The economic situation of the country through labour market mechanisms translates into the standard of living of its inhabitants (see: Gajdos & Zmurkow-Poteralska; 2012; Arendt, 2014; Hadas-Dyduch, et al., 2016). This means that appropriate levels of GDP per capita and economic growth allow the creation of cash transfers, directly - in the form of wages, pensions and indirectly – in the form of social transfers under the social policy of the state. The level of salaries, unemployment rate, relative poverty risk index and proportion of individuals in households benefiting from social welfare in the general population are all factors that determine the level of social order (see: Murawska, 2016; Łaskiewicz, 2016).

The purpose of this article is to evaluate the socio-economic development in Poland. The study was conducted using the TOPSIS method at the regional NUTS 2 (voivodships) level in the time period 2010-2015. Due to the planned achievement of the target, a research hypothesis was posed, according to which, as a result of positive changes in the institutional order in Poland, an increase in the level of socio-economic development in 2010-2015 can be noticed.

2. The TOPSIS method

The article addresses the problem of analysing the phenomenon of the socio-economic development which should be treated as a multifaceted phenomenon with many aspects of research. The methodology of multidimensional comparative analysis is applied to assess the type of the phenomenon (see: Simkova, 2015; Balcerzak, 2009; 2016A; Łyszczarz, 2016; Zelazny & Pietrucha, 2017). The methodology employs the taxonomic measure of development (TMD) most commonly (Balcerzak, 2016B). In order to use this measure, the analysed phenomenon is broken down into a set of economic aspects, and then for each aspect a set of diagnostic variables is selected. Next, based on the accepted diagnostic variables, a synthetic variable (taxonomic measure of development) is determined. The obtained values of the taxonomic measure of development are the resultant level of variables, related to various aspects of the studied phenomenon and allow its synthetic description to be made.

The most commonly used method for determining TMD values in economic research is the TOPSIS method. The TOPSIS method procedure consists of the following steps. In the first step, the procedures for all the positive ideal solution and negative ideal solution variables ones are determined. Then, based on the accepted set of diagnostic variables, distances of the object from the ideal solutions are calculated for each object (region). In the last step of the procedure, the value of the taxonomic measure of development is established taking into account the determined distances.

3. Assessment of socio-economic development in Poland

The article discusses the issue of measuring socio-economic development in Poland at the level of voivodships. According to the assumed objective of the article, the taxonomic measure of development (TMD) was applied to measure the development level and the values were determined using the TOPSIS method (see: Balcerzak, 2016C). Four key diagnostic variables were used in the study, based on which TMD values were determined (See: Table 1). The set of variables comprised gross domestic product per capita, investments outlays per capita, the relative poverty risk index, and proportion of individuals in households benefiting from social welfare in the general population. The values of the variables were obtained from Poland's Central Statistical Office and are available at <http://wskaznikizrp.stat.gov.pl/>. Levels of variables X1 - gross domestic product per capita, X2 - investments outlays per capita indicate the economic development of voivodships and these variables function as stimulants of development. On the other hand, the values of variables X3 - relative poverty risk index, and X4 - proportion of individuals in households benefiting from social welfare in the general population show the social situation of inhabitants of selected voivodships, and these variables are inhibitors to development.

Table 1: The set of diagnostic variables

Variable	Description of Variables
X1	gross domestic product per capita
X2	Investments outlays per capita
X3	relative poverty risk index
X4	proportion of individuals in households benefiting from social welfare in the general population

Source: own estimations

Then, based on the value of the accepted diagnostic variables, TMD values were determined. The obtained results are presented in Table 2. The ranking of voivodships in terms of level of economic development in 2015 was made and, according to the position in the ranking, the results were presented for each of the voivodships. Moreover, using the method of Natural Breaks, the voivodships were assigned to four classes. Class 4 consists of voivodships with the highest socio-economic development level, and class 1 with the lowest level. The results of the classification of voivodships into four classes are also contained in Table 2.

Taking into account the results obtained, it has to be stated that over the last five years the situation of most voivodships in terms of socio-economic development has improved. Only in the case of the lubuskie and świętokrzyskie voivodships, a lower level of development was observed in 2015, when compared to 2010. This translates into the assignment of voivodships to classes where in 2010 there were five voivodships of class 1 and in 2015 only two – the świętokrzyskie and warmińsko-mazurskie voivodships. One should emphasize the weak situation of the świętokrzyskie voivodeship, which was degraded from class 2 to class 1.

Table 2: Ranking and grouping of voivodeships

Voivodship	2010			2015		
	TMD	Rank	Class	TMD	Rank	Class
mazowieckie	0,782	1	4	0,879	1	4
dolnośląskie	0,633	3	3	0,726	2	3
wielkopolskie	0,612	2	3	0,711	3	3

pomorskie	0,606	4	3	0,684	4	3
łódzkie	0,617	7	3	0,678	5	3
śląskie	0,592	5	3	0,671	6	3
małopolskie	0,558	8	2	0,653	7	3
zachodniopomorskie	0,521	13	1	0,613	8	2
podlaskie	0,519	16	1	0,589	9	2
opolskie	0,527	11	1	0,572	10	2
kujawsko-pomorskie	0,553	10	2	0,568	11	2
podkarpackie	0,523	12	1	0,553	12	2
lubuskie	0,594	6	3	0,542	13	2
lubelskie	0,493	14	1	0,537	14	2
świętokrzyskie	0,536	9	2	0,518	15	1
warmińsko-mazurskie	0,481	15	1	0,511	16	1

Source: own estimations

In the whole group of the voivodships, the mazowieckie voivodeship is found to be the best developed in economic terms. Both in 2010 and in 2015 the voivodship was the only one forming class 4 with the highest level of economic development. Following the mazowieckie voivodship, class 3 contains voivodships characterised by a high level of economic development: the dolnośląskie, wielkopolskie, pomorskie, łódzkie, śląskie and małopolskie ones. The group with a lower level of economic development include the zachodniopomorskie, podlaskie, opolskie, kujawsko-pomorskie, podkarpackie and lubuskie voivodships, which in 2015 were assigned to class 2. Here too, one should point to a significant decrease in the level of economic development in the lubuskie voivodeship that was degraded from class 3 to class 2.

4. Conclusion

According to the assumed objective of the article, Poland's voivodships were assessed in terms of their levels of socio-economic development. The application of the TOPSIS method allowed to measure the level of development using the taxonomic measure of development (TMD). For most voivodships, growth rates were observed in the years 2010-2015. This allowed the verification of the formulated research hypothesis, according to which, due to positive changes in the institutional order, a systematic increase in the level of socio-economic development is observed in Poland. The best situation can be found in the mazowieckie voivodeship, which largely results from the highest level of development in the metropolitan city of Warsaw, the capital city of Poland. The weakest economic situation occurs in the voivodships located in the east of Poland. This indicates a still valid division of Poland into two parts, a western part with a much higher level of development, if compared to the eastern part.

References

- [1] Arendt, Ł. (2014). New system of employment forecasting in Poland. *Entrepreneurship and Human Resources in Management*, vol. 15, no. 2, pp. 75-90.
- [2] Bajdor, P. (2012). Comparison between sustainable development concept and green logistics – the literature review. *Polish Journal of Management Studies*, vol. 5, pp. 236-244.

- [3] Balcerzak, A. P. (2009). Effectiveness of the institutional system related to the potential of the knowledge based economy. *Ekonomista*, vol. 6, pp. 711-739.
- [4] Balcerzak, A. P. (2015). Europe 2020 strategy and structural diversity between old and new member states. Application of zero-unitarization method for dynamic analysis in the years 2004-2013. *Economics & Sociology*, vol. 8, no. 2, pp. 190-210.
- [5] Balcerzak, A. P. (2016A). Fiscal burden in the European Union countries. *Economic Annals XXI*, vol. 161, no. 9-10, pp. 4-6.
- [6] Balcerzak, A. P. (2016B). Multiple-criteria evaluation of quality of human capital in the European Union countries. *Economics & Sociology*, vol. 9, no. 2, pp. 11-27.
- [7] Balcerzak, A. P. (2016C). Technological potential of European economy. Proposition of measurement with application of multiple criteria decision analysis. *Montenegrin Journal of Economics*, vol. 12, no. 3, pp. 7-17.
- [8] Furkova, A. and Chocholata, M. (2017). Interregional R&D spillovers and regional convergence: A spatial econometric evidence from the EU regions. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, vol. 12, no. 1, pp. 9-24.
- [9] Gajdos, A. and Zmurkow-Poteralska, E. (2012). Skilled personnel supply and the prospects for regional innovative development in Poland. *Comparative Economic Research Central and Eastern Europe*, vol. 4, pp. 45-58.
- [10] Hadas-Dyduch, M., Balcerzak, A. P. and Pietrzak, M. B. (2016). Wavelet analysis of unemployment rate in Visegrad countries. *16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecké Teplice, Slovak Republic, pp. 595-602.
- [11] Kuc, M. (2017A). Social convergence in Nordic countries at regional level. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, vol. 12, no. 1, pp. 25-41.
- [12] Kuc, M. (2017B). Spatial differences in sustainable development components in Nordic regions. *The 11th Professor Aleksander Zelias International Conference on Modelling and Forecasting of Socio-Economic Phenomena*, Cracow, Poland, pp. 183-192.
- [13] Kułyk, P., Michałowska, M. and Patelska, M. (2017). Consumer attitudes in the light of the concept of sustainable consumption in Lubuskie voivodeship against the background of trends in consumption in Poland. *Oeconomia Copernicana*, vol. 8, no. 2, pp. 181-198.
- [14] Łaskiewicz, E. (2016). Determinants of hourly wages inequality in selected European metropolises. The results from the multilevel modelling. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, vol. 11, no. 4, pp. 853-869.
- [15] Łyszczarz, B. (2016). Public-private mix and performance of health care systems in CEE and CIS countries. *Oeconomia Copernicana*, vol. 7, no. 2, pp. 169-185.
- [16] Meluzin, T. and Zinecker, M. (2014). Reasons for IPO Implementation: Empirical Evidence from the Polish Capital Market. *Inżynieria i Gospodarka Energetyczna-Engineering Economics*, vol. 25, no. 3, pp. 294-301.
- [17] Meluzin, T. and Zinecker, M. (2016). Trends in IPOs: The evidence from CEE capital markets. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, vol. 11, no. 2, pp. 327-341.

- [18] Murawska, A. (2016). Differences in unemployment among persons in a special situation on the labour market on the example of Polish provinces. *Oeconomia Copernicana*, vol. 7, no. 3, pp. 375-388.
- [19] Pietrzak, M. B. and Balcerzak, A. P. (2016A). Socio-economic sustainability in Poland. SEM analysis at regional level. *16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 1704-1712.
- [20] Pietrzak, M. B. and Balcerzak, A. P. (2016B). Assessment of socio-economic sustainability in new European Union members states in the years 2004-2012. *The 10th Professor Aleksander Zelias International Conference on Modelling and Forecasting of Socio-Economic Phenomena. Conference Proceedings*, Cracow, Poland, pp. 120-129.
- [21] Pietrzak, M. B. and Balcerzak, A. P. (2016C). Quality of human capital and total factor productivity in new EU member states. *The 10th international days of statistics and economics*, Prague, Czech Republic, pp. 1492-1501.
- [22] Shuaibu, M. and Oladayo, P. T. (2016). Determinants of Human Capital Development in Africa: A Panel Data Analysis. *Oeconomia Copernicana*, vol. 7, no. 4, pp. 523-549.
- [23] Szyja, P. (2016). The role of the state in creating green economy. *Oeconomia Copernicana*, vol. 7, no. 2, pp. 207-222.
- [24] Simkova, N. (2015). The hierarchical clustering of tax Burden in the EU27. *Journal of Competitiveness*, vol. 7, no. 3, pp. 95-109.
- [25] Zelazny, R., and Pietrucha J. (2017) Measuring innovation and institution: the creative economy index. *Equilibrium. Quarterly Journal of Economics and Economic Policy*, vol. 12, no. 1, pp. 43-62.

DETERMINATION OF THE VALUE OF PUBLIC LIBRARY SERVICES IN A GLOBALIZED SOCIETY

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Abstract. Globalization is not just an economic and political process but also a cultural one. Institutions that are undoubtedly an integral part of cultural events include public libraries. Libraries with their functions contribute to social equality and justice, enable every citizen to gain access regardless of age, nationality or social status. It serves as an important presenter of values for the development of a culturally educated individual. The value of libraries can be difficult to express and its calculation can not be based on standard costs, as is the case in a normal production enterprise, requires a special process. This difficult process is used to estimate prices based on individual library users' surveys. The benefits of public services provided by public libraries are attributed to the individual preferences and values of public library users. This article describes ways to determine the value of basic library services - book lending. The data for the calculations are based on the research of the Municipal Library in Prague, which takes place from 2012 until present. This research provides the largest survey of public libraries in the Czech Republic that helps public libraries to orient their activities and to adapt their decision-making activities in the field of finance. The article also describes changes to libraries in a globalized society.

Keywords: public library, benefit, measurement

JEL Classification: D12, H31, H41, I25

1. Introduction

Public library services are public services that are provided for the purpose of achieving benefits for society. In today's globalized society, they are so important in culture, education and awareness. They are classified as mixed collective services, as they meet the signs of divisibility, exclusivity from consumption and rivalry in the consumption of the service (Kraemer & King, 1986). Public library services belong to the culture sector, which as such bring significant benefits and benefits to the company, which are described inter alia by IFLA /UNESCO (National Library of Czech Republic, 2012). In practice, each library defines the range of services it provides. Therefore, it was necessary to define the basic taxonomy of all available public services that they can provide to public libraries for their customers. The following services have been defined for the purpose of solving the research task financed by the Ministry of Culture of the Czech Republic: lending, copying and printing, digital services on-line, online digital services, information and research, cultural and educational events,

technical and other services, community life, stay in the library. Due to the biggest use of the library service for absentee loans (80% of the total), this article will continue to deal with this type of library services (Stejskal et al., 2016).

2. Methods of measuring the benefits of library services

Public library services are among those that can be difficult to analyze in terms of their effectiveness. The reason is a problematic definition of the measurability of these services and the problematic determination of the value of these services as output of public production (Vakkari & Serola, 2012). All available studies on the effectiveness of public libraries (Holt & Elliott, 2003; Aabø, 2005; Vakkari et al., 2014 and others) had to cope with these two issues. None of the quoted definitions, however, detail the measurement of the service itself. Foreign studies are satisfied with the easily identifiable number of borrowings or the number of served readers (Truett, 1990; Hennen, 2002), which greatly reduces the intelligence of analyzes. All studies on the effectiveness of library services for their calculations are based on cost and benefit values. Cost solutions are considerably easier in terms of measurability, these items are clearly identifiable and traceable from the bookkeeping of individual libraries. The problem arises only in the case of the allocation of costs to individual groups and the assignment of values for the particular library service provided. Benefit issues are very challenging, calculations of their values are a complex process. The value of benefits is determined, inter alia, by the concept of contingent valuation and by the method of determining the consumer surplus (Kim, 2011).

a. Contingent valuation

The principle of CV consists in assigning the relevant values to individual goods and services by the consumer, because the consumer himself can best define the perceived value of the good or service. In the case of public services where there is no market price for a service, it is an expression of individual consumer preferences, for example through willingness to pay for public service consumption. The second option is to determine the amount of money consumers would be willing to accept as a deterioration in the quality of life if the service was not provided to them and would compensate for them (Lee & Chung, 2012). This method should help answer the question whether the service is to be a public service, ie to be financed from public sources, and to what extent public resources should be represented to finance the cost of producing this service if the Pareto Efficiency conditions are to be met (Hanemann, 1991). For financial evaluation of non-market benefits resulting from the activities of public libraries, it is appropriate to use this method (Pichova, 2016). Determining the subjective value of consumed goods is possible only by questionnaire survey or controlled interview. Obtaining these data is technically very demanding because individual consumers have to understand the questions posed enough and must be able to express the value of their consumption in relation to their retirement, the value of their time or the comparison with the price of other goods (Knetsch & Sinden, 1984).

b. Willingness to pay

The willingness to pay approach (WTP) addresses the value of services according to individual preferences and determines the value the consumer is willing to spend on obtaining the service. Elicitation techniques for WTP issues have undergone significant developments, but there are still no unified practices that would be mainstreamed. Elicitation always depends on the individual's individual preference, on the various current factors, and on the question of

the payment mechanism offered. So the survey maker can significantly or negatively affect WTP results (Mitchell & Carson, 2013).

c. Willingness to accept compensation

The willingness to accept compensation (WTA) approach expresses the value of the service on the basis of the willingness to accept the denial of service consumption. It is the minimum amount of money the consumer is willing to accept for denial of a particular service or for what value he / she is willing to accept with a certain negative phenomenon (pollution, misuse).

Studies have shown significant differences between WTA and WTP approaches. The value of WTP is less than the willingness to accept WTA compensation. In practice, the WTP method is most commonly used. However, a WTA and WTP value interval, which has not been interpreted so far in the studies, could be considered as a suitable estimate.

d. Consumer surplus

Methods of economic evaluation of non-market goods and benefits based on consumer surplus are, for example: travel costs method and hedonic price method (Marella & Raga, 2014). The amount of time, travel and other possible costs is a value for the consumer that can be used to assess other possible alternatives to the use of these resources. Consumer surplus (Stejskal et al., 2013) is expressed in terms of the value that the client gets beyond what they have to provide library services to pay a surplus producer. Social welfare, which the library brings, measured by consumer surplus, is based on the results of the questionnaire survey.

Other methods replicate practices that are commonly used in the private sector, such as return on investment (Kaufman & Watsein, 2008), as mentioned above. Other methods used to determine the effectiveness of library services include, for example, methods for measuring the overall economic value, measuring the value of the knowledge economy, a modeling model, and others.

3. Results of applied methods of valuation of public services

From a methodological point of view, two basic approaches are used to determine the benefits of public libraries' services in world practice, which have proven to be valuable in examining the value of public library services. According to their origin, they are referred to as consumer surplus (also referred to as "Ohio") and contingent valuation (also referred to as "Florida"). The differences between them can be seen in Table 1. Other world studies draw on information from these crucial studies, inspired by both the calculation process and the results and the widening of the different valuation methods.

Table 1: Differences between the Florida and Ohio methods for valuing public library services

Criterion	Contingent valuation (Florida)	Consumer surplus (Ohio)
Year of research realization	2004, 2008, 2013	2005
Number of libraries monitored	12 selected libraries	9 selected libraries
Monitored levels	Macro level	Mezo level
Libraries monitored services	13 services	Direct and specific services
Method used	CBA (ROI), REMI	CBA (ROI)
Benefit rating method	Contingent valuation, volume of speculative investments from public budgets	Surplus of the consumer with the help of the identification of library acquisition costs
The way of asking the readers	Personal and telephone conversations	Questionnaire survey

Result of benefits	They were not assigned to individual services	They were splitted into individual services
Input data for economy analysis	From library accounting reports	From library accounting reports
Cost-effectiveness	They were not allocated to individual services	They were not allocated to individual services
The value of ROI	6,54 (2004), 8,32 (2008), 10,18 (2013)	3,81 (2005)

Source: own processing based on studies Griffiths et al. (2004), Hass center (2008, 2013), and Levin (2006)

The study explored more attention was paid to the application accessing the determination of the form of WTP, that appeared in studies with a larger number of issues of this kind, which have been elaborated in more detail than questions such WTA. At the same time, all of the above studies show a WTA value several times higher than the WTP value.

In 2012 the Municipal Library of Prague focused on contingent valuation was conducted in the Czech Republic. The research was carried out by sending an on-line questionnaire survey to library users sent to the email. The base file was read by 11397 readers and the number of answers received 2227, the return was 20 %. The research data was verified on a series of investigations in the same year in the Municipal Libraries in Tábor and Uherské Hradiště. Most questions were asked to type WTP. The result of the elicitation approach of willingness to pay is the average value of CZK 595.72. Result of the WTA elicitation approach - The willingness to receive compensation for non-use of the service was worth CZK 1797.61. Thus, in the case of the Czech Republic, it was confirmed that WTP values are lower than WTA values. The resulting ratios between the WTA and WTP elicitation approaches are shown in Table 2 below.

Table 2: Ratios between WTA and WTP elicitation approaches according to selected studies

Source	Country	WTA	WTP	WTA:WTP
Holt, 1999	USA	136 mil. USD	15 mil. USD	9,0 : 1,0
Pung et al., 2004	Great Britain	273 GBP	116 GBP	4,9 : 1,0
Aabø, 2004	Norway	2000 NOK	400 NOK	5,0 : 1,0
Sociores, 2013	Czech Republic	1797,61 CZK	595,72 CZK	3,0 : 1,0

Source: own processing according to Holt et al. (1999), Pung et al. (2004), Aabø (2004), Sociores (2013)

The values shown show that the value of accepting the compensation for the library service is several times higher than the willingness to pay for the service. At the same time, it is necessary to draw attention to the fact that the resulting WTP values are the result of more detailed inquiries, as the surveys are more focused on this value, while the value of the WTA remains slightly neglected, and its values are, as a rule, devoted to just one question.

Research in 2012 also dealt with the question of willingness to pay for lending any book from the antiquarian bookshop as an alternative to the library. The resulting value per borrowing is CZK 71. The consumer surplus method was applied in the Czech Republic only in 2005, in order to refine the value of library borrowing from previous research. In this context, an empirical survey was carried out in randomly selected antiquarian books and, according to the results of the investigation, the average purchase price of a book in the antiquarian books was set at CZK 200. At the same time, the average market price of the book on the Czech market in 2014 (latest available data) was CZK 294 per book (Pistorius et al., 2015). This amount represents the value of the cost of purchasing a book. To determine the consumer surplus it is necessary to deduct the amount the reader obtains from the sale of the book to the antiquarian bookshop. This results in a consumer surplus of CZK 94 (purchase at a market price of CZK

294 - purchase of an antiquarian CZK 200). It follows from the above that the issue of the value of absent borrowings has already been extensively investigated and that each research method brings different results.

4. Discussion

After studying, it is possible to evaluate the methods of determining the benefits of library services in the Czech environment as follows:

- it is advisable to use the combination of CV and consumer surplus questions to complement the results obtained by the methods
- the consumer's surplus method, due to the market valuation of books, does not have a subjective component included, and therefore is more accurate, better describes the market prices of books in the Czech environment, at the same time it is a more direct and faster way of applying the method,
- the elicitation method of contingent valuation has greater demands on data acquisition and processing, the method is more complicated and time consuming,
- for selecting questions, it is important to take into account respondents in order to find out the most accurate value of benefit,
- for selecting respondents, it is important to take into account the criterion of the last visit to the library by the respondent,
- studies are progressing in more detail on WTP application access, studies also contain a larger number of WTP types than WTA,
- the willingness to accept compensation for library services (WTA) is several times higher than the willingness to pay for services (WTP),
- the differences between WTA and WTP can be determined by their WTA: WTP, but for generalization it would be necessary to carry out a significant empirical survey. The observed value for the Czech Republic of 3.0 : 1 is to be seen only as indicative, studies abroad show differences between the values even more pronounced,
- based on the above, it is good to consider whether to exclude the WTA application approach for future research. In practice, it is preferable to use the WTP elicitation approach.

5. Conclusion

The article discusses the differences in methods in addressing the value of utility provided by public library services. The method of consumer surplus and contingent valuation, which was most used in world studies, was also applied in the conditions of the Czech Republic and confirms the difference in the values obtained. Also eliciting approaches WTP and WTA (contingent valuation) bring values that differ significantly. From the point of view of the use of library services, borrowing services are most used, but in today's globalized society, the importance of residential and community services is increasing, when citizens begin to perceive the library as a meeting place with other Aabo (2005). As a result, the library as an institution

changes its role, offers new services (e-books or more cultural events) and adapts to the evolution of society in the context of electronization and other changes in a globalized society.

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References

- [1] Aabø, S. (2004). Valuing the benefits of public libraries. *Information Economics and Policy*, vol. 17, no. 2, pp. 175 - 198.
- [2] Aabø, S. (2005). The role and value of public libraries in the age of digital technologies. *Journal of Librarianship and Information Science*, vol. 37, no. 4, pp. 205 - 211.
- [3] Griffiths, J. M. K., King, D. W. and Lynch, T. (2004). A study of taxpayer return on investment (ROI) in Florida public libraries. *Detailed Result & Study Methods-Part II. Tallahassee, FL: State Library and Archives of Florida*, 272.
- [4] Hanemann, W. M. (1991). Willingness to pay and willingness to accept: How much can they differ? *American Economic Review*, vol. 81, no. 3, pp. 635-647.
- [5] Hass center. (2008). Taxpayer return on investment in Florida public libraries. The University of West Florida. Available at: <http://roi.info.florida.gov/Content/PDFs/Studies/Library%20ROI%202008.pdf>.
- [6] Hass center. (2013). Taxpayer return on investment in Florida public libraries. The University of West Florida. Available at: <http://roi.info.florida.gov/Content/PDFs/Studies/Library%20ROI%202013.pdf>.
- [7] Hennen, Jr, T. J. (2002). Great American public libraries: The 2002 HAPLR rankings--The eagerly awaited--If overdue--Measure of the nation's public libraries. *American Libraries*, vol. 33, no. 9, pp. 64 - 69.
- [8] Holt, G. E. and Elliot, D. and Moore, A. (1999). Placing a value on public library Services. *Public Libraries*, 38, pp. 98 - 108.
- [9] Holt, G. E. and Elliott, D. (2003). Measuring outcomes: Applying cost-benefit analysis to middle-sized and smaller public libraries. *Library Trends*, vol. 51, no. 3, pp. 424 - 440.
- [10] Kaufman, P. and Watstein, B. S. (2008). Library value (return on investment, ROI) and the challenge of placing a value on public services. *Reference Services Review*, vol. 36, no. 3, pp. 226 - 231.
- [11] Kim, G. (2011). A critical review of valuation studies to identify frameworks in library services. *Library & Information Science Research*, vol. 33, no. 2, pp. 112 - 119.
- [12] Knetsch, J. L. and Sinden, J. A. (1984). Willingness to pay and compensation demanded: Experimental evidence of an unexpected disparity in measures of value. *The Quarterly Journal of Economics*, vol. 99, no. 3, pp. 507 - 521.
- [13] Kraemer, K. L. and King, J. L. (1986). Computing and public organizations. *Public Administration Review*, vol. 46, pp. 488 – 496.

- [14] Lee, S. J. and Chung, H-K. (2012). Analyzing altruistic motivations in public library valuation using contingent valuation method. *Library & Information Science Research*, vol. 34, no. 1, pp. 72 – 78.
- [15] Levin, R., Driscoll, W. and Fleeter, H. B. (2006). Value for money: Southwestern Ohio's return from investment in public libraries. Columbus. Available at: <http://www.9libraries.info/docs/EconomicBenefitsStudy.pdf>.
- [16] Marella, G. and Raga, R. (2014). Use of the contingent valuation method in the assessment of a landfill mining project. *Waste management*, vol. 34, no. 7, pp. 1199 - 1205.
- [17] Mitchell, R. C. and Carson, R. T. (2013). *Using surveys to value public goods: the contingent valuation method*. London: Routledge.
- [18] National Library of Czech Republic. (2012). Služby veřejných knihoven: Směrnice IFLA/UNESCO. Available at: http://knihovnam.nkp.cz/docs/IFLA/Smernice_IFLA_DEF_2012.pdf?PHPSESSID=88e2e72872ca8837ff71e8ae66c49afd.
- [19] Pichova, S. (2016). The effectiveness of public finances provided to public library services in the Czech Republic. *Smart and Efficient Economy - Preparation for the Future Innovative Economy*, Brno, Czech Republic, pp. 638 – 645.
- [20] Pistorius, V. et al. (2015). Zpráva o českém knižním trhu 2014/2015. Svaz českých knihkupců a nakladatelů. ISBN 978-80-905680-4-4. Available at: http://sckn.cz/content/zpravy/zprava_ckt_2015.pdf.
- [21] Sociores. (2013). Data from project work in cooperation with Municipal Library of Prague.
- [22] Stejskal, J. et al. (2013). *Měření hodnoty veřejných služeb: (na příkladu veřejných knihoven)*. Praha: Wolters Kluwer ČR, a.s.
- [23] Stejskal, J. et al. (2016). The economic value of book loans - The case of the municipal library of Prague. *Libri*, vol. 66, no. 4, pp. 303 – 311.
- [24] Truett, C. (1990). Weeding and evaluating the reference collection: a study of policies and practices in academic and public libraries. *The Reference Librarian*, vol. 13, no. 29, pp. 53 - 68.
- [25] Vakkari, P., Aabø, S., Audunson, R., Huysmans, F. and Oomes, M. (2014). Perceived outcomes of public libraries in Finland, Norway and the Netherlands. *Journal of Documentation*, vol. 70, no. 5, pp. 927 - 944.
- [26] Vakkari, P. and Serola, S. (2012). Perceived outcomes of public libraries. *Library & Information Science Research*, vol. 34, no. 1, pp. 37 - 44.

SMALL AND MEDIUM-SIZED ENTERPRISES AND THEIR USE OF MANAGEMENT AUDIT AS A TOOL FOR COMPETITIVE ADVANTAGE IN THE GLOBAL ENVIRONMENT

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Abstract. In the current global environment, it is very important for domestic and international enterprises to be sustainable, prosperous and competitive. To meet their set targets, not only should these enterprises repeatedly carry out analyses of their environment and market (and / or analyses of their existing or potential competitors), but they should also perform audits. At present, enterprises may select from a wide range of different types of audits, with the most commonly used ones including tax, financial, sales, personnel, environmental, quality or contract audits. On the contrary, a frequently omitted area is audit of enterprise management system, which is represented by management audit. Its regular implementation would allow such enterprises to eliminate potential mistakes in their effective management and thus, to strengthen their positions (not only) in the international competitive environment. The paper's primary objective is to develop a specific "Management Model of Decision-Making", based on a comprehensive evaluation of management system and subsequently proposing certain measures to reinforce the (present and / or future) positions in competitive engagements and international markets. Following from a research conducted in the Czech Republic, the secondary objective is to highlight the fact that small and medium-sized enterprises do not take advantage of the management audit processing possibilities, and their stability and competitiveness are therefore reduced. To be more objective, the research included enterprises operating at domestic as well international levels, with the final output being a particular comparison of their competitiveness in the context of management audit implementation.

Keywords: management audit, small and medium-sized enterprises, global environment, domestic and international markets, management model of decision-making

JEL Classification: M42, M21, M14

1. Introduction

In the current international competitive environment, possibly all enterprises strive for excellence, higher levels of competitiveness and gaining certain competitive advantages over other enterprises. The most fundamental competitive advantage for an enterprise is considered to be, for example, its internal stability (Wheelen & Hunger, 2012), an efficient use of its management system (Drucker, 1999), quality workforce (Armstrong, 2016), quality marketing and advertising (Kotler & Keller, 2016), detailed knowledge of enterprise environment and, in particular, knowledge of the customers' needs and wishes (Porter, 1985). The paper's authors argue that it is the internal stability, based on the management system and its efficient use.

However, in order to determine whether it is internally strong and stable, a particular enterprises must periodically analyse its internal environment. Here, management audit serves an effective tool, which involves assessing the internal stability of the enterprise as a whole, i.e. the management audit areas are practically represented by all of the activities that the enterprise performs (with the main area being the enterprise management system and the supporting areas including other enterprise areas, since they more or less influence the enterprise management).

a. Content and purpose of management audit

The concept of management audit may be defined as an independent, objective and somewhat assuring and consulting activity, aimed at improving corporate governance (enterprise management) that helps an enterprise achieve its goals by introducing a systematic methodical approach to assess and improve the efficiency level of management processes. The main effort as well as the primary objective of each enterprise should be a constant improvement of its management system, which particularly means discovering the management system's current state, its strengths or potential deficiencies, developing a proposal for its improvement and introducing a new system, which is the main content of management audit. (Spencer, 2004)

Therefore, management audit should identify and evaluate the current state of an enterprise management system and possibly find and characterize a problematic area in the enterprise that “decelerates” its efficient managing (Trunecek, 2004). The purpose of management audit is to provide the enterprise managers with information on the quality, style, way and efficiency of management. (Chambers & Rand, 2010)

b. Confusing the content of management audit

As stated above, management audit should serve as a tool to assess the current state of an enterprise and its management system, i.e. to prepare an independent review of the enterprise management. However, since management audit has not been used by enterprises in the same degree as other audits (e.g. financial, forensic, quality or environmental), not only is its purpose frequently confused by managers or auditors with the purpose of other audits, but its content also differ. According to Botez (2012), Moorthy et al. (2011) and Ma'ayan & Carmeli (2016), management audit is most frequently confused with internal audit due to their great similarity of audited areas (management, production, marketing and finance) However, Hruskova (2015) states that management audit is more often confused with marketing audit owing to the use of identical analyses (e.g. SWOT analysis, the IFE and EFE matrix) to evaluate enterprise strengths and weaknesses. Vagner (2015) claims that management audit is also confused with internal controlling as it offers similar services (consulting, information and advisory activities or methodologies on suitable enterprise management).

Considering management audit, the basic audited area should undoubtedly be management, and according to his/her consideration, any manager or auditor may then focus on other areas. For instance, Wheelen & Hunger (2012) recommend that the audited areas should at least encompass management, human resources, marketing, production, finances and IT systems. According to Majernik et al. (2016), the focus should also be on quality and sales, with a special attention being given to risk management as part of the management orientation. The same view is taken by Stojanovic et al. (2016) a Rivera et al. (2016). Several other authors, e.g. Ujwary-Gil (2016), point out that a particular attention should be paid to the efficiency of the used resources as well.

2. The research methods and results

a. The research methods

The primary objective of this paper is to develop and present a specific "Management Model of Decision-Making" as an instrument used to evaluate the current state of enterprise management, and simultaneously, as a tool used to enhance enterprise competitiveness not only in the domestic markets, but also in the markets abroad. The model consists of three stages, where the first and the second stage principles encompass a particular analysis and evaluation of the already used management system in a given enterprise (as already published on the 7th International Conference on Management). The third stage principle includes a further analysis and evaluation of enterprises and their resource utilization systems. The advantage of this model may be seen in its comprehensive and more detailed assessment of the enterprise management system used, as opposed to other models or techniques having been presented to such enterprises so far.

The related research was conducted in the Czech Republic between September 2015 and May 2017 and involved 580 small and medium-sized enterprises, with their headquarters being located domestically as well as in other countries – mostly Germany, Austria and Slovakia. The applied research method was based on an electronic questionnaire survey, supplemented by controlled interviews with expert practitioners actively engaged merely in the issue of managerial audit. The aim of the questionnaire survey was to find out if the participating enterprises use management audit at all, and provided they do, then whether they create their own models for evaluating the management systems used. The purpose of the controlled interviews with the experts was for the paper's authors to provide them with a certain incentive in order to develop their own model, which would serve as a "pattern" used for management audit implementation.

b. Results and Discussion

i. Development of "Management Model of Decision-Making" used for management audit implementation

As previously mentioned, the presented management model of decision-making consists of three stages, where the principles of the first and the second stage involve both the analysis and the evaluation of enterprise management. According to the already developed "7S Adaption Model" (based on the 7S McKinsey Model), the authors have proposed a specific enterprise management analysis from the viewpoint of Effectiveness and Efficiency – for a more detailed description, see Pichova & Rauser (2017). The "7S Adaption Model" is followed by the "Application IFE - 7S Matrix" (based on the IFE Matrix), which aims at deepening the enterprise management analysis by using the possibility to assess certain evaluation factors or their indicators from the standpoint of an internal stability in the enterprise management as a whole. Having applied the "7S Adaption Model", managers / auditors can identify particular strengths and / or weaknesses from the given enterprise management perspective. However, to determine whether the strengths prevail over the weaknesses (or vice versa), the authors have proceeded to develop the above mentioned "Application IFE - 7S Matrix" model – for a more detailed description, see Pichova & Rauser (2017).

Following from that, the authors have further focused in detail on analysing used resources in an enterprise as part of the "7S Adaption Model" (Factor - Systems, Evaluation Indicators - System of using company (enterprise) resources, Evaluation Questions - Does the enterprise

use an optimal combination of its resources?), which comprises the third stage. The main reason for the detailed resource analysis is the fact that resources are an integral and necessary part of enterprises and their operations and may also be seen as the possibility to increase the enterprise competitiveness level in the domestic as well as international markets. Having management audit processed on the developed model's basis, the enterprises would now be offered with two basic competitive advantages: a) utilizing the possibility of competitive advantage based on efficient enterprise management; b) utilizing the possibility of competitive advantage based on efficient use of resources.

Moreover, the selection and modification of the 7S Model and the IFE Matrix should not be viewed as random. Every enterprise wanting to be competitive in the domestic and the international markets ought to (possibly on a daily basis) consider the presented questions (see Table 1). Correspondingly, every enterprise need to examine and discuss the questions themselves and in doing so, the above mentioned models may indeed serve as tools directing the enterprise(s) towards successful answers, and at the same time, acting as a forewarning not to omit any factors that affect their competitiveness and success in the markets.

Table 1: Examined questions and factors

Examined Questions	Factors Patterned on the 7S Model
What does the enterprise want to achieve and how does it want to achieve?	Strategy
What staff and composition are needed in the enterprise?	Staff
What abilities and skills does every employee need to have?	Skills
What will be the hierarchical structure of selected employees?	Structure
Which style of managing should be used in the enterprise?	Style
What systems are necessary to be used in the enterprise?	Systems
Are all employees well aware of the enterprise events and happenings?	Shared values

Source: Own processing

Having answered the questions and evaluated the results of the first and the second stage of the "Management Model of Decision-Making", managers / auditors can subsequently proceed to the third stage, i.e. to analyse and evaluate the enterprise resources used. This is represented by a specific "Resource Model", comprised of two evaluation parts, where the first part concerns a comprehensive analysis of resources (see Table 2) and the second part is related to an individual analysis of resources (see Table 4), with both of the parts being equally meaningful.

Table 2: Comprehensive analysis of resources

Category	Category Significance 1 - 3	Evaluation Indicators: expressed by $\rightarrow / * + x - 0 /$			
		Tangible	Intangible	Financial	Human
Resource Originality					
Resource Availability					
Resource Sustainability					
Resource Flexibility					
Resource Substitutability					
Resource Importance					
Comprehensive Evaluation	- - -	Aggregate Score	Aggregate Score	Aggregate Score	Aggregate Score

Note 1: Category Significance

1 = high significance; 2 = average significance; 3 = low significance

Note 2: Evaluation Indicators are assigned according to their relevance

* is very high originality / very easy availability / very simple sustainability / very high flexibility / very easy substitutability / very high importance;

+ is high originality / easy availability / simple sustainability / high flexibility / easy substitutability / high importance;

x is low originality / difficult availability / difficult sustainability / poor flexibility / difficult substitutability / low importance;

- is very low originality / very difficult availability / very difficult sustainability / very poor flexibility / very difficult substitutability / very low importance;

0 is zero (i.e. no) originality / availability / sustainability / flexibility / substitutability / importance.

Source: Own processing

As may be gathered from the above table, the comprehensive analysis consists in assessing resources in terms of their originality, availability, sustainability, flexibility, substitutability and importance, all being the categories created by the paper's authors. First, each category is to be assessed according to its importance for a given enterprise – see Note 1. Afterwards, the resources can be evaluated on the basis of certain indicators – see Note 2. The comprehensive evaluation then resides in the summary of results respecting a simple formula:

Significance x Relevance

Next, the assigned scores are indicated in the following table, i.e. Table 3.

Table 3: Scores of comprehensive analysis of resources

Significance		Relevance		Category	Comprehensive Evaluation			
Evaluation	Points	Symbols	Points		1 Tally of Aggregate Scores			
					2 Tangible	3 Intangible	4 Financial	5 Human
1	3	*	4	Originality				
2	2	+	3	Availability				
3	1	x	2	Sustainability				
		-	1	Flexibility				
		0	0	Substitutability				
				Resource Importance				
Classification of Resources to Classes I. – III.								
Eventual Comprehensive Evaluation								
Resource Classification Classes				Categorization of Classes		Total Points		
I.				Key Resource		72 - 49		
II.				Indispensable Resource		48 - 25		
III.				Substitutable Resource		24 - 0		

Source: Own processing

Resulting from the comprehensive resource analysis turn out to be the evaluation and determination of whether the resources used by the enterprise are significant and relevant for it or not. On that account, the authors have come up with three types of classes, where resources can be classified according to their total points achieved. The first class, i.e. the key source category, includes a resource that is necessary for the enterprise and its continuous operations; the resource is used in a sufficient quantity and composition and cannot be replaced by any

other resource – here, the enterprise managers must (should) try to keep this particular resource as long as possible. The second class, i.e. the indispensable source category, includes a resource that is important for the enterprise and its functioning, but the enterprise uses it only partially and cannot fully engage it in its operations – here, the managers should (must) decide whether it is necessary to have the resource(s) in their current quantity and composition, to reduce their quantity, or else, to modify their existing composition. Additionally, since the evaluation of resources by their significance as well as by their relevance is very subjective for each manager /auditor, the authors propose a two-phase evaluation in this aspect. The first phase may be presented as the evaluation of a comprehensive resource analysis by all enterprise managers individually, whilst the second phase may be the comprehensive analysis evaluation conducted together in brainstorming.

Then, regarding the individual evaluation of resources (see Table 4), certain parameters for each type of resources have been generated and should be monitored and assessed by the managers / auditors. Indeed, the parameters can always be modified or added, as required by the managers / auditors, yet they represent a basic / standard listing to be considered during the resource analysis.

Table 4: Individual analysis of resources

Resources	Parameters
Tangible	Age of assets and machinery; Flexibility of assets and machinery; Technical condition of assets and machinery; Reliability of machinery; Production capacity of machinery; Material provision
Intangible	Innovative development – patent or trademark development; The level of generated know-how; The level of image among customers and the general public; The level of information security; The level of software security used
Financial	Balance of capital structure used – in terms of ownership and time; Trends – profit, cash flow, receivables and payables; Trends – ratios of financial analysis and indicators based on cash-flow, used methods / styles of financing
Human	Number of employees – more detailed allocations to workers, administrative staff and managers; Employee training and qualifications, experience, fluctuation, motivation preferences; Trust in employees; The level of delegating authority to subordinate workers
Overall Evaluation	a) Evaluation of Composition and Structure of Resources; b) Evaluation of Balance and Combination of Resources; c) Evaluation of Intensity of Using Resources

Source: Own processing

Also, it is necessary to point out that on analysing resources, managers / auditors should pay their attention to all of the resources used as inputs to production. It is not advisable to focus only on the resources, which are owned by the given enterprise (tangible, intangible, financial and human resources) and regarded as resources in the narrow sense, but also on those that cannot be owned. These are considered to be resources in the broader sense as they are an integral part of a competitive advantage based on their efficient use (relations with employees, customers, suppliers, creditors or business partners). It should also be monitored whether they mutually complement one another, which is the subject of follow-up research.

ii. Research assessment

The questionnaire survey revealed that the enterprises involved do not perform management audit, or they do so rarely, which results in their internal stability decrease, and thereby lose the

possibility of enhancing their competitiveness not only in the domestic markets, but mainly in the international markets.

Besides that, the questionnaire survey and the controlled interviews showed that a number of enterprise managers, experts and auditors often confuse management audits with several other audits:

- some enterprise managers have been observed to often view the concept of management audit as personnel audit, audit of characteristics and skills of managers or even replace it with internal audit,
- as regards management audit as such, several auditors (as practitioners) have been observed to offer it as personnel audit to the majority of enterprises.

The questionnaire survey and its evaluation also pointed to the fact that although some enterprises have individual analyses evaluating the current state of their management systems processed, the results are not summarized, but they are evaluated separately, which does not provide the enterprises with any comprehensive evaluations of their management systems. To be more specific, the most frequent analyses used in the enterprises are SWOT analysis, balanced scorecard, resource analysis, process analysis and internal benchmarking.

Lastly and perhaps surprisingly, it also emerged from the research that several enterprise managers heard about the concept of management audit for the first time directly from the paper's authors, and they were not even aware of what its content and / or purpose should be. On the other hand, the highest number of enterprise audits has been observed to be conducted in the form of mandatory audits, particularly tax audits, followed by financial, personnel, cost, quality and internal audits.

3. Conclusion

Management audit, presented in the detailed three-stage model, should be carried out on an annual basis. Indeed, each of the model stages can also be prepared and conducted separately and more frequently, which would provide enterprises with regular assessments of the state of their management systems used and with identifications of weaknesses in this particular area, which enterprises must further improve. The reason for performing management audit is evident, since by implementing it, enterprises will ensure not only their sustainability, but also a certain increase in their internal stability, thus securing a higher competitiveness in both the domestic and international markets. In addition, the authors recommend that management audit in enterprises should be carried out primarily by managers rather than external auditors, as recommended by Aschauer et al., (2015), due to the managers' increased knowledge of the management systems used, provision of personnel or awareness of the production processes.

References

- [1] Armstrong, M. (2016). *Armstrong's handbook of strategic human resource management*, 6nd. ed. London: Kogan Page
- [2] Aschauer, E., Moro, A. and Massaro, M. (2015). The auditor as a change agent for SMEs: the role of confidence, trust and identification. *Review of Managerial Science*, vol. 9, pp. 339-360.

- [3] Botez, D. (2012). Internal Audit and Management Entity. *Procedia Economics and Finance*, vol. 3, pp. 1156-1160.
- [4] Drucker, P. F. (1999). *Management challenges for the 21st century*, New York: Harper Business.
- [5] Hruskova, D. (2015). Marketing audit and its impact on business performance. *Conference on Current Problems of the Corporate Sector*. Modra-Harminia, Slovakia, pp. 219-223
- [6] Chambers, A. and Rand, G. (2010). *The Operational Auditing Handbook: Auditing Business and IT Processes*, 2nd ed. Hoboken: John Wiley.
- [7] Kotler, P. T. and Keller, K. L. (2016). *Marketing Management*, 15th ed. Boston: Pearson.
- [8] Majernik, M., Daneshjo, N., Stofkova, R. K and Sanciova, G. (2016). Integrated auditing of enterprise management systems in a globalized environment. *Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences*. Rajecke Teplice, Slovakia, pp. 1261-1269.
- [9] Ma'ayan, Y. and Carmeli, A. (2015). Internal audits as a source of ethical behaviour, efficiency and effectiveness in work units. *Journal of Business Ethics*, vol. 137, pp. 347-363
- [10] Moorthy, M. K. et al. (2011). The impact of information technology on internal auditing. *African Journal of Business Management*, vol. 5, pp. 3523-3539.
- [11] Porter, M. E. (1985). *Competitive advantage: Creating and Sustaining Superior Performance*. New York: Free Press.
- [12] Pichova, R. and Rauser, D. (2017). Management audit as a tool for managing small and medium-sized enterprises. *Proceedings on the 7th International Conference on Management on "Managerial trends in the development of enterprises in globalization era"*, Nitra, Slovakia.
- [16] Rivera, D. E., Villar, A. S. and Pino, M. R. M. (2016). Towards to the Concept of Risk Approach in the audit integrated management system. *Quality - Access to Success*, vol. 17, pp. 41-47
- [17] Spencer, P. K. H. (2004). *Internal Auditor at Work*. Hoboken: John Wiley.
- [18] Stojanovic, T. and Andric, M. (2016). Internal auditing and risk management in corporations. *Strategic management*, vol. 21, pp. 31-42
- [19] Trunecek, J. (2004). *Interní manažerský audit*. Praha: Professional Publishing.
- [20] Ujwary-Gil, A. (2016). The concept and stages of the audit of intangible resources: A network approach. *Proceedings of the 17th European Conference on Knowledge Management*. Sonning Common, England, pp. 916-925
- [21] Vagner, L. (2015). Controlling as an international economic tool. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 829-833.
- [22] Wheelen, T. L. and Hunger. D. J. (2012). *Strategic management and business policy: concepts and cases*. 13th ed. Upper Saddle River: Prentice Hall.

GLOBALIZATION AS A FACTOR OF THE RESOURCE POTENTIAL'S DEVELOPMENT OF THE SPHERE OF SERVICES

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Abstract. Currently, the service sector is an important factor in the development of many countries, including Russia. The service sector is characterized as one of the main components of postindustrial economy and serves as the predominant way to meet the individual's needs. Nowadays, in context of the economy's integration and globalization, it's especially important to study the service sector enterprises that correspond to the current trends in market relations' development. In conditions of market economy, the service sector organizations on equal basis with other economic entities participate in the competitive struggle both domestically and internationally, and in connection with it they need to improve liquidity, financial stability, profitability and also there is a need to control the resource potential. Different interpretations of concept "Resource Potential" are considered in the article, the structure of resource potential is presented. In addition, different methods for estimating the resource potential on basis of a complex indicator of resource potential's dynamics, on the interaction of the growth rates of the most significant resource potential's components, based on a comprehensive assessment of efficiency of enterprise resources' use, are considered. A practical example of application of these methods is presented and conclusions about the state of the enterprise's resource potential under research are drawn, as well as the possibility of applying these methods to service enterprises.

Keywords: resource potential, service sector, service enterprises, globalization, assessment of the company's potential.

JEL Classification: D24, F61, F65, G12

1. Introduction

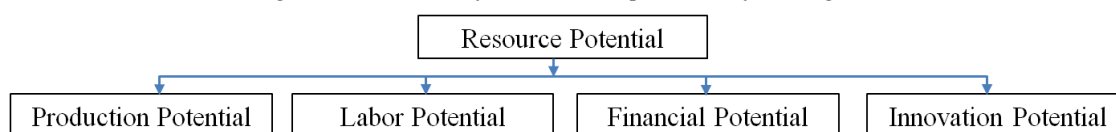
Currently, the service sector is an important factor in the development of many countries in the world, including Russia. (Plotnikov et al., 2015).

The service sphere has its own characteristics, as the relationship between the supplier and the customer of the service differs from the producer and consumer relations in the sphere of production (Vertakova & Plotnikov, 2016). The service is characterized by the length in time, as well as in space, as it often implies the physical presence of the customer (Stern & Arbor, 2001; Neto & Veiga, 2013; Jankelova, 2013).

The products of the service sector cannot simply be called a commodity that has a material embodiment, since it is the result of the interaction of the producer and the consumer (Child, 2009). The most distinctive feature of services from goods is their immateriality, since many services cannot be stored, transported, demonstrated before sale, etc (Nishibe, 2015). However, in the conditions of a market economy, the organizations of the service sector need to control the resource potential (Richnak, 2015; Bai & Wang, 2016).

Having information on the resource potential of the business entity, its management will be able to assess the opportunities and threats, determine the current and future needs of the organization, and make an economically sound decision (Spread, 2016; Hakcever et al., 2000; Berzakova, 2015; Cainelli et al., 2006). The structure of the resource potential can be represented as follows (Fig. 1).

Figure 1: Structure of the resource potential of the organization



Source: own processing

Since at present practically all spheres of society are actively developing, we believe that it is necessary to allocate in the resource potential such an important component as innovation potential (Khalil, 1997; Goldfarb & Ratner, 2008).

2. Body of paper

2.1 Purpose of research

The purpose of the research is to examine several methods for assessing the resource potential, as well as to identify the appropriateness of their application to service enterprises.

2.2 Materials and methods

Among the possible ways to assess the resource potential of organizations in the service sector can be identified the following:

- based on a comprehensive indicator of the dynamics of resource potential,
- on interaction of growth rates of the most significant components of the resource potential,
- based on a comprehensive assessment of the efficiency of the use of enterprise resources.

Any of the above methods of assessing the resource potential of the enterprise involves three stages. The first stage begins with the collection of financial and economic information on the status of the service enterprise. The second stage is to calculate the actual level of the resource potential of the enterprise. For this, the following actions are performed:

- a set of indicators is selected for each category of component potentials, allowing the most complete reflection of their current state,
- calculations of previously selected indicators are performed to determine each component capacity within the resource potential,
- define a system of benchmarks,

- the recommended value of the benchmarks (maximum or minimum permissible) is established for each category of component potentials.

The third stage, final, allows:

- analyze the level of use of the resource potential of the service enterprise under research,
- identify the reserves and losses of the resource potential of the enterprise under research,
- assess the effectiveness of the existing system of managing the resource potential of the enterprise,
- develop a strategy for increasing competitiveness for a loss-making category of resource potential components,
- In addition, when performing calculations, the following conditions must be adhered to:
- use only those indicators that are available in all types of reporting of the service enterprise,
- it is reasonable to limit the number of indicators used.

The estimation based on the complex index of the resource potential dynamics is a calculation of the integrated indicators of the production potential, labor potential and financial potential presented in Tab. 1. With a positive development of the enterprise, the complex indicator of the resource potential will exceed a standart value.

Table 1: Assessment of the resource potential of the enterprise based on a complex indicator of the dynamics of resource potential

Type of indicator	Calculation formula	Standard value
1	2	3
Production potential	$PP = (GR_{fa} \times GR_{ra} \times GR_{ce} \times GR_{ci})^{1/4}$, where GR_{fa} - the growth rate of the average annual value of fixed assets; GR_{ra} - the growth rate of the return on assets; GR_{ce} - cost-effectiveness growth rate; GR_{ci} - the growth rate of capital intensity.	$PP > 1$
Labor potential	$LP = (GR_{aw} \times GR_{an} \times GR_{nop} \times GR_{nm} \times GR_{et})^{1/5}$, where GR_{aw} - the growth rate of average wages; GR_{an} - the growth rate of the average number of personnel; GR_{nop} - the growth rate of the number of operating activities personnel; GR_{nm} - the growth rate of the number of managerial staff; GR_{et} - the growth rate of employee turnover.	$LP > 1$
Financial potential	$FP = (GR_{np} \times GR_r \times GR_a \times GR_{ap} \times GR_{ar})^{1/5}$, where GR_{np} - the growth rate of net profit; GR_r - growth rate of revenue; GR_a - growth rate of value assets; GR_{ap} - the growth rate of the average amount of accounts payable; GR_{ar} - the growth rate of the average amount of accounts receivable.	$FP > 1$
Comprehensive indicator of the resource potential	$C_{res.} = (PP \times LP \times FP)^{1/3}$, Where PP - production potential; TP - labor potential; FP - financial potential.	$C_{res.} > 1$

Source: (Authored by the authors)

Based on Table 1, we see that the value of the complex indicator of the resource potential should be greater than one. This will indicate that the enterprise is developing, positive dynamics is observed. If not the value of the complex indicator of the resource potential is not

greater than one, then it is necessary to pay attention to which component of the resource potential in the final result is decreasing.

The following methodology assumes an assessment of the company's resource potential for the interaction of the growth rates of the most significant components of the resource potential.

To assess the resource potential using this methodology, it is necessary to calculate the growth rates of the most significant indicators. The ratio should be as shown in Tab. 2.

Table 2: Assessment of the resource potential of the enterprise for the interaction of growth rates

The components of the resource potential	The ratio of growth
Production potential	The growth rate of the average annual value of fixed assets > > Capital productivity growth rate > > Cost-effectiveness growth rate > > Capital ratio growth rate
Labor potential	The growth rate of average wages of operating activities workers > > The growth rate of the number of operating activities personnel > > The growth rate of the number of managerial stuff > > Growth rate of turnover of operating activities personnel
Financial potential	Net profit growth rate > growth rate of revenue > > Asset growth > > The growth rate of the average value of borrowed funds > > Rate of the average accounts payable growth > > Rate of the average accounts receivable growth

Source: (Authored by the authors)

If the conditions indicated in Table 2 correspond to the growth rates of the researched enterprise, then we can conclude that there is a positive outlook for the development of this enterprise. If not, therefore, management personnel need to make a decision to adjust the production, labor or financial policy.

The third method of researching the resource potential based on a comprehensive assessment of the efficiency of the use of enterprise resources is mainly aimed at evaluating the extensive and intensive use of company resources, and also on the formation of a synergistic effect from simultaneous application of extensive and intensive factors.

It is possible to evaluate the effectiveness of extensive factors with the help of such an indicator as the resource of the enterprise, the growth or decrease factor of which can be expressed in the following formula:

$$(1 + \Delta RE) = \frac{RE_1}{RE_0} \quad (1)$$

Where $(1 + \Delta RE)$ – coefficient of growth (decrease) in the consumed resource,
 RE_1, RE_0 – resource of the enterprise in the reporting and base period, respectively.

The effectiveness of intensive factors reflects the indicator of resource productivity, calculated by the following formula:

$$RP = \frac{V}{RE_0} \quad (2)$$

where RP – resource productivity,
 V – the volume of services provided,

RE_0 – the resource of the enterprise.

To determine the growth or reduce rate of the resource productivity, we use the formula presented below:

$$(1 + \Delta RP) = \frac{RP_1}{RP_0} \quad (3)$$

where $(1 + \Delta RP)$ – is the coefficient of growth (decrease) in resource productivity,
 RP_1, RP_0 – indicators of resource productivity in the reporting and base period,
 respectively.

The end result of the enterprise's activity is such indicator as the volume of services rendered, which can be obtained from the formula (4):

$$V = RP \times RE \quad (4)$$

So, if we need to calculate the volume of rendered services of the base period, the formula will look like this:

$$V_0 = RP_0 \times RE_0 \quad (5)$$

And if the volume of services rendered for the reporting period, then:

$$V_1 = RP_1 \times RE_1 \quad (6)$$

The dynamics of the volume of services rendered will be reflected using the following formula:

$$(1 + \Delta V) = \frac{V_1}{V_0} \quad (7)$$

where $(1 + \Delta V)$ – is the growth rate (decrease) in the volume of services rendered,
 V_1, V_0 – is the volume of services rendered in the reporting and base period, respectively.

We substitute the exponents (5) and (6) in the formula (7):

$$(1 + \Delta V) = \frac{RP_1 \times RE_1}{RP_0 \times RE_0} \quad (8)$$

Transforming the formula (8) we obtain the following expression:

$$(1 + \Delta V) = (1 + \Delta RE) \times (1 + \Delta RP). \quad (9)$$

Present a comprehensive assessment of efficiency of use of enterprise resource in Tab. 3.

Table 3: Complex estimation of efficiency of use of enterprise resource

Extensive influence factor	Intensive influence factor	Condition for the effective use of enterprise resources
$F_{ext} = \Delta RE / \Delta V$	$F_{int} = 1 - F_{ext}$	$F_{int} > F_{ext}$

Source: (Authored by the authors)

Based on Tab. 3, you can see that the influence of intensive factors on the efficiency of the enterprise should exceed the influence of extensive factors/ However, if we express the increase in the volume of services rendered from formula (9), we can see that it consists of the following components:

$$\Delta V = \Delta RP \times \Delta RE + \Delta RP \times \Delta RE. \quad (10)$$

Consequently, the increase in the volume of services rendered depends both on the increase in resource productivity (intensity), on the increase in the resources of the enterprise (extensiveness), and on the multiplicative interrelation of these indicators, which indicates the importance of employing resources in the enterprise, contributing to both intensive and extensive development.

Moreover, if the following condition is satisfied:

$\Delta RP \times \Delta RE < 0$, then this indicates an inconsistent flow of processes in time;

$\Delta RP \times \Delta RE = 0$, this fact indicates that the rate of one or two processes does not change with respect to the base period;

$\Delta RP \times \Delta RE > 0$, then this indicates a consistent, unidirectional flow of processes in time. However, since a positive value can be achieved with negative growth rates of both indicators, in assessing the resource potential, it is necessary to take into account the condition for increasing the efficiency of using the resource potential of the enterprise, presented in the last column of Tab. 4.

Table 4: Comprehensive assessment of efficiency of use of enterprise resources, taking into account the multiplicative effect

The result of extensive use	The result of intensive use	The result of multiplicative effect	Criterion of orderly organized resource potential structure	The condition of growth of efficiency of use of enterprise resource potential
ΔRE	ΔRP	$\Delta RP \times \Delta RE$	$\Delta RP \times \Delta RE > 0$	$\Delta RP > \Delta RE > 0$

Source: (Authored by the authors)

Next, let's move on to comparing the methods presented above. For this we refer to Tab. 5.

Table 5: Comparative characteristics of methods for assessing the resource potential

Criterion	On the basis of a comprehensive indicator of the dynamics of resource potential	On the interaction of growth rates of the most significant components of resource potential.	Based on a comprehensive assessment of the effectiveness of use of enterprise resources.
Advantages of the method	The relative simplicity of the calculation.	The relative simplicity of the calculation.	It gives an idea of the extensive and intensive use of resources of organization.
Limitations	The result is an average of indicators which do not allow to draw concrete conclusions.	A comparison of rates of growth of the most significant indicators of each of the component potentials that do not take into account the characteristics of the organization	It does not take into account human resources of organization.
The complexity of calculating	Needed detailed information on the organization's staff.	Needed detailed information on the organization's staff.	The complexity of determining the components of such a measure as the "Resource of the enterprise"
The reflected factors	The most significant parameters of each of the components of the potentials.	The most significant parameters of each of the components of the potentials.	Changing the impact of resources, changes in enterprise resource, and change in the volume of services rendered by the enterprise.
Interpretation of results	If comprehensive indicator of the resource potential is more than a value "1", it indicates the positive dynamics of development of the	Each subsequent indication of a potential of the organization must be smaller than the previous one, that is to say about the positive future	Must be satisfied the condition of growth of efficiency of use of resource potential of the enterprise: $\Delta RP > \Delta RE > 0$.

	organization and the growing rates of resource potential.	development of the organization.	This will indicate the positive dynamics of enterprise development and growth of its resource potential.
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Source: (Authored by the authors)

2.3 A practical example

We verify the multiplicative relationship of growth of resource productivity and enterprise resource growth for the non-negativity. Results represented in Tab. 6.

Table 6: The multiplicative relationship of growth of resource productivity and enterprise resource growth

Index	2014	2015	2016
$\Delta RP \times \Delta RE$	-0.02	-0.004	-0.018

Source: (Authored by the authors)

Tab. 6 shows the result of a multiplicative effect during the years is negative, therefore, the processes at the enterprise are uncoordinated in time.

However, as the positive value can be achieved at negative rates of growth of both indicators, so in the evaluation of the resource potential need to be considered a condition of growth of efficiency of use of resource potential of the company. To present a comprehensive assessment of the efficiency of the use of resources of researched enterprise, taking into account the multiplier effect in Tab. 7.

Table 7: Comprehensive assessment of efficiency of use of resources of the enterprise

Index	2014	2015	2016
$\Delta RP > \Delta RE$	No	Yes	No
$\Delta RE > 0$	Yes	No	Yes
$\Delta RP > \Delta RE > 0$	No	No	No

Source: (Authored by the authors)

Based on Tab. 7, it can be seen that in any year is not the condition of the efficient use of resources of the enterprise. Therefore, we can talk about reducing the resource potential of the researched company.

3. Conclusion

Thus, analysis of the resource potential of service enterprise by method, based on a comprehensive assessment of the effectiveness of the use of extensive and intensive factors affecting the resource potential of the company showed that the organization has not fulfilled the key condition to judge the increase of the resource potential of the organization over the past three years, which is confirmed by the first two methods.

The presented methods for evaluating the resource potential can be used for the enterprises of sphere of service, but for a more accurate assessment of the resource potential is necessary to study the specific indicators in detail, which are integral parts of the potential of the service company.

References

- [1] Plotnikov, V., Vertakova, Y. and Polozhentseva, Y. (2015). Methods of detecting imbalances in the structure and dynamics of socio-economic system. *2nd International*

- Multidisciplinary Scientific Conference on Social Sciences and Arts (SGEM 2015)*. Albena, Bulgaria, pp. 821-828.
- [2] Vertakova, Y. and Plotnikov, V. (2016). Innovative and industrial development: specifics of interrelation. *Economic Annals-XXI*, vol. 156, no. 1-2, pp. 37-40.
 - [3] Stern, R. M. and Arbor, A. (eds.). (2001). *Services in the International Economy*. University of Michigan Press.
 - [4] Neto, D. G., Veiga, F. J. (2013). Financial globalization, convergence and growth: The role of foreign direct investment. *Journal of International Money and Finance*, vol. 37, pp. 161-186.
 - [5] Jankalova, M. (2013). Conception based on definition of business factors of successfulness for the support of reaching the excellence of enterprise subjects. *Procedia – Social and Behavioral Sciences*, vol. 81, pp. 531-535.
 - [6] Child, J. (2009). Managerial and organizational factors associated with company performance. *Journal of Management Studies*, vol. 12, pp. 12-27.
 - [7] Nishibe, M. (2015). Globalization: Evolution of capitalist market economy through “Internalization of the Market”. *Evolutionary and Institutional Economics Review*, vol. 12, no. 1, pp. 31-60.
 - [8] Richnak, P. (2015). Globalization and its impact on the present concepts in Ccompany management. *Globalization and its Socio-Economic Consequences, 15th International Scientific Conference Proceedings*, pp. 608-616.
 - [9] Bai, J. and Wang, P. (2016). Econometric Analysis of Large Factor Models. *Annual Review of Economics*, vol. 8, pp. 53–80.
 - [10] Spread, P. (2016). Companies and markets: Economic theories of the firm and a concept of companies as bargaining agencies. *Cambridge Journal of Economics*, vol. 40, pp. 727–753.
 - [11] Hakcever, C., Render, B., Russell, R. S. and Murdick, R. G. (2000). *Service Management and Operations*. Pearson, pp. 751
 - [12] Berzakova, V. (2015). Company valuation and the globalization process. *Globalization and its Socio-Economic Consequences, 15th International Scientific Conference Proceedings*, pp. 27-32.
 - [13] Cainelli, G., Evangelista, R., Savona, M. (2006). Innovation and economic performance in services: a firm-level analysis. *Cambridge Journal of Economics*, vol. 30, pp. 435–458.
 - [14] Khalil, E. L. (1997). Is the firm an individual? *Cambridge Journal of Economics*, vol. 21, pp. 519–544.
 - [15] Goldfarb, R. S. Ratner, J. (2008). “Theory” and “Models”: Terminology through the looking glass. *Econ Journal Watch*, vol. 5, pp. 91-108.

ADAPTIVE MANAGEMENT OF ENTERPRISE VALUE IN THE EMERGING MARKETS IN THE CONTEXT OF GLOBALIZATION

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Abstract. The development of the processes of globalization requires the unification of approaches to assessing the effectiveness of enterprise management systems. It is necessary to develop a methodology that is applicable in different countries and at the international level. Such a methodology is an evaluation of efficiency based on the value of an enterprise. Enterprise cost management is one of the key areas in modern management. This direction of management is based on the recognition of the fact that the growth of value is the best indicator, indicating the growth and development of the enterprise. Known cost-based management models (EVA, CVA, SVA and other models) do not always allow for correct decisions. This is due to the fact that simple models can not satisfy all management principles at different stages of the enterprise's life cycle. The authors of the article propose to use the adaptive control system of fundamental value. This system takes into account the stages of the enterprise's life cycle. It is built on the basis of a system-functional approach to valuation. The essence of the model is the formation of individual profiles of dynamic consistency of key cost indicators, which include indicators of the balance sheet, the operating investment component and the component of dynamic flexibility. At each stage of the life cycle, it is proposed to form its system of dynamic consistency of indicators, which consists in ordering the growth rates of indicators reflecting the growth of each component of the fundamental value.

Keywords: globalization, cost management, fundamental value of an enterprise, life cycle of an enterprise

JEL Classification: D24, F61, F65, G12, G32

1. Introduction

The increasing globalization of the economy is reflected in a sharp increase in the scale and rate of capital's movement, outstripping the growth in international trade compared to GDP growth, the emergence of working around the clock in real time global financial markets (Christophers, 2015; Fernandez & Aalbers, 2016; Neto & Veiga, 2013; Nishibe, 2015; Ruscakova, 2015; and other). The information systems created over the past decades have immeasurably increased the ability of financial capital to move quickly, which at least contains the ability to destroy stable economic systems.

The Russian economy is in a difficult situation. At present, the Russian economy needs to continue the process of closer interaction with the overall structure of the world economy (Plotnikov et al., 2015). At the same time, there is a need to reduce the risks and negative consequences that accompany globalization. Given the positive and negative aspects of globalization of the economy, nevertheless, it should be noted that its further development will continue in any case. Great importance for the development of a market economy has the formation of stable foreign economic relations, the openness of the Russian market. The changes that have occurred in Russia's foreign trade in recent years are radical - the main achievement of the policy of liberalization is the saturation of the consumer market with goods. Globalization of the world economy is defined as a fait accompli, under its influence significant changes occur in the structure of the world system and life activity of the whole society, therefore these features in the development of the world structure must be analyzed and skillfully applied in activities.

A characteristic feature of modern processes of globalization is the multifaceted nature of its manifestation. The impact of globalization covers all main areas of activity - technological, organizational, administrative, legal (Vertakova & Plotnikov, 2016). The post-industrial era of high technology, based on the knowledge economy, whose main product is new information, and new knowledge (Stern & Arbor, 2001), has replaced the industrial era of predominantly extensive development. At the same time, globalization opens up wide ways for the dissemination of this knowledge. There are many examples where a country adopting and using modern western economic, production and organizational methods and structures makes significant economic progress (Szirmai et al., 2013). This fully applies to new management technologies at macro and micro levels, which originate in one country, transforming, with high speed spread to economies of other countries.

2. Theoretical approaches to the Value-Based Management

Value-oriented management – a new trend of management (Martin & Petty, 2000). Value-Based Management (VBM) is now a universally accepted concept, focused on the actualization of the future value of the company in the process of adopting the current operational and strategic decisions (Bolsinger, 2015). Since the recognition of value-oriented management as a perspective concept of enterprise management, many approaches and methods of valuation and management of companies' value have arisen (Berzakova, 2015). In the 1970s and 1980s, a number of indicators were developed that met the most important requirement of a market economy - improving the well-being of shareholders, and hence capitalization (Rappaport, 1986). At this stage of development an issue of the relationship of the fundamental value of companies and their market capitalization has become a topical one, as in the ratio of these categories were based investment strategies of market participants.

The main concepts and cost indicators, which were recognized by specialists, are presented in Table 1. Analysis of management concepts shows that the management concept based on the value approach, which takes into account not only market assessments, but also the quality of management in the enterprise, is most adequate. The introduction of the concept of value in work of modern domestic enterprises meet serious difficulties, which are related primarily to the following aspects:

Table 1: Contents of the main management concepts based on VBM

Concept name	Representative	Index	The basic idea of the concept
The concept of shareholder value added	Rappaport	SVA (shareholder value added)	Assessment of effectiveness of the investment and financial strategy of corporations based on its ability to create shareholder value
The concept of economic value added	Stern, Steward	EVA (economic value added)	According to EVA concept the business value is the book value increased by the present value of future value added. Stern Stewart proved the correlation between the EVA value and the market value
The concept of market value added	Stern, Steward	MVA (market value added)	The difference between the total value of the company and the total amount of capital employed (including equity and debt). Reflects the discounted value of all present and future investments.
The concept of value thinking	Copeland, Kohler, Murrin		Allows you to take into account intangible assets that are not reflected in the balance sheet, which at the present stage acquire special significance in the activities of companies.
The concept of cash value added	Levis	CVA (cash value added)	The idea of the concept is the assertion that not only shareholders but also other stakeholders should benefit from increasing the value of the company.
Model EBO(Edward-Bell-Olson)		The formula for calculating the cost based on the autoregressive	The value of a business is determined on the basis of discounting excess profits

Source: Rappaport, 1986; Stern, Stewart & Chew, 1995; Stewart, 1991; Copeland, Koller & Murrin, 1996; Edwards & Bell, 1961; Ohlson, 1995.

- The methodological approaches and economic models developed to the present time are intended primarily for large enterprises, but for small and medium-sized enterprises this concept remains inapplicable.
- Indicators for assessing the value of an enterprise or its growth have different forms and are often not comparable.
- The most part of indicators of an estimation of growth of cost are a commercial product, contain in a methodology of their application a number of the patented and protected know-how which are known only to the manufacturer. In addition, the introduction of such products requires significant organizational and financial costs, including the adaptation of the product to a specific enterprise, as well as the maintenance of commercial products.

Despite these difficulties, the cost approach at this stage in the development of economic science seems to be the most progressive approach that allows planning and evaluating the activities of an enterprise based on an integrated indicator - cost. One of the problems with implementing VBM is not taking into account the stages of the enterprise's life cycle when determining the cost. Models of the life cycle of enterprise development have become quite widespread in modern management. The practical importance of life cycle models is conditioned by the need for further improvement of business processes, obtaining an opportunity for an adequate response to external and internal changes, as well as increased flexibility in the process of enterprise development.

Among all models, the most popular are the life-cycle models (Adizes, 1988) and the enterprise development model (Greiner, 1972). Interesting models are also represented by the life cycle model, which was called the «Model of the dynamic (organic) development of the enterprise» (Glasl & Lievegoed, 1993). Comparison of different models of the life cycle shows that at the heart of any of offered models one can single out a number of basic stages that exist in any model, while the difference of models often consists in a more detailed and deep division of individual stages of the life cycle due to focus on certain aspects of enterprise's activity in the analysis.

3. Life-cycle management of enterprise value in the emerging markets

The basic model of the life cycle of an enterprise can be represented in the form of the following main stages: birth, youth (rapid growth), maturity (flowering), crisis. Then there are two possible outcomes - withering and death, or a new stage of development that can be realized through the association phase and is provided at the expense of external opportunities opening up to the enterprise. The main task of the life cycle models is the periodization of the stages of the enterprise development, their formalization with the purpose of determining the leading factors of development, driving forces at each stage, therefore this approach allows not only to specify the management efforts, but also to modify the financial model of the enterprise in the process of its development. To evaluate the activities of the company at various stages of development, it is necessary to use various financial indicators. As a rule, they include: a minimum investment of capital for a given result; the maximum of the reduced profit, current costs; minimum time for capital turnover; maximum profitability of capital.

We offer to use the life-cycle model of enterprise value management. The main idea of this approach is that at different stages of the enterprise's life cycle, the dynamics of the components of cost are different, and this, of course, must be taken into account when building a system for managing enterprise development based on value. But since the cost indicator, as an economic category, is heterogeneous, a model of the company's fundamental value, including the balance sheet, operating, investment levels and the level of the cost of dynamic flexibility is offered. For each level, there are specific features associated with the manifestation, methods of evaluation and management methods of this component of value. The indicator of the company's value growth, determined through cash flows, is determined by the complex internal structure of the value generation system and is formed at the expense of cash flows from the operating, investment and financial activities of the enterprise. The dynamics of these components of the cash flow and the integral value of the company's net cash flow is presented in Figure 1.

To evaluate each component of value, a chain of indicators can be used that characterizes the magnitude and quality of one or another component of value. In general, these indicators can be combined into a system based on the principles of dynamic consistency. The basic is the chain of dynamic consistency of individual elements of fundamental value:

$$I(V_{DF}) > I(V_I) > I(V_O) > I(V_B) > 0, \quad (1)$$

Where

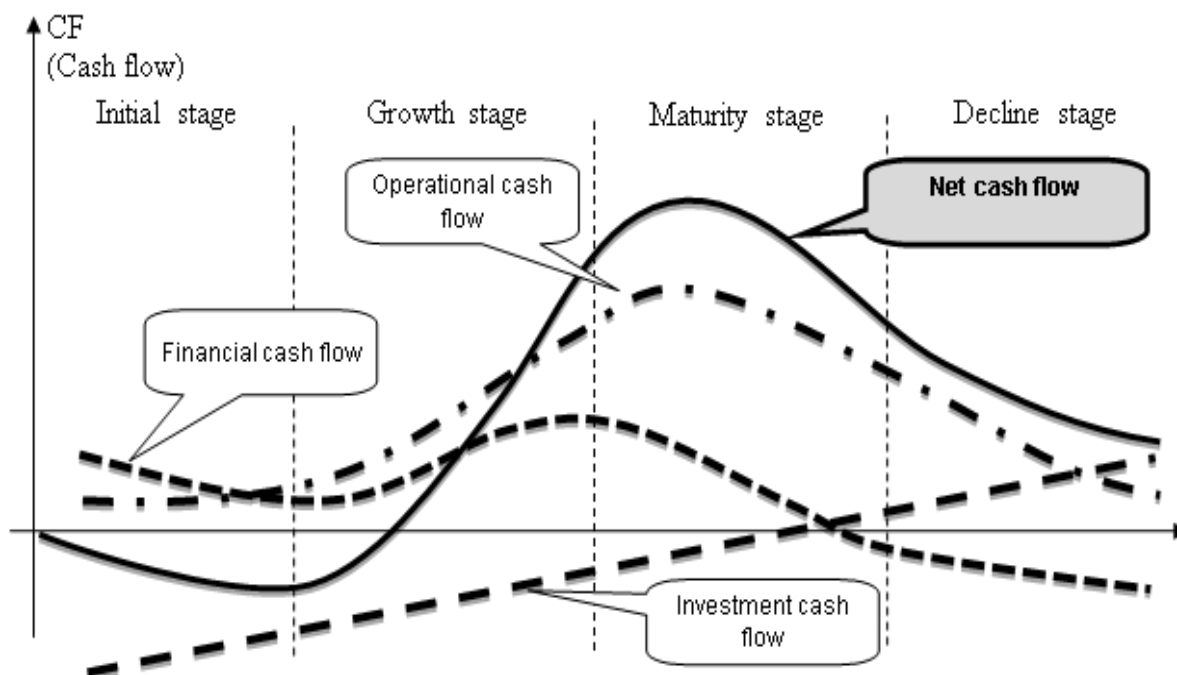
$I(V_B)$ - the growth rate of the balance component of the fundamental value of the trading enterprise;

$I(V_O)$ - the growth rate of the operating component of the fundamental value of the trading enterprise;

$I(V_I)$ - the growth rate of the investment component of the fundamental value of a trading enterprise;

$I(V_{DF})$ - the growth rate of the component of dynamic flexibility (potential) of the fundamental value of a trading enterprise.

Figure 1: Dynamics of the cash flow and its components at the stages of the life cycle of the enterprise



Source: own processing

Such a representation of value may not always reflect the urgent needs of enterprise development at the current stage of the life cycle. At each stage of the life cycle, it is possible to build its own system of ordering, which will allow the enterprise management to choose the mechanisms for influencing the growth rates of value more accurately. Therefore, it is offered to transform the basic equation of dynamic ordering (1) for different stages of the life cycle.

At the stage of start-up, the main task of the enterprise is to ensure the viability and consistency of the business project. At this stage of development, the enterprise is experiencing a shortage of financial resources, so the emergence of a liquidity crisis of business and a liquidity crisis of the owner's capital is possible. Therefore, efforts should be directed at what would make the enterprise work, and all managerial efforts should be aimed at managing the increment in the operating cost of the enterprise. This management strategy corresponds to the following equation of dynamic ordering:

$$I(V_O) > 0. \quad (2)$$

At this stage, management of such components of value as investment and the component of dynamic flexibility in principle is not implemented.

At the stage of adolescence, the main task of enterprise management is to transform the cash flow into a formed market share. At this stage, the enterprise requires significant financial

resources, since its own financial resources, which the company generates, are not enough. Thus, to ensure the growth of book value, it is necessary to include management tasks of the investment component of value, which is aimed at the growth of the main activity of the enterprise (investment in the core business of the enterprise). On the other hand, at this stage there arises the problem of managing the balance component of value, it manifests itself, among other things, in maintaining the optimal capital structure of a growing enterprise. Therefore, the main problems at this stage are the rapid growth of the operating cash flow and the operating component of the cost, ensuring the financing of the company's growth (the investment component of the fundamental value, but mainly in current assets), and ensuring an acceptable capital structure, which in turn affects the amount of the balance component of the fundamental value of the enterprise. The dynamic consistency profile at this stage can have the following form:

$$I(V_O) > I(V_I) > I(V_B) > 0. \quad (3)$$

The next stage is the stage of prosperity and stability. This stage is characterized by high competition. The enterprise can survive either by building an effective business model, or by continually increasing efficiency. The main task of this stage is to increase efficiency. In order to ensure competitiveness, the enterprise begins to invest in ensuring its dynamic flexibility, there are costs for intellectual capital, intangible assets, network capital are formed. At the initial stage of the stability stage, the following form of dynamic consistency should be fulfilled, while the intensity of the operating activity may still exceed the intensity of investment activity.

$$I(V_O) > I(V_I) > I(V_B) > I(V_{DF}) > 0, \quad (4)$$

At the end of the flowering stage, priorities change. This is due to the fact that, despite the sufficient market efficiency of the main activity of the enterprise, rates of rapid growth are exhausted and it is increasingly reducing its effectiveness. This leads to an increase in the role of investment, therefore the growth rate of the investment component of the value must at some point in time exceed the growth rate of the operating component of the cost (and they may decrease at this stage), the value of dynamic flexibility should increase at an even faster rate due to the growth of the components of the intellectual, social network and other types of capital (see Figure 1).

The increment of this component of value is particularly relevant at this stage of development due to the urgent need for the upcoming enterprise transformations. The equation of dynamic consistency at this stage of the life cycle has the following form:

$$I(V_{DF}) > I(V_I) > I(V_O) > I(V_B) > 0, \quad (5)$$

Thus, only at the stage of flowering the ideal dynamic orderliness of the components of value from the point of view of the economy is achieved.

If the enterprise has coped with the problems of reorienting the business to new key competencies, then again the growth stage, which is described by inequality (3), should begin. If the decline begins and the enterprise dies, then it becomes very difficult to specify the form of expressing the dynamic consistency of the growth rates of the components of value, primarily due to an index's decrease in the financial and economic activity of the enterprise.

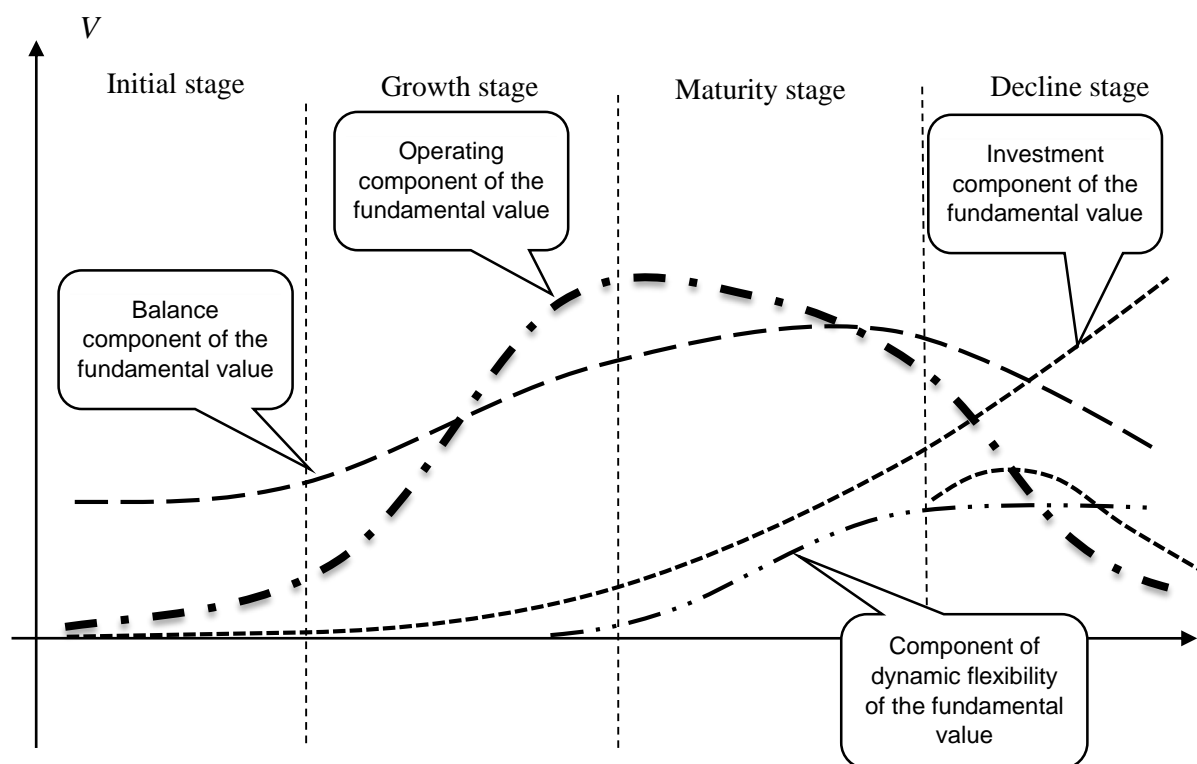
In Figure 2 the dynamics of the growth rates of the components of the fundamental value at various stages of the enterprise's life cycle is presented in accordance with the reasoning given

above. This scheme reflects the change in the growth rates of individual components of the fundamental value in dynamics, taking into account the stages of the life cycle of the enterprise.

4. Conclusion

Through the use of model of enterprise's lifecycle and analyze problems in the creation of the enterprise costs offered various profiles of dynamic consistency of fundamental value's base indexes, which allow to take into account non-uniformity of the size and dynamics of the components of the fundamental value in the process of enterprise development. To prioritize the development of a system of financial interest in the implementation of cost-based approach, as well as to avoid errors early, or, conversely, delayed implementation of certain aspects of cost management. Considered in the article approach may also be useful in identifying the current phase of the enterprise life cycle.

Figure 2: Growth rates of the components of the company's fundamental value at various stages of the life cycle



Source: Developed by the authors

References

- [1] Adizes, I. (1988). *Corporate Lifecycles: how and why corporations grow and die and what to do about it*. Englewood Cliffs, N.J.: Prentice Hall.
- [2] Berzakova, V. (2015). Company valuation and the globalization process. *Globalization and its Socio-Economic Consequences, 15th International scientific conference proceedings*, Rajecke Teplice, Slovak Republic, pp. 27-32.

- [3] Bolsinger, M. (2015). Bringing value-based business process management to the operational process level. *Information systems and e-business management*, vol. 13, pp. 355-398.
- [4] Copeland, T., Koller, T. and Murrin, J. (1996). *Valuation: Measuring and Managing the Value of Companies*. New York: McKinsey & Company, Inc.
- [5] Christophers, B. (2015). The limits to financialization. *Dialogues in Human Geography*, vol. 5, no. 2, pp. 183-200.
- [6] Edwards, E. and Bell, P. (1961). *The Theory and Measurement of Business Income*. University of California Press.
- [7] Fernandez, R. and Aalbers, M. B. (2016). Financialization and housing: Between globalization and varieties of capitalism. *Competition & Change*, vol. 20, no. 2, pp. 71-88.
- [8] Glasl, F. and Lievegoed, B. (1993). *Dynamische Unternehmensentwicklung: Wie Pionierbetriebe und Bürokratien zu Schlanken Unternehmen werden*. Stuttgart: Verlag Freies Geistesleben Stuttgart.
- [9] Greiner, L. E. (1972). Evolution and revolution as organization grow. *Harvard Business Review*, vol. 50, no. 4, pp. 37-46.
- [10] Martin, J. D. and Petty, J. W. (2000). *Value Based Management – The corporate response to the shareholder revolution*. Harvard Business School Press, pp. 249.
- [11] Neto, D. G., Veiga, F. J. (2013). Financial globalization, convergence and growth: The role of foreign direct investment. *Journal of International Money and Finance*, vol. 37, pp. 161-186.
- [12] Nishibe, M. (2015). Globalization: Evolution of capitalist market economy through “Internalization of the Market”. *Evolutionary and Institutional Economics Review*, vol. 12, no. 1, pp. 31-60.
- [13] Ohlson, J. A. (1995). Earnings, book values, and dividends in equity valuation. *Contemporary Accounting Research*, vol. 11, no. 2, pp. 661-687.
- [14] Plotnikov, V., Vertakova, Y. and Polozhentseva, Y. (2015). Methods of detecting imbalances in the structure and dynamics of socio-economic system. *2nd International Multidisciplinary Scientific Conference on Social Sciences and Arts (SGEM 2015)*, Albena, Bulgaria, pp. 821-828.
- [15] Rappaport, A. (1986). Corporate performance standards and shareholder value. *Journal of Business Strategy*, vol. 2, pp. 14-28.
- [16] Ruscakova, A. (2015). The European sovereign debt crisis: The result of the financial globalisation and of the system failures of global economic and political order. *Globalization and its socio-economic consequences, 15th International scientific conference proceedings*, Rajecke Teplice, Slovak Republic, pp. 617-626.
- [17] Stern, R. M. and Arbor, A. (eds.), (2001). *Services in the International Economy*. University of Michigan Press.
- [18] Stern, J., Stewart, G. and Chew, D. (1995). The EVA financial management system. *Journal of Applied Corporate Finance*, vol. 8, no. 2, pp. 32-46.

- [19] Stewart, G. B. (1991). *The Quest for Value: A Guide for Senior Managers*. Harper Business, New York.
- [20] Szirmai, A., Naude, W. and Alcorta, L. (2013). *Pathways to Industrialization in the Twenty-First Century: New Challenges and Emerging Paradigms*, Oxford, Oxford University Press.
- [21] Vertakova, Y. and Plotnikov, V. (2016). Innovative and industrial development: specifics of interrelation. *Economic Annals-XXI*, vol. 156, no. 1-2, pp. 37-40.

SCIENCE AND TECHNOLOGICAL PARKS (STPS) AS THE KEY ELEMENTS OF URBAN INNOVATION INFRASTRUCTURE IN THE CONTEXT OF GLOBALIZATION

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Abstract. The article considers the issues of formation and development of a new more effective model for the functioning of the economic complex of a municipal formation by creating specialized technopark organizational structures working on the market principles of self-sufficiency, possessing the necessary independence and ensuring sustainable development of cities in the context of globalization processes. In modern conditions, due to the influence of factors such as globalization, the development of scientific and technological progress, the emergence of new innovative technologies, new opportunities for economic development highly arise. Today, the problem of successful innovative transformation of the economy is acute for every country. Most states declare their readiness to invest in innovative programs and projects. The result of the policy in the sphere of innovations at the state level should be the formation and enhancement of the investment attractiveness of cities and regions of each country, related to their innovative activity. The article notes that the creation of modern innovation structures – municipal science and technological parks (STPs), can be one of the measures that allows to ensure sustainable development of scientific and technological organizations and industrial entrepreneurship within the city and the region. The STP is a new form of territorial integration of science, education and production in the form of a union of scientific organizations, design bureaus, educational institutions, manufacturing enterprises or their subdivisions.

Keywords: science park, technological park, STP, urban innovation structure, city innovation development, globalization

JEL Classification: F63, O14, O18, O25, O43

1. Introduction

As in the majority of developed countries, in our country there is an active search for an effective approach that relies on a comprehensive analysis and understanding of global innovation processes, features of the development of high-tech world markets, and the nature of competition on them. Thus, one of the most important strategic priorities of the social and economic development of the Russian Federation at present is the formation of a national

innovation system. It should take place taking into account the real state of the economy and the innovation sphere of our country, its strengths and weaknesses, as well as selected benchmarks.

In modern conditions, due to the influence of factors such as globalization, the development of scientific and technological progress, the emergence of new innovative technologies, new opportunities for economic development arise. At the same time, a number of problems that hamper the effective development of the national innovation system characterizes the current state of the innovative infrastructure of Russian Federation. These problems have different causes, and, accordingly, different ways of solving. The existing innovative infrastructure does not promote the development of cooperative links between the subjects of the innovation system: small and medium-sized innovative companies are poorly integrated into innovative networks; cooperative ties that allow to form innovative chains "science and education - innovative small and medium business - big business" are not enough developed, which impedes the effective transfer of knowledge from the research and development stage to the stage of practical application and capitalization of knowledge in the Russian economy (Farre-Perdiguer et al., 2016),

The most important tool for increasing the competitiveness of the city's economy is the introduction of modern technologies on its territory. This requires the development of applied science, which can be ordered to develop the technology necessary for the market, as the leading companies in the world market are, as a rule, owners of technologies that allow producing fundamentally new products (Terebova, 2010), (Vargas et al., 2016).

Currently, there are many variants of innovative territories in the world. The generally accepted typology of territories for innovative development does not exist, which indicates the complexity and diversity of the phenomenon of innovative territories. In domestic scientific publications and mass media, territories with innovative potential are considered as «science and technological park (STP)», «technopark», «technopolis», «innograd» (ru. – inno-city), «naukograd» (ru. – science-city) (Dmitrieva, 2016).

STPs, as a rule, are created at universities or research institutes. Often they do not have their own legal entity, tax benefits, are based only on the territory of a particular university or research institute, attract their employees and students to research activities. Such STPs were created at the St. Petersburg State Electrotechnical University, the Moscow Institute of Electronic Technology, the Ulyanovsk State Technical University and at other universities. Technopolis, unlike the STP, has the status of a special economic zone, appropriate tax benefits for residents and developed infrastructure, including housing for employees of technopolis enterprises (Diez-Vial & Montoro-Sanchez, 2016).

The above-listed statuses and legal forms of innovative development territories testify to the diversity of options of this category not only in the world, but also in Russia. According to the authors, the territory of innovation development should be characterized by such signs as: the presence of a research and educational complex, the status of a special economic zone, the presence of a business incubator, developed infrastructure, marketing promotion of the territory and innovative products produced by its residents.

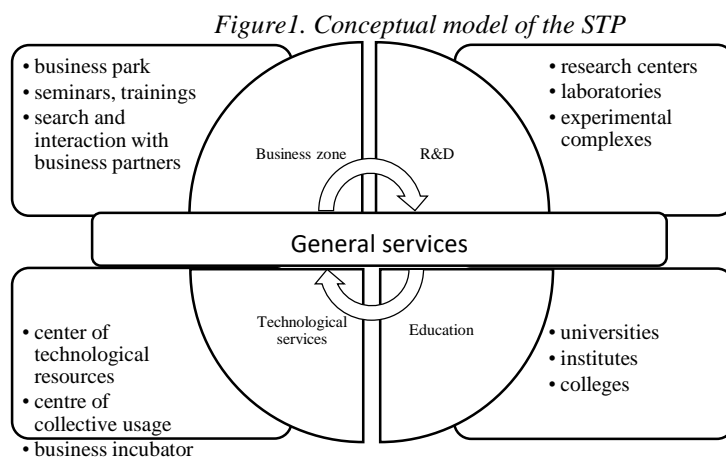
The objectives of marketing the territory of innovation development should be set as the following: attraction of innovative companies as residents of the territory, marketing support of innovative start-ups, launching innovative products and technologies on the market, attraction of investments for support of innovations and development of a modern infrastructure for introduction and manufacture of innovations, creating conditions for the fruitful activity of

investors and companies that require investments. These and other important tasks in our opinion can be solved by creating and developing urban scientific and technological parks (Vasquez-Urriago et al., 2014).

2. Theoretical aspects of creating STPs

STPs are important elements of the modern economy and are widely used as a tool for supporting innovative business in foreign practice. STPs are the platforms that enable firms to innovate in an open system thanks to their networking nature across universities, research labs, start-ups, SMEs, and large firms (Kubra & Nihan, 2016; Diez-Vial & Montoro-Sanchez, 2016).

STPs along with technological clusters, special economic zones, business incubators, innovative centers form the innovative infrastructure of the economic space. Special features of scale, measures of interaction of its constituent organizations and maintenance of the infrastructure in conjunction with the development or promotion of novelty products and technologies characterize each of the objects (Pauna, 2015). STPs in turn also represent a complex system, including a number of important elements for functioning (Fig. 1).



Source: compiled by the author

The figure shows that each structure of the STP includes functional units aimed at achieving the developed strategies and objectives for the development of scientific research and the development of innovations in one or more industries. Conventionally, they can be divided into structures for the provision of special services and structures for the provision of common services.

Despite the fact that the STPs exist more than a half of a century, at the moment there is no generally accepted definition or established classification. International Association of Science parks and Areas of Innovation in early 2002 proposed the following definition:

"The technological park (technopark) is an organization managed by specialists whose main goal is to increase the well-being of the local community through the promotion of innovative culture and the competitiveness of innovative business and scientific organizations. To achieve these goals, the technopark stimulates and manages the flow of knowledge and technologies between universities, research institutes, companies and markets. It simplifies the creation and growth of innovative companies through incubation processes and the formation of new spin-off processes. In addition to high-quality space, the Technopark provides other services" (Diez-Vial & Fernandez-Olmos, 2015).

Thus, the STP is created in order to accelerate the development and application of scientific, technical and technological achievements through the concentration of highly qualified specialists, the use of an equipped production, experimental and information base (Barcellos et al., 2016).

Organizations designed to stimulate the creation of STPs on their territory determine them more specifically. Thus, the Queensland Innovation Council proposes the following definition: “STP is a legal entity created for more adequate use of scientific and technological resources to improve the economic base of the region. The mission of the STP is to stimulate regional development, de-industrialization, and also to simplify the implementation of commercial and industrial innovations. The activity of the STP enriches the scientific and / or technical culture of the region, creates jobs and added value” (Solovyova, 2013), (Jongwanich et al., 2014).

Consequently, the need for the development of technology parks is obvious. This is due to the following main reasons: the need for concentration of promising subjects of small and medium-sized innovative entrepreneurship to coordinate their activities and provide support at all stages of the innovation cycle (Zhou, 2017); the need to create favorable conditions for the commercialization of knowledge and the results of scientific research; the need to increase the competitiveness of products and the need of industrial enterprises to create innovations by scientific organizations and higher educational institutions (Vargas et al., 2016).

Besides STPs give companies an opportunity to innovate in an open system because they act as an intermediary between technology developer and technology diffuser and transfer innovations from universities and research labs to the markets. Considering their networking nature, STPs are the mediators and providers of open innovation for universities, research labs, start-ups, SMEs, and large companies (Farre-Perdiguer et al., 2016).

3. Technology transfer and development of STPs in the world

In the modern world, in the context of globalization, international technology transfer and scientific and technical cooperation are the basic basis for the recovery and rapid growth of the economy of the country, region and city. The role of the phenomenon of technology transfer was, in particular, in his contribution to the formation of the first technopolis - Silicon Valley (USA, California), where, on the basis of Stanford University's research, small innovative companies were created by graduates and students. They turned into such giants of world business, As Hewlett-Packard Co., Intel, Apple Inc. and et al. (Terebova, 2010), (Kusharsanto & Pradita, 2016). For the development of the economy both at the regional and city levels, in our opinion, it is necessary to increase the following types of technological transfer (Jiang & Mei, 2016).

The development of a transnational technological transfer is required, which ensures closer cooperation in science with other countries. It is not easy to enter the free world market for domestic enterprises. It has been divided between specialized firms in the US, Japan, Germany and et al. With the sale of technology, there is an opportunity to penetrate the closed market of another country, because after the technology, the accompanying goods and services are supplied to the host country, after-sales service is provided (Tab.1).

Table 1: Quantitative characteristics of world's STPs

STP	Year of est.	Total area, ha	Total area of premises, m ²	Number of employees	Number of residents
Kulim, Malaysia	1996	1 700	133 000	18 500	59
One-North, Singapore	2001	200	340 000	3 200	–
Research Triangle, USA	1959	2 833	6 000 700	52 000	170
Sophia-Antipolis, France	1969	2 400	1 100 000	40 000	1 452
Turku / Lahti / Otaniemi, Finland	1988/ 2008/ 1949	500/ 70/ 200	250 000/ 13 000/ 40 000	–	160/ 50/ 800
Technologie-park Heidelberg GmnH, Germany	1984	5	50 000	1 400	86
Lakeside Science and technology park, Austria	2002	22	28 000	400	52
Technopolis Tsukuba, Japan	–	up 750	–	1 500	80
Nanhu, China	1988	22	–	–	475

Source: compiled on the basis of data published on the website of the International Association of Science parks and Areas of Innovation. Available: www.iasp.ws

The number of STPs as tools of technological transfer in the world is growing rapidly. Now there are more than 700 of them; 43% are in the United States, 34% in the EU, 11% in China and 13% in other countries. The considered foreign experience of creation and functioning of STPs allows to draw a conclusion that for effective activity of STPs the close cooperation of the state, scientific and educational sphere and business is necessary (Santana, 2016).

STPs and other varieties of technology and innovation zones have become a strategic tool for the policy of new economic development of different countries of the world. For some countries of the world, especially the new industrial economies of East Asia (Singapore, Taiwan, Republic of Korea), such zones have become the basis for transforming the model of the national economy from the policy of export-oriented development to a policy based on high technologies and the formation of an innovative economy (Kosttyunina & Baronov, 2012).

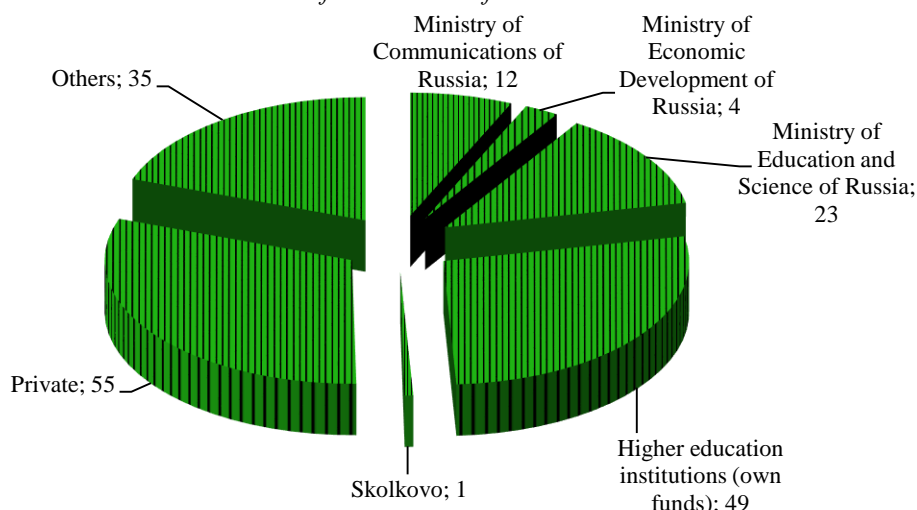
4. The dynamics of innovation activity and technological parks development in Russia

The first STPs began to form in the Russian Federation in the early 1990s. At the same time, the process of development of STPs in Russia had an episodic character. In general, there are two waves of development of Russian STPs. Within the first wave, several dozen STPs were formed, the vast majority of which ceased to exist by the beginning of the 2000s. This happened as a result of the absence at the time of the state's strategy for the creation and development of STPs, and due to the weak material and financial base of STPs, most of which were created within higher education institutions and were not aimed at extracting commercial profits through the introduction of scientific and technical results developments. The second wave – came on 2006, which is connected with the adoption of the concept of long-term socio-economic development of the Russian Federation until 2020, where the need to create a national innovation system is determined.

The number and initiators of the creation of technoparks (as of 2015) are presented in Fig. 2. The federal target program "Establishment of Technology Parks in the Sphere of High Technologies in the Russian Federation" adopted by the Government of the Russian Federation

in 2006 (No. 328-r) indicates that STPs in the sphere of high technologies will not be high-tech enterprises operating in such sectors, as nanotechnology, biotechnology and information technology. Educational institutions, in turn, will provide an increase in scientific and human resources for these enterprises. Other enterprises and organizations located on the territory of the STP will ensure the technological activities of the above-mentioned enterprises or serve them.

Figure 2: The number and initiators of the creation of STPs in the Russian Federation



Source: based on data published on the website of the Association of Clusters and Technoparks of the Russian Federation. Available: nptechnopark.ru

The results of the development research of STPs in Russian Federation showed that the main prerequisites for creating an STP in the region are: industrial orientation of the region, the presence of the city-forming large enterprises, the emergence of potential investors and the support of federal and regional authorities.

5. The idea of the municipal STP in Ekaterinburg (Sverdlovsk region)

The innovative infrastructure of the Sverdlovsk region currently includes a wide range of organizations involved, including higher education institutions, research institutes, scientific and educational and business innovation centers, technology parks and industrial parks, business incubators, etc. Our studies have shown that Yekaterinburg as the capital of the Federal District, has certain conditions that determine the success of the creation and functioning of a STP of any type and size. Key factors include: the presence in the city of large universities, research institutes with high scientific and technical potential, quality housing and communal, cultural, medical and other infrastructure. Also important role has developed research and production and marketing infrastructure, the availability of equipped laboratories and facilities for pilot production, comfortable offices for researchers and technical personnel, a ramified and reliable system of transport communications and free unlimited access to the Internet;

The idea of creating a "municipal" STP as a business development center on the territory of a municipal formation logically fits into the overall strategy of social and economic development of the Sverdlovsk region and the Russian Federation, allowing to form local "growth points" that ensure improvement of the investment climate of the territory,

development of public-private partnerships, high-tech enterprises and high-performance jobs, increasing the overall quality of life of the population.

6. Conclusion

The creation of an STP is economically profitable at the federal, regional, local levels and at the level of an individual enterprise. Federal authorities consider the creation of STPs in the regions as one of the tools for implementing an innovative way of development of the state aimed at increasing the growth rates in high technology and high-tech industries. The main goal of creating a STP in the region is the activation of innovative processes in a certain sector of the regional economy. As the research shows, the STPs allow to increase the number of knowledge-intensive firms in the region, to create favorable conditions for the sustainable development of scientific, technological and industrial entrepreneurship and to increase the volume of shipped goods of own production, performance of works and services by the region's own forces.

We believe that the continuation of research into the creation and development of STPs and other innovative infrastructures will contribute to the solution of the key task facing Russia, which consists in the formation and development of an economy based on skills and knowledge with the greatest degree of innovation that has become customary for developed countries. World experience shows that industry and, first of all, the real sector of the economy is one of the key organizers, customers and buyers of innovations. At the same time, private companies can most reliably and adequately assess the commercial effect of introducing an innovation. We are also sure that they will be able to create a more successful investment strategy, reducing possible risks. However, without the support of the state, it will be extremely difficult for them to do this.

References

- [1] Barcellos, E. E. I., Botura, G. and Paschoarelli, L. C. (2016). Design aspects applied to engineering: Technology sustainable development and innovation in the science parks. *Advances in Human Factors and Sustainable Infrastructure*, vol. 493, pp.95-103.
- [2] Diez-Vial, I. and Montoro-Sanchez, A. (2016). How knowledge links with universities may foster innovation: The case of a science park. *Technovation*, vol. 50-51, pp. 41-52.
- [3] Diez-Vial, I. and Fernandez-Olmos, M. (2015). Knowledge spillovers in science and technology parks: how can firms benefit most? *Journal of technology transfer*, vol. 40, no. 1, pp. 70-84.
- [4] Dmitrieva, M.A. (2016). Strategies for marketing the territory of innovation development. *Economics and Management: Problems, Solutions*, no. 9, pp. 28 -33.
- [5] Farre-Perdiguer, M., Sala-Rios, M. and Torres-Sole, T. (2016). Network analysis for the study of technological collaboration in spaces for innovation. Scienceand technology parks and their relationship with the university. *International Journal of Educational Technology in Higher Education*, vol. 13, no. 8.
- [6] Jongwanich, J., Kohpaiboon, A. and Yang, C. H. (2014). Science park, triple helix, and regional innovative capacity: province-level evidence from China. *Journal of the Asia Pacific Economy*, vol. 19, no. 2, pp.333-352.

- [7] Kostyunina, G. M. and Baronov, V. I. (2012). Technoparks in foreign and Russian practice. *Bulletin of MGIMO University*, no. 3, pp. 91-99.
- [8] Kubra, Ş. and Nihan, Y. (2016). Constraints to open innovation in science and technology parks. *Procedia - Social and Behavioral Sciences*, vol. 235, no. 24, pp. 719-728.
- [9] Pauna, C. B. (2015). Cross-sectoral cooperation vs. cluster development at European level. *Procedia Economics and Finance*, no. 22, pp. 175-183.
- [10] Santana, N. D. (2016). Performance evaluation of technology parks: Proposal based on a study at TECNOPUC. *Navus-revista de Gestao e Tecnologia*, vol. 6, no. 4, pp. 72-87.
- [11] Solovyova, Yu.V. (2013). Development of technopark structures: World and domestic experience. *Mining Information and Analytical Bulletin*, no. 113, pp. 297-302.
- [12] Terebova, S. V. (2010). Directional techno stream. Mechanisms of technology transfer to the city economy. *Journal of Creative Economy*, no 11, pp. 130-136.
- [13] Vargas, C. A. F., Rech, I. and dos Santos, S. A. (2016). Enterprise competitiveness factors in companies located in a Brazilian technological park. *Revista gestao & Tecnologia-Journal of Management and Technology*, vol. 16, no. 2, pp. 100-126.
- [14] Vasquez-Urriago, A.R. et al. (2014). The impact of science and technology parks on firms' product innovation: Empirical evidence from Spain. *Journal of Evolutionary Economics*, vol. 24, no. 4, pp. 835-873.
- [15] Zhou, H. Y. (2017). Research on the Construction of Science Park Entrepreneurship Ecosystem under New Economic Norm. *Agro Food Industry Hi-tech*, vol. 28, no. 1, pp. 2928-2931.
- [16] Kusharsanto, Z. S. and Pradita, L. (2016). The Important Role of Science and Technology Park towards Indonesia as a Highly Competitive and Innovative Nation. *Procedia - Social and Behavioral Sciences*, vol. 227, pp. 545-552.

GLOBAL TRENDS OF DEVELOPMENT OF MODERN TECHNOLOGIES OF MANAGEMENT

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Abstract. Management and its concepts occupy a significant place in the activities of the organization. At this point in time, an effective management system is one of the key factors in the success and survival of businesses. Therefore, an important aspect of management practices is the comparative characteristic and identifying the specific characteristics of each particular style or concept of management. Improvement and testing of the styles and concepts of management in a competitive environment leads to the optimization of the methodology for a particular style of management and find effective ways of applying management concepts in the enterprise. The aim of the study is to study modern management practices and application of certain management technologies in specific situations, as well as the identification of specific features of modern management and definition of its global development trends. The methodological basis of the study consists of a comparative analysis of sources; analytical method that can identify positive and negative aspects of modern management methods; the method of synthesis, allowing to obtain valid conclusions; and inductive method, which was used to indicate individual cases within the population under study management technologies. The result of this research is a methodology for integrated use of the most current management technologies for the effective development of companies. Practical significance of the research lies in the fact that the proposed method using the above technologies in different combinations, gives a variety of positive effects in a certain way affect the development of companies.

Keywords: management, management technology, reengineering, engineering, benchmarking, controlling, grading.

JEL Classification: M12, M19, P00

1. Introduction

Management and technology in its specific applications occupy a significant place in the circuit activities of commercial organizations. At this point in time, an effective management system is one of the key factors in the success and survival of businesses. In addition, the need to use modern management technologies due to increasing degree of competition and globalization of the economy. Since the management aimed at achieving the goals of the company, that from well-chosen technology depends on the possibility of growth and development of the organization in the future. Modern science and practice provides leaders of commercial organizations, the many new management technologies. However, their effectiveness often depends on the specific situation in which they apply and the scope of activities and scale of activity of the enterprise. Therefore, an important aspect of management

practices is the comparative characteristic and identifying the specific features of each particular control technology. Improvement and testing of control technologies in a competitive environment leads to the optimization of the methodology for the application of a certain control technology and finding effective ways of achieving the goals of the company.

Management activity is one of the most important processes that ensure the functioning of a commercial enterprise. Management includes many specific features and elements that define its content as a specific type of activity. Many authors give the definition of the term "control", but the most generalized, covering the maximum number of its specific features, the following.

Governance is a set of techniques and methods of purposeful influence on the object to achieve a particular result (Rednikin, 2014).

Modern society makes the managers quite high. This is due primarily to the high level of competition, as well as diverse and specific needs of the target audience that must be met in order to ensure the survival of the company in the future. Management as a specific kind of activity needs to ensure the coordinated work of the whole company and to contribute to the achievement of the mission and other goals. In addition, you can quite clearly highlight the peculiarities of modern management: 1. customer focus; 2. the management of business processes, not functions, 3. orientation on the final result; 4. constant development and training; 5. active use of information and communication technologies in process management activities (Gorelik, 2015).

Technology management methods, techniques, methods, procedures, and regulations of implementation of the management process showing the sequence and interrelationship of procedures, operations and phases that comprise this process. The purpose of the creation and application of technology management is improving management processes, increasing their efficiency (Hershman, 2016).

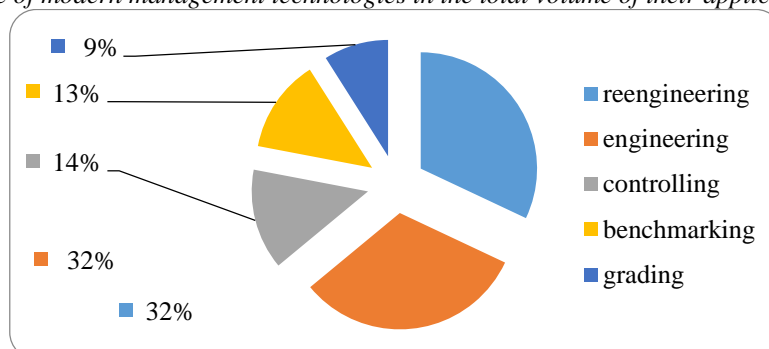
2. Body

The methodological basis of this study served as such General scientific and specific methods such as: comparative analysis of sources; analytical method that can identify positive and negative aspects of modern management methods; the method of synthesis, allowing to obtain valid conclusions; and inductive method, which was used to indicate individual cases within the population under study management technologies.

In addition, to determine the percentage used in Russian enterprises of technology management, has been applied to the survey via e-mail. The questionnaire was composed with two main issues 1. "What is control technology used in Your company currently?"; 2. "How effective is it?" The survey polled 145 of major Russian and foreign companies.

Based on the application of the methods described above, we obtained the following results. Thus, we have chosen principal of modern management techniques, is presented in figure 1.

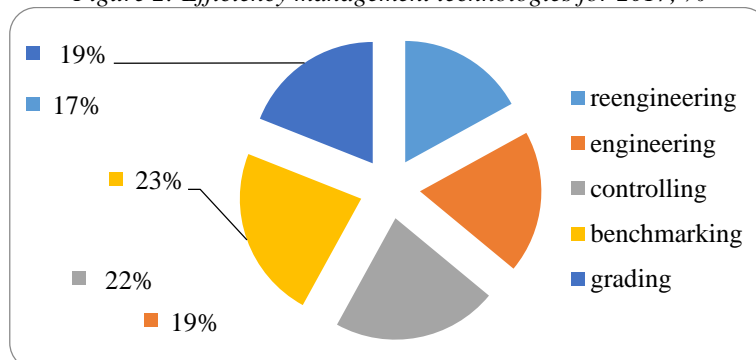
Figure 1: Share of modern management technologies in the total volume of their application for 2017, %



Source: compiled by authors based on survey of Russian and foreign enterprises of large business

Thus, the largest share in 2017 received management technology – benchmarking. However, the effectiveness of management technologies were distributed differently. The most effective technologies was recognized as engineering and re-engineering (figure 2).

Figure 2: Efficiency management technologies for 2017, %



Source: compiled by authors based on survey of Russian and foreign enterprises of large business

Reengineering is a radical approach, which enables drastic changes of the organization (Vilkey & Dehbid, 2016). These changes usually lead to an increase in the efficiency of production and speed of response of the managers of the organization on the trends of the market. Today one of the most effective management concepts commercial organization is the methodology which is based on the maximization of its value. This is because the dynamics of the value of the organization for a certain period, as a criterion of efficiency of functioning of the organization accumulates virtually all information associated with its operations. In the process of managerial decision-making top managers of the organization must be clear about the strength and character of its influence on a company's activities with the final criterion, which is the value of the object.

Engineering is a management technology that is based on the use of information models, structures and processes of the organization, external environment, and special software (Witek-Crabb, 2016).

Business engineering is a management technology that is based on the use of information models, structures and processes of the organization, models of the external environment, as well as specific software (Plotnikov & Volkova, 2016).

Close attention to business engineering as individual methods of control was due to an important trend that emerged in the last few years, the priority in management began to shift from "managing resources" to "organizational management". Problems of sustainable development and changes of the enterprise in the XXI century came to the fore (Plotnikov &

Volkova, 2016). Quite an effective method of solving these problems was made by the technology business engineer, required as a base for new approaches to management. The strategic model, which is an essential part of the technology business engineer contains a sequential number of conceptual components from the optimized mission, i.e. a kind of vector that determines the direction of enterprise development to create a rational system of indicators forming an effective staff motivation on strategy, ensuring the right strategic focus on the main goal.

Thus, "strategic analysis and revision of the vector of development of business" shall be permanent either periodically or in case of important changes in the external and internal environment.

At the moment in management theory and practice selected unambiguous definition of controlling (Vertakova & Kryzhanovskaya, 2015). In our opinion it represents a new concept of governance, which is generated by the accumulated practice of modern management. This concept of system of enterprise management is based on the desire to maintain efficient operation of the organizational system (a company, business firm, Bank, etc.) in the long term due to: adaptation of strategic objectives to the transforming conditions of the environment; harmonization of the operational plans with the strategic plan for the development of organizational systems; coordination and integration of operational plans for the business processes; the formation of a system providing managers with information for different management levels in a timely regime; formation of a system of control of execution of plans, adjust their content and timing; adaptation of organizational structure of management of the company to increase its flexibility and ability to respond quickly to changing environmental conditions.

Key elements of the concept of controlling are: the philosophy of the yield, i.e. the orientation on the effective functioning of the company in the long term; crushing task of controlling the cycle, which ensures iteratively planning, monitoring performance and taking corrective solutions; development of information system that is adequate to the task management (Scuotto et al., 2017).

The controlling cycle consists of iterative stages: planning, monitoring performance and take corrective decisions. The planning stage is handled through the "counter-flow" - first planning is top-down - main objective to create methods adjustments to planned tasks, the coordination of individual plans and consolidate them into a single plan for the organization (Doha et al., 2017). Control of deviations between plan and fact provides an analysis of actual data on the controlled variables and the development of actions for elimination of undesirable deviations within a certain competence at the level of the management hierarchy.

Benchmarking (Benchmarking) long ago won the sympathy and successfully used in the practice of Japanese, American, Western European and Scandinavian businessmen and scientists. It is considered that the birthplace of this term is the United States. But history assures us of an earlier use of the concept of benchmarking. In Japan, Benchmarking is correlated with the content of a Japanese word "dantotsu", meaning "effort, worry, care best (leader) to the best (leader)" (Devece et al., 2017). Currently, benchmarking, using its main principle of "from better to the best" back to life, to the success of many firms in the US, Japan, Western Europe. Benchmarking for the first time literally appeared in 1972 in the strategic planning Institute of Cambridge (USA) (Vertakova et al., 2017). Then research and consultancy organization PIMS (influence of marketing strategy on profit), establishes that in order to find an effective solution in the field of competition, you must know the best practices of other companies that have been

successful in similar conditions. In 1979 the American company Xerox initiated a project "Benchmarking competitiveness" for the analysis of the costs and the quality of their products compared to Japanese. Then a competing firm offered consumers the same quality products at lower prices. The project was a great success. The purpose of benchmarking is to, based on the research reliably estimate the probability of success of entrepreneurship.

Thus, the use of benchmarking is that the production and marketing functions are most manageable when studied and implemented in your company's best methods and technologies of others, not their own companies or industries. This can lead to a profitable enterprise with high efficiency, creation of healthy competition and satisfied customers.

The traditional grading system is designed to create a system of monetary incentives based on evaluation of difficulty of a particular job (Vertakova & Kharlamova, 2016). This evaluation is carried out according to several criteria, and universal: they are applicable to works of any profile, regardless of the industry. In practice, grading is used to compare the level of wages at the enterprise level, which is determined by the market. It is used for comparison of positions, determine the wage at the new site and if you change the characteristics of the work. As a rule, these tasks of the system of grading is limited.

However, the principles of underlying technologies, provide a broader perspective. Combining them with known HR technology, you can create a corporate management system stimulation, competencies, careers – in short, the system of corporate behavior. It can be created by combining human technology: an assessment of staff and monitoring of the performance of employees, planning and implementation of horizontal and vertical career, the formation of personnel reserve, training, material and immaterial incentives.

Grading – grouping of posts for certain reasons (weight, skill, etc.) with the aim of standardization of wages in the organization (Cho & Sohn, 2016). In fact, grading is a way of charging. Technologies of grading are designed to address all the issues associated with the characteristics of the market, and subjectivity due to the influence of organizational or human factor, i.e. the wage for this position is determined by its value or weight for the company.

So, the first step in the grading of posts according to the specified parameters or, in other words, in the same coordinate system and ranking jobs according to importance to the organization.

The second challenge is billing on the basis of importance of a particular job or position for the organization. It allows you to pay not only the market value of the worker, but the importance of his work for the company. We must not forget that billing is a career tool, and a method of cost planning and staffing of the company. The third challenge is motivation. For working will be career motivated. For job candidates – the motivation of attraction (Protogerou et al., 2017).

Thus, the classical grading does three things, two of which have an independent and practical importance. However, its potential is much richer, and if you look wider, it can be used to solve more problems. Technologies of grading are different but have some common features.

3. Conclusion

Since reengineering, according to the study, recognized as one of the most effective control technologies, we propose the following algorithm of a phased description of the preparation

and further implementation of the reengineering of key business processes of the industrial enterprises (figure 3).

The proposed method consists of two major parts: determining the re-engineering and direct implementation of the reengineering of key business processes.

In the first block describes the business direction of the enterprise and major groups of business processes. Using the BCG matrix is necessary for reengineering. Next, using the model of a hammer is to assess the maturity of process management in the organization.

In the second block describes the model of key business processes "as is" and assessed for stability using Shewhart charts, is functional-cost analysis. Based on the data used for modelling business processes "as it should be," determined by the ideal values and on their basis we construct a matrix of gaps. At the last stage are eliminated gaps between the performance of models on an "as is" and "as should be".

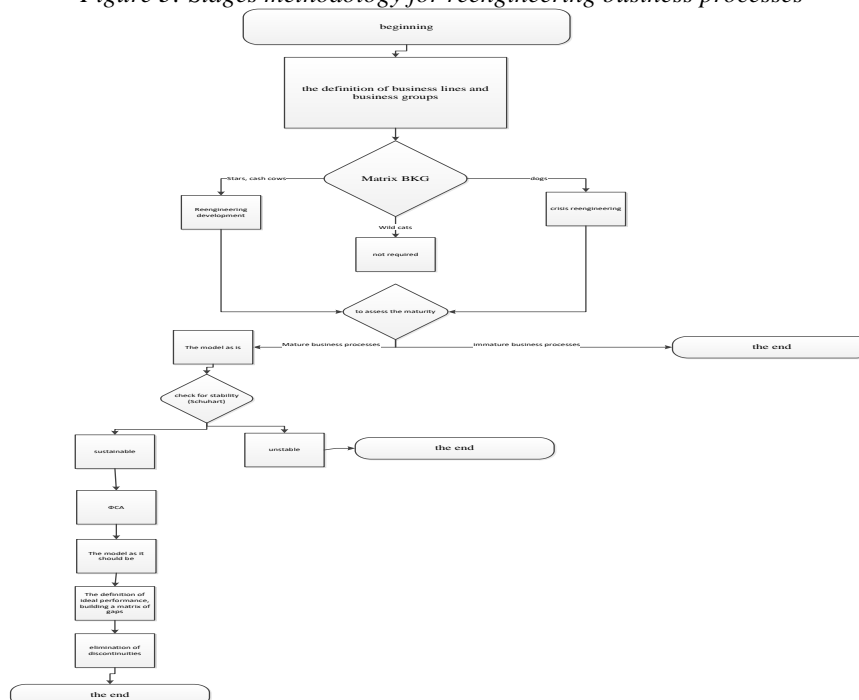
Using this technique, the company can carry out re-engineering on their own, without the involvement of external consultants, which significantly saves time and financial resources for the reengineering of the organization.

Summarizing all the above we can highlight the main trends affecting the formation of a set of modern management techniques used in commercial organisations.

The first trend is associated with the necessity of application in the management activities of modern information technology that gives rise to the need for a clear understanding of their Manager information needs and knowledge of techniques of work with corporate information systems, and systems of support of decision-making.

The second significant trend is associated with qualitative changes in the role of Manager in motivating of subordinates, strengthening our leadership position, increase the necessary knowledge on management, and the need for permanent learning and professional development.

Figure 3: Stages methodology for reengineering business processes



Source: compiled by the authors

The latest trend is the introduction to the management process approach (process management model) requiring managers of multi-functionality and a fundamentally new approach to organization of activities of the company. The main result of the impact of these three trends is shaping a new generation of managers, able to manage companies of various sizes, fields of activity and target audience.

Acknowledgment

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References

- [1] Rednikin, M. S. (March 2014). The Problem of adaptation of foreign management practices in contemporary Russian companies. *Economics and Innovations Management*, no. 3.
- [2] Gorelik, S. (2015). Business engineering and management organizational development. *BIG Petersburg on-line* [Online]. Available: <http://www.big.spb.ru/publications/busengorg.shtml>.
- [3] Hershman, L. (2016). *Faster, better, cheaper: Nine methods of reengineering of business processes*. M.: Al'pina publisher, pp. 248-249.
- [4] Vilkey, A. and Dehbid, M. (2016). Strategic marketing management with Japanese management approach. *Journal of Politics and Law*, vol. 9, no. 10, pp. 172-179.
- [5] Witek-Crabb, A. (2016). Maturity of strategic management in organizations. *Oeconomia Copernicana*, vol. 7, no. 4, pp. 669-682.
- [6] Plotnikov, V. A. and Volkova, A. A. (2016). Business development and service company management in the context of external economic influence. *International Multidisciplinary Scientific Conference on Social Sciences and Arts*, Albena, Bulgaria, pp. 145-152.
- [7] Plotnikov, V. A. and Volkova, A. A. (2016). Service company management in the context of changed resources provision. *International Multidisciplinary Scientific Conference on Social Sciences and Arts*, Albena, Bulgaria pp. 573-580.
- [8] Vertakova, Y. and Kryzhanovskaya, O. (2015). Improving the strategic management of business communication operators. *2nd International Multidisciplinary Scientific Conference on Social Sciences and Arts*, Albena, Bulgaria pp. 747-754.
- [9] Scuotto, V., Santoro, G. and Bresciani, S. (2017). Shifting intra- and inter-organizational innovation processes towards digital business: An empirical analysis of SMEs. *Creativity and Innovation Management*, vol. 26, no. 3, pp. 247-255.
- [10] Doha, A., Pagell, M. and Swink, M. (2017). Measuring firms' imitation activity. *R & D Management*, vol. 47, no. 4, pp. 522-533.

- [11] Devece, C., Palacios, D. and Martinez-Simarro, D. (2017). Effect of information management capability on organizational performance. *Service Business*, vol. 11, no. 3, pp. 563-580
- [12] Vertakova, Y., Kolokolchikov, D. and Strebkova, E. (2016). Organizational transformations: Essence and approaches to classification. *3rd International Multidisciplinary Scientific Conference on Social Sciences and Arts*, Albena, Bulgaria, pp. 475-482.
- [13] Vertakova, Y. and Kharlamova, E. (2016). Transformation of institutional factors in the development of high-tech production in the context of globalization. *16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 2342-+.
- [14] Cho, J. H. and Sohn, S. Y. (2017). Competing risk model for predicting stabilization period of university spin-off ventures. *International Entrepreneurship and Management Journal*, vol. 13, no. 3, pp. 777-796.
- [15] Protogerou, A., Caloghirou, Y. and Vonortas, N. S. (2017). Determinants of young firms' innovative performance: Empirical evidence from Europe. *Research Policy*, vol. 46, no. 7, pp. 1312-1326.

ELECTRONIC TICKET IN SUBURBAN COMMUNICATION

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Abstract. RFID tags are increasingly used in many industries and transportation. They are used for example for automatic identification of goods. These systems can be read-only or contain EEPROM, which allows the system to be programmed. Contactless UNIQUE cards are the simplest representation of the proximity card family. They only contain a 40-bit unique number. It is included in the 64-bit ROM. This ticket control system uses a UNIQUE card reader connected to a PC. In systems that use RFID tags, serious problems make it relatively easy to copy such cards. Because of the lack of any more advanced security methods to copy your card, just read its serial number with the appropriate hardware. This problem does not occur in the presented system. Personal monthly tickets only serve to identify the passenger. The validity of the ticket is stored in a computer database. The current ticket information is displayed on the driver terminal. A picture is displayed on the terminal screen for verification. In the database system on the bus is a complete set of information about the passenger: personal data, photo, ticket validity. The updated database on the bus uses an encrypted WiFi connection, an update is made in the bus database at one of the bus stops. The presented system of electronic monthly tickets can successfully replace classic tickets, greatly improving the process of handling passengers. The system described in this article has been successfully used for four years on one of the private suburban lines.

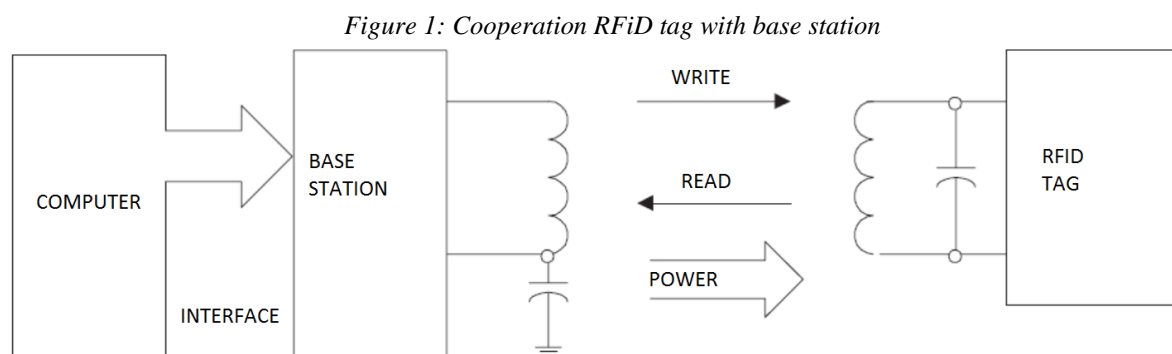
Keywords: suburban communication, electronic ticket, rfid,

JEL Classification: L94, O32, Q55, R42, R51

1. Introduction

RFID tags are increasingly used in many industries and transportation. They are used, for example, for automatic identification of goods. These systems can be read-only or contain EEPROM, which allows the system to be programmed. (Pniewski, 2009) RFID (Radio Frequency Identification) use low-power radio signals (between the tag and the base station) to transmit data (between the tag and the base station). In most solutions, especially for low frequencies and low ranges, they do not have their own power source (the energy they draw from the electromagnetic field of the base station). (Ahson & Ilyas, 2008), (Dobkin, 2008) Due to the frequency of RFID cards, the following types of RFID cards are distinguished:

- a) low frequency (10-500 kHz);
- b) high frequency (10-15 MHz);
- c) ultra-high frequency (860-960 MHz);
- d) microwave frequencies (2.4-5.0 GHz)



Source: own elaboration

a. RFID cards

RFID tags are built with an antenna and electronic circuit (optional battery). (Kim et al. 2017) They are distinguished by the frequency, the way they read and write data, and the type of power source: passive, active and semipassive. Due to the frequency of work we distinguish cards::

- a) LF: 125 kHz
- b) HF: 13.56 MHz
- c) HF: 433 MHz
- d) UHF: 868MHz
- e) UHF: 2.45 GHz

The LF standard covers frequencies from 30 to 300 kHz, typically RFID LF systems operate at 125 kHz. This frequency band provides a short range of reading data up to 50 cm, in practice most readers have a range of 5 cm. The read speed is slower than other frequencies but is not susceptible to radio interference. text.

The HF standard covers frequencies from 3 to 30 MHz, most RFID HF systems operate at 13.56 MHz. Card distance from the reader to 1 meter, with the most popular readers having a range of 5-10cm. The HF standard is moderately sensitive to distortion and provides fast data reading. It is widely used in ticket applications, payments and proximity cards. According to the ISO / IEC 14443 standard, the HF RFIT is an e-passport, air interface, and ISO 15693 credit card.

The UHF RFID standard covers the frequency band from 300 MHz to 3 GHz. Due to this large discrepancy, the new UHF Gen2 standard is introduced, which uses the 860 to 960 MHz band and is supported by a single global protocol, adapted to European, Asian and American standards, while optimized and more efficient. In the second generation of UHF patches were introduced that eliminated first-generation errors by improving memory protection, coding, and programming a Q algorithm to distinguish tags with the same sequence number.

Due to the way the information is sent, the following types of RFID cards are distinguished:

- a) UNIQUE 125kHz - This is the simplest of card standards used. The carrier frequency is 125kHz, the card only stores its 40-bit serial number programmed during production. Theoretically, card numbers should not be repeated, but there are duplicate cards in the world

- b) Q5 - cards similar to UNIQUE - 125 kHz. They contain additional user-programmable EEPROM memory (also due to radio modulation), but this solution is relatively rare. Memory in such cards is protected by a password - without giving it a read or modify is impossible.
- c) Hitag - the standard uses a 125kHz carrier frequency and provides EEPROM memory, but with more advanced capabilities than previously mentioned cards - eg data encryption and anti-collision (for UNIQUE and Q5 transponders). No information will be read - data from both cards will interfere, while the HITAG standard, thanks to anti-collision system allows reading many tags placed in the reader field and individual communication with each of them)
- d) Mifare - The carrier frequency is 13.56MHz, but in this standard we already have a wide range of "internal" cards available that offer, among other things, a connection authentication system, encrypted data transfers, and more complex operations. This standard is used inter alia in proximity payment cards, cards (periodic tickets) of municipal transport of some cities as well as more expensive systems of working time control or access. (Cernatescu & Vladescu, 2014)
- e) Icode - standard characterized by very flat markers; Tags allow read and write (512 b capacity). 13.56 MHz frequency. Up to 30 markers per second. Application: retail sale, library, shipping control, equipment records.

i. Unique cards

UNIQUE contactless cards are the simplest representative of the proximity card family - they only contain a 40-bit unique number. It is included in the programmable 64-bit ROM of the following organization (Table 1):

- 9 header bits (same ones)
- 40 bits of Dyx card number (of which the first 12 identifiers given to a specific customer by the manufacturer), divided into 10 lines of 4 bits,
- 10 parity bits PRy lines (occur after each line of the number), -4 parity bits of the PCx columns (after the last line and its parity bit)
- 1 stop bit (zero).

When the card is inserted into the magnetic field of the reader, the inductive coil in the card is induced to supply voltage that charges the internal capacitance. As soon as the energy accumulated in the capacitor reaches the required level, the card commences the operation of cyclic and uninterrupted sending of the entire contents of the memory (after transmission of the stop bit the transmission starts again). The data is sent using Manchester coding, which modulates the 125 kHz carrier frequency with ASK.

Table 1: Record format on the UNIQUE card

S	S	S	S	S	S	S	S	S	The 9 start bits always have a value of 1
8 bit card manufacturer code				D00	D01	D02	D03	P0	P0-P9: parity bits for each row (event parity)
				D04	D05	D06	D07	P1	
32 bits - unique card code				D08	D09	D10	D11	P2	CP0-CP3: parity bits for each column (event parity)
				D12	D13	D14	D15	P3	
				D16	D17	D18	D19	P4	
				D20	D21	6 D22	7 D23	8 P5	

	D24	D25	D26	D27	P6	S0 – stop bit: always 0
	D28	D29	D30	D31	P7	
	D32	D33	D34	D35	P8	
	D36	D37	D38	D39	P9	
	CP0	CP1	CP2	CP3	S0	

Source: own elaboration

2. Implementation of the electronic ticket system

The ticket control system used was a UNIQUE card reader connected to a PC (on which the software was installed) via the USB port (fig.3). The reader is detected by the system as a so-called. HID (Human Interface Device). The system does not require drivers to be installed, the data sent by it is interpreted by the operating system as input from the computer keyboard. Tab.1 shows the parameters of the card used as an electronic ticket. (Correa et al., 2015), (Dalli & Bri, 2015), (Ellison et al., 2017), (Lefophane & Van der Merwe, 2015)

Figure 2: UNIQUE card reader



Source: own elaboration

Figure 3 shows an example electronic ticket and its construction.

Figure 3: Electronic monthly ticket

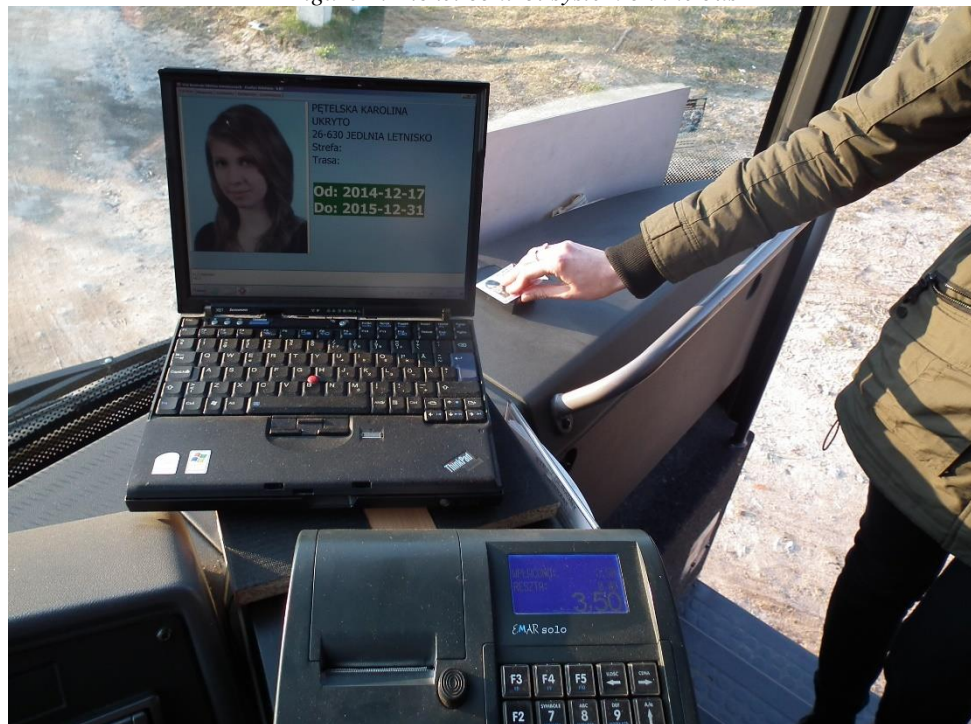


Source: own elaboration

The UNIQUE standard card theory is quite secure - the numbers should be unique and the cards as secure as the keys. However, the first unique card numbers have ended up some time ago, and cards with duplicate numbers are created. In systems that use RFID tags, serious problems make it relatively easy to copy such cards. Because there are no more advanced security methods to copy a card, just read its serial number with the appropriate hardware. (Duzenli, 2015), (Fernandez-Carames et al., 2017), (Guizani, 2015) This problem does not occur in the presented system. Personal monthly tickets (fig.3) are only for identification of the

passenger. The validity of the ticket is stored in a computer database. The current ticket information is displayed on the driver terminal (fig.4). (Ryan et al., 2017), (Vu & Thanh, 2016). (Yang & Luo, 2016)

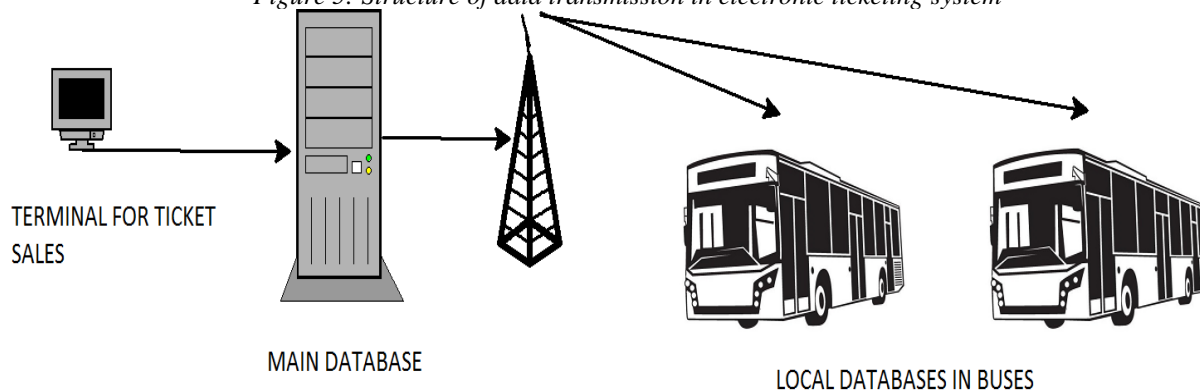
Figure 4: Ticket control system on the bus



Source: own elaboration

This control prevents the use of "illegal" cards, the passenger is identified on the basis of the RFID card, and the image is displayed on the terminal screen to verify. In the database system on the bus is written complete information about the passenger: personal data, photo, ticket validity period. An encrypted WiFi connection was used to update the bus database (fig. 5), and the update was made in the bus database at one of the terminals. This ensures that databases are updated as quickly as possible. Works are currently underway to integrate the monitoring system in use. Linking the systems will allow for additional control by comparing the records in the ticketing system with the records from the monitoring. (Chikouche et al., 2017).

Figure 5: Structure of data transmission in electronic ticketing system



Source: own elaboration

3. Conclusion

The presented system of electronic monthly tickets can successfully replace classic tickets (paper), greatly improving the process of handling passengers. The system described in this article has been successfully used for two years on one of the private suburban lines. The collective experience during the initial operation of the system will allow for further refinement

References

- [1] Ahson, S. and Ilyas, M. (2008). *RFID Handbook, Application, Technology, Security and Privacy*, CRC Press.
- [2] Cernatescu, V. and Vladescu, M. (2014). An implementation of a 13.56 MHz RFID Reader. *2014 IEEE 20th International Symposium For Design And Technology In Electronic Packaging (Siitme)*, Bucharest, Romania, pp. 103-104
- [3] Chikouche, N., Cherif, F., Cayrel, P. L. and Benmohammed, M. (2017). RFID authentication protocols based on error-correcting codes: A survey. *Wireless Personal Communications*, vol. 96, no. 1, pp. 509-527
- [4] Correa, M. I. S. et al. (2015). The electronic ticketing systems and their multiple dimensions: A study about the sbe of the metropolitan area of recife. *Navus-Revista De Gestao E Tecnologia*, vol. 5, no. 3, pp. 60-73.
- [5] Dalli, A. and Bri, S. (2015). Design of electronic ticket system for smart tourism. *12th International Conference on Signal-Image Technology & Internet-Based Systems (Sitis)*, Naples, ITALY, pp. 490-492
- [6] Dobkin, D. (2008). *The RF in RFID, Passive UHF RFID i practice*, Elsevier Inc.
- [7] Duzenli, G. (2015). RFID card security for public transportation applications based on a novel neural network analysis of cardholder behaviour characteristics. *Turkish Journal of Electrical Engineering and Computer Sciences*, vol. 23, no. 4, pp. 1098-1110.
- [8] Ellison, R.B. et al. (2017). Electronic ticketing systems as a mechanism for travel behaviour change? Evidence from Sydney's Opal card. *Transportation Research Part A- Policy and Practice*, vol. 99, pp. 80-93.
- [9] Fernandez-Carames, T.M. et al. (2017). Reverse engineering and security evaluation of commercial tags for RFID-based IoT applications. *Sensors*, vol. 17, no. 1.
- [10] Guizani, S. (2015). Implementation of an RFID relay attack countermeasure. *International Wireless Communications & Mobile Computing Conference (Iwcmc)*, Dubrovnik, Croatia, pp. 1318-1323
- [11] Kim, T. H., Ramos, C. and Mohammed, S. (2017). Smart city and IoT, *Future Generation Computer Systems-The International Journal of Escience*, vol. 76, pp. 159-162.
- [12] Lefophane, S. and Van der Merwe, J. (2015). A security review of proximity identification based smart cards. *Proceedings of The 10th International Conference On Cyber Warfare And Security (Iccws-2015)*, Univ Venda, South Africa, pp. 534-541.
- [13] Pniewski, R. (2009). Programator układów RFID – *Xi Konferencja Naukowo - Techniczna „Logistyka, Systemy Transportowe, Bezpieczeństwo w Transporcie” LogiTrans 2009*, Szczyrk, Poland, vol. 3.

- [14] Ryan, S. E. et al. (2010). Read distance performance and variation of 5 low-frequency radio frequency identification panel transceiver manufacturers. *Journal of Animal Science*, vol. 88, no. 7, pp. 2514-2522.
- [15] Vu, T. A. and Thanh, P. V. (2016). A simple diagram for data transmission using Manchester code. *Proceedings of The 2016 International Conference On Advanced Technologies For Communications (Atc)*, Vietnam Natl Univ Univ Engn & Technol, Hanoi, Vietnam, pp 453-456
- [16] Yang, L and Luo, F. G. (2016). Orthogonal modulation system with Manchester-coded payload and frequency-shift keying label. *Optical Engineering*, vol. 55, no. 4.

GLOBAL SAFETY OF TRAFFIC CONTROL SYSTEMS IN ANTHROPOTECHNICAL ASPECTS

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Abstract. The collection and use of diagnostic data for optimizing maintenance processes lies entirely outside the perspective set by ERRAC (European Rail Research Advisory Council). At the same time, the state of the railway infrastructure and accident rates require any action that could improve traffic safety. Increasing rail traffic safety is also dependent on increasingly improved operational decision-making (reliability-maintenance) methods rail signaling systems, scheduling these systems and handling emergency procedures. The results obtained from operational research and on-going diagnostics of atc devices can be used not only as a basis for improving the design of technical objects and improving the manufacturing process, but also as one of the possibilities for providing reliable information necessary to control the process of operation including renewal, Proper organization of service and repair facilities or forecasting and determination of operating costs. The article presents the research conducted at our university and is aimed at: Development of an aggregated rail traffic safety index, taking into account the number of kilometers of the rail network, the number of trips, the number of kilometers, the number of stops and the number and severity of accidents; Analysis of ATC systems in countries with high aggregated index value in the aspect of travel safety, the degree of information exchange automation, essential hardware and software redundancy components and the level of this redundancy; Analysis of Polish rail safety on the basis of safety factor estimation.

Keywords: railway transport, rail automation devices, reliability, safety

JEL Classification: L92, L96, O33, R42, R49

1. Introduction

The subject of the study is the multifaceted problem of reliability and testing of technical equipment, taking into account the human factor. The area is an open system of land communication, especially railway, in Poland. The subject of the study is the multifaceted problem of reliability and testing of technical equipment, taking into account the human factor. The area is an open system of land communication, especially railway, in Poland. Because of its leading position in the numbering of railway accidents, research and development should lead to real system implementations. The main problem that inhibits the progress of research and implementation is related to the market activity of local distributors of hardware and software of modern ATC systems. The opportunity for comprehensive advancement in education is negligible, as the distributor, also the producer, has a well-defined spectrum of financial goals (Anderson et al., 2016), far from being self-sufficient, technically and

technically competent, and in the context of existing legislation it cannot guarantee the development and implementation of comprehensive system solutions ATC. The factual, mathematical, marketable sets of facts show that:

- a) the compatibility of SRK devices of different manufacturers is maintained at a functional level,
- b) ATC's hardware and software supplies come from various distributors,
- c) the weakest link in the sociotechnical system is a person whose independent participation in the system is a simple function of the degree of his qualification. The ATC distributor is interested in the service agreement as binding as possible with the customer, so the training is limited to a minimum of knowledge of the construction and operating principle, with the exception of mathematical modeling of reliability functions. using the dictionary method or the so-called method. the central point of the system,
- d) due to the lack of up-to-date system solutions and relatively poor sales, hindering the complementarity of goods and services, SRK manufacturers are not motivated to develop a universal interface,
- e) the level of knowledge of electronics and computer science enables each supplier to define its own interface, in particular "closed", ie capable of connecting only the desired components to the system (Garcia et al., 2016), (Pniewski, 2013),
- f) with lack of knowledge about probabilistic models in the description of the reliability and testing functions of hardware and software, distributors are not interested in displaying data that reveal the weakest links of their products - technical systems (the reliability feature is usually the strongest link to the weakest link),
- g) simplified probabilistic models for the renewal function assume the reliability of the service because they are based primarily on resources, defined nota bene based on implicit definition of the manufacturer,
- h) system data (each level) is distributed, unprotected and incoherent.

At the UTH transport and electrical engineering department, a project is underway to develop a system for the automated collection of operational data for rail automation systems. (Consilvio et al., 2015), (Pniewski et al., 2016) When designing the system (SADEK), it is necessary to uphold the above limitations.

2. SADEK system

SADEK is a system for collecting operating data of Automatic Train Control (ATC) devices. Its name is the acronym of the Polish system name: “**S**ystem **A**nalizy **D**anych **E**ksplatacyjnych w automatyce **K**olejowej”- Operating Data Analysis System automation Railway. The characteristic feature of railway automation facilities is the possibility of their presence in various operating states, reliability, diagnostics, etc. Many years of experience in the operation of the rail traffic control systems confirm their dependence on the reliability of the systems and components forming the technical structure of the systems. Operational research is the most efficient source of information for ATC devices to determine the numerical values of reliability indices. (Nowakowski et al., 2016) These studies provide full information about the behavior of the system under operating conditions (use and renewal). They are not only the basis for improving the design of technical objects and improving the manufacturing process, but also

provide reliable information necessary to control the operation, including renewal, proper organization of service and repair facilities, and forecasting and determining operating costs. The task of service departments is, among others. Collect information about the process of exploitation of the examined objects and transfer them to the research coordinating unit. The basic information carriers may be special cards (operating, damage, repair, servicing, causes of damage, etc.) developed under the assumption of collecting the minimum necessary for the purpose of testing the amount of information. Cards containing information on the use and renewal of ATC objects should be periodically filled, eg in daily cycles, based on reliable operating system information, should be checked for formal correctness and then entered into the database, the alternative is automatic registration of selected parameters using the proposed modules for converting signals and transmitting in an open network with the use of information encryption. The application of increasingly modern ATC systems based on microprocessor and microcomputer technology on Polish railways necessitates the analysis and evaluation of their operation, interoperability and forecasting of operational effects, including the renewal process resulting from the implementation of these systems. (Kawalec & Rzyzko, 2016) The design of the support system for the analysis of the reliability and safety of rail automation systems will be particularly useful when evaluating ATC systems based on microprocessor technology, as required by international institutions recommended by CENELEC EN 50129, 50128. In the case of rail traffic control systems there is currently no integrated diagnostic system in Poland. Each of the ATC devices installed in the Polish railway infrastructure is diagnosed on the basis of their own manufacturers' solutions, which use a very wide range of technological solutions for this purpose. Therefore the purpose of the project is:

- a) construction of a database on the structure and operation of the most important railway automation subsystems;
- b) simulation of damage and repair process;
- c) analysis, verification and statistical evaluation of real data and simulation results.

The collection and use of diagnostic data for optimizing maintenance processes lies entirely outside the perspective set by the ERRAC and initiated by the Euromain and InteGRail projects. At the same time, the state of rail infrastructure and accident rates demand any action that could improve traffic safety. Increasing rail traffic safety is also dependent on increasingly improved operational (maintenance-relational) decision-making methods. ATC systems, scheduling these systems and handling emergency procedures. Thanks to the implementation of the results of the SADEK project, which is part of the long-term strategy of maintenance and diagnostics of PKP PLK, there is a real prospect of creating a unified diagnostic system. According to PKP PLK S.A. The task strategy concerns a large area of railway lines and therefore a very large number of rail traffic control devices and subsystems that would be covered by diagnostics. The SADEK expert system will provide basic data on the ATC usage processes and their reliability and renewal for the six major modules (ATC subsystems) (Abacoumkin & Ballis, 2004), (Dyduch et al., 2011), (Dyduch & Kornaszewski, 2009):

- a) general description of technical, operational and economic characteristics;
- b) linear lock devices;
- c) railway crossings;
- d) adjusting devices;
- e) rail-vehicle impact devices;

f) remote control devices.

The results obtained from operational research and on-going ATC diagnostics can be used not only as a basis for improving the design of technical objects and improving the manufacturing process, but also as one of the possibilities for obtaining reliable information necessary to control the process of operation including renewal, Proper organization of service and repair facilities, or forecasting and determining operating costs.

3. Analysis of the SADEK system in terms of the vitality of the social engineering system

The SADEK project has a specific goal in terms of optimizing the effort and resources to maintain ATC systems in terms of rail traffic safety. It was assumed that the diagnostic methodology of the ATC devices was an auxiliary task to achieve this goal. The subtask in the project can be divided into four thematic groups:

- a) development and implementation of an integrated research laboratory;
- b) hardware and software model for process data acquisition and system diagnostics;
- c) diagnostic simulators;
- d) definition and validation of the mathematical model of the reliability function of constituent objects.

Socio-technical systems, increasingly popular as a result of the dynamic development of electronic technology, are, according to the name, strictly dedicated to meeting human needs. (Dey & Johansen, 1973) As their technical part must unconditionally meet the criteria of "user-friendliness", the degree of technical complexity is significantly higher than for technical solutions. Support for a friendly interface requires additional components and software. While in the case of hardware testing equipment is sufficiently well-suited, due to the fact that a limited number of possible damage is possible, in the case of software, the number of possible malfunction paths depends solely on the computer's imagination, which prepares the device's algorithm. (Kuroiwa et al., 2011), (Lloret et al., 2006) Due to the dramatically higher degree of complexity of analogue control circuits, modern drivers typically take the form of microprocessor systems. It forgets that the degree of complexity of the task is transferred to the program controlling the operation of the device. Here, in the field of software, testing is by nature omitted or assumed to be completely inadequate to the complexity of the task. Another issue is the reliability of the sociotechnical system, because it depends on the weakest link that a human being is and will remain. Apart from this, it can only be noted that the reliability of the software will only be in the future condition of the order specification. The solution of the system should include the key possibility of registration of artifacts resulting from the transient damage to which microprocessor systems are inclined to include software errors compensated by computer resetting. (Mikulski, 2002), (Renpenning et al., 2007), (Restel & Zajac, 2002)

4. Conclusion

The initial aim of the SADEK project was to develop an analysis of the reliability of the equipment in the operation process. The considerations discussed in this article have led to the expansion of the system by statistical analysis of the operator's work. Incorporating anticipated operator errors will significantly increase the safety of rail automation systems. Research shows

that the most common cause of accidents is human error. Behavior analysis (operator response times) will allow for early response and will prevent many accidents.

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References

- [1] Abacoumkin, C. and Ballis, A. (2004). Development of an expert system for the evaluation of conventional and innovative technologies in the intermodal transport area. *European Journal of Operational Research*, Piraeus, Greece, vol. 152, pp. 410-419
- [2] Anderson, M., Bjorklund, G. and Haraldsson, M. (2016). Marginal railway track renewal costs: A survival data approach. *Transportation Research Part A-Policy and Practice*, vol. 87, pp. 68-77.
- [3] Consilvio, A., Di Febbraro, A. and Sacco, N. (2015). A modular model to schedule predictive railway maintenance operations. *International Conference on Models and Technologies for Intelligent Transportation Systems (MT-ITS)*, Budapest, Hungary, pp. 426-433.
- [4] Dey, D. and Johansen, G. (1973). Anthropotechnical study on plan position indication of above-ground movement and artificial horizon with predicted indication for manual control of vtol aircraft. *Zeitschrift fur flugwissenschaften*, vol. 21, no 4, pp. 140-145.
- [5] Dyduch, J., Kornaszewski, M. and Pniewski R. (2011). Metody zapewniania bezpieczeństwa samoczynnych sygnalizacji przejazdowych. *Logistyka* (CD), vol. 6.
- [6] Dyduch, J. and Kornaszewski, M. (2009). *Systemy sterowania ruchem kolejowym*. 3st ed. Politechnika Radomska, Polska, Radom.
- [7] Garcia, J. J., Hernandez, A., Urena, J. and Garcia, E. (2016). FPGA-Based architecture for a multisensory barrier to enhance railway safety. *IEEE transactions on instrumentation and measurement*, vol. 65, no. 6 pp. 1352-1363.
- [8] Kawalec, P. and Rzyśko, M. (2016). Modern methods in railway interlocking algorithms design. *Microprocessors And Microsystems*, Cracow, Poland, vol. 44, pp. 38-46.
- [9] Kuroiwa, A., Kato, T. and Kunifuji, T. (2011). Improve the safety of maintenance work on the railway using computer. *8th International Conference on Computer Aided Design, Manufacture and Operation in the Railway and Other Advanced Mass Transit Systems (COMPRAIL)*, Lemnos, Greece, vol. 13, pp. 915-923.
- [10] Lloret, J., Sanchez, F.J., Diaz, J.R. and Jimenez, J.M. (2006). A fault-tolerant protocol for railway control systems. *2nd Conference on Next Generation Internet Design and Engineering*, Valencia, Spain, pp. 310-317.
- [11] Mikulski, J. (2002). Malfunctions of railway traffic control systems - failure rate analysis. *3rd International Conference on Computer Simulation in Risk Analysis and Hazard Mitigation*, Sintra, Portugal, vol. 5, pp. 141-147.
- [12] Nowakowski, W., Łukasik, Z. and Bojarczak, P. (2016) Technical safety in the process of globalization. *Proceedings of the 16th International Scientific Conference*

- Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 1571-1578
- [13] Pniewski, R. (2013). *Metoda oceny bezpieczeństwa cyfrowych systemów automatyki kolejowej*. Monografia Nr 179. Wydanie I. Uniwersytet Techniczno-Humanistyczny im. Kazimierza Pułaskiego w Radomiu 2013.
- [14] Pniewski, R., Kornaszewski, M. and Chrzan, M. (2016). Safety of electronic ATC systems in the aspect of technical and operational. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 1729-1735.
- [15] Renpenning, F., Braband, J. and Wery, S. (2007). Application of functional hazard assessment in railway signalling. *14th European Safety and Reliability Conference (ESREL 2003)*, Maastricht, Netherlands, pp. 1307-1314.
- [16] Restel, F. J. and Zajac, M. (2002). Reliability model of the railway transportation system with respect to hazard states. *IEEE International Conference on Industrial Engineering and Engineering Management IEEM*, Singapore, Singapore, pp. 1031-1036.

TRADE REMEDIES: GLOBAL TRENDS AND THE CASE OF JAPAN

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Abstract. Global trade liberalization, promoted by GATT/WTO, stimulated major world economies to extensively cut their average tariff levels through a number of bilateral and multilateral trade agreements. However, simultaneously with the reduction of tariffs and in order to protect their national interests in the changing global environment, member states adjusted their trade policies toward a more frequent application of trade remedies. In this paper, the authors empirically examined the actual imposition cases of trade remedies by Japan. The study results demonstrate that anti-dumping duties are the most frequently applied trade remedies administrated on intermediate products, primarily from developing countries (China, Republic of Korea, South Africa, Pakistan). However, the number of these measures actually imposed by Japan is not comparable with the frequency of similar measures initiated against Japanese exporters abroad. Actual imposition cases of countervailing duties and safeguards remain low, nevertheless Japan shows concerns regarding the upward rising trend of safeguards in the world. The study conducted envisages a more frequent application of trade remedies by Japan due to the gradual increase in imports of manufactured goods from developing countries. The imports from the respective countries is expected to further expand in the context of a new strategic approach to emerging economies aiming at building new extensive networks of regional trade agreements as stipulated by the Strategy of the Global Outreach drafted by the Japanese government.

Keywords: international trade, trade remedies, Japan, emerging economies

JEL Classification: F13, P52, F68

1. Introduction

More than two decades have passed since the emergence of the World Trade Organization (WTO) and its role in global trade remains substantial. WTO has been both promoting the reduction of barriers to cross-border trade and facilitating the establishment of additional multinational agreements. Nevertheless, simultaneously with the reduction of tariffs, and with the aim of protecting their domestic industries against intensifying foreign competition, member states adjusted their policies towards the application of non-tariff barriers¹ and contingency trade remedies.

¹These measures are rather diverse and include but not limited to technical barriers, industrial standards, administrative and bureaucratic delays, non-automatic licensing, prohibitions and quantity-control measures.

The WTO agreements provide derogations of basic principles in specified circumstances with trade remedies being one of the admissible instruments imposed for economic reasons.² Contingency trade remedies include anti-dumping (AD), countervailing (CV), and safeguard (SG) measures and their impact on international trade is a long-standing debate in the academic literature. (Yilmaz, 2013)

AD and CV duties are both levied on imports of a certain product from a particular exporting country, provided it has been proved that the respected product is dumped (AD) or subsidized (CV), and therefore causing material injury to domestic producers. SG measures are applied in case of increased total imports and may take versatile forms, including quantitative restrictions. Trade remedies are essential trade mechanisms that help fulfill long-term commitments of trade agreements while adapting to a changing environment. They are mostly introduced to mitigate the impact of drastic changes in the business cycles, real exchange rates, and industry-specific determinants. (WTO, 2009)

The objective of this paper is to provide a brief overview of global trends in the imposition of trade remedies and empirically examine their actual imposition cases by Japan. The structure of the paper is as follows. Section 2 investigates the global trends in the imposition of trade remedies by WTO members by analyzing (1) the most frequent users and the most affected countries as well as (2) the sectors most commonly targeted by such measures. Section 3 empirically examines trade remedies imposed by Japan and identifies idiosyncratic features that differ Japan from the general trends of other developed economies. Section 4 concludes.

2. Global Trends in the Imposition of Trade Remedies

The number of trade remedies actually applied by WTO members, notably the AD measures, remains rather high. From 1995 to mid-2016, the WTO reported 3,316 AD, 225 CV, and 154 global SG measures (Fig.1). Trade remedy investigations are overall initialized by the G20 economies, representing 72 % of all trade restrictive measures. (WTO, 2016) Global import restrictions in the main trading countries are gradually replaced by a more selective approach of trade defensive mechanisms.

Conventionally, AD duties prevail amid other trade remedies applied in the global trading system and they are primarily employed by developed countries, but emerging economies have been increasingly catching up. Developing countries are trying to take advantage of the policy mechanisms that successfully helped industrialize countries under the old GATT regime. As the matter of fact, AD duties are recently being levied by a significantly larger number of countries, particularly the developing ones. By 2016, India outranked all other countries in terms of AD duties imposition, including the United States and European Union (EU) that have been traditionally regarded as the most frequent utilizers of such measures. Argentina, Brazil, China, and Turkey are also in the top-10 list. In addition, newly industrialized and developing countries *de facto* also resort to safeguards more often than developed economies with India being on the top of the list followed by Indonesia, Turkey, Chile, Jordan and the Philippines. When it comes to CV measures, their application is still largely the prerogative of developed countries.

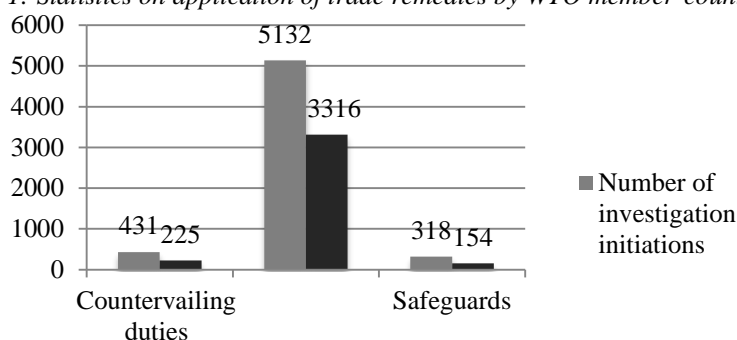
Contingent trade remedies are sector-specific and are mostly applied in steel, chemical, machinery, textile, agriculture and other related industries. About 70% of AD measures are

²For instance, if the import of a particular product has caused economic damage to domestic producers.

levied on exporters from developing countries; however, in many cases developing countries reciprocally impose trade remedies against each other, thus provoking the situation of a more frequent imposition of similar measures amid developing economies. The majority of AD duties is levied against Chinese (840 cases), South Korean (229 cases), Taiwanese (187 cases), American (175 cases), and Japanese (140 cases) exporters. One-fourth of AD duties by India and one-third by the United States and the EU are introduced against Chinese exporters.

In 1995-2016, CV duties were also mainly administrated against China (69 cases), India (29 cases), and the EU (12 cases). For instance, the United States, the leader in the CV duties imposition, initiated 36 out of total 98 cases against China; similarly, 14 out of 37 cases of CV duties by the EU were against India. Overall, in 1995-2014, more than 40 countries initiated trade remedies against Chinese exporters³ (Tiang et al., 2016)

Figure 1: Statistics on application of trade remedies by WTO member-countries, 1995 – mid-2016



Source: (WTO homepage <https://www.wto.org>)

The growing role of trade remedies is corroborated by a plentiful amount of WTO dispute settlement consultation requests that account for about 45 % of the total number of WTO disputes on final or interim decisions that have been issued since 1995. The remarkable focus on contingency trade remedies proves the fact that they have a great impact as policy instruments, though affecting a minute portion of global trade. Moreover, incremental cases of their actual application may imply that multilateral trade negotiations are in a dead end.

3. Trade remedies in Japan

The United States and Western European countries have been consistently dominating the WTO multilateral negotiation process. Consequently, Japan's role in these negotiations has always remained disproportionate in comparison with its large share in global GDP and global trade (Saxonhouse & Stern, 2006). In the 1990s, Japan's trade policy, regarded as the "aggressive legalism," guided the government authorities towards meticulous implementation of multilateral trade rules and avoidance of bilateral and non-legal trade dispute settlements that were favorable policy instruments in the past (Araki, 2006). However, over time such "single-layered" vision under the multilateral WTO framework has been replaced by a multi-layered trade policy focusing on bilateral and regional free trade agreements (FTAs). (Urata, 2015)

³In addition, it is reported that over 70% of all the investigations worldwide were against China (Tiang et al. 2016).

Trade remedies in the form of duties in Japan are called “special duties” (special tariffs) and include AD, CV, emergency, and retaliatory duties that are regulated by the Customs Tariff Act and the relevant Cabinet orders and guidelines, while quantitative restrictions, such as emergency import quotas, are stipulated in the Foreign Exchange and Foreign Trade Act (FEFTA). Therefore, SG in Japan can fall into the category of either emergency duties or emergency import quotas, thus creating transparency problems of the legal system regulating their implementation (Fukunaga, 2010). In some cases, Japan also applies quotas and tariff quotas to fishery products, certain milk products, and raw silk (Podoba & Gorshkov, 2015, B). The imposition of such mechanisms is regulated by the related government agencies⁴

Tab.1 shows the four-layered structure of trade policy authorities, including ministries regulating general trade policy issues, ministries regulating specific sectors or industries, government agencies involved in the trade policy and incorporated administrative agencies. The Cabinet is in charge of the overall coordination of trade policies, while at the stage of planning or implementing a trade policy, a relevant ministry or a government agency prepares a proposal and consults with other regulating authorities. A bill draft is prepared by the respected ministry only after receiving the comments and consultations of other authorities involved.

Table 1: Authorities regulating trade policy in Japan

1	Ministries regulating general trade policy issues	Ministry of Foreign Affairs (MOFA); Ministry of Economy, Trade and Industry (METI)
2	Ministries regulating specific sectors or industries	Cabinet Office; Ministry of Finance (including the Customs and Tariff Bureau); Ministry of Agriculture, Forestry and Fisheries; Ministry of Education, Culture, Sports, Science and Technology; Ministry of the Environment; Ministry of Land, Infrastructure, Transport and Tourism
3	Government agencies involved in the trade policy of Japan	Japan External Trade Organization. Several committees responsible for various trade aspects in the Diet.
4	Incorporated administrative agencies	Official export credit agencies: JETRO (trade promotion); Japan Bank for International Cooperation (JBIC); Nippon Export and Investment Insurance (NEXI). development and implementation of standards: Japanese Industrial Standards Committee; Pharmaceuticals and Medical Devices Agency; National Public Safety Commission; Customer Affairs Agency; Government Regulatory Unit Japan Oil, Gas and Metals National Corporation Japan National Tourism Organization

Source: (compiled by the authors with reference to Trade Policy Review. Japan. WTO, 2015)

The application of trade remedies in Japan is divergent from the general trends in the leading trading countries. In 1982-2017, there were only 10 cases of actual imposition of trade remedies, with eight of them being in the form of anti-dumping duties (Fig.2) which is incomparable with the number of cases against Japanese exporters (140).

Previous studies (Podoba & Gorshkov, 2015, A; Gorshkov & Podoba, 2016, B) show that economic sectors protected by trade remedies in Japan include textiles, basic chemicals, semiconductor devices, iron and steel, and the agricultural sector⁵. Trade remedies are predominantly employed against China (Tab.2).

⁴Usually Ministry of Economy, Trade and Industry (METI) or Ministry of Agriculture, Forestry and Fisheries (MAFF).

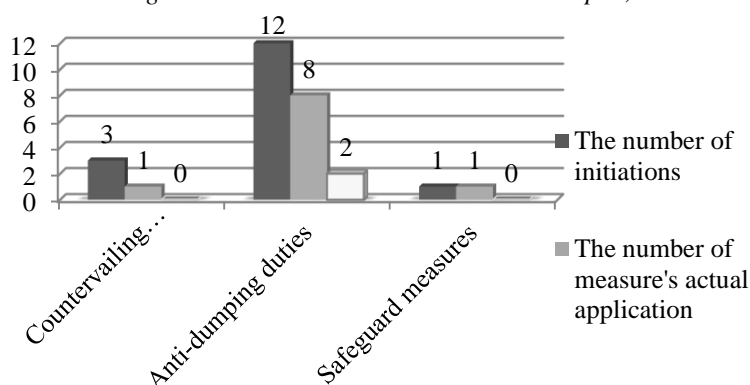
⁵Special SG are frequently applied in the agricultural sector.

AD duties in Japan are administrated mostly on intermediate products and components from developing countries (Gorshkov & Podoba, 2016, B). There are only three AD duties effective as of September 2017:

1. on electrolytic manganese dioxide from China (46.5 %), South Africa (14.5 %), Spain (14.0 %); effective September 1, 2008-March 4, 2019),
2. on toluenediisocyanate from China (69.4 %), excluding Hong Kong and Macao; effective April 25, 2015-March 24, 2020);
3. on potassium (kalium) hydroxide from the Republic of Korea (49.5 %) and China (excluding Hong Kong and Macao, 73.7 %); effective August 9, 2016-August 8, 2021).

Two investigations, one on China (initiated September 30, 2016; highly polymerized polyethylene terephthalate) and one on the Republic of Korea and China (March 31, 2017; carbon steel butt-welding pipe fittings) are still on-going.

Figure 2: Statistics on trade remedies in Japan, 1982–2017



Source: (compiled by the authors with reference to the Japan's Customs [accessed August 17, 2017]. Available at: <http://www.customs.go.jp/tokusyuu/>)

In contrast to other developed countries, CD duties are seldom applied by Japan with the only case registered in January 2006, when Japan levied a 27.2 % CV duty on dynamic random access memories (DRAMs) exported by Hynix (Republic of Korea). The investigation results revealed that the Korean government subsidized Hynix in order to export DRAM chips at an unfairly low price (Conconi, 2009).

The provisionary SG measures were introduced on December 22, 2000 against Chinese exporters of Welsh onions, shiitake mushrooms, and rushes used in tatami mats due to a sharp increase of these products in the Japanese imports. By imposing provisionary SG measures, the Japan presumably aimed for the Chinese voluntary export restrains (VERs), however, these expectations were met with retaliatory measures significantly damaging Japanese exports¹³ and forcing the Japanese government to reconsider the idea of further imposition of general SG measures. Ironically, starting from the 1950-s and up until the Uruguay round, Japan was forced to apply “gray-area measures” such as VERs despite the fact that these measures are prohibited under Article 11 of the WTO Agreement on Safeguards as the fear of their imposition can induce VERs without formal intergovernmental agreements under appropriate conditions (Kagitani & Hiramaya, 2015).

⁶A 100% special custom duty on automobiles, mobile and car phones, and air conditioners was invoked from June 22, 2001.

Overall, the application of contingency trade remedies by Japan remains rather low due to bureaucratic barriers, low integrity of the legislation on trade remedies, pluralism of the government regulatory authorities as well as insufficient cooperation amid them (Podoba & Gorshkov, 2015, B). Nevertheless, the Japanese government is gradually revising the existing legislature: for instance, in 2016, the revised Cabinet Order Relating to Anti-Dumping Duties and the Cabinet Order Related to Countervailing Duties came into force and the requirements for associations wishing to file an application were relaxed⁷ (WTO, 2017).

Another obstructive factor explaining infrequent implementation of trade remedies is the fact that the most sensitive sectors in Japan are protected by other measures, such as tariff peaks, non-ad-valorem tariffs⁸, tariff rate quotas, state trading, sanitary and phytosanitary measures (SPS), and other non-tariff measures (NTMs) or a combination of these (Kimura, 2008). For instance, Japan has implemented “trade liberalization without agriculture,” as the agricultural sector maintained high protection levels for so-called “sensitive products” (*juuyou hinmoku*) such as rice, dairy products, beef, pork, and others (Mulgan, 2015).

Table 2: Trade remedies employed by Japan since the establishment of the WTO

Measures	Country	Product	Period
CD	South Korea	Dynamic Random Access Memories (DRAMs)	01.2006-04.2009
AD	China	Ferro silico manganese	02.1993-01.1998
	Pakistan	Cotton Yarn	08.1995-07.2000
	South Korea and Chinese Taipei	Polyester staple fibers	07.2002-06.2012
	South Africa, China, Spain, Australia	Electrolytic manganese dioxide	06.2008-03.2019 (South Africa, China and Spain) 06.2008-08.2013 (Australia)
	China	Tolylene diisocyanate	04.2015 - 04.2020
	South Korea, China	Sodium hydroxide	08.2016-08.2021
SG	China	Welsh onions, shiitake mushrooms and tatami-mats	04.2001-11.2001

Source: (compiled by the authors with reference to the Japan's Customs [accessed August 17, 2017]. Available at: <http://www.customs.go.jp/tokusyuu/>)

The instability of the world trading system coupled with the chronic domestic problems of the Japanese economy envisages gradual trade policy shifts. Trade remedies are likely to be successively applied due to the increased imports from emerging economies particularly in the context of a new strategic approach to emerging economies aiming at building new extensive networks of regional trade agreements (RTAs), as stipulated by the Strategy of the Global Outreach. The shift towards FTAs is adopted by Japan and other world's major economies as a more productive path to overcome the shortcomings of the current multilateral trading system (Saxonhouse & Stern, 2006) and is driven by both international and domestic factors (Yoshimatsu & Ziltener, 2010). FTAs can play a complementary role in the domestic structural reforms that are a pre-requisite for the revitalization of the Japanese economy (Naoi & Urata, 2013). In fact, Japan has shifted its priority from multilateral negotiations towards regional and bilateral agreements not only with developing countries but also with the developed countries

⁷After the revisions, associations that have at least two domestic producers (before the revisions domestic producers had to constitute a majority) of the like products as members are eligible to file an application. (WTO, 2017). The word “sensitive” herewith implies “politically sensitive.”

⁸These include not only simple specific tariffs but also differential tariffs, seasonal tariffs, and others (Kimura, 2008).

(Yoshimatsu & Ziltener, 2010). The growing number of FTAs will presumably push Japan to reconsider its administrative and trade barriers. Consequently, the impossibility to apply quantitative restrictions and foreign exchange rationing make contingency trade remedies the sole available mechanism for Japan to protect its domestic interests (Gorshkov & Podoba, 2016, A).

4. Conclusion

The analysis of global trends depicts the idiosyncrasy of Japan that stands out amid other developed countries in terms of actual imposition of trade remedies. These measures are scarcely administrated partially due to the fact that Japan is actively utilizing other protective measures and partially due to the various institutional factors, such as the lack of transparency and coordination among the regulating authorities, low experience and business expertise of Japanese companies in filing the relevant cases. Japan is not very far removed from the global practice of imposing AD measures to restrict international trade: they are levied on intermediate products, primarily from developing countries such as China, Republic of Korea, South Africa, and Pakistan, even though the frequency of similar measures initiated against Japanese exporters is substantially higher. To sum up, the growing number of contingency trade remedies imposed by and against developing economies and recent trade policy shifts towards developing FTA networks with emerging economies corroborate the notion that in the future this trend for Japan will be reversed. Moreover, growing tensions with multilateral trade agreements such as the Trans-Pacific Partnership (TPP) and withdrawal of the United States from this agreement, demonstrate yet another emerging trend of protectionist movements in the global trade that will inevitably facilitate a new wave of contingency trade remedies.

References

- [1] Araki, I. (2006). The evolution of Japan's aggressive legalism. *World Economy*, vol. 29, no. 6, pp. 783-803.
- [2] Conconi, P. (2009). Japan – Countervailing duties on dynamic random access memories from Korea. *World Trade Review*, vol. 8, no.1, pp. 273-277.
- [3] Fukunaga, Y. (2010). Customs law of Japan. In C. Cheng (Ed.). *Customs Law of East Asia*, pp. 117-164.
- [4] Gorshkov, V. and Podoba, Z. (2016, A). A note on Japan's contemporary trade policy. Economic theory and business: Global challenges. *Proceeding of the international conference "Evolution of International Trading System: Prospects and Challenges-2016"*, Saint-Petersburg, pp. 34-41.
- [5] Gorshkov, V. and Podoba, Z. (2016, B). Anti-dumping duties in Japan: Practice of application. *International Trade and Trade Policy*, vol. 1, pp. 33-45.
- [6] Kagitani, K. and Harimaya, K. (2015). Safeguard and voluntary export restraints under the World Trade Organization. The case of Japan's vegetable trade. *Japan and the World Economy*, vol. 36, pp. 29-41.
- [7] Kimura, F. (2008). Demystify protectionism: The WTO trade policy review of Japan. *World Economy*, vol. 31, no. 11, pp. 1383-1392.

- [8] Mulgan, A. G. (2015). Understanding Japanese trade policy: A political economy perspective. *The Political Economy of Japanese Trade Policy*, Palgrave Macmillan, United Kingdom, pp. 1-40.
- [9] Naoi, M. and Urata, S. (2013). Free trade agreements and domestic politics: The case of the trans-pacific partnership agreement. *Asian Economic Policy Review*, vol. 8, pp. 326-349.
- [10] Podoba, Z. and Gorshkov, V. (2015, A). Trade remedies in Japan: The case of countervailing duties. *Economic Theory and Business: Global Challenges. Proceeding of the international conference "Evolution of International Trading System: Prospects and Challenges-2015*, Saint-Petersburg, Russia, pp. 305-311.
- [11] Podoba, Z. and Gorshkov, V. (2015, B). Japan's special tariff system: Practice of administration. *World Economy and International Relations*, vol. 5, pp. 81-91.
- [12] Saxonhouse, G. R. and Stern, R. M. (2006). Trade-policy issues and policy options for Japan and the United States: Introduction and overview. *World Economy*, vol. 29, no. 6, pp. 669-676.
- [13] Tian, X., Xie, S., Wang, Q. and Wang, X. (2016). Why Chinese exports face so many trade remedy actions: An empirical study based on multi-country and multi-industry data. *China & World Economy*, vol. 24, no. 6, pp. 108-126.
- [14] Urata, S. (2015). Postwar Japanese trade policy: A shift from multilateral GATT/WTO to bilateral/regional FTA regimes. *The Political Economy of Japanese Trade Policy*, Palgrave Macmillan, United Kingdom, pp. 41-70.
- [15] World Trade Organization, Policy Review Body. *Trade Policy Review. Report by The Secretariat. Japan* (Rep. No. WT/TPR/S/310). (2015, January 19). [Online]. Retrieved August 16, 2017. Available: https://www.wto.org/english/tratop_e/tpr_e/s310_e.pdf
- [16] World Trade Organization, Policy Review Body. *Trade Policy Review. Report by The Secretariat. Japan* (Rep. No. WT/TPR/S/351). (2017, January 18). [Online]. Retrieved August 16, 2017. Available: https://www.wto.org/english/tratop_e/tpr_e/s351_e.pdf
- [17] World Trade Organization. *Report on G20 Trade Measures* (Rep.). (2016, November 10). [Online]. Retrieved August 16, 2017. Available: https://www.wto.org/english/news_e/news16_e/g20_wto_report_november16_e.pdf.
- [18] World Trade Organization. *World Trade Report 2009. Trade Policy Commitments and Contingency Measures*. [Online]. Retrieved August 16, 2017. Available: https://www.wto.org/english/res_e/booksp_e/anrep_e/world_trade_report09_e.pdf.
- [19] Yilmaz, M. (Ed.). (2013). *Domestic Judicial Review of Trade Remedies*. Cambridge University Press, United Kingdom.
- [20] Yoshimatsu, H. and Ziltener, P. (2010). Japan's FTA strategy toward highly developed countries – Comparing Australia's and Switzerland's experiences. 2000-2009. *Asian Survey*, vol. 50, no. 6, pp. 1058-1081.

THE EFFECTS OF GLOBALISATION ON THE ECONOMIC DEVELOPMENT OF SLOVAKIA FROM THE 20'S OF THE 20TH CENTURY TO THE PRESENT AND ITS MANIFESTATIONS IN THE STRUCTURE OF EMPLOYMENT

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Abstract. Slovakia has gone through interesting economic developments over the last century, which have also been reflected in the structure of employment. Initially, the agricultural landscape in the middle of the last century turned into a centrally managed economy, geared towards the heavy industry and the markets of the countries of the Council for Mutual Economic Assistance. At that time, however, globalization processes began to appear in globalized economies, reflected in the volume of international trade, the emergence of multinationals, mixed cultures, and the growth of living standards. Only in 1989 the Central European political and economic changes have taken place that have allowed our economy to be changed to market oriented, with the possibility of moving closer to advanced Western European economies. Until then, for a partially isolated Slovak economy, entering the globalized economy was a great challenge. The involvement of the national economy in the global economic ties and the global competitive environment has also been reflected in structural unemployment in Slovakia. The aim of the paper is to clarify this historical development and to find its reflection in the structure of the Slovak economy and employment. Information has been drawn from available statistical surveys since the 1920s. The historical and logical approach and the genetic-historical analysis were used to process the contribution. At the end of the paper are outlined the positive and negative effects of globalization on the Slovak labour market, household behaviour and living standards of the population.

Keywords: employment, economic development, transformation of economy, globalization

JEL Classification: F62, I25, J21, N14, N54

1. Introduction

Za posledných takmer sto rokov bolo hospodárstvo na území Slovenska pod vplyvom rôznych politických zriadení a prechádzalo rôznymi ekonomickými systémami, čo sa podpísalo aj na štruktúre ekonomiky. Po rozpade rakúsko-uhorskej monarchie a vzniku Československa malo Slovensko na rozdiel od Českých krajín odlišnú ekonomickú úroveň a väčšina obyvateľstva sa živila poľnohospodárstvom. P. Sirucek a kol. (2007) uvádza, že pri sčítaní obyvateľstva v roku 1921 bol pomer medzi obyvateľstvom pracujúcim v priemysle a obyvateľstvom, pracujúcim v poľnohospodárstve 17 : 61 % a agrárny charakter krajiny zotrval až do konca druhej svetovej vojny. V súčasnosti je táto relácia v prospech obyvateľstva

pracujúceho v priemysle. Priemysel však, na rozdiel od poľnohospodárstva a lesníctva, patrí medzi spracovateľské odvetvia a významná orientácia na sekundárny, prípadne terciálny sektor v súčasnom globalizovanom svete so sebou prináša určité problémy.

2. Štruktúra hospodárstva na území Slovenska v historických súvislostiach

Vzhľadom na vlastnícke pomery pôdy, ktoré mali historický základ vo feudálnom systéme a na už spomenutý pomer v štruktúre základných odvetví po rozpade habsburskej monarchie sa v 20. rokoch dvadsiateho storočia uskutočnili pozemkové reformy¹ – ich cieľom bola podpora hospodárstva novovzniknutej republiky, efektívnejšie využívanie pôdy a v konečnom dôsledku snaha o zníženie cien poľnohospodárskej produkcie. Majiteľom pôdy mohli zostať maximálne 150 hektárov poľnohospodárskej, alebo 250 hektárov všetkej pôdy, zvyšok museli predať štátu za ceny platné pred 1. svetovou vojnou. Došlo aj k zrušeniu fideikomisu – dedenie majetkového súboru určitou osobou (spravidla najstarším synom), ktorá však majetkom nemohla úplne disponovať aby sa zachovala celistvosť majetku ďalším generáciám. Fideikomis tak významne obmedzoval trh s pôdou a navyše majiteľ zvereneckého majetku takýto majetok nemohol použiť ani ako záruku za bankové úvery. V poľnohospodárstve na slovenskom území bola nízka produktivita práce, ktorá vyplývala aj z prírodných podmienok a odvetvie tak nedokázalo užiť všetko obyvateľstvo. Keďže mimo poľnohospodárstvo bol nedostatok pracovných miest, začalo dochádzať k vysťahovalectvu za prácou do cudziny.

V tabuľke č. 1 uvádzame počty² pracujúceho obyvateľstva v roku 1910. Z celkového počtu osôb činných v povolani takmer 70 % obyvateľstva pracovalo v prvovýrobe a iba cca 17,5 % v priemysle. Dominantným bol primárny sektor ekonomiky. Údaje pre porovnanie s dneškom sú orientačné, keďže neskôr podľa plebiscitu alebo po 2. sv. vojne došlo k úprave štátnych hraníc. Slovensko a autonómne územie rusínske podľa Štatistickej príručky republiky Československé z roku 1920 malo asi 63 272 km² a 3 654 435 obyvateľov podľa demarkačnej čiary z roku 1919. Údaje z maďarských zdrojov v danom období považovali za slovenské územie 16 žúp a 4 mestá s municipálnym právom (mestá s právomocou župy) s 3 350 600 obyvateľmi. V Ročenke Československej republiky Státního statistického úradu z roku 1922 (s. 185-187) sa uvádza, že rozpadom monarchie získalo Slovensko viac ako 700 priemyselných podnikov, napriek tomu, že história slovenského priemyslu bola v tom čase krátka. Maďarské územie bolo rýdzo poľnohospodárske a výstavbou priemyslu na slovenskom území sa malo posilniť hospodárstvo Uhorska. Priemyselné podniky boli za rakúsko-uhorskej monarchie na slovenskom území zakladané za podpory maďarskej vlády (subvencie, daňové úľavy, transportné výhody a pod.). Industriálne centrá boli Bratislava so západným Slovenskom a Považím, Gemer a údolie Porady až po Košice. Najsilnejším a najdôležitejším priemyslom bol drevársky priemysel a nadväzujúci drevospracujúci a nábytkársky. Na poľnohospodárstvo nadväzoval cukrovarnícky, pričom slovenské cukrovary patrili k najväčším a najmodernejším v strednej Európe, a liehovárnícky. Veľmi silné zastúpenie mal aj chemický priemysel.

¹Ďalšou skutočnosťou, ktorá hrala v prospech novovzniknutej republiky a jej hospodárstva, bolo pričlenenie Bratislavy k štátnemu celku v januári 1919, čím Československo získalo prístup k významnej dopravnej tepne - európskemu veľtoku Dunaju.

²Počty sú uvádzané za slovenské župy, v tom čase však bol Užhorod slovenskou župou. Medzi rusínske župy patrili Bereg, Ugoča a Marmaroš, ktorých počty pracujúcich nie sú v tabuľke č. 1 započítané.

Table 1: Vybrané ukazovatele o pracujúcich v slovenských župách v roku 1910

Počet obyvateľstva činného v povolani v tis. osôb */	1403,6
Z toho pracujúci v poľnohospodárstve a záhradníctve a v iných odvetviach prvovýroby (okrem baníctva a hutníctva) v tis. osôb	853,8
Podiel pracujúcich v prvovýrobe na celkovom počte pracujúcich v %	69,83 %
Z toho pracujúci v priemysle v tis. osôb	244,9
Podiel pracujúcich v priemysle na celkovom počte pracujúcich v %	17,45 %

*/Započítané slovenské župy: Bratislava, Bratislava (m), Nitra, Trenčín, Tekov, Turec, Orava, Liptov, Zvolen, Spiš, Hont, Štiavica (m), Novohrad, Gemer, Abauj-Torna, Košice (m), Zemplín, Užhorod, Komárno (m).

Source: Magyar Stat. Közlemények, Ú. S. in Statistická príručka republiky Československé (Státní úřad statistický, 1920); vlastné prepočty

Štatistická Ročenka Československé republiky z roku 1930 na str. 2 uvádza údaje o počte prítomných obyvateľov Slovenska k poslednému sčítaniu ľudu v roku 1921 na 2 998 266. Do roku 1930 sa na Slovensku zintenzívnila výroba poľnohospodárstva a keďže odbyt produkcie bol zaistený v zámorských krajinách, hlavne v ich priemyselných centrách. Môžeme hovoriť o prvých lastovičkách globalizácie, keďže poľnohospodársku produkciu sme vyvážali do krajín, ktorých poľnohospodárska výroba už nestačila pokryť potreby. Keďže tým bola zaistená rentabilita v poľnohospodárskom podnikaní, mohli sa zlepšovať pracovné metódy, ďalej narastala produktivita práce a hospodársky rast, napriek svetovej poľnohospodárskej kríze, ktorú spôsobila mimoriadne krutá zima medzi rokmi 1928 a 1929.. Ďalšou ranou potom bola Veľká hospodárska kríza po roku 1929 a nízka kúpyschopnosť obyvateľstva.

Slovenský priemysel mal z čas monarchie dobrú štartovaciu pozíciu. Ako sme už spomenuli, pôvodne mal zásobovať celé Uhorsko a za týmto zámerom bol v počiatkoch podporovaný Maďarskou vládou. Po vzniku Československej republiky sa síce niektoré odvetvia ako hutníctvo alebo kožiarsstvo dostali do krízy, keďže bolo nutné sa prispôbiť novému hospodárstvu a komplikáciou bola aj nedostatočná dopravná infraštruktúra, ktorá nezodpovedala hospodárskym požiadavkám. Napriek tomu sme mali aktívny vývoz, predovšetkým obilniny, mlynárske výrobky, zeleninu, zvieratá, seno a slamu. Vývoz bol väčší ako dovoz pri cukre, liehu, víne, slade dreve a drevených výrobkoch. Predmetom najväčšieho dovozu bolo uhlie.

Zmenu v slovenskom hospodárstve priniesli 30-te a 40-te roky. Najprv to bola veľká hospodárska kríza, potom nástup fašizmu a vznik samostatnej Slovenského štátu 14.3.1939 resp. Slovenskej republiky od 21.7.1939 do konca druhej svetovej vojny, kedy bolo hospodárstvo orientované na potreby Nemeckej ríše. Po skončení druhej svetovej vojny sa Slovenská republika opäť stala súčasťou Československa, no na hospodársky vývoj celej krajiny mal vplyv nástup centrálne riadenej ekonomiky pod taktovkou Komunistickej strany Československa, znárodňovanie podnikov, strata západných odbytísk a orientácia hospodárstva pre potreby Socialistickej hospodárskej sústavy resp. krajín Rady vzájomnej hospodárskej pomoci, ktorá vznikla v roku 1949. Vývoj v poľnohospodárskom sektore bol ovplyvnený kolektivizáciou realizovanou na princípe centrálneho plánovania, kde sa hlavným cieľom stalo množstvo, zatiaľ čo kvalita a účinnosť mali len druhotný význam (Adamisin et al., 2017). Prioritou nasledujúceho obdobia dlhého viac ako 40 rokov bol ťažký priemysel, hutnícky priemysel a zbrojárska výroba. Produktivita práce začala klesať a pôvodne hospodársky veľmi vyspelá krajina začala zaostávať. (Napriek tomu bola relatívne vysoká potravinová sebestačnosť na úrovni okolo 80 %). Boli sme krajinou, dlhé roky viac menej ekonomicky izolovanou od vyspelej časti Európy a rozvinutých krajín sveta. V roku 1989 nastali v krajinách

strednej Európy politické aj ekonomické zmeny, ktoré smerovali k transformácii centrálne plánovaných ekonomík, pôvodne orientovaných prevažne na trhy Sovietskeho zväzu a krajín Rady vzájomnej hospodárskej pomoci. Slovenská ekonomika musela tak prekonať v priebehu niekoľkých rokov dôsledky centrálne plánovaného hospodárstva s výrobou zameranou prevažne jednostranne na ťažký a zbrojársky priemysel. Následná reštrukturalizácia ekonomiky a silná konkurencia trhov vyspelých ekonomík zapríčinili vysokú nezamestnanosť.

Pád socialistického systému znamenal opätovnú privatizáciu podnikov a pôdy, reštitúcie majetku, ale aj stratu trhov a krachy podnikov, ktoré neobstáli v novom konkurenčnom prostredí. Viedli sa veľké diskusie o rýchlosti krokov zásadnej ekonomickej reformy. V konečnom dôsledku zvíťazila tzv. šoková terapia. Veľké problémy slovenskému hospodárstvu prinieslo zrušenie zbrojárskej výroby na Považí, čo veľmi prispelo k rastu nezamestnanosti. Na začiatku transformačného procesu mala negatívny vplyv na ekonomiku aj skutočnosť, že v krajine bol vysoký dopyt, vyvolaný vynútenými úsporami. Vynútené úspory vyvolala nerovnováha medzi dopytom a ponukou z doby centrálne plánovaného hospodárstva a z toho dôvodu veľmi narástol import, ktorý bol oveľa väčší ako export. Do hospodárstva začal postupne vstupovať aj zahraničný kapitál, ktorý využíval komparatívnu výhodu krajiny - lacnú pracovnú silu s relatívne dobrými zručnosťami a slušnou vzdelanostnou úrovňou. V nasledujúcich rokoch ale vzdelávací systém nebol (a stále nie je) flexibilný k potrebám trhu práce, čo sa začalo prejavovať v nedostatku kvalifikovaných odborníkov.

V roku 1993 sa Slovensko osamostatnilo. Ekonomiku Slovenska v tomto období ovplyvnilo - okrem samotného vzniku nového štátu a potreby vytvoriť nové inštitucionálne orgány aj spomalenie transformačného procesu a zmeny v daňovom systéme. Nastal pokles ekonomickej aktivity, čo sa prejavilo poklesom HDP a rastom miery nezamestnanosti. Vstupom Slovenska do Európskej únie v roku 2004, a tým na spoločný európsky trh, sa zmenili podmienky podnikania a zväčšil sa tlak konkurencie. Vzhľadom na to, že vstupom do Európskej únie sa Slovensko zaviazalo prijať aj spoločnú menu, jedným z hlavných cieľov hospodárskej politiky bolo splnenie maastrichtských kritérií, aby krajina mohla v čo najkratšom čase vstúpiť do menovej únie. Zmenu hospodárskych podmienok ovplyvnil aj rozmach internetu na Slovensku, prístup k informáciám, aj k vzdialeným trhom. Rast produktivity práce v porovnaní s nízkymi jednotkovými pracovnými nákladmi spolu s reformami vo fiškálnej oblasti³ vytvorilo zo Slovenska ekonomicky zaujímavú krajinu pre zahraničných investorov. Motorom rastu bol okrem zahraničného dopytu aj domáci dopyt, hlavne súkromná spotreba a investície. Súkromná spotreba sa zvýšila vplyvom rastu zamestnanosti a zvýšením reálnych miezd. Investície rástli hlavne v automobilovom priemysle a elektrotechnickom priemysle a verejné investície smerovali do infraštruktúry. Rast investícií zasa stimuloval tvorbu pracovných miest. Zostali však regionálne disparity, ktoré sú najvýraznejšie v tvorbe produktu a nezamestnanosti (Darmo, 2015). V septembri 2008 sa však na Slovensku prejavila svetová kríza a odhalila niektoré slabiny štruktúry slovenského hospodárstva, pričom „stagnácia, až recesia svetovej ekonomiky znamenala pokles odbytu, zníženie kúpyschopnosti obyvateľstva, ako aj zastavenie väčšiny investičných zámerov“ (Hajduchova & Giertlio, 2015).

3. Slovenské hospodárstvo v súčasnom globalizovanom svete

Slovensko je malou nesebestačnou otvorenou ekonomikou a jeho hospodárstvo je veľmi ovplyvňované vývojom svetových cien agrokomodít a energetických surovín, predovšetkým

³Daňová reforma k 1.1.2004 zmenila progresívne zdaňovanie na jednotnú daň z príjmov pre právnické aj fyzické osoby vo výške 19%, aj daň z pridanej hodnoty bola stanovená vo výške 19 %.

ropy. Vzhľadom na to, že poľnohospodárske výrobky pre ich nevyhnutnosť k životu môžeme označiť za strategický produkt, problémom slovenského hospodárstva je jeho orientácia na výrobu luxusných statkov. V skladbe súčasného slovenského hospodárstva dominuje automobilový a elektrotechnický priemysel, ktorého produkcia a export zásadne ovplyvňujú výšku HDP. Pavlínek (2016) upozorňuje, že úspešný rozvoj automobilového priemyslu na Slovensku sa dosiahol na úkor jeho prevažnej závislosti od zahraničného kapitálu. Pokles významu poľnohospodárstva v prospech priemyslu sa odráža aj v štruktúre zamestnanosti v SR, čo dokumentuje nasledovná tabuľka č. 2. Problémom však je, že „Slovenská republika výrazne zaostáva v inovačnej činnosti“ (Buno, 2015), čo sa v krátkom čase môže prejaviť na priemyselnej produkcii.

Table 2: Vybrané ukazovatele o pracujúcich v SR podľa Výberového zisťovania pracovných síl

	2012	2014	2016
Počet pracujúcich spolu v tis. osôb	2 329,0	2 363,0	2 492,1
Podiel pracujúcich z ekonomicky aktívneho obyvateľstva v %	86,1	86,8	90,4
Poľnohospodárstvo, lesníctvo a rybolov v tis. osôb	75,4	82,7	72,0
Podiel na celkovom počte pracujúcich v %	3,24	3,49	2,89
Priemysel v tis. osôb	633,4	614,2	679,2
Podiel na celkovom počte pracujúcich v %	27,20	25,99	27,25

Source: Štatistický úrad Slovenskej republiky (Pracujúci podľa výberového zisťovania pracovných síl); vlastné prepočty

V primárnom sektore (poľnohospodárstve, lesníctve a rybolove) pracuje v roku 2016 iba 2,89 % celkového počtu pracujúcich oproti spomenutým 69,83 % v roku 1910. V priemysle naopak toto číslo narástlo z 17,45 % celkového počtu pracujúcich na súčasných 27,25 %. Pre informáciu ďalšie ekonomické činnosti s väčším percentuálnym podielom pracujúcich uvádzame v tabuľke č. 3. Čo sa týka lesníctva, dopad globálnej ekonomiky na toto odvetvie za prvé roky 21. storočia skúmali I. Hajduchova, M. Sedliacikova a D. Halaj (2016) a došli k záveru, že faktory globalizácie, ako sú priame zahraničné investície a čistý vývoz, nemali počas sledovaného obdobia na daný sektor významný vplyv. Množstvo zamestnaných vo výrobe cyklicky citlivej produkcie (luxusných výrobkov) však môže v prípade nepriaznivých hospodárskych podmienok spôsobiť rapídnu zmenu zamestnanosti.

Opätovný rast významu slovenského poľnohospodárstva a zmiernenie rozdielov v miere zamestnanosti medzi ním a priemyslom by pomohlo riešiť aj podporu sociálnej inklúzie a zmiernenie regionálnych disparít. V danom odvetví vidíme priestor pre uplatnenie podnikov sociálnej integrácie. Tieto sa zameriavajú na pomoc hlavne nízkokvalifikovaným nezamestnaným, ktorí sú vystavení riziku trvalého vylúčenia z trhu práce (Pongracz, 2016).

Table 3: Ekonomické činnosti s počtom zamestnaných nad 100 tis. osôb v roku 2016

	v tis. osôb	%-ny podiel na celkovom počte pracujúcich
Veľkoobchod a maloobchod	310,5	12,5
Stavebníctvo	229,4	9,2
Verejná správa a sociálne zabezpečenie	222,4	8,9
Zdravotníctvo a sociálna pomoc	181,5	7,3
Vzdelávanie	177,0	7,1
Doprava a skladovanie	163,6	6,6
Ubytovacie a stravovacie služby	113,9	4,6

Source: Štatistický úrad Slovenskej republiky; vlastné prepočty

V prípade potravín je naša nižšia produkcia nahrádzaná dovozom, nejedná sa však o doplnkové, ale rozhodujúce agrokomodity, ako je hydinové a bravčové mäso, mlieko, vajcia, med apod. V súčasnosti nie sme schopní zabezpečiť si zásobovanie potravinami z vlastných zdrojov a v slovenskej obchodnej sieti je podiel slovenských potravinárskych výrobkov približne na úrovni 40 %. Z údajov Ministerstva pôdohospodárstva o komoditnej štruktúre s poľnohospodárskymi a potravinárskymi výrobkami v rokoch 2015 a 2016 (Informácia o vývoji obchodu Slovenskej republiky s poľnohospodárskymi a potravinárskymi výrobkami za rok 2016) je zjavné, že vyvážame surovinu a späť dovážame hotové výrobky – napríklad saldo pri živom hovädzom dobytku je 70 001,7 tis. Eur, oproti tomu pri hovädzom mäse čerstvom alebo chladenom je saldo –35 251,4 tis. Eur a pri mrazenom mäse –7 480,8 tis.. Podobné je to pri bravčovom mäse (tu je saldo až -230 990,6 tis. Eur), hydine, masle, zelenine. Viac sa dováža ako vyváža tiež všetka zelenina okrem strukovín – tam prevažuje slovenský vývoz.

Nízky podiel slovenských poľnohospodárskych výrobkov v domácej obchodnej sieti je zapríčinený aj nízkou rentabilitou poľnohospodárskej produkcie, výrazným znížením nákupných cien mnohých podstatných poľnohospodárskych produktov. Keďže odvetvie je v porovnaní s okolitými krajinami finančne poddimenzované a nemôže tak v globalizovanom svete konkurovať lacnejšej zahraničnej produkcii. Podľa N. Jankelovej, D. Masara a S. Moricovej (2017) slovenskí poľnohospodári vnímajú ako najdôležitejšie rizikové faktory cenové riziko, výrobné alebo príjmové riziko. Navyše nízke priemerné mzdy na Slovensku sú jednou z príčin, prečo slovenský zákazník dáva prednosť nízkej cene pred kvalitnými, ale drahšími slovenskými produktmi. Vývojom efektívnosti poľnohospodárskych podnikov sa v svojom článku zaoberajú Serences et al., (2016). Výhodou domácej slovenskej potravinovej produkcie je to, že nie je zaťažovaná žiadnym potravinovým škandalom. Je potrebné zo strany štátu podporiť predaj domácich slovenských výrobkov, posilniť výdavky do poľnohospodárstva a výraznejšie vplývať aj na spoločnú poľnohospodársku politiku EÚ. Varovným príkladom môže byť mliečna kríza v roku 2016, keď kvôli nízkym výkupným cenám mlieka došlo k výraznej redukcii dojníc na Slovensku. Vďaka horším klimatickým podmienkam sa u svetových producentov mlieka znížila jeho produkcia, čo sa odrazilo v cene mlieka a následne v raste cien masla. Slovenskí poľnohospodári v súčasnosti však nedokážu vyprodukovať viac mlieka pre výrobu masla, keďže obnova chovu dojníc trvá aj niekoľko rokov.

4. Conclusion

Slovenské hospodárstvo dokázalo využiť svoju konkurenčnú výhodu (ktorú malo v kvalifikácii pracovnej sily, nákladoch na pracovnú silu a v relatívne dostatočnej zásobe vody), predovšetkým pre zapojenie sa do svetového obchodu s produkciou automobilového a elektrotechnického priemyslu. Z tohto dôvodu menej svojich zdrojov vynakladalo a vynakladá na produkciu potravín. Vďaka medzinárodnému obchodu je síce možnosť dovozu lacnejších (aj keď niekedy menej kvalitných) potravín, je to však za cenu obetovania potravinovej sebestačnosti, potravinovej bezpečnosti a pracovných miest, ktoré by mohli byť v poľnohospodárstve vytvorené. Takto de facto dávame prácu poľnohospodárom v krajinách, z ktorých tieto produkty dovážame. Ak odhliadneme od toho, že nekvalitné dovážané potraviny môžu vážne ohroziť zdravie obyvateľov, nemožnosť dovozu potravín (nech už z hocakého dôvodu) vzhľadom na nesebestačnosť krajiny, by mohla viesť ku katastrofe, alebo minimálne k sociálnym nepokojom. Európa prechádza zásadnými zmenami v hospodárstve ale i v sociálnej sfére spoločností a tento proces kombinuje staré problémy s novými (Korimova, 2008). V súčasnom globalizovanom svete je potrebné mať na pamäti aj slová Imricha Karvasa (1999), že „absolútna voľnosť medzinárodného obchodu a dovoz lacných potravín môže spôsobiť zničenie roľníckeho stavu“

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References

- [1] Adamisin, P., Kotulic, R. and Kravcakova Vozarova, I. (2017). Legal form of agricultural entities as factor in ensuring the sustainability of the economic performance of agriculture. agriculture sector. *Agricultural Economics – Zemedelska ekonomika*, vol. 63, pp. 80-92.
- [2] Buno, M. (2015). Technological environment of the Visegrad group. *Proceedings of International scientific conference: Globalization and its socio-economic consequences 2015*, Rajcke Teplice, Slovakia, pp. 66-71.
- [3] Darmo, L. (2015). Regional disparities in unemployment and economic performance of Slovak regions – the estimation of Okun's coefficient. *Proceedings of International scientific conference: International Scientific Conference on Knowledge for Market Use – Women in Business in the Past and Present*, Olomouc, Czech Republic, pp. 75-84.
- [4] Hajduchova, I. and Giertliova, B. (2015). The impact of globalization on the employment development in the SR. *Proceedings of International scientific conference: Globalization and its socio-economic consequences 2015*, Rajcke Teplice, Slovakia, pp. 171-180.
- [5] Hajduchova, I., Sedliacikova, M. and Halaj, D. a kol. (2016). The Slovakian forest-based sector in the context of globalization. *Bioresources*, vol. 11, pp. 4808 – 4820.
- [6] Jankelova, N., Masar, D. and Moricova, S. (2017). Risk factors in the agriculture sector. *Agricultural Economics – Zemedelska ekonomika*, vol. 63, pp. 247-258.
- [7] Karvas, I. (1999). *Základy hospodárskej vedy*. 2st ed. Bratislava, Slovakia.: VEDA.

- [8] Korimova, G. (2008). Theoretical and methodological approaches of social economy development. *Ekonomický časopis (Journal of Economics)*, vol. 3, no. 56, pp. 311-325.
- [9] Ministerstvo pôdohospodárstva a rozvoja vidieka Slovenskej republiky. Informácia o vývoji obchodu Slovenskej republiky s poľnohospodárskymi a potravinárskymi výrobkami za rok 2016. [Online]. Available: <http://www.mpsr.sk/sk/index.php?start&language=sk&navID=759&navID2=759&sID=111&id=11474>.
- [10] Pavlinek, P. (2016). Whose success? The state-foreign capital nexus and the development of the automotive industry in Slovakia. *European Urban and Régional Studies*, vol. 23, pp. 571-593.
- [11] Pongracz, E. (2016). Global problems of the contemporary word and their solutions at the local level through social entrepreneurship. *Proceedings of International scientific conference: Globalization and its socio-economic consequences 2016*, Rajcke Teplice, Slovakia, pp. 1768-1773.
- [12] *Ročenka Československé republiky* (1930). Praha, CZ: Vydavatelství Ročenky Československé republiky.
- [13] Serences, P., Cierna, Z. and Piterkova, A. (2016). The development of value added and net income of farms in Slovakia. *Proceedings of International scientific conference: International Scientific Days (ISD) Conference on Agri Food Value Chain - Challenges for Natural Resources Management Society*, Nitra, Slovakia, pp. 378-388.
- [14] Sirucek, P. a kol. (2007). *Hospodářské dějiny a ekonomické teorie*. Slaný: Melandrium.
- [15] Státní statistický úřad (1922) *Ročenka Československé republiky*
- [16] Státní úřad statistický (1920) *Statistická příručka republiky Československé I*. Praha, Czech Republic Knihkupectví Bursík a Kohout.
- [17] Štatistický úrad Slovenskej republiky. Pracujúci podľa výberového zisťovania pracovných síl. [Online]. Available: [http://statdat.statistics.sk/cognosext/cgi-bin/cognos.cgi?b_action=cognosViewer&ui.action=run&ui.object=storeID\(%22iB193D1C87387465B954B10BE9F45111D%22\)&ui.name=Pracuj%C3%BAci%20pod%C4%BEda%20V%C3%BDberov%C3%A9ho%20zis%C5%A5ovania%20pracovn%C3%BDch%20s%C5%ADl%20%5bpr0002qs%5d&run.outputFormat=&run.prompt=true&cv.header=false&ui.backURL=%2fcognosext%2fcps4%2fportlets%2fcommon%2fclose.html&run.outputLocale=sk](http://statdat.statistics.sk/cognosext/cgi-bin/cognos.cgi?b_action=cognosViewer&ui.action=run&ui.object=storeID(%22iB193D1C87387465B954B10BE9F45111D%22)&ui.name=Pracuj%C3%BAci%20pod%C4%BEda%20V%C3%BDberov%C3%A9ho%20zis%C5%A5ovania%20pracovn%C3%BDch%20s%C5%ADl%20%5bpr0002qs%5d&run.outputFormat=&run.prompt=true&cv.header=false&ui.backURL=%2fcognosext%2fcps4%2fportlets%2fcommon%2fclose.html&run.outputLocale=sk).

GLOBALIZATION AND ITS IMPACT ON THE QUALITY OF EUROPEAN EDUCATION

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Abstract. This paper describes the trends of the development caused by globalization and for the requirements which are in the educational process in current global environment of the EU. Globalization of economic, globalization of the world – from the national to world industry, the whole world connection and dependence brings many and fast changes which influence not only the economic but also all the fields of life, culture, politics, science, technics, education. The changes which are seen in the 21st century probably reincrease the changes which were during the last millennium from the reason of the speed, range and significance. Quality research and the development can't exist without quality education which will develop creative abilities of students, their creative thinking, ability to solve problems. The important part of this educational system must be long-term education. The only source which we have in let's say non-restricted amount is the education. Knowledge and skills which are focused on the only concrete situation are not becoming usable. It is the reason why it is in developing states the effort to find and to increase in people such competences (skills, knowledge and opinions) which are usable in the most (also in not existing) jobs which allow to people make the whole range of working positions and functions, to make different jobs and which are suitable for solving the whole range of the most not expecting problems which allow to people to be successful with fast changes in the job, private and social life.

Keywords: Globalization, European Union, education, lifelong learning, e-Inclusion

JEL Classification: I22, I25, I28

1. Introduction

Globalization is a very complex and contradictory process. It represents the removal of economic and financial barriers under pressure from free trade theories, the openness of political, scientific and cultural relations, the use of technologies enabling universal communication. In this context, there are many hopes connected with the achievements of science and technology, the hope for the widespread possibilities of man, the wide interpersonal communication, and the improvement of life. At the same time, however, the diversity of global dependencies brings with them serious problems, new contradictions, tensions and threats (Cihovska, 2010). Uneven economic growth is still deepening the gap between rich and poor countries, contradictions between rich people and marginalized people within the same country

(Compos et al., 2011). With the tendencies of globalization, the contradiction between science and industrial rationality and the life of mankind on this planet is also exacerbated. On the one hand, science and technology have achieved tremendous successes, such as controlling energy, penetrating the universe, producing new materials, the results of modern medicine (Vandyke et al., 2004). On the other hand, unmanageable and threatening environmental problems mean one of the main threats to humanity. Uncertainty, where mankind is heading, takes on new forms. There is a population explosion in the poorest regions (Silerova et al., 2015).

In the age of globalization, concepts such as human capital, value of human resources, learning society, tertiary education, and permanent education and so on are becoming significant and very frequent in the context of education (Kanuka et al., 2007). However, it seems to be a very current need to look deeper and more differentiatedly at seemingly non-problematic concepts such as human capital and those that appear to be generally understandable, eg the notion of learning society, the idea of intercultural education, the role of modern means of communication, etc (Eisma et al., 2004). Globalization is ruled by new technologies, which enable many new businesses (Silerova et al., 2008). To present them as a topic of discussion is a way of deeper understanding of their nature and to realize the connotations that are associated with them.

a. Education and content of education in a global society

The notion of human resource appreciation, sometimes expressed by the term human capital, is undoubtedly central. It plays a significant role in economic development and growth (Farkas, 2012). It is assumed that a higher level of education is the most important element of human resources, leading to higher productivity as it facilitates adaptation to complex technologies and complex organizational structures. Educators also contribute to the formation of values, attitudes and behaviors that determine the rhythm and ways of social and economic development (Nichols, 2003). The UNESCO International Education Committee's 21st Century Education, entitled Learning to Hide Wealth, formulates the concept of a learning society that concerns everyone, and the concept of learning that takes place throughout life as a permanent education. The implementation of these tendencies brings about changes that are reflected in a certain way in all levels and types of schools. Above all, it turns out that it is necessary to see the educational system as a whole. The percentage of the population that achieves complete secondary education is growing strongly. In this context, the issue of the quality of primary and secondary education is at the forefront. Both, the expansion and democratization of secondary education and the enhancement of the quality of primary and secondary education are essential prerequisites for the further expansion of higher education.

A detailed analysis of the development of the education system, especially from the socio-economic point of view and from the perspectives of the school policy, when it comes to the European Union, is provided by the studies Education and Europe. In particular, the authors emphasize the increasing importance of education for the individual life as well as the need for the country to stand up in the widening competition of the non-globalizing markets. The globalization of the commodity and labor market will inexorably build on those countries that do not adapt to the current trends in the development of education and school systems (Orszaghova et al., 2016).

However, the issue of human capital appreciation has many aspects and contains a number of controversial issues. Seeking to raise the educational level of the citizens in the era of globalization has undoubtedly a significant positive charge. These tendencies of human resource appreciation support inter alia the overcoming of the deep gap that has historically

arisen between the so-called educated general and professional. In our conditions, has been a major cultural problem since the end of the 19th century (Dostal, 2008). Our teachers and have pointed out the insularity of both concepts and their serious unilateralism. In a world where science and technology penetrate deep into the everyday life of a society that has to demonstrate its ability to compete in global markets.

The ongoing changes anticipate highly motivated, flexible workers who are willing and able to realize individual potentials and diversify their pathways to deepen post-school education during recurrent education. At the same time, in the conditions of the information society, they become an essential part of the competence that provides, in addition to general and vocational education, such as the ability to communicate, the ability of responsible behavior, moral decision making in contradictory and challenging situations of everyday life. This general characteristic, however, must be seen in other concrete contexts, which in turn take on different forms (Hong et al., 2009). In addition, new factors linked to globalization tendencies are also affected by these processes of human resource valorisation through education. Human resources valuation becomes an essential part of all major investment projects (manufacturing, electronics, chemistry, tourism, etc.). In this context, transnational companies provide programs for their staff and also contribute to deepening specialized training for those who work in production. This training relates not only to technical aspects but also to motivation to develop the learning skills. New relationships between this activity and national education systems are emerging. National education systems provide general training (Stephanidis et al., 1998). This is important because the school as part of the company's tax has organic relations to its own national culture. Specialized training, provided by a multinational subject, has a limited application, but is often needed for sustained competitive advantage. This private sector of transnational societies plays an important complementary role in education. It is, therefore, desirable that transnational societies and national governments cooperate in the valorisation of human resources. This makes it important to recognize the cultural differences of the various regions and thus better determine the optimal type and extent of education. From the pedagogical standpoint, the notion of human capital in the context of globalization tends to shift considerably into the forefront of utilitarian rationality and is associated with a very narrow economic vision.

The economic vision is often popularized by the idea that it is the need to prepare individuals to work at different levels of production as a standard of flexible specialists. It is based on the fact that one has to transform itself into human capital in order to become a positive factor of productivity and to assimilate the necessary technique. The problem that is currently being raised lies in the fact that education can not be understood only as the acquisition of science and technology, or of professional competence. Therefore, with a positive emphasis on the importance of education, it is the task of educators to think again and again about the concept of this education, with a view to a comprehensive anthropological approach.

The specific tasks of education to overcome the concept scientists and to contribute optimally to the development of each person's personal potential. The emphasis on all-round personal development can be realized in a number of moments influencing the concept and content of education. It also contributes to the strengthening of the role of art in hitherto customary education. This is particularly important in view of the various influences of superficial pseudoculture, which spread to the globalizing world (Warburton et al., 2009).

The second half of the 20th century represents a qualitative change in the development of education systems, when a quantitative explosion of higher education occurs, but in the last decades it also reduces the material resources that these systems provide.

The concept of tertiary education is being introduced. This term includes all more or less comprehensive degrees of post-secondary education and a wide range of courses, separated by their content, focus and methods, and by the length of these courses provided at universities of traditional university and non-university types as well as in other institutions (Park, 2011). Elite universities, with an emphasis on science, research, and academic values, are parts, but not the only, tertiary sector so named, in which the concept of lifelong learning also plays an important role.

Figure 1: Three policies and axes for globalization



Source: (Hong, 2009)

It is pointed out that higher education can not be understood as purely regional or national. This is reflected in the recognition of diplomas, the mobility of students and university teachers and researchers, the growing scientific and cultural partnership, solidarity between developed and less developed countries. Strengthening new forms of knowledge transfer (Internet) can also help stop the brain drain and help mitigate the gap between rich and poor countries in the field of knowledge creation and application. In addressing the issue of human resource valorisation at the university level, the relationship between global and local is also specifically reflected. However, along with positive development trends, discrepancies are growing. Political and sociological analyzes also reveal a number of problems and contradictions linked to the need for human capital in a globalizing society.

b. Education in today's global society and dates controlled school

Contemporary companies can give a whole range of different additives, which try to describe it more or less inaccurately. So we can talk about a knowledge, postmodern, informational society. At the same time, we can talk about learning companies. It is precisely the need for information analysts, people who are capable and intellectually equipped to work effectively with information, to develop education and its valuation. Almost all modern textbooks of management and economics have already agreed that the role of economic goods is increasingly being played by machines, equipment or buildings, at the expense of social and information capital (Schmidt, 2011).

It is the people who work for the individual companies that represent their greatest value and the estate, which is certainly important to defend and develop in a systematic manner. Of course, this fact must also be reflected in education, at all levels and levels. The harsh prices that are paid today for startup companies are usually not paid for the idea, technological performance, or the prospect of economic profitability but just for the team that demonstrates the ability to work efficiently and creatively (Bayne, 2004). It is an investment in social capital. At the same time, however, it is obvious that social capital is also extremely dependent on the education and lifelong growth of each individual. While real estate investment is in principle, almost one-off investment, the social capital of the group and the intellectual capital of an individual can change considerably over time. Therefore, ongoing investment in these areas is important.

The growing importance of formal as well as non-formal education can be considered as one of the essential features of the information society. Besides, there is another extremely important aspect that we can not forget. The development of the Internet and related technologies has made it possible to transform the whole process of education in a strong way. On the one hand, it is the development of e-learning and learning as a distance form of education, but also the gradual opening of top courses to the world beyond a purely academic environment. Examples include online courses offered by US universities in various online projects. If the home university finds that there is a very good course of artificial intelligence, it certainly does not make sense to try to compete against it. Rather, it should incorporate it into its teaching and provide students with backgrounds and resources for their successful completion, and eventually set up additional activities (extra exercises, developing lectures, tutorials, software equipment)

The prominence of university, but also secondary or even secondary school materials can play a very important role in the development of education and education as such. The transfer of cultural and intellectual content can certainly serve the growth of quality and thus the development of the information society. At this point, we would like to draw attention to one aspect that can be perceived within Europe or the US as a minority, but the change in global structures will have a very strong impact, and thus the availability of education that will strongly transform the economy, politics or social ties within the individual countries. It is precisely the fact that people across the world or economic backgrounds can get quality education is one of the greatest changes the information society brings with it. And it is these activities that are followed by a number of other online projects that are devoted to education.

A situation where education is available free of charge, and anyone who has a network connection at any time and at the necessary pace they need can fundamentally change the distribution of poverty and be a tool for its eradication. At the same time, I believe that the transfer of cultural specifics can be heavily enriching for science and the economy. Just remember the relationship between language and mathematics when it is obvious that they are heavily influenced. These overlaps can be found more and more. Two dimensions are to be kept in mind here. First of all, it is the distribution of quality education in areas that are still facing the lower literacy of the population, especially in Africa and some parts of Asia. The second layer is to make quality education available to people from developed countries for whom it is economically poorly accessible. At a time when the new economic crisis, which could be caused by study debts in the USA, seems to be developing, educational projects like this are one of the ways to boost the competitiveness of the economy, but at the same time reducing the cost of education.

Of course, the emergence of new barriers, which, on the contrary, can hinder a number of people in accessing education or at least disadvantages them in their society. An example may be a situation where the school will require pupils to purchase a particular precious equipment for education purposes. Other problems may be linked to the inaccessibility of technology in student households. Other problems may also occur in the case of people with disabilities, where on the one hand the accessibility of education can be improved (for example, for non-mobile people), but it can also pose new obstacles for the visually impaired (a lot of infographics, poorly processed texts). So far, we have not mentioned two areas that have changed the information revolution. We leave the first one without a deeper commentary - it is the development of completely new subjects such as computer science, computer technology and information education, which are of great importance for the students' ability to succeed in the world of information society. There are not only new subjects at all levels, but also new faculties. Interdisciplinary fields such as social computer science, computer graphics, and digital music are also seen in development.

Another area to be mentioned is a change in the way of teaching, which is associated with the emergence of modern technologies. Whether it is data projectors, PowerPoint (or other) presentations, educational audiovisual materials and many other elements, it can be said that the transformation of didactic technologies is one of the most visible and powerful changes of the present school. Also a film can find its place in science classrooms, where they can become a very effective and modern teaching assistant for creative teachers (Stubna et al., 2014). An even bigger change then recharges interactive whiteboards or promoted teaching with tablets. All this takes students into a deeper way into the lessons that can entertain and enrich them at the same time. In this area it is perhaps not the benefit of the trends or even the slightest doubt.

2. Conclusion

We consider the most important element of the current possibilities of data-controlled education to be the possibility of highly individualized courses, which are linked to feedback mainly for students. Secondly, it serves teachers who can modify the lesson. Tertiary, data from area tests could be used by national organizations, for example, to evaluate schools, change and develop study materials, etc. Data analysis in education and its effective use will be an important part of social science work that should contribute to enabling students even adults to effectively educate at all levels and throughout their lives. Lifelong learning becomes an indisputable imperative that will increasingly need to reflect universities and other institutions.

It was not in the possibilities of this relatively short text to provide a comprehensive view of all areas of education that are fundamentally changing with the emergence of the information society. Still, we believe we have offered at least a basic insight into the issue, which shows how the roles and positions of the university will change in the social climate of the coming years.

References

- [1] Bayne, S. (2004). Smoothness and striation in digital learning spaces. E Learning. *Digital Media*, vol. 1, pp. 302–316.
- [2] Compos, M., Laferriere, T. and Harasim, L. (2011). The post-secondary networked classroom, renewal of teaching practices, and social interaction. *Journal of Asynchronous Learning Network*, vol. 21, pp. 35-41.

- [3] Cihovska, V. (2010). *Manažment ľudských zdrojov*, 1st ed. Bratislava: Ekonóm, pp. 112-113.
- [4] Dostal, J. (2008). Pedagogická efektivita off-line learningu v celoživotním vzdělávání. *Klady a zápory e-learningu na menších vysokých školách, ale nejen na nich*, Prague, Czech Republic, pp. 56 – 64.
- [5] Eisma, R., Dickinson, A. and Goodma, J. (2004). Early user involvement in the development of information technology-related products for older people. *Universal Access in the Information Society*, vol. 3, pp. 131-40.
- [4] Farkas, M. (2012). Participatory technologies, pedagogy 2.0 and information literacy. *Library Hi Tech*, vol. 30, pp. 82–94.
- [5] Hong, H. and Sullivan, F. R. (2009). Towards an idea - centered, principle-based design approach to support learning as knowledge creation. *Educational Technology Research and Development*, vol. 57, pp. 613–627.
- [6] Kanuka, H. and Anderson, T. (2007). Online social interchange, discord, and knowledge construction. *Journal of Distance Education*, vol. 13, pp. 57–74.
- [7] Nichols, M. (2003). A theory of eLearning. *Educational Technology & Society*, vol. 6, pp. 1–10.
- [8] Orszaghova, D., Kozelova, D. and Greganova, R. (2016). Mathematics study outcomes as an indicator of the quality of the university education. *Agri Food Value Chain - Challenges for Natural Resources Management Society*, Nitra, Slovak Republic pp. 652-658.
- [9] Park, Y. (2011). A pedagogical framework for mobile learning: categorizing educational applications of mobile technologies into four types. *International Review of Research in Open and Distance Learning*, vol. 12, pp. 78–102.
- [10] Schmidt, D. (2006). Model-driven engineering. *Computer*, vol. 39, pp. 25-31.
- [11] Stephanidis, C., Salvendy, G. and Akoumianakis, D. (1998). Toward an information society for all: An international research and development agenda. *International Journal of Human–Computer Interaction*, vol.10, pp. 107-134.
- [12] Stubna, J., Hostovecky, M. and Tothova, D. (2014). Documentary movies as a motivation in science subjects. *12th IEEE International Conference on Emerging eLearning Technologies and Applications (ICETA)*, pp. 169-174.
- [13] Silerova, E., Hennyeyova, K., Vogeltanzova, T. and Junek, P. (2015) ICT influence on supporting agribusiness development. *Global Agribusiness and the Rural Economy*, Prague, Czech Republic pp. 425-432.
- [14] Silerova, E. and Kucirkova, L. (2008). Knowledge and information systems. *Agricultural Economics – Zemědělská ekonomika*, Czech Republic, vol. 54, no. 5, pp.217-223.
- [15] Vandyke, C. (1990). Taking computer literacy. *Communication of the acm*, vol. 30, pp. 366-374.
- [16] Warburton, S. (2009). Second life in higher education: Assessing the potential for and the barriers to deploying virtual worlds in learning and teaching. *British Journal of Educational Psychology*, vol. 40, pp. 414–426.

ORGANIZATION OF REGION TERRITORIALY-SPATIAL FORMATIONS IN THE CONDITIONS OF ECONOMY GLOBALIZATION

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Abstract. In the context of globalization, economic space is aimed for mobilizing all available resources, including the strengthening of integration processes and consolidation of spatial formations as a factor of sustainable growth of the national economy, therefore, the establishment of new approaches to the assessment of the development of macro-economic space is relevant now. The uneven evolutionary dynamics of economic theories of space determines the prospects for stimulating competitive advantages based on the mobilization of the potential of spatial entities regions. The aim of the article is exploring the features of formation of spatial entities regions in a globalizing economy. Authors used comparative-historical methods built evolution theories of economic space, based on the methods of scientific cognition, comparative and statistical analysis of systematized results of rating global indices characterising the quality of economic space. Authors analysed and identified basic theories of the formation and development of economic space, and also the key components of regions spatial potential of regions. Based on the comparison and analysis of global indices of globalization, economic freedom and prosperity, characterizing elements of spatial development Russia's place in the world's economic space and the analysis of their its dynamics has been determined. Researchers realized the analysis of spatial entities in different countries, which encourage the development of the whole economy and constitute a pole of development. The authors also conducted an analysis of the international experience of application of spatial entities, as well as their distinctive characteristics.

Keywords: region, spatial territory, potential, economic space, globalization

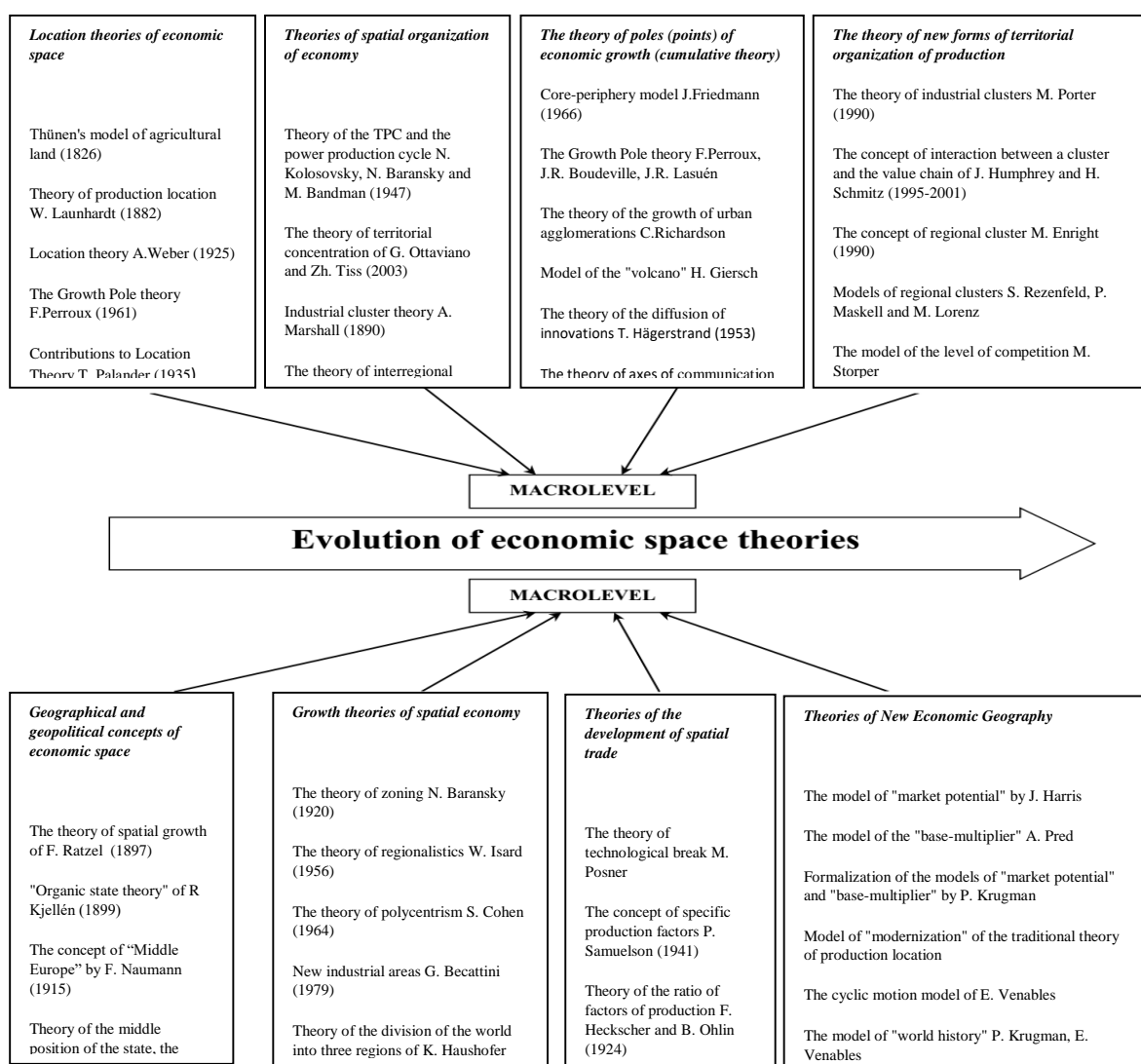
JEL Classification: E02, E61, F02

1. Introduction

The transition to the new industrial development in the present circumstances of the economy's functioning is impossible, if you use only the extensive growth factors, the basis of the exit from the crisis is the most complete use of intensive growth factor- spatial potential. The spatial potential of economic activities is an important factor in the development of the country, and it should serve as the primary resource to stimulate sustainable development and levelling out differentiation (Polozhentseva, 2016).

Historically, the formation of the science of spatial organization of the economy is associated with the works of A. Smith (Smith, 1778), who considered to be the founders of the doctrine of economic space. But the greatest development of this science was in the late XIX century - early XX century, thanks to the development of the German economic and geographical school, whose most prominent representatives are F. Ratzel (Ratzel, 1974), J.H. Von Thünen (Von Thunen, 1826), V. Launhardt (Launhardt, 1872), T. Palander (Palander, 1935), A. Weber (Weber, 1926), A. Lösch (Losch, 1940), P. Krugman (Krugman, 1995) etc. First, this was due to the urbanization and concentration of the economy and politics in individual territories. After spending a synthesis of views of various authors, one can focus attention on the fact that in economic science there are several directions for the development of theories of economic space. Considering the evolution of theories of economic space, we divided all the theories (depending on the object) onto the meso- and macrolevel (Figure 1).

Figure 1: Evolution of theories of economic space



Source: compiled by authors based on research approaches of various scientists

As a result of the analysis, it has been established that the theories of the development of the economic space have a long and complex evolution, this is due to many factors, such as scientific and technological progress, the informatization of society, the globalization of world

economic systems, the complication of integration processes between economic entities, the emergence of new forms of management, international competition, etc.

Structurization and effective organization of economic space are based on the functional properties of the forms of spatial organization of production and settlement - industrial and transportation hubs, agglomerations, territorial production complexes, urban and rural settlements of different types (Vertakova et al., 2015).

Considering the essence of the definition of the economic space in the scientific literature, it can be concluded that so far the basic characteristics that characterize this category remain undeveloped (Grechenyuk et al., 2016). Thus, it can be concluded that the diverse content of the economic space is reflected in its structure including: specific functions, the size of territories, the heterogeneity of development and self-organization.

2. Results

The analysis of the most successful world experience in the creation of special economic zones showed that these actions are very promising in terms of using effective methods of economic activity with the aim of economic, social and scientific and technological progress of society (Table 1).

Table 1: World experience in the creation and application of territorial entities

	Special economic zones	Country	Name	Characteristics
1	Verdon - the port of Bordeaux Saint-Barthelemy and Saint-Martin	France	"Sensitive economic zones", "poles of competitiveness", "Sensitive urban areas", "Technoparks"	Since the 1980s, the idea of free economic zones has been actively implemented in France. The draft law on free economic zones has received a specific name "On the implementation of the Covenant of reviving the economy of cities." In this law, there are two types of "sensitive urban zones" (ZUS - Zoneurbainesensible): "free urban zone" (ZFU - zonefrancheurbaine), "ZONE - Zonederedynamisationurbaine". The main preferential terms are tax and social. There is a formation of "poles of competitiveness" (Pôlesdecompétitivité) on the basis of large research and production complexes and high-tech enterprises in various sectors of the economy. In France, there is a three-level graduation of the "poles": 1 level - of global significance, with international potential; Level 2 - national; Level 3 - regional.
2	Mumbai, Kolkata, Chennai, Delhi, Bhilai, Madhyam Pradesh	India	"Growth corridors", "growth poles"	The territorial structure of the economy of India is very different from the structure of most developing countries. As a result of development, the territorial structure of the Indian economy has taken the form of a huge quadrangle, the tops of which form Delhi, Mumbai, Kolkata and Chennai, and the sides and the latitudinal diagonal are relatively narrow economic bands, which they called "corridors of growth". Due to the corridors of growth, the creation of the economic complex of India at the national level is taking place. At the beginning of the twenty-first century, a new stage

				of development began in India, also known as the "economic miracle."
3	Moscow, Saint Petersburg, Samara, Nizhny Novgorod, Rostov-on-Don, Novosibirsk, Yekaterinburg, Khabarovsk	Russian Federation	"Growth points"	<p>Points of growth in Russia began to form during the transition period of development. The Russian territorial and economic space actually represents a peculiar system of poles of growth, where the city performs the function of a "core" for the adjacent territories.</p> <p>There are the following types of territorial and spatial formations:</p> <ul style="list-style-type: none"> - free (special) economic zones prototypes of growth poles); - territorial production complexes; - technoparks; - zones of technical and economic development; - small industrial formations; - zones of development of high-tech production.
4	California, New York, Florida, Michigan	USA	"Free trade zones"	There are free trade zones that are similar to special economic zones. The goal of creating US free trade zones in enhancing the competitiveness of national industry in the world market. Although the main purpose of creating free trade zones in world practice is to request the procedure for importing goods.

Source: compiled by authors based on research approaches of various scientists

The policy aimed at deliberately increasing economic growth in specific, maximally favorable places with the aim of achieving national and regional interests is applied throughout the world, in countries with different political and economic arrangements. The so-called favorable places were determined in different ways and in the scientific literature they received a general name - territorial-spatial formations (TSF): poles, corridors, points, centers, locomotives, nuclei, zones, technoparks, TSC (Plotnikov et al., 2015). These territorial-spatial formations differ from each other, but rely on the "growth pole theory", since it has fundamental conceptual frameworks and terminology (Table 2).

Table 2: Types of TSF, allocated in various countries

Territorial-spatial formations (TSF)	Authors	Characteristics	Country
1. Free economic zones (FEZ)	J. M. Keynes	The existence of FEZ presupposes the existence of beneficial mechanisms for managing economic activity. FEZs are created by the state in order to attract investors, increase employment, stimulate exports and develop production.	USA, Brazil, Russian Federation
2. Special economic zones (SEZ)	Jacques Delors "Economy of the 20th Century" (1969)	Special economic zones are an important tool for raising the regional economy and equalizing interregional differences, facilitating the organization of new enterprises, increasing employment, raising wages, and increasing tax revenues in the country's budget. They are created	France

		by the state in order to improve the situation in these "difficult" areas.	
3. Growth corridors	P. Pottier	The essence of the research is that the territories located between the poles of growth receive additional impulses of development, as a result of which they turn into corridors of development	India
4. Growth poles	François Perroux "The Economy of the 20th Century" (1961)	The growth pole is the concentration of enterprises in certain zones, where economic growth, entrepreneurial activity, and the innovation process are of high intensity.	Australia, Ireland, Croatia, Sweden, Finland, Denmark, Belgium, Spain, Italy, Brazil, the Netherlands,
5. The point of economic growth	G.V. Gutman, A.A. Myroedov, S.V. Fedin "Management of the World Economy"	Under the "point of economic growth" should be understood economic entity, industry or type of activity, which, as a result of the revitalization, can ensure diversification and rationalization of the structure of the region's economy; and the development of its new elements, contribute to the improvement of quality life of the population.	Germany, Russian Federation
6. Kernels of development	K.V. Pavlov	Under the economic kernel should be understood as a set of growth points and basic elements of the economy, contributing to the intensive development of other elements of the national economic complex.	South Korea, Japan, Saudi Arabia, the Soviet Union
7. Territorial production complex	I.G. Aleksandrov, N.I. Klossovsky, Baranovsky	TPC is an effective combination of enterprises of one or several specialization industries located within the economic region, the union republic, the region, the province, using mainly their production and social infrastructure	the Soviet Union
8. Growth center	J.H. Friedman	"Center - periphery" (growth), uneven economic growth and the process of spatial polarization generate disparities between the center and the periphery. In this case, spatial connections arise between the center and the periphery, which transform space into a kind of force field. In the process of these relations, the center dominates the periphery due to the emergence of innovations in the center.	Australia, Ireland, Croatia, Sweden, Finland, Denmark, Belgium, Spain, Italy, Brazil, Netherlands, Slovenia, Germany
9. Technopark	F. Terman Emmons	Technopark is a property complex created for carrying out activities in the sphere of high technologies, consisting of office buildings and industrial premises, engineering, transport, residential and social infrastructure with a total area of at least 5000 square meters.	USA, Great Britain, France, Germany, China, Japan, Canada, Australia
10. Clusters	M. Delgado, M. Porter, S. Stern	Cluster - geographic concentration of interrelated companies and organizations in a particular field	USA United Kingdom, France, Germany

Source: compiled by authors based on research approaches of various scientists

"The theory of growth poles" is a general concept that includes a large number of theories in the field of sociology, economics, and geography (Babkin et al., 2015). The concept of "poles of growth" is based on a polarized development. The main goal is the formation of industrial

centers, which are able to exert a stimulating influence on the development of neighboring territories. (Sysoeva et al., 2016)

Based on the monitoring of global world development indices, we have identified complex indicators for the development of countries in the world, which enable us to quantify the quality of the economic space on the basis of an analysis of its constituent characteristics: territory, economic entities, welfare of the population, informatization.

The incorporation of spatial potential into the world economic system is shown by the globalization index, so we conducted a comparative analysis of the level of globalization of the countries of the world (Table 3).

Table 3: World experience in the creation and application of territorial entities

Country	Ranking of countries by the globalization index	Country	Ranking of countries by the index of economic freedom of economic entities	Country	Index of countries' readiness to participate in the networked economy
Netherlands	91.70	Hong Kong	88.6	Singapore	6.0
Ireland	91.64	Singapore	87.8	Finland	6.0
Belgium	90.51	New Zealand	81.6	Sweden	5.8
Austria	89.83	Switzerland	81.0	Norway	5.8
Switzerland	87.01	Australia	80.3	USA	5.8
Singapore	86.93	Canada	78.0	Netherlands	5.8
Denmark	86.44	Chile	77.7	Switzerland	5.8
Sweden	85.92	Ireland	77.3	United Kingdom	5.7
Hungary	85.78	Estonia	77.2	Luxembourg	5.7
Canada	85.67	United Kingdom	76.4	Japan	5.6
USA (34)	75.71	USA	75.4	Russia (41)	4.5
Russia (45)	69.40	Russia	50.6	China (59)	4.2
China (73)	60.73	China	52.0		

Source: compiled by authors using materials from: <http://globalization.kof.ethz.ch/>, <http://www.heritage.org/index/download>

According to the presented rating, the undoubted leaders are the Netherlands, Ireland and Belgium for all analyzed five years, while the value of the index itself is slightly fluctuating, which indicates the slowdown of the processes of integration into the world economic space, primarily due to the unstable foreign policy situation in the Middle East and the migration policy of European countries. The United States in the index of globalization in 2013 ranked 34th in the overall ranking of countries, in 2014 there was an increase to 32 places, but in 2015 and 2016, positions dropped to 34 places. The values of the indicator for 7 years increased from 74.81 to 75.71. China remains a weakly integrated state, although its current policy is aimed at expanding world ties; The significance of the level of the index of globalization remains low and amounts to 60.73 in 2016.

3. Conclusion

Analysis of the values of the index of globalization in Russia showed that in the period from 2014 to 2015, the country rose to 53 and 45 places, respectively, but the value of this index is

below the average, so we can conclude that the Russian economy is only at the stage of inclusion in globalization processes.

Another indicator of the development of spatial potential, from the point of view of economic entities that carry out their activities in this territory, is the index of economic freedom of economic entities.

The analysis of countries on the index of economic freedom of economic entities showed that in the period from 2012 to 2016, the leading position is taken by Singapore and Hong Kong, also the top three are Australia and New Zealand. The Russian Federation on this index occupies the lowest position among the considered set of countries, is inferior even to China, but within four years from 2012 to 2015 inclusively, there is a tendency of increase of this value, but in 2016 the index of economic freedom takes less value in comparison with the previous one period, it is connected with various factors, first of all - with political and external economic situation.

The level of efficiency of the use of the economic space in the context of globalization can be assessed through openness of the state on the basis of an analysis of the use of information technology. Analysis of this index allows us to conclude that over a five-year period, Russia has significantly improved its positions and moved from 56 places in 2012 to 41 in 2016, while the value of the index itself is growing, but the growth rate is not very significant, the backlog from the leaders is almost 2 points, which is significant in the scale of the index itself.

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References

- [1] Babkin, A. V., Plotnikov, V. A. and Muraveva, S. V. (2015). Integrated industrial structures in the economy of Russia: Organizational forms and typology. *Proceedings of the 25th International Business Information Management Association Conference (IBIMA 2015)*, Amsterdam, Netherlands, pp. 1286-1294.
- [1] Federal Law of (July 22, 2005). No. 116-FZ "On Special Economic Zones in the Russian Federation" [Online]. Available: <http://docs.cntd.ru/document/901941445> (accessed 25.08. 2017).
- [2] Grechenyuk, O., Grechenyuk, A. and Polyandin, A. (2016). Research of global servicization processes and their role in the Russian economy. *16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 523-531.
- [3] Index Of Economic Freedom (2017). [Online]. Available: <http://globalization.kof.ethz.ch/> (accessed 25.08. 2017).
- [4] KOF Index of Globalization [Online]. Available: <http://globalization.kof.ethz.ch/> (accessed 25.08. 2017).
- [5] Krugman, P. (1995). *Development, geography and economic theory*, Cambridge: MIT Press.

- [6] Launhardt, W. (1872). Theorie der Kommerziellen Trassierung der Verkehrswege. Zeitschrift des Hannoverschen Architekten- und Ingenieurvereins. *Hannover*, vol. 18, pp. 515—534.
- [7] Losch, A. (1940). *Die raumliche Ordnung der Wirtschaft*, Jena, Gustav, Fischer.
- [8] Palander, T. (1935). *Beitrage zur Standortstheorie*, Uppsala: Almqvist & Wiksell.
- [9] Plotnikov, V., Trusova, N. and Klimenko, P. (2015). Program budgeting as a mechanism to achieve social and economic development of the region. *International Multidisciplinary Scientific Conferences on Social Science & Arts. (SGEM 2015) Conference on Political Sciences Law, Finance Economics & Tourism*, Bulgaria, vol. 3, no. 1, pp. 851-858.
- [10] Plotnikov, V. and Volkova, A. (2014). Service economy and the specifics of its development in Russia. *Emerging markets queries in finance and business (EMQ 2013)*, vol 1, no. 16, pp. 18-23.
- [11] Plotnikov, V. and Volkova, A. (2015). The influence of government policy on the services sector. *International Multidisciplinary Scientific Conferences on Social Science & Arts. (SGEM 2015) Proceedings of Conference on Political Sciences Law, Finance Economics & Tourism*, Bulgaria, vol. 3, no. 1, pp. 875-882.
- [12] Polozhentseva, Y. (2016). Inequality in social standard of living in the international context. *Economic Annals-XXI*, vol. 157, no. 3-4, pp. 15-18.
- [13] Ratzel, F. (1974). *Politische Geographic*, Osnabriick: Zeller.
- [14] Smith, A. (1778). *An Inquiry into the Nature and Causes of the Wealth of Nations*, 2 ed. London: W. Strahan; T.Cadell.
- [15] Sysoeva, E., Budilova, E. and Risin, I. (2016). Influence of economic sanctions on the financial resources of Russian organizations. *27th International Business Information Management Association Conference, (IBIMA 2016)*, Milan, Italy, pp. 1145-1156.
- [16] Vertakova, Y., Polozhentseva, Y. and Klevtsova, M. (2015). Investment mechanism of stimulation of cluster initiatives in the region. *International Multidisciplinary Scientific Conferences on Social Science & Arts. (SGEM 2015) Proceedings of Conference on Political Sciences Law, Finance Economics & Tourism*, Bulgaria, vol. 3, no. 1, pp. 771-778.
- [17] Vertakova, Y., Polozhentseva, Y. and Klevtsova, M. (2016). Sanctions and economic policy in the conditions of globalization. *16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 2354-2361.
- [18] Vertakova, Y., Polozhentseva, Y., Klevtsova, M. and Leontyev, E. (2016). Government Support Tools for Small Business: Russian and Foreign Experience. *27th International Business Information Management Association Conference, (IBIMA 2016)*, Milan, Italy, pp. 1134-1144.
- [19] Von Thunen, J. H. (1826). *Isolated State*. Oxford: Pergamon Press.
- [20] Weber, A. (1926). *Theory of the location of industries*, The University of Chicago Press.

INTERNATIONAL INDUSTRIAL ENTERPRISE IN RUSSIAN PROVINCE: SOCIO-ECONOMIC CONSEQUENCES (FOR EXAMPLE, THE CONSTRUCTION OF MINING COMBINE MCC EUROCHEM, JSC IN THE VOLGOGRAD REGION OF RUSSIA)

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Abstract. The processes of globalization of the economy and the transition to the competition. The construction of large industrial facilities has a significant impact on the economic, ecologic, social and business environment. MCC EuroChem, JSC in the Volgograd region of Russia with a capacity of up to 4.6 million tons of potassium chloride per year. MCC EuroChem, JSC will be the first company in Russia and the fourth in the world to produce the full range of mineral fertilizers - nitrogen, phosphorus and potash fertilizers, when it launches. This construction has already brought unprecedented investment volumes, new technological and management decisions, new level of social policy to the economy of the Volgograd region. Indicators of socio-economic development of the Kotelnikovsky area of the Volgograd region have grown significantly. Also the impact of this construction on all spheres of life of the local population is obvious. MCC EuroChem, JSC and the regional government, business and population in the United States the processes of clustering, agglomeration and globalization.

Keywords: industrial production, EuroChem, Volgograd region, Russia, socio-economic development

JEL Classification: L23, L72, O25, P25

1. Introduction

Globalization is an inalienable process of the modern world economy. It covers all countries and all spheres of economic relations. The entire population inevitably participates in this process as a consumer of goods and services and as a labor.

Taking into account the concerns of the population during the implementation of global investment projects is the main task of the socio-economic policy of the governments of all countries.

In the context of globalization, the effective use of regional resources, taking into account local features, is a source of competitiveness of territories and their economic security (Polyakov & Zubkova, 2009).

The construction of the world's largest mining and processing facility in the Kotelnikovskiy area of the Volgograd region of Russia by MCC EuroChem, JSC demonstrates the full range of relations arising in the process of globalization. It includes cooperation between MCC EuroChem, JSC and the regional government, business and population in the processes of clustering and agglomeration. The Volgograd Region of Russia has a significant scientific, structural-functional and spatial potential for a progressive structural shift in the direction of chemical production (Polyakov, 2010).

2. MCC EuroChem, JSC

EuroChem is a vertically integrated agrochemical company, combining low-cost natural resources and production bases supported by wholly-owned logistics assets and a global advisory, sales and distribution platform.

It currently manufactures nitrogen and phosphate fertilizers and will soon launch potash operations to further enhance the product mix. Its range is of high-quality and includes standard and commodity products as well as a growing slow release and specialty fertilizer product offering, on which there is greater emphasis.

The production base is becoming more international, with assets in Russia, Lithuania, Kazakhstan and Belgium, plus a joint venture in China. These assets have ready access to key markets through logistics and distribution network that currently covers more than 25 countries (Anonymous, 2017).

Russian fertilizer companies enjoy a significant share of the global fertilizer market and have considerable strategic and social importance to the national economy. (Dmitrieva et al., 2017). The development of potash capacity is one of the main strategic priorities of the company. It is constructing mining and processing facilities at two locations in Russia; at the Gremyachinskoe deposit (EuroChem-VolgaKaliy, Volgograd region) and at the Verkhnekamskoe deposit (EuroChem Usolskiy, Perm region).

The Gremyachinskoe deposit is one of the four largest deposits of potassium ore in Russia and is characterized by a 10-meter thick potash layer with an average KCl content of 39.5%. Potassium is an important macronutrient required in the highest amount after nitrogen for plants and its ample supply is crucial for crop productivity (Wakeel et al., 2017). EuroChem-VolgaKaliy has mining rights on more than 1.6 billion tones of reserves in the deposit, as per Russian classification. A capacity of production is up to 4.6 million tons of potassium chloride per year. MCC EuroChem, JSC will be the first company in Russia and the fourth in the world to produce the full range of mineral fertilizers - nitrogen, phosphorus and potash fertilizers, when it launches. The density and existence of potential market (its closeness/accessibility) are key factors for investor (Novackova et al., 2016).

The project is implemented by EuroChem-VolgaKaliy, a subsidiary of MCC EuroChem, JSC established in 2006. The launch of mining and production are planned in 2018.

Globalization is increasingly characterized by discontinuity, emergence of powerful, unpredictable changes and by the exceptional pace at which new technologies spread around (Bohac & Lipkova, 2016). Today EuroChem-VolgaKaliy continues the construction of

industrial infrastructure, i.e. two shafts, which will ensure the operation of mineral's extraction for further processing at the factory. The construction of a surface complex consisting of 30 buildings for production and household purposes, connected by networks of technological pipelines, water and gas pipelines, conveyor galleries is also under construction. 160 thousand square meters housing with social infrastructure are under construction for residence of workers.

The construction of the facility was approved by the Government of the Russian Federation in 2007, and also approved by the regional law "Strategy of socio-economic development of the Volgograd region till 2025" in 2008. Attracting investments (including foreign investments) and assessing their quality should be considered in the context of opportunities that are created (or not created) in order to increase the value of "live" labor and the number of domestic technologies of the sixth technological mode (Romanov, 2017).

3. Socio-economic consequences

The fact is that in modern conditions the principles of plant placement changed, the geographic dispersion of plants increased and that resulted in an illusion that the industry made a small contribution to the economic well-being (Kirillovskaya, 2016). The Kotelnikovsky area is located in the south of the Volgograd Region of Russia, bordering the Rostov region and the Republic of Kalmykia. The population is 35.3 thousand people. The urban population is 54% of the total population, rural is 46 %.

Historically the Kotelnikovsky area is most of all agricultural. Production activities of MCC EuroChem, JSC will allow the area to become an industrial center of the south of Russia. Investments in people tend to increase, however, investment in production spheres remains priority (Azyrkina, 2015). Launching a new production by MCC EuroChem, JSC will make a significant investment to the provision of high-quality potash fertilizers to the country's agricultural producers, significantly increase Russian exports of these products, and will give a powerful impetus to the development of the region. Projects like this modernize socio-cultural and infrastructural environment of the territory, increase the production of public goods and services, improve the quality of life (Lomovceva et al., 2016).

In addition the project implementation reduces unemployment in the south of the Volgograd region. From 3 to 5 thousand people are involved in the construction of the facility. After launch the enterprise will provide about 3 thousand new jobs and more than 10 thousand jobs in related industries and services.

The potash enterprise will become one of the largest taxpayers in the region. Annual tax to budgets of all levels will amount to 10 billion rubles. More than half of it will go to the Volgograd region. The export sector acts as a locomotive for the development of other industries, stimulates the diversification and modernization of the entire economy. In the economy chains of added value are formed, related to the in-depth processing of raw materials and servicing enterprises that produce raw materials and intermediate products. This creates a demand for human capital, which forms the conditions for the development of the educational system and the scientific sphere. As a result, all this provides financial and human capital for the development of entrepreneurship in the manufacturing industries, in agriculture and in the service sector. As a result, the economy enters the "whole development" trajectory (Levin et al., 2015).

MCC EuroChem, JSC's production repeatedly increases the investment attractiveness of the region. The total investment amount of the project is 131.4 billion rubles (taking into account the second stage is 164 billion rubles). The amount of assimilated investments from the beginning of the project is more than 80 billion rubles.

During the project implementation in the Kotelnikovskiy area of the Volgograd region EuroChem, JSC makes serious investments in the development of local infrastructure. It took on voluntary commitments to improve the quality of life in the cities of presence.

160 thousand square meters of housing for 5,5 thousand inhabitants is under construction for the residence of the company's employees at the expense of investor in the local areas "Dubovaya roscha" and "Vostochny".

The residential area "Vostochny" has already been built. It consists of a multi-apartment residential building, a hostel, 9 five-story apartment buildings, more than 30 individual houses, a hotel with a sports complex.

The future residential area "Dubovaya roscha" consists of two zones. Currently, construction is underway in the first zone, with a population of 4.8 thousand people. The total amount of investments is more than 12 billion rubles. In this territory it is planned to build 1,600 housing units with an area of more than 120 thousand square meters. These are individual houses, multi-apartment houses, preschool institutions, a school for more than 550 people, a hospital for more than 200 people, a polyclinic. It is also planned public and business buildings (retail premises, offices), a sports center, a cultural center.

Under the agreement with the investor, part of the housing will be provided free to the region for orphans and budget workers. Engineering infrastructure is being built: 41 thousand square meters of roads, 6 km of power lines, 7.4 km of gas supply networks, 3.8 km of water supply, 4.5 km of communication networks. These facilities are planned to be completed in December 2017. Today due to the funds of MCC EuroChem, JSC, a gas station, two branches of gas supply, a reserve power line with a length of 106 km have been built. The reconstruction of the Gremyachaya railway station of the Privolzhskaya railway was carried out (expansion). For 10 years of MCC EuroChem, JSC activities the company has invested more than 650 million rubles in social and charitable projects of Kotelnikovsky area and Volgograd region. MCC EuroChem, JSC social policy system is based on five general corporate priorities: sports, health, education, ecology and charity.

4. Ecological activities

MCC EuroChem, JSC pays great attention to the environmental component in the engineering, construction and operation of the mining facility. At the engineering stage, the best environmental technologies are laid in the solutions, which allow to minimize the negative impact on the environment:

- reduction of the area of land withdrawn from agricultural circulation and reduction of anthropogenic load on soils and damage to the environment by multi-storey construction,
- carrying out hollow filling operations that allow to reduce environmental pollution by storing wastes inside the mine. It reduces the risks of environmental pollution from the disposal of large-tonnage waste,

- absence of wastewater discharges into natural reservoirs due to a closed cycle of water use in production .The risks of pollution of water bodies are excluded,
- application of a special technology of waterproofing.

The expenses for the construction of environmental facilities are 2.4 billion rubles.

5. Cooperation with government

Efficiency of the policy, pursued in regions, depends on the coordinated actions of various ministries and departments, which are taking part in formation and realization of investment policy (Baulina et al., 2016).

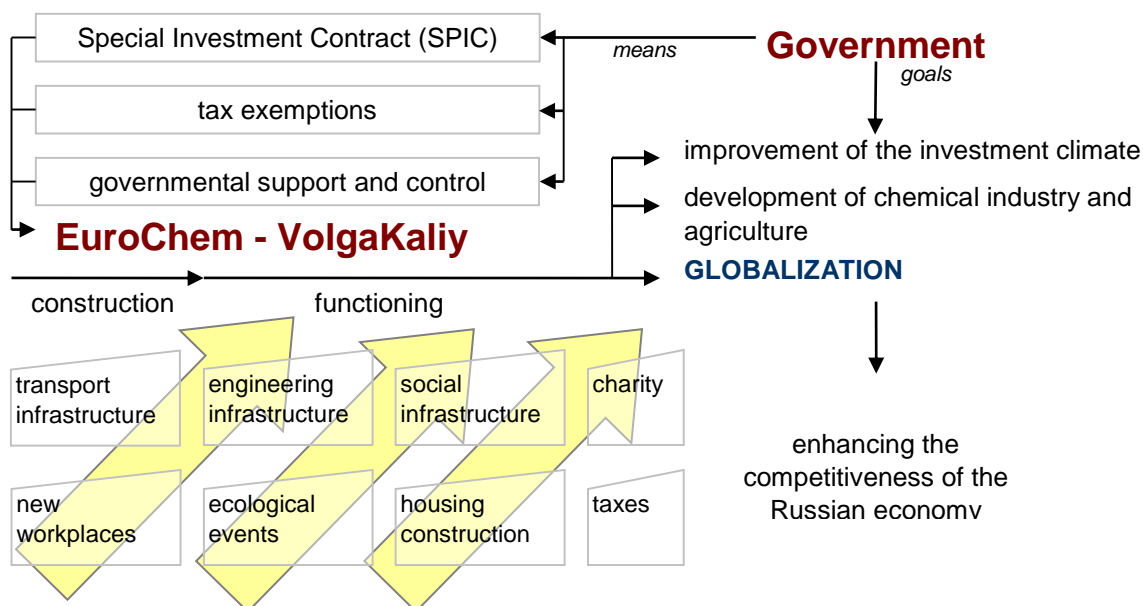
The Ministry of Industry and Trade of Russia, the Administration of Volgograd Region and EuroChem-VolgaKaliy signed a special investment contract (SPIC) in November 2016 about the implementation of the investment project "Creation of a mining and processing facility for the extraction and enrichment of potassium salts and the development of potassium chloride capacity of 2.3 million tons per year of 95 percent KCL".

There is an objective need to introduce a fundamentally new tools of state regulation of investment sphere and creation of a favorable investment climate (Novikova, 2016). The possibility of concluding special investment contracts with the Government of the Russian Federation is a new mechanism providing a set of incentives for creating new industrial productions, which means attracting investments, developing the industrial potential of the entities, creating new jobs, and providing the market with modern, demanded products.

The attachment to the contract identifies a list of 12 social infrastructure facilities to be built and handed over by the investor to the Administration of Volgograd Region until December 31, 2025. The cost of creating 12 social objects was determined in the amount of 6 billion rubles. In order to create these objects the Administration of the Volgograd Region provides for an investor the property tax exemptions. According to agreements, the Administration of the Volgograd region plans to provide the investor tax exemptions by zeroing the property tax in 2018-2027.

The scheme of interaction between the investor and the government, as well as goals and means, is presented in the figure 1.

Figure 1: The scheme of interaction between the investor and the government



Source: compiled by the authors

6. Risks and threats to the regional economy

The first stage of the construction was planned to be completed before the end of 2017, the second stage - until 2022. However, the launch date is shifted due to changes in macroeconomic indicators that do not allow the company's investment strategy to be clearly defined. MCC EuroChem, JSC plans to postpone the launch of production at the end of 2018.

The parameters that firmly fixed in the investment agreements are considered by MCC EuroChem, JSC as an additional risk. There is a possibility of loss of state support in case of failure to fulfill the obligations of the investor within the established period. The reason for this concern is the unstable macroeconomic situation and the global economic trends. Only if the enterprise is profitable, then all the principles of the development of society are fulfilled - economic, social, ecological (Polyakov & Yaschenko, 2013).

EuroChem-VolgaKaliy undertakes voluntary obligations to create favorable living conditions for the population of the Kotelnikovsky area. However, after the launch the enterprise will become a town-forming enterprise, and Kotelnikovo will become the monocity. This creates additional risks for the socio-economic development of the area with possible unstable facility's functioning.

Globalization limits the development of economy socialization due to polarization of society and concentration of capital, and energize socialization by equalizing incomes and standards of living of population in all countries and territories, due to complexity and enhancement (Sardak et al., 2017).

7. Conclusion

The small cities of modern Russia are in a situation of acute shortage of budgetary funds. Therefore, they have a significant number of problems of socio-economic development. The independent solving of these problems is difficult and there is a need to attract external financial

sources. Global processes of modern economy affect provincial territories involving them to active production activities. At the same time certain risks and threats to the regional economy arise and must be controlled by the government. These risks are: environmental, breach of obligations, social instability, the formation of monocities.

Despite this, globalization brings economic growth, new technologies, large-scale production to the Russian province, improving the quality of life of the population through investments in the social sphere.

We should acknowledge that globalization is not an irreversible process (Shepelev, 2017). Thus, the impact of globalization on small cities should be under the control of the local and federal government, which will support positive effects and prevent negative consequences.

All spheres of society's life, public institutions and business entities are involved in the process of globalization.

References

- [1] Anonymous (2017). At a glance. EuroChem. [Online]. Available: <http://www.eurochemgroup.com/en/at-a-glance-2/>.
- [2] Azyrkina, A. S. (2015). The fundamental problem of the Russian economy: the human capital as a panacea of the raw material disease of the country. *Journal of Institutional Studies*, vol. 7, no. 1.
- [3] Baulina, O., Klyushin, V. and Shchukin, A. (2016). Methodological approaches to clusters identification in the conditions of economy globalization. *Proceedings of 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 127-134.
- [4] Bohac, R. and Lipkova, L. (2016). Cataracts of globalization and the economic diplomacy of small states. *Economic Annals-XXI*, vol. 159, no. 5-6, pp. 16-19.
- [5] Dmitrieva, D., Ilinova, A. and Kraslawski, A. (2017). Strategic management of the potash industry in Russia. *Resources Policy*, vol. 52, pp. 81-89.
- [6] Kirillovskaya, A. A., Pashkus, V. Y. and Volkova, A. V. (2016). The newest economic policy, government regulation of the economy and economic security. *Proceedings of 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*. Rajecke Teplice, Slovak Republic, pp. 870-875.
- [7] Levin, S. N., Kagan, E. S. and Sablin, K. S. (2015). Regions of "resource type" in the modern Russian economy. *Journal of Institutional Studies*, vol. 7, no. 3.
- [8] Lomovceva, O. A., Tkhorikov, B. A., Gerasimenko, O. A. and Polyakov, V. G. (2016). The strategic nature of public-private project in solving the problems of small and medium-sized cities in Russia. *The Social Sciences*, vol. 11, pp. 3136-3141.
- [9] Novackova, D., Saxunova, D. and Strazovska, L. (2016). Global investment projects implemented in public interest in Slovakia. *Proceedings of 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 1521-1529.
- [10] Novikova, G., Chub, A. and Gushina, J. (2016). The effective management of the construction complex of the region in the globalization conditions. *Proceedings of 16th*

International Scientific Conference Globalization and Its Socio-Economic Consequences, Rajecke Teplice, Slovak Republic, pp. 1547-1554.

- [11] Polyakov, V. G. (2010). Estimation of the substrategy of the chemical-pharmaceutical structural shift in the economy of the Volgograd region. *National Interests: Priorities and Security*, vol. 13, pp. 44-47.
- [12] Polyakov, V. G. and Yaschenko, S. O. (2013). Economic justice in the urban environment. *Sociology of City*, vol. 3, pp. 68-74.
- [13] Polyakov, V. G. and Zubkova, I. Y. (2009). The construction of large industrial complexes on the principles of public-private partnership as a factor of the region's competitiveness. *Terra Economicus*, vol. 7, no. 3, pp. 179-182.
- [14] Romanov, E. V. (2017). What capitalism does Russia need? methodological guidelines of the “new industrialization”. *Economic and Social Changes: Facts, Trends, Forecast*, vol. 10, no. 2, pp. 90-108.
- [15] Sardak, S., Bilska, O. and Simakhova, A. (2017). Potential of economy socialisation in the context of globalization. *Economic Annals-XXI*, vol. 164, no. 3-4, pp. 4-8.
- [16] Shepelev, M. (2017). Regional integries in the crisis of globalism. *Economic Annals-XXI*, vol. 164, no. 3-4, pp. 24-27.
- [17] Wakeel, A., Hafeez-ur-Rehman and Magen, H. (2017). Potash use for sustainable crop production in Pakistan: A review. *International Journal of Agriculture and Biology*, vol. 19, no. 3, pp. 381-390.

THE EFFECTS OF GLOBALISATION ON SLOVAK LABOUR MARKET - OPPORTUNITIES AND PROBLEMS

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Abstract. The global economic crisis was also hit hard by the Slovak economy and the issue of unemployment in our society resonates very intensively. Different instruments are being sought to eliminate the negative impact of the crisis on the labour market, with the emphasis on alleviating the disadvantageous position of disadvantaged job seekers, facilitating and speeding up the transition of unemployed people to labour market. The Slovak labour market is struggling with serious structural problems that are a brake on the economic development of the country. Unemployment among young people, people over 50 years, large regional disparities and a huge share of long-term unemployment mean the untapped potential of the economy. At the same time, it is a social indicator associated with unfavourable social phenomena, unemployment means a loss of social status, people without work are at risk of poverty and social exclusion. It should be noted, that globalization also brings many opportunities, is a positive driving force for change. It opens up access to new technologies, cheaper goods and services, creates flexible jobs, new business areas and innovative forms of service. At present, the social economy and its social entrepreneurship tool are at the forefront of Slovak conditions. It is a hybrid business model that tackles the unemployment of disadvantaged job seekers, brings stable jobs and innovative forms of service delivery. This paper focuses on the analysis of the current situation on labour market in Slovakia in relation to the effects of globalization and with emphasis on its negative consequences and opportunities.

Keywords: globalisation, labour market, unemployment, social economy

JEL Classification: F66, J08, J64, L31

1. Introduction

Súčasný proces globalizácie prináša nové výzvy a zároveň je aj motorom zásadných ekonomických, právnych a sociálnych zmien na celom svete. Globalizačný proces má vplyv nielen na hospodárske vzťahy v štáte, ale aj na politiku zamestnanosti a sociálnu politiku. Malé a stredné podniky nie sú schopné (MSP) súťažiť s veľkými spoločnosťami, a preto pomerne často sú nútené ukončiť svoje pôsobenie. V dôsledku likvidácie spoločností rastie počet nezamestnaných (Bajzikova, 2016). Narastajúce sociálne problémy značne zaťažujú verejné financie jednotlivých ekonomík, ale zároveň vytvárajú priestor pre nové modely podnikania, ktoré častokrát prinášajú inovatívne riešenia na podporu sociálnej inklúzie znevýhodnených a zraniteľných osôb. Do popredia sa dostáva sociálne a solidárne hospodárstvo, ktoré uprednostňuje sociálny blahobyť, spoluprácu a solidaritu pred ekonomickým ziskom. (Sipikalova, 2015).

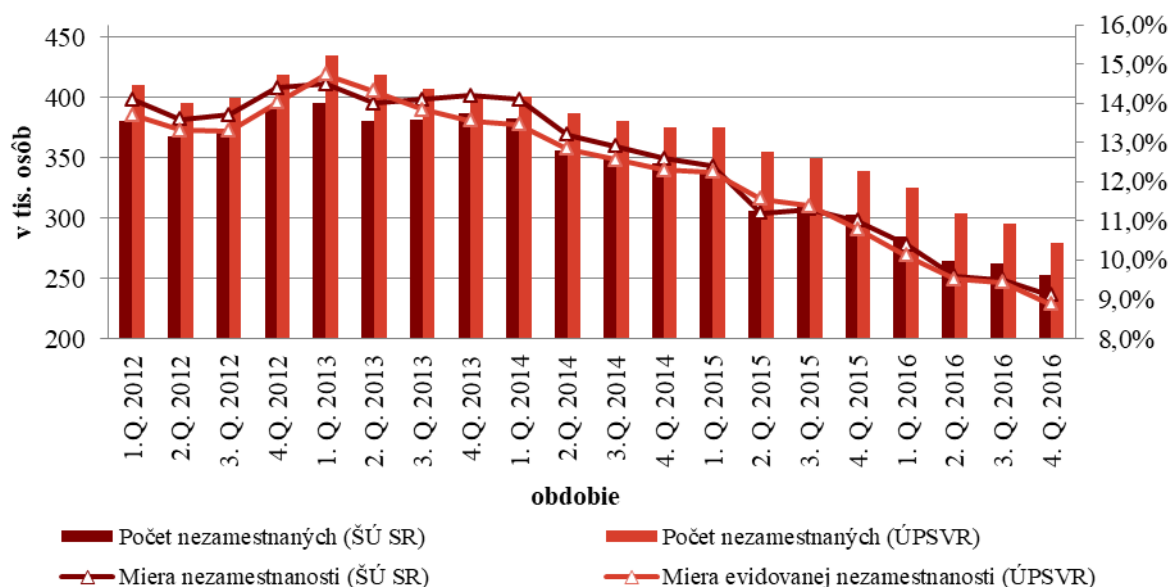
2. Slovenský trh práce – aktuálna situácia

Práca je najlepšou zárukou ochrany pred sociálnym vylúčením a jej strata znamená zároveň aj stratu sociálneho statusu. Úlohou aktívnej politiky trhu práce je poskytnúť pomocnú ruku nezamestnaným a prispieť k ich čo najrýchlejšiemu návratu na trh práce, aby nemuseli trpieť závažným materiálnym nedostatkom.

Vo vývoji nezamestnanosti v SR môžeme sledovať rastúcu tendenciu až do roku 2001 (19,2 %), odkedy tento ukazovateľ postupne začal klesať (v roku 2004 zaznamenal mierny nárast). V roku 2008 bolo o 34,45-tis. nezamestnaných osôb menej ako v roku 2007, čo znamená medziročný pokles počtu nezamestnaných o 11,8 %. Priemerná úroveň miery nezamestnanosti bola od roku 1999 najnižšia, keď dosiahla hodnotu 9,6 %.

Pokles počtu pracovných príležitostí v dôsledku hospodárskej recesie sa prejavil na vývoji nezamestnanosti v roku 2009 (12,1 %) a tento trend naďalej trval aj v roku 2010 (14,4 %). V roku 2011 nasledovalo mierne zlepšenie stavu, ale miera evidovanej nezamestnanosti naďalej rástla a hodnoty oboch metodík oscilovali v roku 2013 okolo 14 %. V roku 2014 klesala o 1- až 1,3- percentuálneho bodu a dosiahla 13, resp. 12,8 %, čo predstavuje stále vysoký počet nezamestnaných osôb. V roku 2015 bolo v SR priemerne evidovaných 354 582 uchádzačov o zamestnanie, je to pokles oproti roku 2014 o 31 079 osôb. Miera evidovanej nezamestnanosti počas roka postupne klesala a v priemere za rok 2015 dosiahla úroveň 11,50 %. Na základe metodiky ŠÚ SR v roku 2016 miera nezamestnanosti sa znížila na 9,7 % až, ale stále 266 tisíc bolo bez práce (Pongracz & Polackova, 2017).

Figure 1: Vývoj nezamestnanosti podľa evidencie ŠÚ SR a ÚPSVR



Source: Správa o sociálnej situácii obyvateľstva. MPSVaR, 2017.

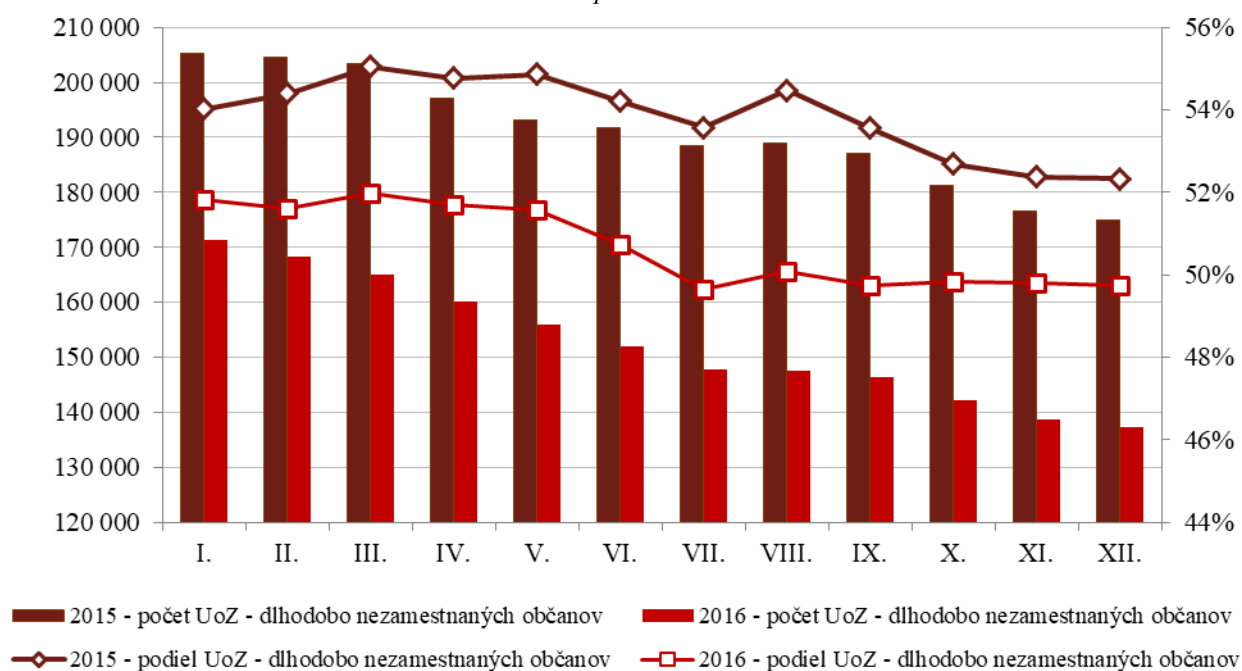
Trh práce je citlivým a zraniteľným miestom slovenskej ekonomiky, i nedávne roky poslednej krízy sa na Slovensku od roku 2009 prejavovali výraznejšie v porovnaní s väčšinou ekonomík EÚ, čo malo za následok prehĺbovanie štrukturálnych problémov na trhu práce a nárast miery nezamestnanosti. Nezamestnanosť v podmienkach SR má výrazný ekonomický, sociálny a politický rozmer, ale i mnohé sociálno-ekonomické, regionálne, generačné, etnické a iné špecifiká. Nepriaznivé efekty krízy ovplyvnili predovšetkým kategóriu znevýhodnených osôb, ako i niektoré regióny Slovenska, pre ktoré je typická nižšia ekonomická aktivita a nižšie

mzdová úroveň. Nezamestnanosť znevýhodnených skupín je na Slovensku veľkým problémom aj v európskom porovnaní (Rievajova & Klimko, 2016).

Globálna hospodárska kríza značne ovplyvnila vývoj ukazovateľov týkajúcich sa trhu práce, avšak štrukturálne problémy pretrvávajú už dlhodobo. Zaznamenávame vysoký podiel dlhodobej nezamestnanosti a uchádzačov o zamestnanie s nízkym vzdelaním, ako i mladých ľudí, navyše aj regionálne disparity v nezamestnanosti sú veľmi významné.

Najvyššiu mieru nezamestnanosti v roku 2016 vykazoval Banskobystrický, Košický a Prešovský samosprávny kraj (14,47 %). Naopak, najpriaznivejšia situácia v nezamestnanosti bola v Bratislavskom samosprávnom kraji (4,90 %). Pri analýze regionálnych trhov práce podľa okresov môžeme konštatovať, že najvyššia nezamestnanosť je v okresoch Rimavská Sobota, Revúca, Kežmarok a Rožňava, Poltár, na čele s okresom Rimavská Sobota s takmer 25 %. Za rizikovú skupinu uchádzačov o zamestnanie považujeme aj absolventov škôl a osoby staršie ako 50 rokov. V roku 2016 vo vekovej kategórii nad 50 rokov bolo v evidencii 74-tisíc osôb. Priemerne mesačne sme evidovali 16 952 nezamestnaných absolventov škôl, čo predstavuje 5,63-percentný podiel na celkovom počte uchádzačov o zamestnanie.

Figure 2: Vývoj počtov uchádzačov o zamestnanie (UoZ) dlhodobo nezamestnaných občanov a ich podiel na celkovom počte UoZ



Source: Správa o sociálnej situácii obyvateľstva. MPSvaR, 2017.

Skutočným problémom slovenského trhu práce je však pretrvávajúci vysoký podiel dlhodobej nezamestnanosti a tzv. tvrdého jadra. Viac ako 50 % všetkých nezamestnaných je bez práce najmenej 12 mesiacov. Situáciu komplikuje skutočnosť, že ide najmä o viacnásobne znevýhodnených uchádzačov o zamestnanie. Sú to častokrát osoby s nízkym vzdelaním alebo bez vzdelania, ktoré už stratili pracovné návyky alebo ešte nikdy nepracovali. Alarmujúcim problémom sa ukazujú byť mladí ľudia, ktorí sa nevzdelávajú ani nie sú ani ekonomicky aktívni, patriaci do kategórie tzv. NEET.

3. Sociálne podnikanie pracovnej integrácie (WISE)

Keďže Slovensko trpí vysoká nezamestnanosť, je dôležité podporovať tvorbu nových pracovných miest. S rastom zamestnanosti sa predpokladá aj zvyšovanie príjmov do štátneho rozpočtu (Vavrova, 2015). Tým sa zároveň môžu rozširovať zdroje pre zavedenie inovatívnych nástrojov štátnej politiky zamestnanosti. Ako reakcia na nové sociálne problémy sa hľadajú účinné opatrenia, ktoré prinášajú sociálne zmeny a zlepšenie kvality života jednotlivcov.

Sociálna inovácia má za následok sociálne zmeny a rozvíja potenciál na vytvorenie nových zdrojov udržateľného rastu a pracovných miest. Možno ju považovať za kľúčový faktor regionálneho rozvoja. Je obzvlášť dôležitá pri opätovnom začlenení nezamestnaných na trhu práce (Dudova & Polonyova, 2017).

Sociálna ekonomika vytvára novú oblasť pre podnikateľské aktivity, ktorá zahŕňa sociálne inovácie a zároveň rieši sociálne problémy spoločnosti. Postupne sa rodia „hybridné podnikateľské subjekty“, ktoré uprednostňujú sociálny cieľ pred dosahovaním zisku.

Sociálne podniky, ktoré kombinujú organizačné formy ziskovo orientovaného podnikania a dobročinnosti, sa javia ako ideálny typ hybridnej organizácie (Battilana & Lee, 2014). Okrem toho sociálne podnikanie predstavuje činnosť, ktorá spája podnikateľské aktivity, sociálne inovácie a neziskové riadenie (Dacin, M. T. et al., 2011).

Podľa spôsobu naplňovania sociálneho cieľa (ich primárnej úlohy) sociálne podniky môžeme vo všeobecnosti rozdeliť do dvoch skupín:

- sociálne podniky poskytujúce služby alebo tovary pre sociálne znevýhodnené, zraniteľné osoby, marginalizované skupiny alebo
- sociálne podniky zamestnávajúce osoby, ktoré pred prijatím do zamestnania boli znevýhodnenými uchádzačmi na trhu práce.

V Európe sa koncepcia sociálneho podnikania prvýkrát objavila v roku 1990. Začala sa rozvíjať najmä v priestore tretieho sektora a bola úzko spojená s družstevným hnutím. V roku 1991 v Taliansku bol prijatý zákon vytvárajúci osobitnú právnu formu pre "sociálne družstvá", čo naštartovalo rozmach tohto sektora (Defourny & Nyssens, 2012). Koncept sociálneho podnikania sa rozvíja v posledných desaťročiach ako forma sociálnej inovácie zameranej na zvýšenie blahobytu jednotlivcov a komunít prostredníctvom zamestnanosti, integrácie a účasti. Osobitný záujem o hospodársku a sociálnu úlohu týchto podnikov je prítomný v krajinách v procese transformácie ako potenciálny nástroj pre reformu sociálnej politiky a systému sociálneho zabezpečenia (Dzunic et al., 2017).

Na Slovensku sociálny podnik, konkrétne typu pracovnej integrácie - WISE (Work Integration Social Enterprises), bol prvýkrát zakotvený do legislatívy novelou zákona č. 5/2004 Z. z. o službách zamestnanosti v roku 2008. Bol to významný moment ako predpoklad pre rozvoj tohto sektora, avšak dodnes absentuje komplexné podporné a legislatívne prostredie, čo sťažuje jeho napredovanie.

V súčasnosti v zmysle zákona o službách zamestnanosti za subjekt sociálnej ekonomiky sa považuje právnická alebo fyzická osoba, ktorá:

- si za svoj prvotný sociálny cieľ kladie dosiahnuť merateľné pozitívne sociálne vplyvy, poskytuje tovar alebo služby zraniteľným, marginalizovaným, znevýhodneným, vylúčeným osobám alebo používa metódu produkcie tovaru, služieb, ktorá predstavuje jej prvotný sociálny cieľ,

- použije na dosiahnutie svojho prvotného sociálneho cieľa každoročne najmenej 50 % z finančných prostriedkov získaných z príjmu z predmetu činnosti, ktoré zostanú po úhrade všetkých výdavkov na predmet činnosti za príslušné zdaňovacie obdobie podľa daňového priznania,
- je spravovaná zodpovedne a transparentne (zákon č. 5/2004 o službách zamestnanosti v znení neskorších predpisov, 2004).

Za subjekt sociálnej ekonomiky, za podmienky splnenia vymenovaných podmienok, môžeme považovať sociálny podnik pracovnej integrácie. Pre sociálny podnik pracovnej integrácie sú v zákone špecifikované bližšie kritériá. Ide o právnickú alebo fyzickú osobu, ktorá:

- najmenej vo výške 30% z celkového počtu svojich zamestnancov zamestnáva takých občanov, ktorí pred prijatím do pracovného pomeru boli znevýhodnenými uchádzačmi o zamestnanie,
- pomáha týmto zamestnancom nájsť zamestnanie na otvorenom trhu práce,
- najmenej 30% príjmu, po odpočítaní všetkých výdavkov na predmet činnosti, použije na vytvorenie nových pracovných miest alebo na zlepšenie pracovných podmienok,
- je zapísaná v registri sociálnych podnikov.

Ústredie práce, sociálnych vecí a rodiny SR priznáva štatút sociálneho podniku, vedie a spravuje ich register. Sociálny podnik je povinný raz ročne prekladať správu o výsledkoch svojej činnosti. Zákon vymedzuje subjekt sociálnej ekonomiky ako aj sociálny podnik pracovnej integrácie, avšak čerpanie príspevkov aktívnej politiky trhu práce nie je ani v jednom prípade viazané na pridelenie štatútu. Z tohto dôvodu zo strany podnikateľských subjektov, ktoré síce vykazujú znaky sociálneho podnikania, nie je záujem žiadať o štatút. Tieto nedostatky, ktoré brzdia rozvoj sektora sociálnej ekonomiky, by mal napraviť pripravovaný samostatný zákon, ktorý vymedzí subjekty, kritériá, finančné a nefinančné podpory pre túto oblasť.

4. Conclusion

V procese podporovania sociálneho začleňovania, najmä prostredníctvom tvorby pracovných miest, zastáva významnú úlohu aj sociálna ekonomika. Do popredia sa dostávajú sociálne inovácie, ktorá sa rodia ako reakcia na neuspokojené potreby jednotlivcov alebo miestnej komunity. Formujú sa nové stratégie sociálnej inklúzie, ktoré sa orientujú na využitie a mobilizáciu lokálnych zdrojov (Lubelcova, 2012). Sociálne podniky získali široké uznanie ako nástroje na riešenie sociálnych a environmentálnych problémov. Vzhľadom na skutočnosť, že sociálne podniky integrujú sociálne blaho a obchodné postupy, čelia výzvam často protichodných cieľov (Wry & York, 2017). Napriek tomu tento „hybridný model podnikania“ v západných krajinách Európy je schopný obstáť v konkurenčnom prostredí a potvrdilo sa jeho opodstatnenie v riešení spoločenských výziev. Aj v slovenskom hospodárstve existujú oblasti – predovšetkým na regionálnej úrovni – kde by aplikácia sociálnej ekonomiky v praxi bola prínosom a mohla pomôcť s riešením niektorých sociálnych problémov. Takýto priestor vidíme napríklad v tradičnom odvetví poľnohospodárstva (Polackova, 2015).

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References

- [1] Bajzikova, L. (2016). Employment support in Slovakia. *Proceedings of 16th International scientific conference Globalization and its socio-economic consequences*, Rajecke Teplice, Slovak Republic, pp. 74-80.
- [2] Battilana, J. and Lee, M. (2014). Advancing research on hybrid organizing - Insights from the study of social enterprises. *Academy of Management Annals*, vol. 8, no. 1, pp. 397-441.
- [3] Dacin, M. T. et al. (2011). Social entrepreneurship: A critique and future directions. *Organization Science*, vol. 22, no. 5, pp. 1203-1213.
- [4] Defourny, J. and Nyssens, M. (2012). Conceptions of social enterprise in Europe: A comparative perspective with the United States. *Social Enterprises*, pp. 71-90.
- [5] Dudova, I. and Polonyova, S. (2017). A way of developing social innovation in regions. *Proceedings of 21th International conference Current Trends in Public Sector Research*, Slapanice, Czech Republic, pp. 260-267.
- [6] Dzunic, M., Stankovic, J. and Jankovic-Milic, V. (2017). Work integration social enterprises in transition countries - The case of Serbia. *International Review of Entrepreneurship*, vol. 15, no. 2, pp. 245-268.
- [7] Lubelcova, G. (2012). Social economy: concepts, opportunities, risks. *Sociológia*, vol. 44, no. 1, pp. 83-108.
- [8] Polackova, H. (2015). Area for social economy in agriculture. *Proceedings of 15th International scientific conference Globalization and its socio-economic consequences*, Rajecke Teplice, Slovak Republic, pp. 581-590.
- [9] Pongracz, E. et al. (2015). *Sociálna ekonomika - Social economy*, 2st ed. Bratislava, Slovak Republic: Ekonóm.
- [10] Pongracz, E. and Polackova, H. (August 2017). Labor Market Inclusion Through Social Economy in Slovakia, Unemployment - Perspectives and Solutions. [Online]. Available: <https://www.intechopen.com/books/unemployment-perspectives-and-solutions/labor-market-inclusion-through-social-economy-in-slovakia>.
- [11] Rievajova, E. and Klimko, R. (2016). The Labour market in the Slovak Republic-structural problems. *Proceedings of 16th International scientific conference. Economic and social development - the legal challenges of modern world*, Split, Croatia, pp. 498-507.
- [12] Šipikalova, S. (2015). Význam sociálneho a solidárneho hospodárstva v ekonomickom systéme. *Nové výzvy pre sociálnu politiku a globálny trh práce 2015 [elektronický zdroj] medzinárodná vedecká konferencia*, Bratislava, Slovak Republic. pp. 506-511.

- [13] Vavrova, K. (2015). Tax incentives of business entities in selected countries of the EU in the context of globalization. *International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic. pp. 855-863.
- [14] Wry, T. and York, J. G. (2017). An identity-based approach to social enterprise. *Academy of Management Review*, vol. 42, no. 3, pp. 437-460.
- [15] Zákon č. 5/2004 Z. z. o službách zamestnanosti vznení neskorších predpisov.

MANAGEMENT AND ITS TRENDS IN CONDITION OF GLOBALISATION

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Abstract. The contribution's aims are pointing to the trends in management development. Under the conditions of globalization that operates in all areas of society, it is necessary to monitor and regulate the development of – particular - the factors by that globalization has the most significant impact and which consequently affect other objects and entities in their development. This may also include management and development of management styles, which are currently subject to the most globalizing impact. This creates an increasingly multi-cultural environment that connects the seemingly unrelated nationalities and their historical, cultural and social specificities. This creates an increasingly multi-cultural environment that connects the seemingly unrelated nationalities and their historical, cultural and social specificities. The job offers a cross-section of the development of style management until today, when human resources managers have to adapt to new conditions - the leadership of multicultural teams.

Keywords: management, globalization, style of managemen, leadership, multi cultural impacts

JEL Classification: M1, M5

1. Introduction

Globalizácia je pojem, ktorý sa stal absolútnou súčasťou života v súčasnosti. Skloňuje sa vo všetkých pádoch v akejkoľvek oblasti spoločenského života. Predstavuje šírenie tzv. masovej kultúry prostredníctvom procesov zabezpečujúcich rozvíjanie ekonomických vzťahov s cieľom narastajúceho prepojenia a vzájomnej závislosti národných ekonomík. (Stewart, 1996) Dôsledkom globalizačných procesov je nielen to, čo si obliekame, čo jeme, čo používame a preferujeme, ale aj kde pracujeme a za akých podmienok.

Príspevok si za cieľ kladie poukázať na vývojové trendy v podmienkach globalizácie tých, ktorí v tomto prostredí koordinujú prácu často už multikultúrnych tímov a sú nútení inovovať riadiace prístupy, aby boli nielen dobrými manažermi, ale aj efektívnymi lídrami. (Hatcher, 2006) Tvorí *subjekt* riadenia. Svojou prácou ovplyvňujú ľudské zdroje, ktoré predstavujú *objekt* riadenia. Obe skupiny sa v rámci produkčného procesu realizujú vo vzájomných spätnoväzobných vzťahoch, majúci horizontálny a vertikálny charakter. Rovnakým pravidlám inštitucionalizácie podliehajú obe skupiny ľudských zdrojov jednotlivo. Pri identifikovaní väzieb medzi jednotlivými úrovňami **riadiacich pracovníkov** možno uplatniť tradičný prístup zodpovedajúci pravidlám hierarchie. Potom je možné klasifikovať tri úrovne riadenia, ktoré rovnako dobre vyhovujú aj členeniu z hľadiska obsahovej náplne riadiacich pracovníkov na: **top manažment, middle manažment a low manažment**. Pri zúžení uhlu pohľadu na najvyššiu úroveň manažmentu a zamyslení sa nad otázkou, či je možné hierarchické

pravidlá členenia uplatňovať – opäť separátne – len pre túto skupinu manažérov sa ponúka odpoveď, že členenie je možné, pričom za klasifikačné kritérium možno považovať manažérske schopnosti. (Holmqvist & Spicer, 2013) Vznikajú tri základné archetypy top manažérov: **Podnikateľ** je typ manažéra, ktorý celé svoje snaženie orientuje do budúcnosti a nenecháva sa spútať súčasnosťou. Má schopnosť zavádzať niečo principiálne nové a prekonávať často na prvý pohľad neprekonateľné prekážky. **Manažér** je v maximálnej miere fixovaný na súčasnosť a riadi organizáciu a ľudí pomocou dôkladných a podrobných poznatkov o podnikateľskom prostredí, firmu rozvíja a formuje v tomto prostredí. **Vodca** sa vyznačuje jedinečnými schopnosťami vyrovnávať sa s nevyhnutnosťami reagovať na meniace sa prostredie, situácie a odhaľovať potenciál rastu tam, kde ostatní „hádzu flintu do žita“ a vnímajú len samé prekážky, neúspech a problémy. (Armstrong, 1994)

2. Trendy v rozvoji manažérskych štýlov

Pre existenciu rozvíjajúcej sa ekonomiky sú potrebné všetky typy top manažérov a história je dôkazom o tom, že každá doba ponúkala možnosť realizácie niektorej z nich. (Roebuck, 2010) Na začiatku 20. storočia to boli najmä podnikatelia, ktorí hrali prím, v neskoršom období 50. tých rokov 20. storočia nachádzali uplatnenie najmä organizačné typy manažérov a 70. roky vyžadovali najmä nenahraditeľné schopnosti vodcov. (Bartol & Wei, 2002) Novovznikajúce podniky a inštitúcie potrebujú *podnikateľov*, zabehnuté a rozvíjajúce sa zas *manažérov* a tie, ktoré musia zvládnuť nielen narastajúci konkurenčný tlak, ale aj turbulentnosť zmien podnikateľského prostredia na globálnom trhu zas *vodcov*. (Akram, 2014) Často sa však pri používaní manažérskej terminológie stretávame s nesprávnym vysvetľovaním si uvedených manažérskych pozícií a asi najčastejšou chybou býva stotožňovanie pojmov manažér a vodca. Je preto potrebné upozorniť na špecifické črty vodcovskej práce v kontexte vývoja tejto formy vrcholového riadenia. Vodcovia sú riadiaci pracovníci, ktorí majú schopnosť presvedčať iných, aby sa s nadšením snažili dosiahnuť stanovený cieľ, aktivizujú pracovné skupiny a motivujú a orientujú na realizáciu cieľa. Tieto svoje schopnosti však dokážu uplatňovať a efektívne využívať aj v náročných situáciách, kedy podnikateľské prostredie nevykazuje znaky štandardného vývoja, ale musí v záujme vlastnej existencie pružne a efektívne reagovať na zmeny, s pozitívnym, častejšie však s hroziacim negatívnym dopadom. (Kucharcikova et al., 2016) Otázkou, čo posúva manažéra do pozície vodcu sa zaoberalo už mnoho odborníkov, zaujímavým je napríklad výskum J. Frencha a B. Ravena, ktorí tento stav definovali ako **moc** – kontrolu, ktorú určitá osoba má a môže uplatňovať voči inej v závislosti od toho, v akej miere ju ovplyvňovaná osoba akceptuje. (Nica, 2016)

2.1 Prístup založený na rysoch lídra

Jednotlivé stupne uplatňovania moci spresňuje nasledovná tabuľka 1. (Armstrong, 1994) Tabuľka poukazuje na rozsah pôsobnosti vedenia, ale je potrebné doplniť uvedené alternatívy aj poznatkami o tom, ako líder k spomínanej moci – kontrole – dospel. Či je vrodenná, či naučená, alebo je možné získať ju iným spôsobom. Zodpovedať tieto otázky vyžadovalo realizovať veľké množstvo výskumov a overiť najrôznejšie spektrum názorov ich realizátorov. V súčasnosti môžeme identifikovať štyri základné prístupy k štúdiu vedenia: Prístup k štúdiu vedenia založený na rysoch sa vysporiadal s dilemou, či sa lídrom manažér rodí, alebo sa tieto schopnosti naučí. Jediným akceptovateľným názorom je ten, že lídrom sa človek rodí. Špecifické rysy, ktoré mu umožnia realizovať sa ako líder, sú získané a na začiatku bádania v 20. storočí sa k nim radila najmä inteligencia, fyzická veľkosť a sebadôvera. Vývoj

a praktická akceptácia však poukázali na určité nedostatky a ďalších 40 rokov sa hľadala optimálna kombinácia relevantných rysov.

Table 1: Stupnica uplatňovania moci

SPECIFIKÁCIA MOCI	MÔJ NADRIADENÝ MÔŽE....:
Donucovacia moc	prideliť mi nevyhovujúcu prácu či pracovné zaradenie spôsobiť, že moja práca bude pre mňa náročná
Odmeňovacia moc	zvýšiť plat/mzdu poskytnúť zamestnanecké výhody ovplyvniť povýšenie
Zákonná moc	vyvolať pocit povinnosti urobiť úlohu vyvolať pocit zodpovednosti za splnenie úlohy upozorňovať na povinnosti
Odborná moc	poskytnúť prospešné technické rady podeliť sa o získané výskumné skúsenosti a poznatky poskytnúť odbornú radu
Pridelená moc	Spôsobiť, aby som sa cítil vážený Spôsobiť, aby som mal pocit, že som sa osvedčil Spôsobiť, aby som mal pocit vážnosti

Source: Armstrong, 1994

Vznikol nasledovný rebríček predurčujúci manažéra do pozície lídra (tabuľka 2).

Table 2: Základné rysy a charakteristiky lídra

RYSY LÍDRA	CHARAKTERISTIKA
dynamickosť	ochota prevziať iniciatívu, energickosť pri snahe o dosiahnutie cieľa
motivácia	vyvinutá potreba viesť a ovplyvňovať iných
integrita	čestnosť a pravdovravnosť v jednaní s ostatnými
sebadôvera	rozhodnosť, asertivita a istota
inteligencia	verbálne a numerické schopnosti, schopnosť spracovávať a používať zložité informácie
znanosti	znanosť práce, organizácie, odvetvia...

Source: Armstrong, 1994

2.2 Prístup založený na osobnostných kvalitách a spôsobe správania sa

Tento prístup k skúmaniu je tvorený viacerými teóriami, v poradí, v akom sa postupne formovali.

Table 3: Komparatívna analýza teórií osobných rysov

TEÓRIA	CHARAKTERISTICKÉ POJMY	PÔVOD	VZNIK TEÓRIE
Teória kontinua	Orientácia na šéfa Orientácia na podriadeného	Skúsenosti Tannenbauma a Schmida	Popisom autorov
Michigenská teória	Orientácia na prácu Orientácia na pracovníka	Výskum na University of Michigan	Prostredníctvom prieskumu v teréne
Dvojrozmerná teória	Pozornosť/úcta Uvádzanie do chodu, štruktúra	Výskum na Ohio State University	Pomocou prieskumu v teréne
Mriežka vedenia.	Pozornosť ľuďom Pozornosť výrobe	Výskum Blakea a spol.	Popisom autora pomocou určitého výskumu

Source: own processing

Základ tvoria: Teória kontinua, Michigenská teória, Dvojrozmerná teória a Mriežka vedenia.

Teórie sa síce líšia terminológiu, podstata výstupov je ale veľmi príbuzná. Súhrn základných charakteristík prináša tabuľka 3. Determinujúcimi prvkami sú pre definovanie správania sa miera autority uplatňovanej manažérom a miera slobody pri rozhodovaní, uplatňovanej podriadenými. Teória je založená v prevažnej miere na osobných názoroch autorov, ktoré síce môžu byť rešpektované okolím, ale mali by byť podložené aj výsledkami výskumu pre aplikáciu v praxi.

2.3 Michiganský výskum

Problematicu vedenia rozpracovali tvorcovia tohto výskumu na základe spracovania veľkého množstva údajov získaných od tisícok zamestnancov, ktoré poskytli podklady pre štúdium vedúcich pracovníkov nielen v priemysle, ale aj v nemocniciach a štátnej správe. Po rozsiahlych analýzach rozdelili vedúcich pracovníkov na dve kategórie: *Vedúci orientovaní na prácu* veľmi podrobne určujú svojim podriadeným úlohy a dôsledne dozerajú na ich plnenie, motivujú a stanovujú výrobné normy. *Vedúci orientovaní na pracovníkov* sa orientujú na ľudské aspekty problémov podriadených a na vytváranie efektívnych pracovných skupín, majúcich za cieľ vysokú výkonnosť. (Merkus & Veenswijk, 2017)

2.4 Dvojrozmerná teória

Táto teória je charakteristická svojou orientáciou na vedúcich pracovníkov a podobne, ako Michiganský výskum, aj ten, ktorý realizovali v Ohio, bol veľmi rozsiahly. Výsledky poukázali na niektoré zaujímavé fakty, ktoré rozdelili ľudí pri vedení podľa ich správania sa na: *vedúcich, presadzujúcich pozornosť* či *úctu voči iným* a *vedúcich, presadzujúcich „uvádzanie do chodu a štruktúru“*. (Blaskova et al., 2015)

2.5 Teória manažérskej mriežky

Je to teória založená na osobných kvalitách a spôsobe správania sa, čo má praktické uplatnenie vo vytvorení mriežky vedenia, akéhosi rámca, slúžiaceho na rozpoznanie toho, aký štýl vedenia manažéri uplatňujú a čo majú robiť, aby sa dopracovali k ideálnemu stavu v riadení. Determinantmi dvojrozsmernej mriežky sú: orientácia na ľudí a orientácia na produkciu. Prienikom uvedených determinantov môže vzniknúť množstvo štýlov riadenia, ako napríklad nezáujem vedúceho, jeho koncentrácia na plnenie úloh s opomenutím morálky a rozvoja podriadených, až po štýl riadenia označovaný ako tím, v ktorom vedúci podporuje produkciu morálku koordináciou a prepojenosťou pracovných aktivít. (Montserrat & Federico Rodriguez, 2012)

2.6 Situačná teória vedenia

Všetky doterajšie výskumy a teórie sú dôkazom o variantnom zmýšľaní autorov pri štúdiu správania sa vedúcich pri vedení. Majú však jednu spoločnú charakteristiku, ktorá vyústila do formulovania situačnej teórie vedenia. A síce, že efektívne vedenie závisí na tom, ako správanie vedúceho zodpovedá konkrétnej rozhodovacej situácii. Celá aktivita sa v rámci rozpracovávania uvedenej teórie sústreďuje na rozpoznávanie kľúčových situačných faktorov a určovanie ich reaktívneho významu. Je to veľmi náročná úloha a podobne, ako pri teórii založenej na osobných kvalitách a spôsoboch správania sa vyvinulo viacero teórií, ktoré berú do úvahy určité situačné faktory. (Podhorska & Siekelova, 2016) Uvedme si štyri základné:

2.7 Kontingenčná teória

Teóriu charakterizujú nasledovné predpoklady, získané rozsiahlym výskumom. Efektívnosť vedúceho ovplyvňujú dve situačné dimenzie:

1. Vzťahy medzi vedúcim a členmi skupiny

Podstatou prvej dimenzie je vyjadrenie stupňa dôvery, ktorú získava vedúci v kolektíve svojich výkonných pracovníkov a rovnako aj lojalitu, ktorú zas oni prejavujú vedúcemu. Poukazuje aj na prítlačivosť vedúceho. **Štruktúra úloh** - Štruktúra predstavuje stavbu a postup pri plnení úloh a dimenzia vyjadruje stupeň, ktorý zodpovedá rutínnej práci podriadených či vopred danému postupu v porovnaní s prácou nerutinného charakteru. (Sroka & Cygler, 2014)

2. Právomoci funkčného postavenia

Funkčné postavenie predstavuje pridelenú vedúcu funkciu a dimenzia zahŕňa odmeny a tresty spojené príznačne s danou funkciou, ďalej formálnu autoritu vedúceho, odvíjajúcu sa od postavenia v hierarchii riadiacich funkcií a podporu, ktorú získava vedúci od svojich nadriadených a celej organizácie. Autorom teórie bol F. Fiedler, (Fiedler, 1995) ktorý pri koncepcii vychádzal z tzv. *priaznivosti* situácií. Definoval ju ako stupeň, v ktorom situácia umožňuje vedúcemu ovplyvňovať pracovnú skupinu. (Mathieu, 2016)

- interpersonálne vzťahy môžu byť buď dobré alebo zlé,
- štruktúra úloh môže byť úzka alebo široká,
- právomoci funkčného postavenia môžu byť veľké alebo malé,
- rôzne kombinácie týchto troch skutočností môžu byť priaznivé, stredné alebo nepriaznivé.
- Fiedler zároveň ponúkol niekoľko pragmatických postupov, umožňujúcich zlepšiť vzťahy, štruktúru úloh a právomoci funkčného postavenia:
 - Vzťahy medzi vedúcim a členmi skupiny možno zlepšiť reštrukturalizáciou skupiny podriadených tak, aby bola zladená vzhľadom na životné skúsenosti a kultúrne špecifiká, úroveň vzdelania a odborné znalosti či etnické charakteristiky. Tieto snahy môžu byť odborovo organizovaných skupinách však považované za snahu o oslabovanie odborov,
 - Štruktúra úloh sa môže meniť ľubovoľne. Štruktúrovanosť môže byť väčšieho či menšieho rozsahu v závislosti od toho, ako detailne bude práca popísaná. Determinantom je rôzny prístup pracovníkov k voľnejšiemu či presne zadefinovanému vykonávaniu úloh,
 - Právomoci funkčného postavenia sa tiež môžu meniť ľubovoľne, pretože vedúci môže získať vyššie zaradenie v organizácii alebo získať viac právomocí. (Gavlakova & Gregova, 2013)

2.8 Teória cesta – cieľ

V rámci tejto teórie sa presadzuje názor, že vedúci je kľúčovou osobou, ktorá prispieva k zlepšovaniu motivácie, spokojnosti a výkonnosti podriadených. Opäť vyvodila viacero štýlov vedenia: Direktívny je charakteristický tým, že vedúci nariaďuje a podriadení sa nepodieľajú na rozhodovaní. Pri podporujúcom štýle je vedúci považovaný za priateľského s pozitívnym

vzťahom k podriadeným. Participatívny štýl vyžaduje takého vedúceho, ktorý žiada a dostáva späť od podriadených nápady a názory, ktoré aplikuje pri riešení rozhodovacích situácií. Štýl orientovaný na dosiahnutie cieľa uprednostňuje vedúceho, ktorý je kreatívny v tvorbe podnetných cieľov pre svojich podriadených a prejavuje im dôveru v tom, že tieto ciele aj naplnia. Kľúčový problém súvisí s voľbou takého spôsobu usmerňovania podriadených vedúcim, aby došlo k naplneniu vytýčených cieľov. Vedúci, podobne ako kouč, teda monitoruje reálnu cestu k napĺňaniu cieľov a to nasledovnými spôsobmi: rozpoznávaním a stimulovaním potrieb podriadených, ktoré sa týkajú odmien, odmeňovaním za dosiahnuté ciele, podporou úsilia podriadených na ceste k dosahovaniu cieľov. (Weede, 2016)

2.9 Teória štýlov vedúceho – rozhodovací model

Predmetom záujmu teórie je nájdenie štýlu vedenia pomocou pri odstraňovaní bariér realizácie cieľov a rozširovaním príležitostí pre individuálne uspokojovanie osobných potrieb podriadených. (Seaberg et al., 2017)

2.10 Trojrozmerná teória efektívnosti vedúceho

Výsledky trojrozmernej teórie sú veľmi podobné s výskumom realizovaným v Ohio, pretože základné princípy opäť stavajú na zadaných dvoch typoch správania sa vedúcich: *Správanie orientované na úlohy* je príznačné mierou organizácie a určovania rolí podriadených vedúcim, ako aj mierou vysvetľovania postupu práce a pod. (Dengov & Tulyakova, 2015) *Správanie orientované na vzťahy* je určené mierou podporovania osobných vzťahov podriadených s vedúcim, akú im prisudzuje vedúci, ako aj mierou jeho pomoci a uľahčovania práce podriadených. Už z názvu teórie je zrejmé, že tieto dva typy nekorešpondujú s trojrozmerným pohľadom na problematiku, preto treba doplniť tretí rozmer, ktorým je efektívnosť. **Efektívnosť** vedúcich je závislá na zladení daného štýlu vedenia s konkrétnou situáciou. Platí totiž, že ak existuje integrita štýlu vedenia s požiadavkami danej situácie, práca vedúceho je efektívna. Podľa miery dosiahnutej integrity sa potom posudzuje aj miera dosiahnutej efektívnosti. (Ashkanasy et al., 2017)

2.11 Transformačné vedenie

Vedúci, ktorých štýl je charakteristický transformačným prístupom, sú prezentovaní často ako charizmatickejší a viac intelektuálne stimulujúci svojich podriadených, ako vedúci uplatňujúci transakčný prístup, pričom pojem charizma zaviedol už nemecký sociológ Max Weber. Vysvetľoval ho ako určitú adaptáciu teologického pojmu vlastníctvo božej priazne či milosti. Zdôrazňoval akýsi osobný magnetizmus v správaní sa, ktoré umožňuje lepšie stotožnenie sa s úlohou. Charizmatizmus vedúceho významnou mierou ovplyvňuje aj ostatných spolupracovníkov, ktorí sú spomínaným magnetizmom priťahovaní. (Dugelova & Strenitzerova, 2015)

3. Globalizácia a vývoj riadenia

V príspevku sme si priblížili historický prierez vývoja manažérskych rolí s dôrazom na formovanie lídrov. Možno konštatovať, že tento proces zdokonaľovania vedenia ľudí sa nikdy nekončí, pretože sa stále menia nielen interné, ale aj externé faktory vplyvu, ako aj samotné interpersonálne väzby. V súčasnosti je najmarkantnejším vplyvom, ktorý nemožno nespomenúť, globalizácia a jej rôznorodé dôsledky. *“Innovation is a key priority in creating competitive advantage in a global competitive environment.”* Managers, team leaders who involve

coaching techniques to managing process, can significantly help to bring innovation into team work. Thus organizations can benefit from the design and implementation of procedures to develop their coaching skills of managers and encourage them to use coaching as the main managerial skills". (Rousseau et al., 2013) Vzniká fenomén **multikulturálneho vedenia**. Je to fenomén, ktorý stavia do nových pozícií výkonných aj riadiacich pracovníkov a kladie na kvalitatívne nové požiadavky. Stretnúť sa s ním samozrejme možno aj v podmienkach slovenských podnikov, ktoré s narastajúcim počtom zahraničných investorov menia štruktúru ľudských zdrojov. Vytvárajú sa medzinárodné tímy, ktoré sú riadené pôvodnými manažermi. Tí vnášajú do podnikov vlastné štandardy firemnej kultúry, ktorú už majú zavedenú, osvedčenú aj v iných svojich pobočkách. Sú pomerne detailne vymedzené po formálnej stránke, ale často im chýba obsah. Preto často v praxi vzniká problém, že ľudia sa len tvária, že im rozumujú a predstierajú, že im je všetko jasné. Ide o veľkú komunikačnú nedostatočnosť na ktorú musí formujúce sa multikultúrne vedenie myslieť a snažiť sa ju eliminovať. (Ponisciakova & Gogolova, 2015) Jedným zo spôsobov, ako tento negatívny jav odstrániť je dokonalá príprava na medzinárodné partnerstvo ešte pred jeho vznikom. V tomto smere je dôležité spoznávanie a pochopenie rôznych štýlov vedenia. Napríklad pre manažerov zo severských krajín (Škandinávie, Holandska) je charakteristické nízke sebaapresadzovanie sa a nižšia prístupnosť voči iným členom kolektívu. Nemci, Američania sa viac orientujú na výkon, sú menej prístupní, menej empaticí. Kultúra východných krajín je menej sebaapresadzujúca sa a súčasne prístupnejšia. Južná kultúra (Španielsko, Taliansko, Francúzsko) je sebaapresadzujúca sa a rovnako pomerne prístupná. Najviac tolerancie k rozdielnostiam iných kultúr majú asi Briti a Holanďania. Podmienené je to, v kontexte historického vývoja zrejme tým, že ako kolónie vládli veľmi rozmanitým kultúram a v súčasnosti veľa občanov z bývalých kolónií dlhodobo žije v Británii a Holandsku. (eTrend, 2003) Ďalšou dôležitou vedomosťou je správny prístup domáceho manažera pri riadení multikultúrneho tímu. Ten si zabezpečí, ak nebude riadiť spontánne a čisto intuitívne, ale do praxe uvedie aj rôzne odporúčania a návody. (Donnelly et al., 1997)

4. Conclusion

Globalizácia sa stala neoddeliteľnou súčasťou života človeka v pracovnom aj súkromnom prostredí. V podnikateľskom prostredí platí, že všetci (manažéri aj výkonní pracovníci) sa podľa možnosti jej vplyvu musia prispôbovať. Ak však disponujú určitou výhodou v najrôznejšej podobe či forme, môžu byť aktívnymi globálnymi hráčmi, udávajúcimi trend. K devízam lídrov pre riadenie medzinárodných tímov rozhodne patrí schopnosť rozpoznávať výzvy, ktoré musia prijať, rovnako ako schopnosť uvedomiť si, že multikultúrny tím potrebuje lídra s multikultúrnou kompetenciou. Veľmi dôležité je vedomie toho, že budovanie dôvery medzi členmi multikultúrneho tímu má byť pre lídra kľúčovou úlohou a žiadne geografické a jazykové odlišnosti nesmú byť bariérou úspešnosti. Či však akceptujeme kontext globalizácie alebo sa nad úspešnosťou lídra zamýšľame len na národnej úrovni, platí rovnako, že líder nesmie podceňovať motiváciu a problémy v komunikácii.

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References

- [1] Akram, A. S. Al-K. (2014). The effects of human resource management Practices on employees. Motivation and Retention. Available at SSRN: <http://ssrn.com/abstract=2407263>.
- [2] Armstrong, M. (1994). *Personálny management*, GRADA, Praha.
- [3] Ashkanasy, N. M., Humphrey, R. H. and Quay, N. H. (2017). Integrating emotions and affect in theories of management. *Academy of Management Review*, vol. 42, no. 2, pp. 175-189.
- [4] Bartol, K. M. and Wei, L. (2002). Information technology and human resources management: Harnessing the power and potential of neccentricity. *Research Personnel and Human Resources Management*, vol. 21, pp. 215-242.
- [5] Blaskova, M., Bizik, M. and Jankal, R. (2015). Model of decision making in motivating employees and managers. *Engineering Economics*, vol. 26, pp.517-529.
- [6] Dengov, V. and Tulyakova, I. (2015). Credit risk analysis for the telecommunication companies of Russia: Fuzzy model. Comparison of the results. *2nd International Multidisciplinary Scientific Conference on Social Sciences and Arts (SGEM 2015). Political Sciences, Law, Finance, Economics And Tourism*, Albena, Bulgaria, pp. 123-130.
- [7] Donelly, J., Gibson, J. and Ivanchevich, J. (1997). *Management*, GRADA, Praha.
- [8] Dugelova, M. and Strenitzerova, M. (2015). The improvement of human resource controlling in service companies. *Proceedings of 7th International Scientific Conference on Finance and Performance*, Zlin, Czech Republic, pp. 258-273
- [9] Fiedler, F. E. (1995). The contingency model of leadership effectiveness: Its levels of analysis. *Elsevier*, vol.6, pp 147-167.
- [10] Gavlakova, P. and Gregova, E. (2013). CAPM and optimal portfolio. *7th International days of statistics and economics*, Prague, Czech Republic, pp. 428-437.
- [11] Hatcher, T. (2006). An examination of the potential of human resource development (HRD) to improve organizational ethics. *Human resource management ethics*, pp. 87-110.
- [10] Holmqvist, M. and Spicer, A., (2013). Managing human resources by exploiting and exploring people's potential. *Research in the Sociology of Organizations*, vol. 37, pp. 1-279.
- [12] Hill, R. M. (1997). The single-vendor single-buyer integrated production–inventory model with a generalized policy. *European Journal of Operational Research*, vol. 97, pp. 493-499.
- [13] Kucharcikova, A., Konusikova, L. and Tokarcikova, E (2016). Approaches to the quantification of the human capital efficiency in enterprises. *Communications: scientific letters of the University of Žilina*, vol. 18, pp. 49-54.
- [14] Mathieu, J. E. (2016). The problem with (in) management theory. *Journal of Organizational Behavior*, vol. 37, no. 8, pp. 1132-1141.

- [15] Merkus, S. and Veenswijk, M. (2017). Turning new public management theory into reality: Performative struggle during a large scale planning process. *Environment and Planning C-Politics and Space*, vol. 35, no. 7, pp. 1264-1284.
- [16] Montserrat, V. V. and Federico Rodriguez, R. C. (2012). Hacer para aprender y aprender haciendo, *Pedagógica: Revista do programa de Pós-graduação em Educação - PPGGE*, vol. 14, no. 29, pp. 535-564.
- [17] Nica, E. (2016). The effect of perceived organizational support on organizational commitment and employee performance. *Journal of Self-Governance and Management Economics*, vol. 4, no. 4, pp. 34–40.
- [18] Roebuck, Ch., (2010). Human resources. Wake up to your true potential. *The Health service journal*, vol. 120, no. 6225, pp. 25.
- [19] Rousseau, V., Aube, C. and Tremblay, S. (2013). Team coaching and innovation in work teams: An examination of the motivational and behavioral intervening mechanisms. *Leadership & Organization Development Journal*, vol. 34, no. 4, pp. 344 – 364.
- [20] Seaberg, D., Devine, L. and Zhaung, J. (2017). A review of game theory applications in natural disaster management research. *Natural Hazards*, vol. 89, no. 3, pp. 1461-1483.
- [21] Sroka, W. and Cygler, J. (2014). Pathologies in inter-organizational networks. *Procedia Economics and Finance*, vol. 12, pp. 626-635.
- [22] Stewart, F. (1996). Globalisation and education. *International Journal of Educational Development. Elsevier*, vol. 16, no. 4, pp. 327–333
- [23] eTrend (2003). Členov medzinárodných tímov treba na rozdiely pripraviť [Online]. Available: <https://www.etrend.sk/podnikanie/clenov-medzinarodnych-timov-treba-na-rozdiely-pripravit.html>.
- [24] Podhorska, I. and Siekelova, A. (2016). The impact of internally generated goodwill on the financial performance of companies – International comparison. *16th International Scientific Conference Globalization and Its Socio-economic Consequences*, Rajecke Teplice, Slovak Republic, pp. 1736-1743.
- [25] Ponisciakova, O. and Gogolova, M. (2015) Exploiting the potential and possibilities of conscious human resource management in the process of globalization, *Globalization and its socio-economic consequences 15th International scientific conference*, Rajecke Teplice, Slovak republic, pp. 597-603.
- [26] Weede, E. (2016). Geopolitics, institutions, and economics: On the rise and decline of civilizations. *Geopolitics, History, and International Relations*, vol. 8, no. 1, pp. 177–220.

POSSIBILITIES OF ADAPTING THE WORLD PRACTICES OF ELIMINATING ACCUMUATED DAMAGE IN RUSSIA

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Abstract. Globalization is a process of combining or converging economic, social and cultural norms, practices and principles of states possessing clear distinctive features of social and economic development. Acquisition and adaptation of the best world practices in solving severe problems encourage the processes of globalization; it affects the majority of developed and developing countries. Forming the accumulated (past) environmental damage is one of the problems which developed countries faced last century and worked out efficient tools to solve it. In Russia the consequences of forming the object of accumulated damage are connected with the depletion of resources in exploited fields and execution of negative environmental and social-economic processes on the areas with environmental deterioration, decrease in living standards of the population in surrounding communities, inability of involving these areas in secondary economic turnover. In Russia the solution of accumulated damage problem comes with insufficient regulatory support of legal succession of responsibility for the caused damage as most of the enterprises, being closed down today, were operating in the centralized economic system and they were state property. Thus, the authors have analyzed world practices in solving the accumulated damage problems, suggested the options of their adapting to Russian institutional legal framework. Also, they have made the suggestions on designing organizational-economic mechanism ensuring the state and private investment involvement in implementing programs and projects aimed at environmental remediation and further involvement of these areas in secondary economic turnover.

Key words: accumulated environmental damage, area remediation, world practices

JEL Classification: P48, Q01, R58, Q56

1. Introduction

The XX and the beginning of the XXI centuries are characterized by an incredible growth of industrial production and the volume of mineral resource extraction as a result of which there is an increasing amount of technogenic wastes. The technologies of the previous century did not allow to reduce the negative effects on the environment, therefore, it has become a precondition for forming and accumulating environmental damage.

From the point of eliminating the effects of accumulated damage Russia can be considered as a country in which this problem is the most alarming one. The transition from central-driven economy to the market-managed one, poorly supervised and, at some extent, spontaneous privatization, imperfection of legislation in the area of regulation, the absence of generally accepted techniques of accumulated damage assessment have led to the insufficient attention

and low capabilities of local and regional authorities to implement measures on its eliminating. Due to the development of almost all the types of raw materials extraction and accumulating household and industrial waste on the territory of Russia a great variety of objects of accumulated damage is worsening the whole situation. It requires implementing different approaches to solving the issues of accumulated damage depending on the exact conditions and reasons for emerging specific objects.

In addition, one of the features concerning accumulated damage in Russia is the need for a greater role of the state in eliminating these consequences as the majority of the objects were formed by the Soviet enterprises owned by the state and closed down during the transition period. As a result, using the mechanism of transferring the responsibility for accumulated damage from the former owner to a new one, as it happens in developed countries, is difficult in Russian conditions and requires the political (national) will to make appropriate decisions, main priorities of which are mostly social factors connected with increasing negative effects on the population and local ecosystems than economic ones.

To work out prospective directions of improving Russian implemented policy on eliminating the consequences it is necessary to study in detail the experience of developed countries in the sphere of regulating past (accumulated) environmental damage as they have different conditions of emergence and solutions of this problem.

2. Methods

While analyzing the main preconditions and tools of the environmental and economic policy on accumulated damage implemented in the developed countries of Europe and North America and also in Russia the authors used the methods of comparison and logical analysis, methods of table and graph data representation, system approach.

The basis of the conclusions and recommendations on possible directions of applying foreign experience in the area of regulating accumulated (past) environmental damage within Russian conditions is scientific articles of leading Russian and foreign scholars concerning this top, materials of World Bank studies including findings of World Bank survey on past environmental damage in Russia, legal documents regulating stated issues in the studied countries and in Russia, personal findings and experience of the authors.

3. Results and Discussion

3.1 Main approaches to defining the concept of accumulated environmental damage

In the legal documents of different countries there is the differentiation between terms ‘damage’ and ‘losses’. Term ‘damage’, as a rule, means casualty (material) damage whereas ‘losses’ stands for lost income or / and lost profits.

The European environmental regulation states that environmental damage means “a measurable adverse change in a natural resource or measurable impairment of a natural resource service which may occur directly or indirectly” (Directive 2004/35/EC). Furthermore, it introduces the principle of environmental responsibility which is realized if there is an ability to identify the connection between damage and considered activity.

The responsibility for the past environmental damage is defined as “residual costs incurred due to eliminating, reducing and/or bringing under control the damage to the environment, health

and property which is the result of past and continuous economic activity”(The interpretation of international experience concerning the responsibility for past environmental damage within the context of Russia, 2006).

The Russian legislation gives different definitions of this term. According to GOST- 54003-2010 past environmental damage is “consequences of human economic activity on the territories of enterprises and organizations which was done in the past and stipulated the present pollution of the territories, bringing damage to the environment and preventing from using it in commercial and economic purposes” (Environmental management).

However, after introducing the changes in the Federal Law of the Russian Federation № 7-FZ from January, 10, 2002 “About the protection of the environment” stated in Federal Law “About introducing changes in certain legal acts of the Russian Federation” in 2016 there were given simpler definitions identifying the considered concepts:

- “accumulated environmental damage”,
- “objects of accumulated environmental damage”.

During the research the authors of the article rely on the definition stated in the Russian laws. In addition, the important constituents of the past environmental damage within the research are:

- accumulating pollutants in ecosystems due to the past economic activity as a result of the emission of their volume into the environment which exceeded the capacity of ecosystems to recycle them;
- deferred negative effects of the objects of accumulated damage on health and living standards of the population, biodiversity of local ecosystems and the development of new economic activities in the affected areas in case of their preservation;
- the lack of direct legal successive mechanisms of responsibility for accumulated (past) damage under the conditions of Russia.

From the authors’ points of view one of the most important aspects of accumulated damage is its connection with sustainable environmental economic development of territories turning up in intergenerational character of accumulated damage. It joins the economic activity of previous generations with current costs which the new generations living on the territories affected by the objects of the accumulated damage have to incur.

3.2 Different approaches to studying the issue of eliminating the consequences of past (accumulated) environmental damage

The analysis of scientific literature showed that there are different approaches to studying the issue of past (accumulated) damage. The main directions of assessing accumulated damage in many countries of the world are the development of appropriate legal regulations providing the transference and distribution of responsibility for accumulated damage between different subjects including the state if it is necessary.

The experience of developed countries such as Germany and the USA shows that there is the need for distributing the responsibility while eliminating accumulated damage, identifying the mechanisms of legal regulations and funding sources. In 1980 the USA introduced Superfund law added by CERCLA – Comprehensive Environmental Response, Compensation, and Liability Act of 1980 which are similar to Directive 2004/35/EC. Nevertheless, Hendrik Schoukens (2016) notes in his article that recent developments in the area of legal regulations

of the European Union are mostly connected with preventing environmental damage, and restoration of the territories is becoming the last jurisprudence that can serve as an incentive for unsustainable development as it suggests any damage caused to the nature can be restored. Furthermore, scientists pay a great attention to the biodiversity of the region (Le Coent et al, 2017), relationship between pollution, economic development and health (Lu et al, 2017) and also cultural values of the restoration and elimination of past damage (Wehi & Lord, 2017).

Even in poorly developed countries such as Nigeria the legislation aimed at decreasing accumulated environmental damage was developed over the past decades. Scientists (Sam et al., 2016) dealing with this issue underline the need for the complex risk assessment based on the principles of sustainable development and cooperation between the interested parties while making decisions.

Since the main source of accumulated environmental damage is extraction industry such countries as the USA, Germany, Great Britain, Canada, Korea, China and Russia pay a great attention to this issue. Canadian scientists (Alexandrov et al., 2011), (Erechtoukova & Khaite, 2017), (Erechtoukova et al., 2016) are trying to design economic-mathematical models of the environment in order to assess its condition by IT technologies. Another research (Jangwon et al., 2016) identifies the need for assessing the danger of subsidence in the abandoned mines and designing the map through 3-D analysis as early used 2-D analysis does not provide the entire spectrum.

Chinese and Korean scholars (Zhu et al., 2016) study the subsidence and possibility of extracting coal under buildings, railways and water objects. They offer the forecast model helping to assess prospective damage from extraction industry.

Some of the scientists (Zhang et al., 2016) suggest waste recycling (repulping) to improve sustainable development of the economy under the conditions of resource deterioration. Also, it can positively influence the environmental constituent and decrease the volume of accumulated environmental damage.

In Russian science this approach is presented in works considering accumulated industrial waste such as mining dumps, terricones, tailing ponds as secondary technogenic resources. On the modern level of technological development they can be a valuable resource whose recycling will allow to reduce the volume of extracted raw materials and decrease environmental damage connected with its accumulation (Potravny et al., 2016), (Zhukova, 2012).

The procedures of eliminating accumulated damage are used in many countries and mostly connected with the natural processes of land restoration without big financial investments (Bradshaw, 1997). This method is of high priority as in most cases the enterprise or an entity damaged the environment is a bankrupt or cannot be identified.

Over the last decade Russian scholars study the issue of accumulated damage through the perspective of sustainable development where processes of forming the territories of accumulated damage are considered as indicators of “unsustainable” development (Tyglov et al., 2014)

Due to the great square of Russia regional mechanisms of eliminating accumulated damage are becoming of great significance and require additional justification and taking into account regional peculiarities while working out management decisions (Zhukova et al., 2017). A number of studies describe separate tools of encouraging events on eliminating accumulated damage and enhancing the interest of economic entities in their implementation. (Potravny et

al., 2017), which is particularly relevant for the Russian system of regulating rational environmental management.

3.3 The analysis of the EU and North American practices in maintaining the issue of past (accumulated) environmental damage. Responsibility for accumulated damage

The analysis of the literature on the topic of the research showed that the countries of Western Europe and North America began paying attention to the issue of regulating the responsibility for the past (accumulated) environmental damage in 1970-1980. About a decade later a special attention was given to the economic consequences of accumulated damage and their assessment. It has led to the transition to the modernization and increase in energy efficiency of existing production to prevent the formation of object of past damage, generally in the EU countries through introducing the best available technologies.

In Eastern Europe this process began later, in 90s of the past century, after destroying central-driven system of economy and due to the need for attracting investments from developed countries the unsolved issue of regulating accumulated damage was becoming a serious handicap. In Russia this process began even later and according to the experts' estimate it falls behind the world community for 10-20 years.

Nevertheless, in all studied countries the issues of eliminating the consequences of accumulated damage have not been solved and it can be explained by its long-term character. In the EU countries only in the middle of 2000 years appeared complex approaches to solving this issue within implemented environmental policy of the EU.

Table 1 presents the comparative characteristics of features of national environmental policies in the area of struggling against accumulated damage.

Table 1: Comparative characteristics of national systems of regulating past (accumulated) environmental damage

Features of comparison Country	Preconditions for developing state policy	Identifying the objects of pas damage and the order of works	Identifying the responsibility for past damage, role of state and public institutions	Economic mechanisms of solving the issue
Germany	Barriers for economic development and attracting investors in regions exposed to past damage, high environmental risks, negative image of the territory.	Made on the base of established limits (defining the values of indexes of environment quality to implement countermeasures, preventative measures and maximum allowable level of pollution	The main responsibility is on the private sector, the state participates only in case of the insolvency or inability to identify a duty-holder, and also in case of dangerous military waste buried before 1945	Joint financing of the projects on reconstructing restored territories, attracting investments from private sector; models of public-private partnership (10-20% - private sector, the rest – the state of funds of the EU)
The United Kingdom	Limitations for useful using of territories, high barriers of economic development	Implementing within the frame of national system of planning land-use management, using risky approach to justify decisions based on the reference standard	For polluted areas the authorities have to find a individual (damage-doer) who will incur expense on recultivation. If it's impossible to identify, the owner or landholder will be responsible.	Grants, credit support and guarantees, partnership projects with shared risks and profits; accelerated tax credit in the form of covering expenses on clearing up the polluted areas
Poland	During the privatization of state industrial enterprises	Implementing on the base of listing the areas with excessive level of	The landholder (the owner or renter) is obliged to implement	Lack of mitigating effect; taking into account the risk or other

	the department of public assets assessed the past environmental damage of privatized enterprises	soil pollution; both indicators of maximum levels of concentration and method of risk assessment are used (for objects polluted before 1980)	'remediation' of any area found on the territory of his object (except cases when pollution is dated back to the period before introducing the Law); while closing down the state company and its dividing into several small ones new owners carry the joint responsibility	opportunities to adapt criteria of remediation to the specific of a single area; more severe rules requiring extra expenses, less flexible rules in comparison with other ones developed in other countries of Central Europe.
The USA	Attracting public attention to the pollution caused by several old landfills which created the threat both to the environment and health of the mankind.	Extensive system of guidelines on regulating, designing the programs of restoring the polluted areas, funding, technologies and methodology on solving the issue; risky approach I used	Developed complex system of identifying, assessing and registering polluted areas based on the official rating system of danger levels which are listed as priorities meaning obligatory remediation works, a damage-doer takes responsibility	Direct costs on programs of Superfund Law; budgetary allocations, private funding (damage-doer pays for the works at the objects listed in priorities for remediation works.

Source: designed by the authors

On the whole, the analysis of international experience shows a great variety of approaches to justifying, assessing and legal succession of past (accumulated) environmental damage in different countries. The common feature is the orientation at such a fundamental principle of internalization of environmental negative externalities as "damage-doer pays". Nevertheless, it can be used only in the case if the damage-doer and his legal successor are easily identified. As a result, this approach has limitations for applying under Russian conditions according to the reasons mentioned above.

In addition, in world practice the existing owner is usually considered as one of the parties which can take the obligations on eliminating past damage. From the time of introducing the appropriate law the responsibility is established for new (future) owners and is transferred together with proprietary right. In such a case there is a principle "Buyer, be aware" meaning that not having complete information about the need for eliminating the objects of accumulated damage a new owner is not released from the responsibility.

Thus, different countries may solve the issues concerning transferring the responsibility to other parties differently, for example – former owners or co-owners. Furthermore, the state participates in the procedures of eliminating past damage, usually in case of existing ownerless objects.

4. Conclusion

As the held research showed in world practice there are two main approaches to identifying the objects of accumulated damage whose choice will lead to different possibilities of remediating the damaged territories: risky approach (risk management) designed on managing (gradual decrease) environmental economic risks connected with the presence of objects of accumulated environmental damage; approach based on identifying 'severe' norms of environmental quality ('zero risk') which require total restoration of the damage territory and

is considered by the majority of participants in economic activity as excessively severe and financially-difficult implemented.

Nowadays in Russia the second approach is implemented which limits the possibilities to apply international practices demonstrating the fact that severe standards of environmental quality do not take into account a number of factors and are not efficient on the whole.

Apart from legal framework, methodical grounds for identifying the territories of accumulated damage and the transition to the risky approach during their assessment the highest potential to improve works in the area of eliminating accumulated damage in Russia is the development of economic tools on endorsing the events and recognizing higher responsibility and the role of public sector by solving the issues. Particularly, it is necessary to develop progressive forms of private-public partnership projects in the area of accumulated damage, to increase the size of federal subsidies on holding the research and to implement projects on remediating territories.

References

- [1] Alexandrov, G. A. et al. (2011). Technical assessment and evaluation of environmental models and software. *Environmental Modelling and Software*, vol. 26, no. 3, pp. 328-336.
- [2] Bradshaw, A. (1997). Restoration of mined lands – using natural processes. *Ecological Engineering*, vol.8, no. 4, pp. 255-269.
- [3] Environmental management. Assessment of past accumulated damage in the areas of organisation's location. Available: URL: <http://files.stroyinf.ru/Data2/1/4293809/4293809544.htm>
- [4] Erechtkhoukova, M. G. and Khaite, P. A. (2017). The effect of data granularity on prediction of extreme hydrological events in highly urbanized watersheds: A supervised classification approach. *Environmental Modelling and Software*, vol. 96, pp. 232-238.
- [5] Erechtkhoukova, M. G., Khaite, P. A. and Saffarpour, S. (2016). Short-term predictions of hydrological events on an urbanized watershed using supervised classification. *Water Resources Management*, vol. 30, no. 12, pp. 4329-4343.
- [6] Jangwon, S., Yosoon, Ch. and Hyeong-Dong, P. (2016). GIS-based evaluation of mining-induced subsidence susceptibility considering 3D multiple mine drifts and estimated mined panels. *Environmental Earth Sciences*.
- [7] Le Coent, P., Preget, R. and Thoyer, S. (2017). Compensating environmental losses versus creating environmental gains: Implications for biodiversity offsets. *Ecological Economics*, vol. 142, pp. 120-129.
- [8] Lu, Z. et al. (2017). The dynamic relationship between environmental pollution, economic development and public health: evidence from China. *Journal of Cleaner Production*, vol. 166, pp. 134-147.
- [9] Potravny, I. M. and Gassiy, V. V. (2017). Project management methodology for the accumulated environmental damage liquidation. *Russian Foundation for Basic Research Journal. Humanities and social Sciences*, vol. 2, no. 87. pp. 68-76.
- [10] Potravny, I. M., Gengut, I. B and Davakhuu, N. (2016). Mechanism of creating and using liquidation fund while closing down extraction enterprises. *Subsoil use. XXI century*, vol. 1, pp. 118-126

- [11] Sam, K., Coulon, F. and Prpich, G. (2016). Working towards an integrated land contamination management framework for Nigeria. *Science of the Total Environment*, vol. 571, pp. 916-925.
- [12] Schoukens, H. (2017). Habitat restoration measures as facilitators for economic development within the context of the EU habitats directive: Balancing no net loss with the preventive approach? *Environmental Law*, vol. 29, no. 1, pp. 47-73.
- [13] The interpretation of international experience concerning the responsibility for past environmental damage within the context of Russia. The document under discussion at the conference devoted to the issues of responsibility for past (accumulated) environmental damage. – April, 4, 2006., Moscow. Available: URL: <http://consulting.ineca.ru/?dr=projects/pel&pg=material>
- [14] Tyglov, S. G., Ponomareva, M. A. and Zhukova, I. A. (2014). Concept of sustainable development, intergeneration externalities and accumulated environmental damage: interconnection of concepts and phenomenon. *Bulletin of Rostov State University of Economics (RINH)*, vol. 4, no. 48, pp. 63-69.
- [15] Wehi, P. M. and Lord, J. M. (2017). Importance of including cultural practices in ecological restoration. *Conservation biology*, vol. 31, no. 5, pp.1109-1118.
- [16] Zhukova, I. A. (2012). Raising the efficiency of using technogenic resources as the basis of remediationof natural ecosystems in extraction regions. *Bulletin of Rostov State University of Economics (RINH)*, vol. 4, pp. 9-14.
- [17] Zhukova, I. A., Shekhovtsov, R. V., Ponomareva, M. A. and Tyaglov, S. G. (2017). The mechanism to eliminate the accumulated damage to the system of socio-economic development of the region. *European Research Studies Journal*, vol. 20, no. 3B, pp. 67-75.
- [18] Zhang, Y. J. et al. (2016). Residual coal exploitation and its impact on sustainable development of the coal industry in China. *Energy Policy*, vol. 96, pp. 534-541.
- [19] Zhu, X. J. et al. (2016). Surface dynamic subsidence prediction model of solid backfill mining. *Environmental Earth Sciences*, vol. 75, no 12.

GLOBAL SERVICE DELIVERY AND CITIZEN-CENTRIC DIGITAL GOVERNANCE: A REASSESSMENT

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Abstract. Relying on recent research on how governments and individuals activate in a digital setting, leaving electronic traces that bring about immense volumes of data about themselves and any interplays they have, we first analyze the broader theoretical arguments that prove that information and knowledge create capacity for cutting edge, performance, and the sharpness to adjust to a swiftly altering environment. Based on this evidence, we exemplify arguments that governments are unsuccessful in taking advantage of the affordances of big data, whereas individuals are powerless to connect with government digitally as they do with companies or social undertakings. We advance primary empirical research for the main case study that clarifies that there are cultural obstacles to employing social media and adopting the digital timestream, and advancing the data science abilities required to obtain public usefulness from big data. We use meta-analysis to inspect the evidence that Internet and mobile-based digital technologies favour co-production and co-creation: at the separate level, most individuals handle their matters with government as they do with their bank; at the shared level, co-production may entail a type of crowdsourcing, where individuals inform governments of non-necessity issues in proximities, while at the strategy level, co-production advances so as to achieve co-creation, individuals employing the government as stage notion to co-create both strategy and services.

Keywords: citizen-centric, digital, governance, service, delivery

JEL Classification: G18, H11, I28

1. Introduction

Relying on recent research (Dunleavy & Margetts, 2015) on how governments and individuals activate in a digital setting, leaving electronic traces that bring about immense volumes of data about themselves and any interplays they have, we first inspect the broader theoretical arguments that clarify that information and knowledge create capacity for cutting edge, performance, and the sharpness to adjust to a swiftly altering environment. Nearly all governments are dependent on a significant digital manifestation and an intricate arrangement of wide-ranging information systems for regulatory processes and policy-making (Machan,

2016, A) that influence the entire framework within which strategy and service distribution options are constituted, either furthering novelty or limiting policy choices. Governments strive to equal an ever more technologically sagacious community, familiar with collaboration through social networks and electronic forums (Madsen & Wu, 2016) which have immediately acquired more confidence online than the stereotypical proposals of government bureaucracies. Digital leaders employ a well-defined digital approach associated with a culture and leadership (Hellman & Majamäki, 2016) stabilized to stimulate the alteration. An entity's digital advancement is impacted considerably by its digital approach. An absence of blueprint is the main obstacle hampering early-stage entities (Vasile & Androniceanu, 2016) from utilizing digital trends to the fullest extent. As early-stage entities advance, an absence of strategy dies down (Bauder, 2016) and confines cover portfolio handling, funding, and managing cyber security. The possible effect of a digital approach is chiefly regulated by its aim and reach. Digital blueprints at early-stage entities highlight a practical target. (Eggers & Bellman, 2016)

2. Literature review

Digital technologies are instrumental in assisting maturing entities attain strategic objectives. The relevance that entities establish on employing digital technology to enhance cutting edge and decision making differs by digital maturity degree. The exponential alterations that stimulate digital evolution confront the conventional patterns of leadership (Popescu Ljungholm, 2016) and governance. Laborers in digitally maturing entities are more expectant in their leaders' capacity to handle the digital business. Entities at higher degrees of advancement constantly have leaders with the expertise and grasp (Fisher, 2016) to manage the digital evolution mechanism. The ubiquity or nonappearance of a digitally experienced leadership (Androniceanu, 2014) is instrumental in whether the entity begins a course of action to upskill its personnel. Leaders who master digital orientations and technologies tend to supply organizational backing (Peters & Besley, 2016) to their personnel to assist them strengthen digital skills, in comparison with individuals who are deficient in that awareness. Less digitally sophisticated agencies fail regarding the capacity to visualize mentally how digital technologies may affect the business. Citizen demands are more outstanding (Tulloch, 2016) as an agency ascends the advancement curve. An intense attention on employing digital technologies to enhance the citizen practice (Androniceanu & Ristea, 2014) assists maturing entities in boosting service distribution. Digitally advancing government entities are typified by a culture that facilitates digital evolution, bolstering innovation, furthering collaborative labor settings, and preserving a constructive position toward risk-taking. (Eggers & Bellman, 2016)

3. Methodology

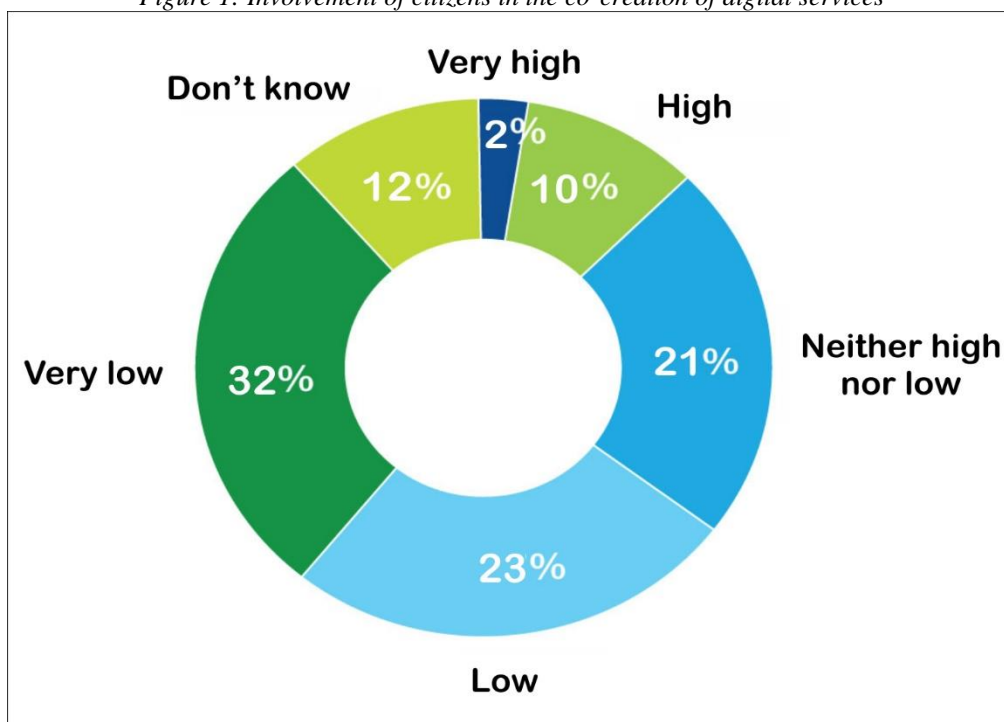
Based on this evidence, we exemplify Dunleavy & Margetts (2015)'s argument that governments are unsuccessful in taking advantage of the affordances of big data, whereas individuals are powerless to connect with government digitally as they do with companies or social undertakings. We develop primary empirical research for our case study that indicates that there are cultural obstacles to employing social media and adopting the digital timestream, and advancing the data science abilities required to obtain public usefulness from big data. Internet and mobile-based digital technologies favor co-production and co-creation: at the separate level, most individuals handle their matters with government as they do with their bank (Wilkinson & Kemmis, 2015); at the shared level, co-production may entail a type of crowdsourcing, where individuals inform governments of non-necessity issues in proximities,

while at the strategy level, co-production advances so as to achieve co-creation, individuals employing the government as stage notion to co-create both strategy and services. (Dunleavy & Margetts, 2015) Numerous public entities strive to subsidize essential citizen services and digital proposals, despite the fact that digital evolution is a path to considerable expense savings. Leaders attempting to stimulate transformation confront challenging priorities. Public entities that effectively handle their objectives (Brown, 2016) are likely to have consistent, realistic approaches and well-defined business cases. Excepting insubstantial financial backing and too numerous conflicting first concerns, advancing entities indicate security as a critical obstacle. For early-stage entities, the unavailability of a long-term approach (Grant, 2016), associated with an absence of apprehension of digital orientations, is a decisive impediment. While approach constitutes the ground of the transformation mechanism, leaders might not comprehend its relevance. Entities with a well-defined and consistent approach are more digitally developed, more thoroughly prepared to react to chances and menaces, having a culture that cultivates cutting edge and collaboration. (Eggers & Bellman, 2016)

4. Empirical data and analysis

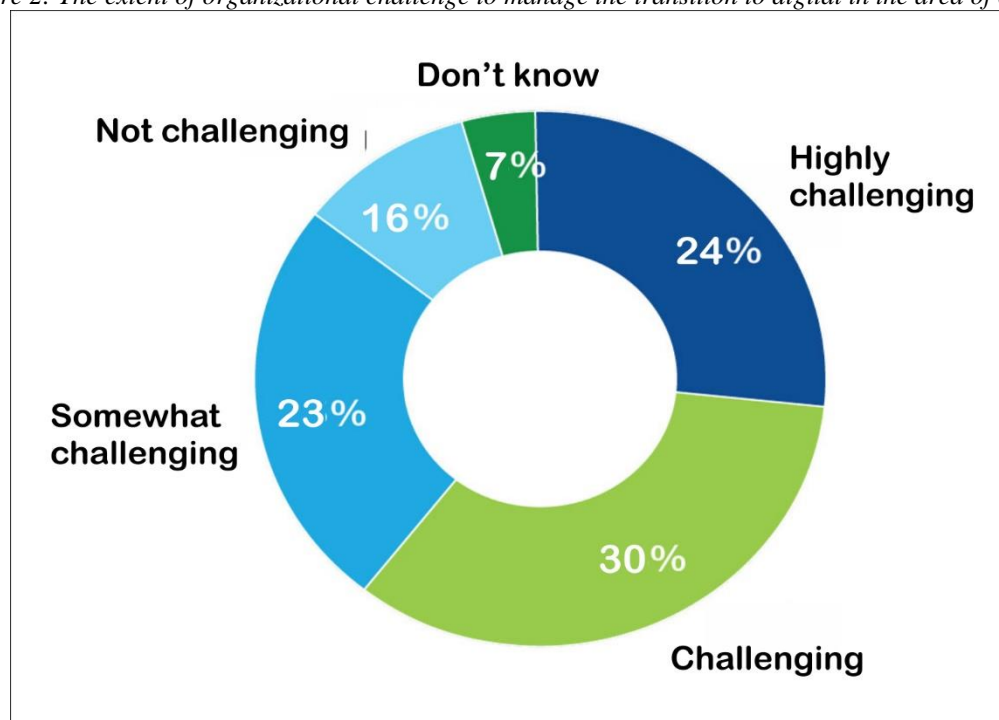
Following Eggers and Bellman (2016), our meta-analysis combines data from 214 papers identified in the Web of Science as covering the participation of individuals in the co-creation of digital services, the degree of organizational challenge in handling the transition to digital in the sphere of culture (Selth, 2016), leading determinants of digital transformation, and the utilization of open source technology to provide digitally improved services. The essential position is that the internet brought into government an organizational culture that functions in opposition to the steadiness of operations (Hurd, 2016) and interferes with the proposal that procedures may be digitally embedded. If citizens network with government via social media platforms, consequently there are more opportunities (Eacott & Evers, 2015) that they may collaborate with government in co-creation. Computers operate as a channel for novel kinds of professional connections and economic requirements (Lucas, 2016) on the activity of government. (Dunleavy & Margetts, 2015) The public sphere should increase the digital expertise of both laborers who address digital evolution (Siekelova et al., 2017) and those who affect it. Individuals who are at advanced in digital evolution should cooperate closely with staffing partners to attract the appropriate type of digital expertise. A digital attitude is distinct from how nearly all entities, particularly in the public sphere, deal with the world, concerning views about stakeholders (Newton & Riveros, 2015), introducing goods and services, and manners of labor. Current cultural norms frequently require endeavors to embed the precepts of digital (user target, open performance, and active advancement) in government entities. Nearly all public sector entities deal with the cultural matters of digital evolution. (Eggers & Bellman, 2016) (Figures 1–4)

Figure 1: Involvement of citizens in the co-creation of digital services



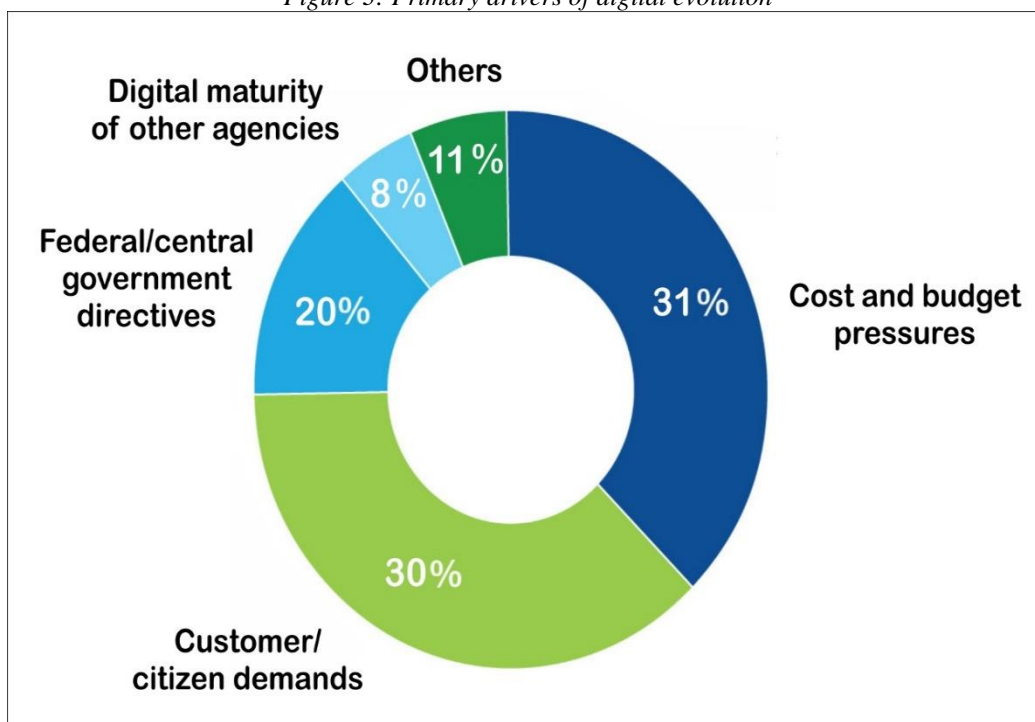
Source: Deloitte University Press and our calculations

Figure 2: The extent of organizational challenge to manage the transition to digital in the area of culture



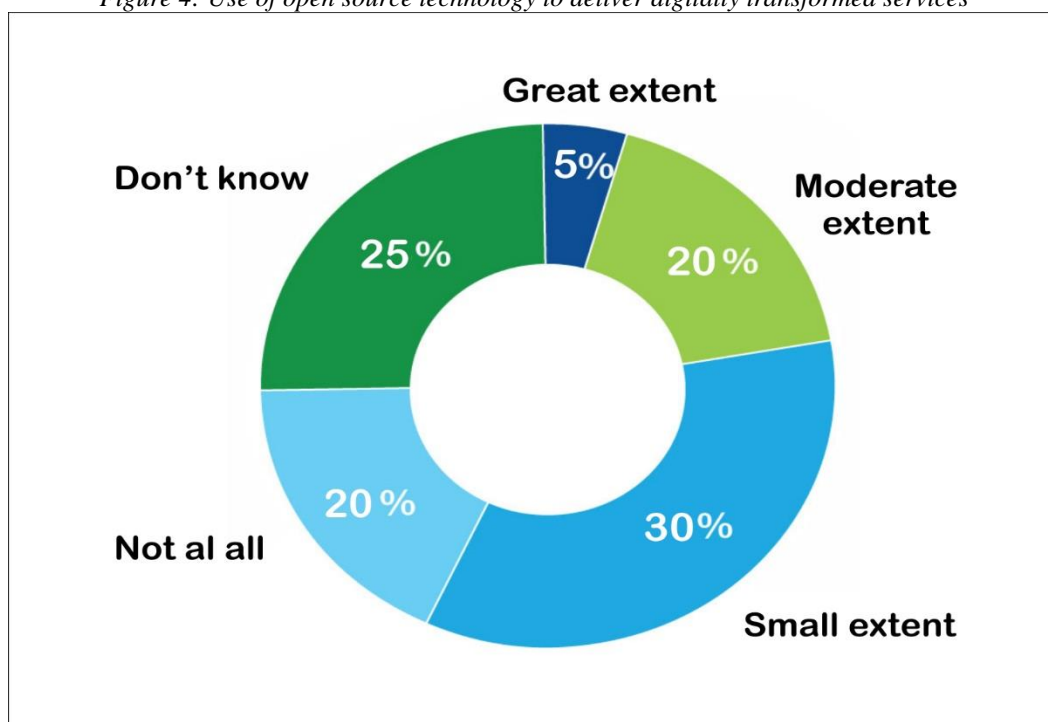
Source: Deloitte University Press and our calculations

Figure 3: Primary drivers of digital evolution



Source: Deloitte University Press and our calculations

Figure 4: Use of open source technology to deliver digitally transformed services



Source: Deloitte University Press and our calculations

5. Results and discussion

Entities throughout spheres and roles confront cultural obstacles (Williams et al., 2016) in their digital progress. Citizen needs and expense and budget constraints are the most outstanding determinants of digital evolution. Government entities should work meticulously with citizens to establish a user-centric digital practice (Machan, B, 2016): they are likely to come to grips with guaranteeing internal buy-in and not with delivering to user demands. Even for entities that claim citizen need is the leading determinant of digital evolution (Mihaila et al., 2016), the proportion considerably grappling with users to co-produce digital services is rather low. To address digital evolution (Androniceanu, 2012), public sector entities should access a powerful and newfangled technology marketplace. Acquisition and commercial approaches should alter radically to harmonize digital evolution. (Eggers & Bellman, 2016)

6. Conclusions

Public sector strategies to acquisition are justifiably fashioned to check that public resources are allocated adequately. A shared series of matters and a common set of obstacles (Bolton, 2016) are hindering transformation: culture, acquisition, personnel, leadership, and approach that are not maintaining the proper rhythm or are ill-prepared (Mihaila, 2016) for a technologically cutting-edge, citizen-centric epoch. Efficacious public entities are to be more adjustable to the fashionable digital period, re-conceptualizing their services and unceasingly remodeling the manner they get involved with users. Unceasing digital transformation may identify public entities that strive as the setting alters around them (Chitpin & Jones, 2015), whereas others may exploit all that digital evolution can provide and thus prosper. Preceding the rise of digital technologies, novel strategies may be evaluated via all-encompassing investigation (Friedman et al., 2016), investment judgments may be established on cost-benefit direction, and the end intention of nearly all blueprints is a definite point. For public sphere agencies worldwide, the pecking orders and governance arrangements are frequently more noticeable than in the private sphere. (Eggers & Bellman, 2016)

References

- [1] Androniceanu, A. (2012). Key issues related to the human resources management nowadays. *Proceedings of the 6th International Management Conference: Approaches in Organisational Management*, Bucharest, Romania, pp. 221–230.
- [2] Androniceanu, A. (2014). Research on management capacity of medical units for addicts to deliver quality services in time of crisis. *Revista de Cercetare si Interventie Sociala*, vol. 47, pp. 78–104.
- [3] Androniceanu, A. and Ristea, B. (2014). Decision making process in the decentralized educational system. *Procedia Social and Behavioral Sciences*, Iasi, Romania, vol. 149, pp. 37–42.
- [4] Bauder, H. (2016). Understanding Europe's refugee crisis: A dialectical approach. *Geopolitics, History, and International Relations*, vol. 8, pp. 64–75.
- [5] Bolton, J. (2016). Predicting and managing demand in social care. *American Journal of Medical Research*, vol. 3, pp. 152–187.

- [6] Brown, J. A. (2016). The new ‘southern strategy.’ Immigration, race, and ‘welfare dependency’ in contemporary US Republican political discourse. *Geopolitics, History, and International Relations*, vol. 8, pp. 22–41.
- [7] Chitpin, S. and Jones, K. (2015). Leadership in a performative context: A framework for decision-making. *Educational Philosophy and Theory*, vol. 47, pp. 387–401.
- [8] Dunleavy, P. and Margetts, H. (2015). Design principles for essentially digital governance. *111th Annual Meeting of the American Political Science Association*, vol. 3, no. 6, San Francisco, USA.
- [9] Eacott, S. and Evers, C. (2015). New frontiers in educational leadership, management and administration theory. *Educational Philosophy and Theory*, vol. 47, pp. 307–311.
- [10] Eggers, W. D. and Bellman, J. (2016). *The Journey to Government’s Digital Transformation*. Westlake, TX: Deloitte University Press.
- [11] Fisher, N. (2016). Midwest diagnosis: Immigration reform and the healthcare sector. *American Journal of Medical Research*, vol. 3, pp. 84–114.
- [12] Friedman, D., Friedman, H. H., and Friedman, L. W. (2016). US healthcare: A system in need of a cure. *American Journal of Medical Research*, vol. 3, pp. 125–141.
- [13] Grant, S. (2016). Employer sponsored fertility preservation: Debating institutional promotion of reproductive procrastination or choice. *Journal of Research in Gender Studies*, vol. 6, pp. 120–145.
- [14] Hellman, M. and Majamaki, M. (2016). Ordinary men with extra-ordinary skills? Masculinity constructs among MMORPG-gamers. *Journal of Research in Gender Studies*, vol. 6, pp. 90–106.
- [15] Hurd, H. M. (2016). The innocence of negligence. *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 48–95.
- [16] Lucas, R. E. B. (2016) “Integral migration in developing economies: An overview of recent evidence,” *Geopolitics, History, and International Relations*, vol. 8, pp. 159–191.
- [17] Machan, T. R. (2016 A). Individualism in the right key. *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 11–19.
- [18] Machan, T. R. (2016, B). The morality of gregarious egoism. *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 7–29.
- [19] Madsen, E. S. and Wu, Y. (2016). Low R&D efficiency in large pharmaceutical companies. *American Journal of Medical Research*, vol. 3, pp. 141–151.
- [20] Mihaila, R. (2016). Is the decrease in the gender wage gap the principal driver of the sustained rise in female labor market participation? *Journal of Research in Gender Studies*, vol. 6, pp. 146–152.
- [21] Mihaila, R., Popescu, G. H. and Nica, E. (2016). Educational conservatism and democratic citizenship in Hannah Arendt. *Educational Philosophy and Theory*, vol. 48, pp. 915–927.
- [22] Newton, P. and Riveros, A. (2015). Toward an ontology of practices in educational administration: Theoretical implications for research and practice. *Educational Philosophy and Theory*, vol. 47, pp. 330–341.

- [23] Peters, M. A. and Besley, T. (2016). We never expel a foreigner – Globalism, interconnectivity and the experiment of the open society. *Geopolitics, History, and International Relations*, vol. 8, pp. 112–126.
- [24] Popescu Ljungholm, D. (2016). The role of work organizations in the social construction of gender. *Journal of Research in Gender Studies*, vol. 6, pp. 269–275.
- [25] Selth, A. (2016). The road to Mandalay: Orientalism, ‘Burma girls’ and Western music. *Journal of Research in Gender Studies*, vol. 6, pp. 159–191.
- [26] Siekelova, A., Kliestik, T., Svabova, L., Androniceanu, A. and Schonfeld, J. (2017). Receivables management: The importance of financial indicators in assessing the creditworthiness. *Polish Journal of Management Studies*, vol. 15, pp. 217–228.
- [27] Tulloch, L. (2016). The transnational state, neoliberalism and environmental education policy: A New Zealand case study. *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 170–195.
- [28] Vasile, O. and Androniceanu, A. (2016). Dynamics of migration in Romania and management of financing instruments. *European Proceedings of Social and Behavioural Sciences*, Iasi, Romania, pp. 1059–1067.
- [29] Wilkinson, J. and Kemmis, S. (2015). Practice theory: Viewing leadership as leading. *Educational Philosophy and Theory*, vol. 47, pp. 342–358.
- [30] Williams, J. C., Phillips, K. W. and Hall, E. V. (2016). Tools for change: Boosting the retention of women in the STEM pipeline. *Journal of Research in Gender Studies*, vol. 6, pp. 11–75.

SELECTIVE METHOD OF A BANK CAPITAL ASSESSMENT IN RUSSIAN FEDERATION AND OTHER COUNTRY IN THE CONTEXT OF GLOBALIZATION

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Abstract. The selective method of the bank capital assessment for the first time developed and proposed in the context of globalization. By grouping the indicators in economically important areas and determining their significance, this method will identify the most problem banks by the criterion of capital insufficiency or its misuse. Important coefficients are determined for the liquidity directions, the level of risks, relative and absolute levels of equity, reliability of the bank, as well as the level of equipping the bank with information technologies. The values obtained in the liquidity group will demonstrate the financial component necessary for the successful functioning of the bank capital. Reliability indicators will reveal the level of profitability, financial stability and the impact of the size of the bank on its activities. Assessment of the level of risks will protect the movement of bank capital. The relative and absolute levels of equity capital will certify to users of information on the fulfillment by the bank of mandatory economic standards. And the group that determines the level of equipping with information technologies will provide an opportunity to assess the bank capital for the future, which will certainly affect the quality of the assessment and the efficiency of the bank capital. Mathematical expressions have been developed for making calculations for the bank capital assessment.

Keywords: bank capital, selective method, mathematical expressions, capital assessment, globalization

JEL Classification: F60, F63, O35, O44

1. Introduction

The capital of the bank plays the determining role in process of creation and functioning of the commercial bank (Ruscakova, 2015). One of the most serious problems, which the bank's management faces, is competent and accurate estimation of the bank capital (Harumova, 2015). It is the correctly chosen method of estimation that influences the quality of estimation, conclusions on the results of estimation and forming the trend (Tokarova, 2015).

Along with the traditional methods of estimation of the bank's capital, the modern rhythm

of conducting banking operations demands more perfect and innovating approaches for the capital evaluation (Vidyapin & Tagirbekov, 2007).

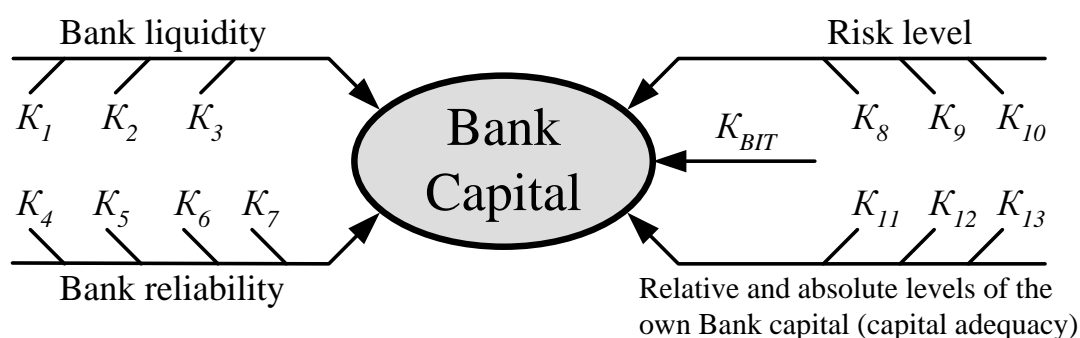
For more effective control from the direction of the Central Bank of Russian Federation, concerning the activity of the commercial banks, it is recommended to use selective method of the estimation the bank's capital, which allows, due to the set of indices on economically appropriate directions and determination their importance, to reveal the most problematical banks from the point view of the capital insufficiency and its inappropriate usage (Soltes & Stofko, 2015).

2. Selective method and groups of indicators

It is recommended to choose a set of indices on the direction of liquidity, level of risk, the levels of relative and absolute forms of the equity capital, the bank's reliability (Posnaya & Vovchenko, 2017) and also the of supplying the banking institution with the information technologies.

The classification of the indices for the estimation of the bank's capital on the basis of the selective method is given in the Fig.1.

Figure 1: Indicators of bank capital assessment



Source: the results of author's research in 2017

The first group of the offered instrument includes the bank's liquidity K_1, K_2, K_3 – the values of liquidity, which are evaluated according to the Russian Bank Instruction (December 3, 2012 № 139 – E). According to the calculations of the set of indices, we can make a conclusion on the banks ability to pay off the current debt with the help of floating assets (Shavshukov, 2015). Due to this, we can reveal liquidity as one of the main components for the estimation of the bank.

Next, we reveal a set of indices, characterizing the reliability of the bank. As it is known, the reliability is determined by the expert method, taking into consideration the rating positions (for example CAMELS system, Kromonov's methods etc). Let us consider the elements of the second group more detailed. The index K_4 – the size of the bank or scale – influences the financial stability of the bank, and is one of the elements of reliability. The President of the Russian Banks Association G.Tosunyan at the press-conference "The course of rouble and situation in Russian banking", January 22, 2016, said, that the size (scale) of the bank is one the factors of its stability, but in may not be the guarantee of its stability. But in model of the capital estimation, the size of the bank should be taken into consideration, because it influences the volume of activity, and therefore, the size of capital (Pashkus et al., 2015).

The index K_5 – level of liquidity – adds the calculations of the previous group (liquidity)

with more detailed research: dynamics, problem concerning liquidity revealing, perspectives of the liquidity increasing, etc.

The index K_6 – the level of the equity capital and assets profitability, including the profitability of the capital (ROE), as the index of the effective using of the equity assets of the bank, and the profitability of the assets (ROA), demonstrating the stockholders reimbursement of the bank's capital. The index "Level of profitability" is advisable to use in the model of the capital estimation, because it shows how effectively the capital "works" and performs its functions.

The index K_7 – the level of financial stability, reflecting the stability of the bank's financial position, which is provided with sufficient share of the equity capital in structure of the sources of financing, it witnesses the solvency of the bank, that is the bank's ability to fulfill its payment duties in time and in full. The duties result in operations with the customers, on the open market, with the counteragents. The using K_7 in the model is explained by the ability of the research the equity capital sufficiency for making the payment duties.

The group of indices, estimating risks, also has important significance in usage, because risk determines the probability of the fact, that the profit in fact may be lower than the profit planned on a set of reasons. To predict this situation can help the calculation of the risks K_8 , K_9 , K_{10} , the calculation of which is determined by Instruction №139. Risk can not be equal zero.

Bank must determine the volume risk characteristics, because of the following:

- 1.the problems arise immediately and regardless to the expectations;
- 2.the new tasks are set, but they do not correspond to the last experience of the bank;
- 3.the management of the bank is not able to take necessary and urgent measures, which can change the situation to the best (Lai & Wong, 2008).

The consequences of the wrong risk estimations or absence of the ability to oppose the effective measures, can be problematic and influence the functionality of the capital (Official Letter of the Bank of Russia, 2012).

The values in the group of indices "Capital Sufficiency" K_{11} , K_{12} , K_{13} are determined also according to the Instruction № 139.

The index K_{BIT} allows to reveal the level of the bank's supplying with the modern business making technologies. One of the offerings to improve the estimation of the bank capital can be taking into account the level of supplying with the information technologies, appropriate usage of which is the new instrument for solving the given tasks, and also, including the estimation of the bank capital: reducing the expenses, increasing the volume of profit, reducing the outstanding debt, increasing the number of customers, etc. Information technologies in banking sphere for more accurate estimation of the bank's capital can accrue and use in full the information about the customers and their needs in services. We can formulate and offer the following definition of the information technologies, using in banking: *Banking Information Technologies* (BIT) – this is the process of transforming the banking institution information on the basis of the methods of collection, registration, transmitting, storing, processing data with a purpose to provide training, making and realization the management decision with using the means of personal and calculation techniques.

Using of the modern information technologies greatly influences and changes business – processes in banks, puffing them to the new level. Modern Banking Information Technologies

(BIT) have to correspond the following principles (Wozabal & Hochreiter, 2012):

- module principle of formation, allowing to configure the systems easily according with the concrete order and with the subsequent growing;
- openness of technologies, which are able to interact with different external systems, and provide the choice of the programmed – technical platform and transform it to other hardware;
- flexibility of the tuning the modules of the banking system and their adaptation for the needs and conditions of the given bank;
- scale, taking into consideration increasing and complication of the functional modules of the system while developing business – processes;
- multi-user access for the data in real time and realization of all functions in united information area (Novy, 2015);
- modeling of the bank and its business-process, the ability of algorithmical tuning of the business - processes;
- constant development and improvement of the system, on the basis of reengineering the business-process (Kramarova & Valaskova, 2015).

We can state, that each group, of instruments, offered in the model, Fig.1, is necessary and important for the estimation, and effective functioning of the bank's capital. The estimation of the size of the bank's capital plays the first important role in determination the further ways of development of the credit organization.

The technique of estimation the value of equity capital is also important. Financial technique is the totality of types and forms of organization the financial relations, conditions and methods of calculations, used in forming the financial resources, forming and using the monetary funds of the special purpose (Posnaya et al., 2017). Widely presented in financial literature methods of estimation capital of the bank can be brought together in the united technology to get more appropriate research and expert device (Jary, 2015). In the given research the financial mechanism is used with the purpose of optimization the process of the capital's estimation and formation the system approach for the reducing the costs and revealing the reserves of growth. The totality of financial methods is the correspondent part of the financial mechanism. On the basis of this, we can offer to integrate the existing methods (method of the estimation on the balance value, method of the estimation on the market value, method of the estimation on the regulated principles of the accounting) of estimation of the bank's capital value and the worked out selective method into the united mechanism.

As a whole, we can determine, that the selective method of the bank's capital estimation, will allow to evaluate in more detailed way the quality and effect of the bank's capital, automatize the process and simplify the procedure of making decisions from the direction of the Central Bank in the relation of each concrete commercial bank.

In future, the data collection about the banks activity will be fully automatized. In such case the structure of the data collection, presumably, will be organized in the following way: the Central Bank of Russian Federation will give all banking institutions directive instructions, concerning the types of indices which the banks need to send in their reports. The data base of the accountable organizations will be formed automatically. Later, will the help of the offered model, on the base of the received data, the factors of the bank capital are determined. Taking

into consideration the three years old history, the gauging of the model is made to reveal the boundary values; for this two or three successful banks are taken and two or three banks, which do not correspond the requirements of the banking laws are chosen. Also it is additionally offered to use the matrix of the weight indices in dependence of the phase of the economical cycle (crisis, depression, reviving, rise). Weight indices is offered to set initially by the expert method, because it is obvious, that the impact of each group of indices in the estimation of the bank's capital is different; therefore, at the present moment the values of these weights were not determined. In future, the given values can be corrected either, by the expert board or automatically, reasoning from the situation, as at the micro level, as at the macro level.

This method is called selective, from the French word, «selectif» (take away, pick out, choose). In the theory of the estimation the bank's capital the given term is used for the selection (choice), that is unification the indices into groups, and making each, group significant with the help of weight indices. The selective method determines the result more precisely, although it is more cumbersome in comparison with the mentioned above.

3. Mathematical modeling of the bank capital factor

Starting from the mentioned above, let us determine the definition of the bank capital factor – K_0 , which reflects the potential, reliability, stability of the banking institution on the base of the constituents of the bank's capital, which can be obtained in the form of the following expression:

$$X_1 \cdot (K_1 + K_2 + K_3) + X_2 \cdot (K_4 + K_5 + K_6 + K_7) + X_3 \cdot (K_8 + K_9 + K_{10}) + \\ + X_4 \cdot (K_{11} + K_{12} + K_{13}) + X_{BIT} \cdot K_{BIT} = K_0, \quad (1)$$

where $X_1, X_2, X_3, X_4, X_{BIT}$ – weight indices, mentioned above;

$K_1 - K_{13}$ – bank's activity indices, described in part two;

K_{BIT} – the index, reflecting the level of provision the institution with the modern Banking Information Technologies (BIT).

For the visuality of the further analysis, let us determine the corresponding sums of the grouped indices as the S_i indices, then the Eq.1 will look as follows:

$$X_1 \cdot S_1 + X_2 \cdot S_2 + X_3 \cdot S_3 + X_4 \cdot S_4 + X_{BIT} \cdot K_{BIT} = K_0, \quad (2)$$

where $S_1 = (K_1 + K_2 + K_3)$, $S_2 = (K_4 + K_5 + K_6 + K_7)$, $S_3 = (K_8 + K_9 + K_{10})$, $S_4 = (K_{11} + K_{12} + K_{13})$.

The Eq.2 can also be written in the short way:

$$X_{BIT} \cdot K_{BIT} + \sum_{i=1}^4 X_i \cdot S_i = K_0 \quad (3)$$

So, the bank's capital factor will demonstrate, while making the necessary calculations, is this or that bank coming close to the boundary level, at which the institution cannot carry out its standard norms.

It is the offered selective method that can afford to make the estimation of the bank capital more accurate, flexible and obvious, with the purpose to prevent the negative trends and to strengthen the positive trends of the bank's activity, which greatly influence the forming, using and effective functioning of the bank capital.

4. Conclusion

While using the selective method we can affirm that each of the presented groups has its advantages. Also in using the selective method in estimation of the bank capital, it is necessary to pay attention to the interchangeability of the groups and interconnection of the group indices, because the accuracy of the total estimation depends on the each group and worsening the values of the indices in one group, inevitably will lead to the worsening of the values in another group, and the situation with the improvement of the values of the given indices is the same.

We can note, that the Central Bank having the capital factor on all banking instructions of the country as the integral characteristic, will see the condition of the whole banking system, the directions and tendencies, that allows to take preventive measures for the stabilization of the banking institutions activity by the way of regulating the level of the key rating, and also the situational legislative initiatives.

We consider that the usage of the selective method of the bank's capital estimation will give more detailed information about the problems, perspectives, and tendencies of the effective functioning of the bank's capital.

References

- [1] Capital Instruments. (2015). *Bank and Insurance Capital Management*, pp. 67-73.
- [2] Gup, B. E. (2011). Bank capital regulation and enterprise risk management. *Enterprise Risk Management*, pp. 337-350.
- [3] Jary, C. (2015). Globalization and deflation. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 265-273.
- [4] Kramarova, K. and Valaskova, K. (2015). Globalization and transfer pricing: Brief analysis of the legislation in the Slovak Republic. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 353-361.
- [5] Lai, T. L. and Wong, S. P. (2008). Statistical models for the Basel II internal ratings-based approach to measuring credit risk of retail products. *Statistics and Its Interface*, vol. 1, no. 2, pp. 229-241.
- [6] Minimum Capital Requirements. (2016). *Handbook of Basel III Capital*, pp. 11-38.
- [7] Novy, M. (2015). The impact of globalization on the price elasticity of demand. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 538-545.
- [8] Ruscakova, A. (2015). The European sovereign debt crisis: The result of the financial globalization and of the system failures of global economic and political order. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 617-626.
- [9] Harumova, A. (2015). Multinationals as a part of globalization. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 192-198.

- [10] Official Letter of the Bank of Russia. (2012). Recommendations of Basel Committee of Banking Supervision on Proper Operational Risk Management. The Bank of Russia issues.
- [11] Posnaya, E. and Vovchenko N. (2017). Methodology, tools, a mechanism to assess the bank capital. *Rostov-on-Don, Finansovye Issledovania*, vol. 1, no. 54, pp. 39-46.
- [12] Posnaya, E., Vorobyova I., Sokolova E. and Leonova, M. (2017). The role of human factors in the bank capital evaluation framework. *European Research Studies Journal*, vol. 10, no. 1, pp. 148-154.
- [13] Tokarova, M. (2015). Selected problems of competitiveness measuring in conditions of globalization. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 800-809.
- [14] Soltes, V. and Stofko, S. (2015). The impact of population movement on security in the age of globalization. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 773-778.
- [15] Shavshukov, V. (2015). Brics` currences in global forex. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 670-679.
- [16] Pashkus, V., Pashkus N. and Pashkus, M. (2015). Building a strong cultural brand of Saint-Petersburg in the global economy: Breakthrough Positioning and Approaches to the Assessment. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Rajecke Teplice, Slovakia, pp. 559-571.
- [18] Vidyapin, D. and Tagirbekov, K. (2007). Everything about banks. *Military books association*, Moscow, Russia, vol. 1.
- [17] Wozabal, D. and Hochreiter, R. (2012). A coupled Markov chain approach to credit risk modeling. *Journal of Economic Dynamics and Control*, vol. 36, no. 3, pp. 403-415.