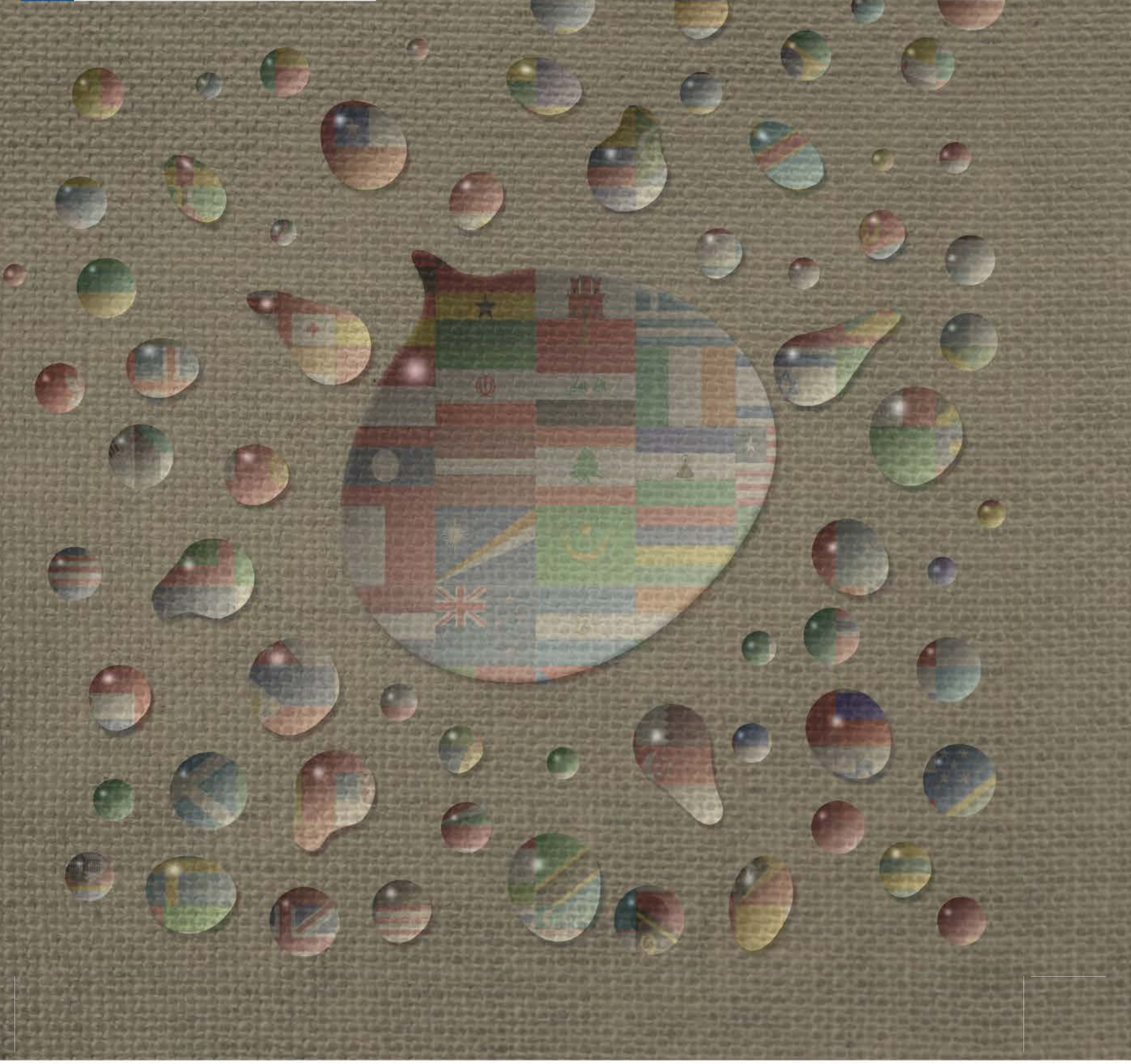
GLOBALIZATION AND ITS SOCIO-ECONOMIC CONSEQUENCES

17th International Scientific Conference

4th – 5th October 2017 Rajecke Teplice, Slovak Republic

Proceedings Part III.

UNIVERSITY OF ŽILINA
Faculty of Operation and Economics of Transport and Communications



Globalization and Its Socio-Economic Consequences

17th International Scientific Conference - Proceedings Part III.

UNIVERSITY OF ŽILINA
Faculty of Operation and Economics of Transport and Communications

The Faculty of Operation and Economics of Transport and Communications
University of Zilina
Univerzitna 1
010 01 Zilina
Slovak Republic

http://ke.uniza.sk/en/conference

ZU - UNIVERSITY OF ZILINA
The Faculty of Operation and Economics of Transport and Communications,
Department of Economics

GLOBALIZATION AND ITS SOCIO-ECONOMIC CONSEQUENCES

17th International Scientific Conference

Proceedings

(Part III.)

4th – 5th October 2017
Rajecke Teplice, Slovak Republic

ORGANIZED BY

ZU - UNIVERSITY OF ZILINA, The Faculty of Operation and Economics of Transport and Communications, Department of Economics.

EDITED BY

prof. Ing. Tomas Kliestik, Ph.D.

TITLE

Globalization and Its Socio-Economic Consequences

ISSUED IN

Zilina, Slovakia, 2017, 1st edition

PAGES

3122

ISSUED BY

ZU - UNIVERSITY OF ZILINA

PRINTED IN

GEORG, Bajzova 11, 010 01 Zilina, Slovak Republic

NUMBER OF COPIES

80 (each part)

Not for sale

ISBN 978-80-8154-212-1

REVIEWED BY

assoc. prof. Ing. Viera BARTOSOVA, Ph.D.	University of Zilina, Slovak Republic
prof. Ing. Jaroslav BELAS, PhD.	Tomas Bata University in Zlin, Czech Republic
Dr.h.c. prof. Ing. Tatiana COREJOVA, Ph.D.	University of Zilina, Slovak Republic
assoc. prof. Ing. Viktor V. DENGOV, Ph.D.	State University in St. Pettersburg, Russia
prof. Ing. Valentina V. GERASIMENKO, Ph.D.	Lomonosov Moscow State University, Russian Federation
assoc. prof. Ing. Ales HES, CSc.	University of Finance and Administration, Praha, Czech Republic
Dr. Anita KOLNHOFER-DERECSKEI	Obuda University, Budapest, Hungary
prof. Ing. Tomas KLIESTIK, Ph.D.,	University of Zilina, Slovak Republic
assoc. prof. Pavol KRAL, Ph.D.	University of Zilina, Slovak Republic
prof. Ing. Anna KRIZANOVA, CSc.	University of Zilina, Slovak Republic
assoc. prof. Gheorghe LAZAROIU, PhD.	Spiru Haret University, Bucharest, Romania
prof. Ing. Alexander N. LYAKIN, DrSc.,	State University in St. Petersburg, Russia
prof. Ing. Olga P. MOLCHANOVA, Ph.D.	Lomonosov Moscow State University, Russian Federation
assoc. prof. Ing. Hussam MUSA, Ph.D.,	Matej Bel University, Banska Bystrica, Slovak Republic
prof. univ. dr. Elvira NICA	Bucharest University of Economic Studies, Romania
assoc. prof. Gheorghe H. POPESCU, PhD.	Dimitrie Cantemir Christian University, Bucharest, Romania
prof. nadzw. dr hab. Wlodzimierz SROKA	University of Dabrowa Gornicza, Poland
Dr. phil., prof. Velga VĒVERE	The University College of Economics and Culture, Latvia
assoc. prof. Ing. Marek VOCHOZKA, MBA, Ph.D.	The Institute of Technology and Business in Ceske Budejovice, Czech Republic

PUBLICATION ETHICS

Publishing research work and experiment findings are a celebration of significant efforts by a scholar who shares results with other scholars around the world.

Globalization and its socio-economic consequences is an international scientific conference publishing peer-reviewed quality and original research work in a book of proceedings. All submitted manuscripts are a subject to initial appraisal by the editor, and, if found suitable for further consideration, strict double blind peer-review process is applied by anonymous expert referees to ensures the fair evaluation of submitted manuscripts.

Using double-blind peer review system, neither reviewers' nor author's identities are revealed to the other party to ensure the quality of research work published in the book of proceedings. Authors of manuscripts that were rejected during the review process will be informed if the manuscript may be resubmitted after it is corrected according to given recommendations. The final decision to accept or reject the manuscript will also be sent to the corresponding author along with any recommendations made by the referees.

The submitted manuscript must be an original work the author(s) and the manuscript should not be published elsewhere nor should it be currently under consideration for publication by another journal or proceedings. Manuscripts that are found to be published before or under consideration/review elsewhere will be rejected. The only exception is if the submitted manuscript builds on previously published articles elsewhere by the same author(s). In this case, author(s) are obligated to show more significant development in the submitted manuscript than the original published article and also to show that the original article is well cited in the submitted manuscript.

Plagiarism would not be tolerate and the following measures will be taken accordingly. First, the manuscript that has been proven to be involved in plagiarism will be immediately rejected along with the immediate rejection of any other manuscript submitted by the same authors. Second, each author involved in the violating manuscript will be banned from submitting any new manuscript to the book of proceedings in a period of two years.

For any complain or concerns with regard to any publishing article, please contact us at globalizacia@fpedas.uniza.sk. We will acknowledge your e-mail and provide an estimated time to study and solve your complain or concerns.

TOPICS

- Accounting
- Advertising Management
- Banking and Insurance
- Business & Economics
- Business Ethics
- Business Intelligence
- Business Information Systems
- Business Law
- Business Performance Management
- Business Statistics
- Change Management
- Consumer Behaviour
- Corporate Finance and Governance
- Corporate Governance
- Cost Management
- Decision Sciences
- Development Planning and Policy
- Economic Development
- Economic Methodology
- Economic Policy
- E-Business
- E- Marketing
- Economic Systems
- Entrepreneurship
- Finance & Investment
- Financial Accounting
- Financial Economics
- Globalization
- Global Business
- Global Marketing
- Growth; Aggregate Productivity
- Household Behaviour and Family Economics
- Human Resource
- Industrial and Manufacturing Engineering
- Information Systems
- Information Technology Management
- International Business
- International Economics
- International Finance
- Labour Economics
- Labour Relations & Human Resource Management
- Law and Economics
- Management Accounting
- Management Information Systems
- Management Science
- Market Structure and Pricing
- Marketing Research and Strategy
- Marketing Theory and Applications
- Monetary Theory
- Operations Research
- Organizational Behaviour & Theory
- Prices, Business Fluctuations, and Cycles
- Product Management
- Production and Organizations
- Production/Operations Management
- Public Administration and Small Business Entrepreneurship
- Public Economics and Finance
- Public Finance and Taxation
- Public Relations
- Public Responsibility and Ethics
- Regulatory Economics
- Resource Management
- Strategic Management
- Strategic Management Policy
- Supply Change Management
- Systems Management
- Systems Thinking
- Taxes
- Technological Change; Research and Development
- Technology & Innovation
- Time Management
- Total Quality Management
- Travel/Transportation/Tourism
- Welfare Economics

TABLE OF CONTENTS

PART I

PART II

PART III

PART IV

PART V

PART VI

GLOBAL COSTS OF RAILWAY AUTOMATION DEVICES EXPLOITATION AND MAINTAINING

Mieczysław Kornaszewski[1,a,*], Roman Pniewski[2,b]

[1]Kazimierz Pulaski University of Technology and Humanities in Radom, Faculty of Transport and Electrical Engineering, Malczewskiego 29, 26-600 Radom, Poland

[2]Kazimierz Pulaski University of Technology and Humanities in Radom, Faculty of Transport and Electrical Engineering, Malczewskiego 29, 26-600 Radom, Poland

[a]m.kornaszewski@uthrad.pl, [b]r.pniewski@uthrad.pl

*Corresponding author

Abstract. During the railway automation devices exploitation, there are interrelated processes of changes in technical and exploitation conditions. The functioning of these devices is dependent on their components reliability and sub-rational management of their exploitation process. The exploitation process of the rail automation devices must take into account both their usage and difficult renovation process. Due to the exploitation and maintenance costs optimization, it is important to select a maintenance strategy for railway automation devices, i.e. determining the way of carrying out maintenance work that allows devices to maintain their technical efficiency. From an economic point of view, the optimum level of railway automation devices reliability will be achieved when the total production and exploitation costs of the devices are minimal. An increase in a level of technical facilities safety and reliability causes a growth in their manufacturing costs and ultimately results in lower exploitation and maintenance costs and losses due to devices damage during their normal usage. The high level of railway automation devices safety can be achieved by many alternative spending combinations. For example, a specified level of safety can be achieved through higher investment outlays (the usage of better and more expensive technology, materials and resources, etc.) or due to higher exploitation costs (highly qualified and better paid service personnel, etc.).

Keywords: railway transport, rail automation devices, exploitation and maintenance costs, reliability, safety

JEL Classification: L92, M11, O32, R49

1. Introduction

The railway automation systems are part of complex railway transport system and they mostly function in varied, often extreme exploitation conditions. A long-time experience of systems exploitation confirms their correct functioning depending on the entire system reliability, individual subassemblies and efficient management of their usage (Kornaszewski et al., 2016).

The exploitation management of railway automation objects includes planning and decision-making activities, organizing and managing of financial resources in order to achieve (Murthy & Verbitsky, 2003):

- rational use of railway automation devices,
- maintenance of railway transport objects in the state of functional and task efficiency.

The development and maintenance of railway automation devices at a high level of reliability and security depend on, for example, development of the railway transport infrastructure in Europe and all over the word (Łukasik et al., 2016). Directions of European railway transport infrastructure development have been identified in the documents which establish the basic rail transport and combined transport networks – TEN (Trans-European Network) and TERFN (Trans-European Rail Freight Network).

The exploitation area on the railway transport market consists of economic entities licensed to carriage passengers or cargo and to provide traction services. In Poland, there are currently 118 licensed railway carriers on the railway market (actual data on the day 31.05.2017).

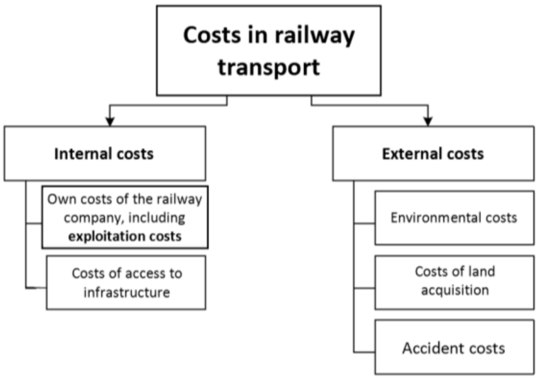
The railway transport as a complex economic structure generates specific costs just as in the other spheres of economic activity. The basic concept of cost is usually identified in case of the railway transport with units expressed in monetary, the physical and natural components consumption of its assets and services. It can be identified also with a payment for a human work in order to get the intended effects as revenue and profit from service activities. This approach is limited to the own costs of railway company (Popa, 2016).

2. Basic operating costs of railway transport objects

The functioning of railway transport companies in the transport services market causes, because of the impact range, the existence of two main costs groups (fig. 1) (Urbanyi-Popiołek, 2013):

- internal costs relating to the functioning of the railway transport company;
- external costs relating to the other entities, a specific community or a society at all.

Figure 1: Costs structure in railway transport due to the scope of impact



Source: (Urbanyi-Popiołek, 2013)

The internal costs of railway transport company create two main groups (Dolinayova et al., 2015):

- own costs incurred by a particular company during providing services in the transport market; they consist of: energy costs, maintenance and repair costs (related to exploitation), taxes, administrative charges and insurance, depreciation costs;
- costs of access to infrastructure – the charges paid by the railway carrier to the railway infrastructure manager for make railway lines available to use.

The external costs are associated with negative effects on the natural environment, health and human life. They arise as a result of the transport company service activity (Siciliano et al., 2016). They mostly include:

- environmental costs, mainly those related to noise emission and air pollution;
- costs of land acquisition – particularly important in railway transport because of the wide impact of railway transport infrastructure elements;
- costs of accidents in railway transport - in particular, they include the medical care costs and the compensation paid to victims and their relatives, administrative costs (e.g. Police or fire brigade intervention) and lost economic benefits associated with periodic work cessation.

3. Railway automation devices exploitation

3.1 Process of railway automation devices exploitation

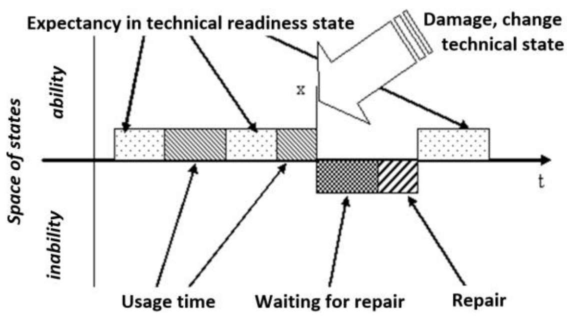
The concept of process is defined as a sequence of events describing system functioning. In case of the excessive deterioration of the railway transport facilities' technical state, there is an urgent need to restore the structure of this system. Otherwise, if there is no renewal, the damages will appear. They can cause big breach of the system's structural integrity and significant losses (Gradzki & Lindstedt, 2015).

Functioning of the railway automation devices is dynamic and always takes place over time. The values of these devices features may be different from the previous time. Then we can say about state changes. The railway automation devices may be in following usage processes and operation which depend on each other. The operation range and cost depend on the course of the previous usage and the desired use efficiency after the service (Dolinayova et al., 2015).

The exploitation process is a function that maps set of operating times into a set of reliability states (fig. 2). The railway automation devices may be in one of the possible technical states at any time (Kornaszewski, 2013):

- usability (technical efficiency);
- limited efficiency (partial);
- inability for use.

Figure 2: An example of the railway automation device exploitation process as an object for repair



Source: (Kornaszewski, 2013)

In the state of efficiency, the values of device parameters do not exceed the limit range. On the other hand, the state of inability means that the limit values of the parameters have been exceeded and the device cannot be used. The state of the object's inability is characterized by the incapability to fulfill the required functions (Sustr et al., 2016). By railway automation objects serving, it is thought that mainly activities aimed to maintaining or restoring such a facility for state of technical efficiency. The railway automation device withdrawal from its exploitation and its liquidation are carried out on the basis of technical state assessment and economic analysis of the profitability for further use (Berzi et al., 2016), (Murthy & Verbitsky, 2003).

3.2 Railway automation devices exploitation strategies

Nowadays, the exploitation process management takes place in the decision system and it involves decision-making which concerns the physical realization of all the processes and activities during exploitation. The skillful management is necessary for the rational use of the railway automation devices, maintenance and restore of technical efficiency (maintenance process), power supply of the whole exploitation system, materials, replacements, information and devices state diagnostics (Popa, 2016).

A set of alternative actions is very important in the decision-making process. It is a complete set of actions that should be taken into a consideration, analyzed, selected and then developed a hypothesis for each of them. It could be also a set of hypotheses about the achieved state after selection and applying the alternative as a final solution (of decision) (Zoeteman & Esveld, 2004), (Murthy & Verbitsky, 2003).

The rational exploitation policy should: prevent the damages, anticipate the quantity of defects that can be prevented, remove the damage effects by the devices reparation or replacement with new ones. Mentioned exploitation policy should take place with the least possible financial outlay. The service optimization of railway automation devices must include the following facts during usage of the processes (Kornaszewski, 2013):

1. The technical efficiency of railway automation devices decreases with the time of usage. The maintenance of objects in full technical usability requires then many financial outlays, for example: for maintenance, technical reviews and repairs. The exploitation costs rise in the process of time, because of increasing amount of the repairs. In practice, the exploitation period of facilities like these is very long.
2. The railway automation devices keep a constant technical efficiency. These devices do not require bigger financial expenses to maintain the technical usability. They are not subject of services or repairs and the failure occurrence forces the facility withdrawal from the exploitation.

It is necessary to apply a strategy which is the most economically profitable in specific conditions depending on the type of facilities, their usage profile and the renovation cost.

4. Global costs of railway automation objects exploitation and maintaining

4.1 Exploitation costs in standard terms

Only the maintenance and management costs can be attributed to the exploitation costs of the technical objects.

The exploitation costs of technical devices must be included in the indirect, departmental costs, which include costs related to the service of devices (depreciation, repair and operation of devices, drive energy, cooling materials and condition of the tools and devices etc.), costs associated with maintenance of departmental spaces (depreciation and repair of buildings, heating, lighting and maintenance of cleanliness etc.), costs related to the internal transport (drive energy, means of transport amortization and handling, salaries of the transport services employees etc.) and costs related to work of technical supervision, management and administration (salaries of technical control managers and staff etc.), write-offs for capital social fund (Siciliano et al., 2016).

In general, it should be assumed that direct exploitation costs C_e are the sum of the operating costs C_o and maintainance costs C_m (Urbanyi-Popiołek, 2013):

$$C_e = C_o + C_m \tag{1}$$

With more accurate analysis, we can extract more components like: the wages, costs of consumables, energy and service. Sometimes unit costs are used as indicators, for example a unit cost of maintenance is determined by the expression:

$$\overline{C_{to}} = \frac{1}{N}\sum_{i=1}^{N}\frac{C_{PSi} + C_{CRi} + C_{MRi}}{T_{BTR}} \tag{2}$$

where: N – the number of devices; C_{PSi} – costs of periodic service; C_{CRi} – costs of current repairs; C_{MRi} – costs of major repairs; T_{BTR} – period between repairs (Urbanyi-Popiołek, 2013).

The exploitation costs should cover the entire system of fixed assets exploitation, including technical devices in the company. In such case costs of fixed assets exploitation will include:

- in terms of use, the costs of: depreciation, lubricants consumed during operation, cleaners and coolants, downtime of equipment and means of transport caused by their inadequacy, maintenance of efficiency and cleanliness of appropriate spaces;
- in terms of service, the costs of: fuel and energy, manufacture and purchase of workshop assistance, production and purchase of replacement parts and their regeneration.

4.2 Optimization of the railway automation devices reliability and safety according to the costs

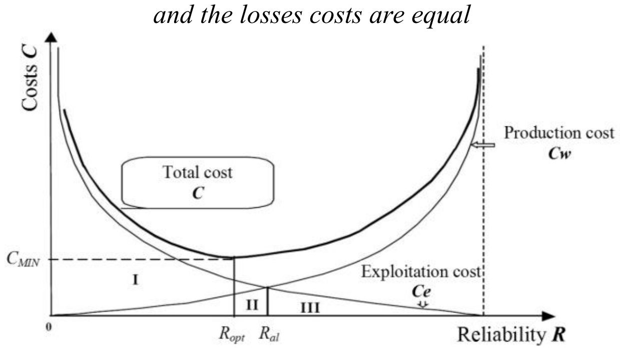
Optimization tasks *(Profit → max* and *Costs → min)* include the value of resources spent to ensure the proper reliability and safety of railway automation devices (Gradzki & Lindstedt, 2015), (Muhlemann et al., 1995).

The higher level of the reliability R entails increasing costs for ensuring reliability and decreasing losses cost due to insufficient reliability. The comparison of these two economic categories leads to an optimal level of reliability (Nowakowski et al., 2016).

Figure 3 shows that an economically optimal level of system reliability R_{opt} (understood as the absence of damage posing a security risk) will occur for minimum total costs C_{MIN} (Muhlemann et al., 1995). The area of characteristics can be divided into three parts:

I – the area of work effectiveness in improving reliability. Its actions result in the decreasing total cost. The rate of the losses cost decline is higher than the rate of cost increase to ensure an adequate level of reliability,
II – the indirect area where the total cost grows slightly,
III – the area of ineffective measures to improve reliability with even faster increase of total cost.

Figure 3: Total reliability costs, where: Ce – exploitation costs; Cw – production costs; R – level of reliability (safety); R_{opt} – optimal level of reliability; R_{al} – level of reliability at which costs of proper reliability alignment and the losses costs are equal



Source: (Muhlemann et al., 1995)

Increasing level of reliability raises the production costs. This results in reduced exploitation costs and losses, such as damage of the railway automation devices during their usage. From an economic point of view, it is necessary to minimalize the total costs of devices production and exploitation.

4.3 Cost analysis of the railway automation devices LCC durability

Due to the high costs associated with projects such as the railway transport equipment modernization, they should be carefully analyzed for their feasibility and profitability. The profitability analysis should be prepared to determine the measurable economic effects for the adopted modernization variants in relation to the existing state of the railway devices.

One of the methods used to evaluate the effectiveness of the railway automation devices modernization is Life Cycle Cost Analysis (LCC) (Durairaj et al., 2002). At first, the LCC analysis was used in the armaments industry, among others in USA, and at the end of the 1980s this analysis was disseminated to other industries, including the railway industry. Currently, the use of LCC analysis as a decision tool for evaluating alternative solutions is more extensive.

The durability cycle cost is understood as the total cost incurred in the lifecycle of a technical facility, in this case a railway automation device: from concept and design to decommissioning. The essential meaning for the LCC cost estimation concept is based on knowledge of the life cycle and actions taken in subsequent phases of this cycle. It is also important to be aware of the relationship between these activities and the performance, non-damage, serviceability and other characteristics of railway automation devices and the resulting costs (Banar & Ozdemir, 2015). There are five main phases of the life cycle: a concept and a definition, designing, production, exploitation (operation and maintenance and liquidation.

In the LCC concept, costs incurred in above phases can be divided into acquisition costs, maintenance costs and decommissioning costs (Zhang et al., 2017), (Banar & Ozdemir, 2015):

$$LCC = C_A + C_H + C_L \tag{3}$$

where: C_A – acquisition costs; C_H – maintenance costs; C_L – decommissioning costs.

5. Conclusion

It is very important to rationally manage the railway automation devices exploitation process because it directly affects the selection of costs associated with their exploitation, improvness of the functioning readiness, the time of trouble-free work extension, the costs of renewal reduction. Making the right decisions in the action systems is conditioned by having the economic information provided by the accounting segment (Murthy & Verbitsky, 2003).

The decision of railway automation devices repair and modernization is influenced by the initial costs associated with the investment expenditures for the purchase of new components and the structural changes in device as well as the expected cost of the life cycle usage and exploitation. LCC analysis can be successfully used to evaluate the efficiency of the railway automation devices maintenance and modernization. It also takes into account the reliability features of these devices. The cost analyzes show that the maintenance costs in the LCC oscillate between 60 and 90 percent of a total cost. The high level of the railway automation devices reliability and safety can be achieved by using multiple alternative combinations of spending. The specified level of system security can be achieved through higher investments (using better and more expensive technology, materials etc.) or higher exploitation costs (e.g. highly qualified and better paid personnel service etc.) (Sustr et al., 2016).

Acknowledgment

This material is based upon work supported by Polish National Center for Research and Development under Grant No. PBS3/A6/29/2015.

References

[1] Banar, M. and Ozdemir, A. (2015). An evaluation of railway passenger transport in Turkey using life cycle assessment and life cycle cost methods, *Transportation Research Part D-Transport And Environment,* vol. 41, pp. 88-105.

[2] Berzi, L., Delogu, M., Pierini, M. and Romoli, F. (2016). Evaluation of the end-of-life performance of a hybrid scooter with the application of recyclability and recoverability assessment methods, *Resources Conservation and Recycling*, vol. 108, pp. 140-155.

[3] Dolinayova, A., Loch, M., and Kanis, J., (2015). Modelling the influence of wagon technical parameters on variable costs in rail freight transport, *Research in Transportation Economics,* vol. 54, pp. 33-40.

[4] Durairaj, S. K., Ong, S. K., Nee, A. Y. C. and Tan, R. B. H. (2002). Evaluation of Life Cycle Cost Analysis Methodologies, *Corporate Environmental Strategy,* vol. 9, no. 1, pp. 30-39.

[5] Gradzki, R. and Lindstedt, P. (2015). Method of assessment of technical object aptitude in environment of exploitation and service conditions, *Eksploatacja i Niezawodność - Maintenance and Reliability,* vol. 17*,* no. 1, pp. 54-63.

[6] Kornaszewski, M., Bojarczak, P. and Pniewski, R. (2016). Introduction of world innovative technologies to railway transport in Poland. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, Rajecke Teplice, Slovak Republic, Part II., pp. 962-969.

[7] Kornaszewski, M. (2013). *Modelowanie odnowy systemów sterowania ruchem kolejowym w procesie eksploatacji*. Wydanie I. Wydawnictwo UTH, Radom.

[8] Łukasik, L., 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*, Rajecke Teplice, Slovak Republic, Part IV., pp. 1212-1219.

[9] Muhlemann, A. P., Oakland, J. S. and Lockyer, K. G. (1995). *Zarządzanie. Produkcja i usługi.* Wydawnictwo Naukowe PWN, Warszawa.

[10] Murthy, D. K. and Verbitsky, D. E. (2003). Effective reliability management for transit system life cycle. *Asq's 57th Annual Quality Congress Proceedings: Expanding Horizon: Global, Personal, Tools, Networking, Solutions*. pp. 169-182.

[11] 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, Slovak Republic, Part IV., pp. 1571-1578.

[12] Popa, A. M. (2016). The Impact of Information Technology on the Management of Train Traffic. *New Approaches in Social and Humanistic Sciences,* Bologna, Italy, pp. 429-432.

[13] Siciliano, G. et al. (2016). Adapted cost-benefit analysis methodology for innovative railway services, *European Transport Research Review*, vol. 8, Issue 4, article no. 23.

[14] Sustr, M., Viskup, P. and Fuchs, P. (2016). Monetary Costs of Transport Process Members, in the Railway Transport Caused by Irregularity. *Proceedings of the 20th International Scientific Conference Transport Means 2016,* Kaunas, Lithuania, pp. 1058-1063.

[15] Urbanyi-Popiołek, I., (2013). *Ekonomiczne i organizacyjne aspekty transportu.* Wydawnictwo Wyższej Szkoły Gospodarki, Bydgoszcz.

[16] Zhang, D., Hu H., Roberts, C. and Dai, L. (2017). Developing a life cycle cost model for real-time condition monitoring in railways under uncertainty. *Proceedings of the Institution of Mechanical Engineers Part F-Journal of Rail and Rapid Transit,* vol. 231, Issue 1, London, England, pp. 111-121.

[17] Zoeteman, A. and Esveld, C. (2004). State of the art in railway maintenance management: planning systems and their application in Europe. *IEEE International Conference On Systems, Man, and Cybernetics, Conference Proceedings,* vol. 1-7, New York, USA, pp. 4165-4170.

DETERMINATION AND REALIZATION OF SCIENTIFIC AND TECHNOLOGICAL PRIORITIES OF RUSSIA IN THE CONTEXT OF GLOBALIZATION

Elena Korostyshevskaya[1,a], Svetlana Rumyantseva[2,b] and Ivan Samylov[3,c,*]

[1]Saint Petersburg State University, Faculty of Economics, Department of Economics and Economic Policy, Tchaikovskogo str. 62, a. 310, Saint Petersburg, 191194, Russia

[2]Saint Petersburg State University, Faculty of Economics, Department of Economics and Economic Policy, Tchaikovskogo str. 62, a. 310, Saint Petersburg, 191194, Russia

[3]Saint Petersburg State University, Faculty of Economics, Department of Economics and Economic Policy, Tchaikovskogo str. 62, a. 310, Saint Petersburg, 191194, Russia

[a]e.korostyshevskaya@spbu.ru, [b]s.pumyantseva@spbu.ru, [c]sambar92@mail.ru

*Corresponding author

Abstract. Stable, sustainable and progressive development of Russian economy, its integration in global innovation process is the main goal of Russian economic policy, which reflects both national economics and the whole society. While global competition becomes tougher, general goals related to long-term planning and forecasting as well as strategic goals related to technologies, industries, spheres of activity of high priority became main key factors of intensification of innovation process and increase of its effectiveness. Hence, major role in economic and innovation development belongs to the choice of foreground directions of scientific and technological development of countries, regions, companies, other actors of national innovation system of Russia in the context of the triad "forecast-plan-program". Time frames of the research (2006-2016) is relatively representative period during which the biggest number of decisions were taken and documents signed related to determination and realization of scientific and technological priorities of Russia. The article has the following structure: 1) review and comparative analysis of official documents reflecting scientific and technological priorities of Russia; 2) development of a classification of scientific and technological priorities; 3) Topicality of Foresight of commercialization of results of technological development in Russia; 4) forecast, analysis and measurement of efficiency of government policy concerning scientific and technological priorities. Results of this research may become a basis of enhancement of scientific and technological policy of Russia in the context of globalization.

Keywords: globalization, scientific and technological priorities, forecast, plan program, Foresight, innovation, innovation policy.

JEL Classification: F63, 021, 031, P11

1. Introduction

Achievement of strategic goals of socio-economical development of Russia and intensification of participation of the country in global processes requires simultanious solution of a set of interconnected problems. The most difficult task is to increase the competitiveness of processing industries while maintenaning the acceptable level of national security.

The purpose of this research is to review current state of the area of scientific and technological priorities of Russia, to track its evolution during last 10 years period and to evaluate efficiency of innovation policy of Russia using examples of strategic plans and state programs.

Key researches in this area are related to such problems as: the problem of justification and achievement of results of scientific and technological forecasting (Belousov & Frolov, 2008), (Komkov, 2009), (Kokoshin & Bartenev, 2015); development of industry-related forecasts (Chertok, 2009), (Troshin & Fedorova, 2015), (Giglavy et al., 2013), (Keisner et al., 2016); a forecast of science branches development (Boychenko, 2009); foresight as an instrument of design of possible development scenarios (Bussey, 2013), (Brummer et al., 2010), (Komkov et al., 2016); models of entrepreneurship development in global environment in the context of different countries (Gajanova, 2015), national industrial initiatives. Some researches analyze a need for achievement of discontinuity of innovation process in the context of sustainable development (Janoskova & Kral, 2015) and tendencies of development of global technology markets including those based on achievements of life sciences (Hejduková, 2015). In addition, within the framework of this research there are forecast-based researches regarding prospective directions of cooperation between EU and Russia and other CIS countries in the area of development of innovation processes and innovation policy (Fakhrutdinova et al, 2016), (Korostyshevskaya & Urazgaliev, 2016), (Lancaric et al., 2016).

2. Classification of scientific and technological priorities of Russia

Analysis of official documents related to scientific and technological priorities of Russia allowed to distinguish such kind of priorities as traditional, new, thematical, political, declarative and real priorities.

Traditional scientific and technological priorities are represented by special priorities and triade priorities (forecast, plan, program).

The number of documents reflecting special priorities includes:

1. Priority directions of development of science, technology and technics in Russia and the List of critical technologies of Russia (presidential decree No. Пр-842 dated May 21, 2006).
2. Priority directions of development of science, technology and technics in Russia and the List of critical technologies of Russia No. 899 dated July 7, 2011 based on the presidential decree No. 623 dated December 16, 2015.

At the moment among directions of its priorities Russia has 8 directions of science, technology and technics development: new and the newest technologies (3 directions), traditional basic technologies (3 directions), technologies ensuring national security (2 directions) and 26 critical technologies.

Critical technologies (CT) is related to development of new areas of the sixth technological framework prevail: nanotechnology, biotechnology, IT. Traditional basic technologies are subordinate and ecology and national security are at the third place.

Technologies related to development of high-tech processing industries are given minimal attention. The latest list of CTs as of 2015 contains only two technologies of this type: technologies of aerospace and transport equipment of the new generation and technologies of electronic component bases and energy-efficient light devices.

Triade priorities include:

1. Forecasting documents such as the Forecast of Scientific and Technological Development of Russia until 2020") adopted on September 27, 2013.
2. Documents related to strategic planning: the Concept of Long-term Socio-economic Development of Russia until 2020, the Strategy of Innovation Development of Russia until 2020 adopted on December 8, 2011.
3. Programming documents including state programs funded from the budget (direction "Innovation Development and Modernization of the Economy") and Russian Government Program for Science and Technology Development for 2013-2020.

The forecast of scientific and technological development of Russia until 2030 includes seven thematic directions: IT and communication, biotechnology, medicine and healthcare, new materials and nanotechnology, rational nature management, transport and space systems, energy efficiency and energy saving.

The Concept determines traditional hi-tech industries as drivers of innovation development of the economy which could become a starting point for solution of a problem of creation of modern scientific and technological base and modernization of the economy. New areas such as biotechnology and nanotechnology are not affected by the document.

If one compare these priorities with their list, available in Forecast 2030, then they are fundamentally different. In Forecast 2030 the emphasis is put on new technologies of manufacturing industries associated with the development of a high-tech complex of Russia.

Strategy of Innovation Development has other priorities, new technologies dominate here, there is no electronics and shipbuilding, and there are a number of other areas of activity based on advanced production technologies. Priorities are formulated in the thematic areas, somewhat vague and they are closer to the list in Forecast 2030.

In the State Program for Development of Science and Technology for 2013-2020, the thematic nature of priorities is preserved, they practically coincide with Forecast-2030.

Starting in 2014, the government is trying to establish a new agenda and find new ways of defining priorities in the context of the deployment of global innovation processes in the context of „markets of the future" and „big challenges".

The National Technological Initiative is a long-term program of public-private partnership for the development of new promising markets based on high-tech solutions that will determine the development of the world and Russian economy in the next 10-15 years. The specific result of these priorities should be the emergence of Russian companies among global leaders in the future markets in 2030-2035.

Until 2014 scientific and technological priorities were not connected to potential markets which high-tech business usually take into account and the connection „priority - global market" was absent. Now we are talking about the formation of a stable demand for Russian products in the „markets of the future". Such markets today either are absent in the world, or are not yet sufficiently developed. (Pashkus et al., 2016)

By this moment, the Council for Economic Modernization and Innovative Development of Russia have approved six roadmaps, except for FoodNet; 11 projects that are implemented within the framework of these roadmaps will receive support from the Agency for Strategic Initiatives for Promotion of New Projects. Now the roadmaps related to on the development of seven promising markets are underway.

Typology of NTI roadmaps is twofold. On the one hand, they are associated with the creation of new markets, and, on the other hand, they are associated with promising technologies: digital design and modeling, new materials, additive technologies, telecommunications (Dengov & Tulyakova, 2015), etc.

Another government initiative is the Strategy of the scientific and technological development of the Russian Federation until 2035, where scientific and technological priorities are formulated in the context of the so-called “big challenges”. These challenges for Russia are presented by the risk of lagging behind the world rates of technological development; the risk of loss of efficiency of traditional energy; problems of preservation of the environment; the need to ensure food security, both in terms of quantity and quality of food; changing situation in the labor market, social sphere and healthcare; the risk of spreading epidemics; the emergence of new security threats to Russian society, which have a complex interrelated nature. (Decree of the President of the Russian Federation “On the Strategy for the Scientific and Technological Development of the Russian Federation until 2035” of December 1, 2016, No. 642).

3. Foresight as an instrument of scientific and technological forecasting

As the world practice has shown, the development of effective strategies for innovative economic development is a result of a constant Foresight process (Boykova & Salazkin, 2008). At the moment there are different methods of forecasting - factographic, expert, index, scenario, matrix and other methods, which are widely used in innovation science. Each one of them is aimed at solution of a specific problem and have its own advantages and shortcomings. Obviously, to determine the future strategies in space-time terms, the application of each of them separately contradicts the very logic of the theory. In this case, there is a need for a basic unified method that could combine all forecasting techniques and that may be used for analysis of complex and heterogeneous economic systems. Scenario analysis may act as such a method. In order to reduce inaccuracies it is important to develop several scenarios under different assumptions, to come up with the so-called "medium scenario" and to form a macroeconomic plan to solve existing problems on its basis. Appropriate period should be chosen for implementation of certain areas of a program. It is important that program of any source (state, university or business) includes the blocks that would be subordinate to the triad: scientific, technical, investment, institutional and socio-economic.

Therefore, foresight forecasts are a key to achieving the objectives of innovation policy and accelerating the pace of scientific and technological development of Russia, in particular, in terms of commercialization of technological developments.

Foresight makes it possible to identify and track existing and emerging technological trends and predict a whole range of events. Foresight not only predicts future technological trends, but also searches for promising, yet undiscovered opportunities for the development of future technologies as well as opportunities missed in the past and analyses risk (Razgulyaev et al., 2014). Foresight system is important for advanced development of universities, as well as for national fundamental science in the context of global competition.

4. Effectiveness of the innovation policy of Russia in the field of scientific and technological priorities

To estimate the effectiveness of Russia's innovation policy, official documents of strategic planning and programming have been analyzed. The results of the analysis are presented in Tables 1-3.

Table 1: effectiveness of the innovation policy of Russia in the context of strategic planning

Document	Tasks	Year	% of completion
The Strategy for the Development of Science and Innovations in the Russian Federation for the Period until 2015. Approved by the Interdepartmental Commission on Science and Innovation Policy of the Ministry of Education and Science on February 15, 2006 (Minutes No. 1)	1. Domestic expenditure on research and development as% of GDP - 2%;	2010 г.	56% of completion (1,13 % GDP);
	2. The number of patent applications for 10 thousand people - 4;		50% of completion (2);
	3. The share of innovative products in total sales - 15%.		32% of completion (4,9 %).
	1. Domestic expenditure on research and development as% of GDP - 2,5%;	2015 г.	0,45% of completion (1,13 % GDP);
	2. The share of innovative products in total sales - 12%;		36% of completion 4,4%;
	3. The number of patent applications for 10 thousand people 5,5.		29% of completion (1,6 in 2014)
The Strategy of Innovative Development of the Russian Federation for the Period to 2020. Approved by the Order of the Government of the Russian Federation No. 2227-p dated 08.12.2011.	1. The share of organizations implementing technological innovations in the total number of organizations – 9,6%;	2013 г.	93% of completion (8,9 %);
	2. Share of innovative goods, works, services, in total exports of goods, works, services of industrial firms – 8.2%;		167 % of completion (13.7%);
	3. The share of products (works, services) that are new to the world market, in the total volume of industrial production - 0,04 in 2013		0 % of completion
	4. Coefficient of inventive activity - 2,1;		95% of completion (2 in 2013);
	5. Domestic expenditure on research and development (in% of GDP)- 1,5 in 2013		70% of completion (1,05 in 2013)

Source: compiled and calculated by the authors based on: http://fcp.economy.gov.ru/cgi-bin/cis/fcp.cgi/Fcp/ViewFcp/View/2007/240; http://inno-exp.ru/archive/15/innov_15_2015_114-131.pdf; http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/wages/ (date of extraction - 23.10.2016)

For example, in the Strategy of innovative development of the Russian Federation for the period up to 2020, quite achievable targets were indicated for the period until 2013, but they are not met. For the period up to 2016 (the next target line), almost all targets were significantly increased. The data obtained for the year 2015 make it possible to propose that the results of the implementation of the target targets for 2016 will not be achieved fully. We pay special attention to the complete lack of results on such an indicator as "the share of goods (works, services) that are new to the world market in the total volume of industrial production" (0% of completion).

Table 2: The effectiveness of innovation policy of Russia (state programs for the development of traditional industries)

Document	Tasks	Year	% of completion
„Space program of the Russian Federation for 2006-2015“	1. Russian segment of the international space station consisting of 5 modules	Until 2010	100% (5 modules)
	2. A system of fixed space communications and television broadcasting (13 space crafts - SCs)		77% (10 SCs)
	3. System of mobile satellite communication (6 SCs)		50 % (3 SCs)
	4. A system of space meteorological monitoring (5 SCs)		20% (1 SCs)
	5. System of space environment monitoring (4 SCs)		0%
	1. Russian segment of the international space station consisting of 8 modules	Until 2015	62% (5 modules)
	2. System of fixed space communications and broadcasting (26 SCs)		58% (15 SCs)
	3. System of mobile satellite communication (12 SCs)		75% (9 SCs)
	4. System of space meteorological monitoring (5 SCs)		20% (2 SCs out of 5)
	5. System of space environment monitoring (4 SCs)		20% (1 SCs out of 5)

Source: compiled and calculated by the authors based on: Krylov A. / Analysis of a space activity of Russia for the period 2001-2013 Available: http://mosspaceclub.ru/3part/krilov_1.pdf (date of extraction - 23.10.2016)

The development of outer space in modern conditions is a matter of national security. In 2010, only one of the five tasks was completed - the first. In 2015, none of the five tasks was fully completed. At the same time, this is the most costly program in terms of money.

The Federal Space Program of Russia for 2006-2015, approved by the Government of the Russian Federation on October 22, 2005, No. 635, was amended four times (in 2007, in 2008, in 2011 and in 2012). Because of all the changes introduced, the total amount of funding for the activities envisaged by the Program for 2006-2015 was increased from 486.8 to 876.2 billion roubles.

Table 3: Effectiveness of innovation policy (on the example of Non-Industry Development Programs)

Document	Tasks	Year	% of completion
Nanoindustry development program in the Russian Federation until 2015	1. The average age of scientific and special equipment, devices and devices - 5 years	2011 г.	100% (5 лет в 2011 г.)
	2. Number of organizations with access to various components of the nanoindustry infrastructure - 2480		100% (2483 в 2011г.)
	3. Sales of Russian nanoindustry products 150 billion roubles		100% (154 млрд. руб. в 2011 г)
	1. The volume of sales of Russian nanoindustry products is 750 billion rubles.	2015 г.	13% 100 млрд. руб.

Source: compiled and calculated by the authors based on: http://www.komitet2-8.km.duma.gov.ru/file.xp?idb=2917125&fn=material.pdf&size=2702432 (date of extraction - 23.10.2016)

In terms of sales of Russian products of nanoindustry in 2015, a purely symbolic implementation has been achieved.

Consequently, it may be argued that Russian innovation policy in the sphere of scientific and technological priorities is not efficient. This discredits it and require sufficient changes.

5. Conclusion

Currently, there is a state of uncertainty in terms of scientific and technological priorities in Russia as there is no uniform list of priorities. The special priorities and priorities of the triad are not fully harmonized.

As a result, the relationship between scientific and technological forecasting, planning and programming of the national economy is not traced. The existing system of scientific and technological priorities is not aimed at developing the branches of high-tech industries, with the exception of existing State programs.

Special priorities contain only two critical technologies, which is clearly not sufficient according to world`s standards. All the official documents mentioned earlier are mostly declarations of intent, since they are not fully executed. The lack of realistically achievable priorities negatively affects the government policy in this area and the formulation of its goals, tasks, directions and strategies.

Russian practice of scientific and technological priorities has begun to clearly discern the tendency of the formation of their political context in the form of a list of "big challenges".

The most effective form of government intervention in this area should be macroeconomic planning rather than programming which is a form practiced in the post-Soviet period.

Acknowledgement

The article was prepared with support of the grant of RFBR (Russian Foundation for Basic Research), project No. 17-02-00171 - Innovation development of Russia and instruments of its stimulation in the context of the theory of cycles and evolutional economy.

References

[1] Bussey, M. (2013). Conceptual Frameworks of Foresight and Their Effects: Typology and Applications, *Foresight,* vol.7, no. 3, pp. 64-73.

[2] Belousov, D. and Frolov, I. (2008). Long-Term Science and Technology Forecasting: Methodologies, Future Visions, Scenarios of Development, *Foresight,* vol.2, no. 3, pp. 54-66.

[3] Boychenko V. S. (2009) Priorities in basis research as a reflection of the balance of interests of the state, society and science, *Innovations,* vol. 9, pp. 47-64.

[4] Brummer, V., Konnola T. and Salo A. (2010). Diversity in Foresight: a Practice of Selection of Innovation Ideas, *Foresight,* vol. 4, no. 4, pp. 56-58.

[5] Chertok, B.E. (2009). Space era: Prognosis till 2101, *Innovations,* vol. 9, pp. 43-46.

[6] Dengov, V. V. and Tulyakova, I. R. (2015). Credit Risk Analysis for the Telecommunication Companies of Russia: Problem Statement and Selection of Indicators. *Proceedings of the 2nd International Multidisciplinary Scientific Conferences on Social Sciences and Arts (SGEM)*, Book 2, Albena, Bulgaria, pp. 131-138.

[7] Fakhrutdinova, E. V. et al. (2016). Regional Economic Integration in the Innovation Sector in the Former Soviet Union and Russia's Role in Its Revitalization. *PICMET '16 Conference "Technology Management for Social Innovation",* Waikiki Beach Marriott Resort & Sp Honolulu, Hawaii, USA, pp. 1764-1773.

[8] Gajanova, L. (2015). The Proposal of competitive intelligence Model for Enterprices in the Slovak Republic as a Prerequisite for Sustainable Development in a Global Environment. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences,* Part I., Zilina, Slovakia, pp. 134 - 143.

[9] Giglavy, A., Sokolov A., Abdrakhmanova G., Chulok A. and Burov B. (2013). Long-Term Trends in the ICT Sector, *Foresight,* vol.7, no. 3, pp. 6-24.

[10] Hejduková, P. (2015). Globalization and health markets. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Part I., Zilina, Slovakia, pp. 199-206.

[11] Janoskova, K. and Kral, P. (2015). Optimal Timing of Innovation as a Precondition of successful innovation on the Global Market. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences,* Part I., Zilina, Slovakia, pp. 254-259

[12] Keisner, A., Raffo, J. and Wunsch-Vincent, S. (2016). Robotics: Breakthrough Technologies, Innovation, Intellectual Property, *Foresight,* vol.10, no. 2, pp. 7-27.

[13] Kokoshin, A. A. and Bartenev, V. I. (2015). Problems of the interdependence of security and development in the strategic planning of the Russian Federation: from goal-setting to forecasting, *Problems of forecasting,* vol. 6, pp. 6 -17.

[14] Komkov, N. I. (2009). Scientific and technological forecasts as a basis for transition to an innovative economy, *Innovations,* vol. 9, pp. 20-32.

[15] Komkov, N. I., Selin, V. S., Tsukerman V. A. and Goryachevskaya V. S. (2016). Scenario forecast for the development of cargo flows of the Northern Sea Route in the short and strategic perspectives, *Problems of forecasting,* vol. 2, pp. 87-98.

[16] Korostyshevskaya, E. M. and Urazgaliev, V. Sh. (2016). Russia in European Innovation Space in the Context of Globalization. *Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences,* Part II., Zilina, Slovakia, pp. 970-979.

[17] Lancaric D., Toth, M. and Savov R. (2016). Legal form of business and agency costs: a case of Slovak agriculture, *Ekonomicko-manazerske spektrum,* vol. 10, no. 2, pp. 35-48

[18] Pashkus V. Y. et al. (2016) Evaluation of City Brand in the Global Economy: Techniques and Perspectives. *Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences,* Part V., Zilina, Slovakia, pp. 1635-1641.

[19] Razgulyaev, K. A., Khan, D. V. and Lukovnikova, N. M. (2014). Foresight and forecast research and technology activities of the university, *Innovations,* vol. 8, pp. 100-106

[20] Troshin, A. N. and Fedorova L. A. (2015). Forecasting the sustainable development of high-tech industries in the aviation cluster in Russia, *Problems of forecasting,* vol. 3, pp. 43-45.

TRANSPORT IN A SUSTAINABLE CITY IN THE GLOBALISED ENVIRONMENT

Barbara Kos[1,a,*]

[1]University of Economics in Katowice, 1 Maja 50, 40-287 Katowice, Poland

[a]barbara.kos@ue.katowice.pl

*Corresponding author

Abstract. Sustainable development is a global concept used in creating development policies at various decision levels. This concept covers nearly all areas of human activity. More than one-half of the world's population currently lives in urban areas. Shaping appropriate transport policy and actions for urban mobility are important elements of the sustainable development of modern cities. The concept of sustainable urban mobility is closely connected with the goals of improving energy consumption and environmental indicators in urban areas. In the case of agglomerations and large cities, the organization and management of traffic as well as shaping appropriate communication habits have a decisive influence on transport pollution. Contemporary agglomerations are particularly interested in the development of public transport and the use of advanced technical and organizational solutions in this area. Urban public transport is a public service, essential to the functioning of cities, and thus to economic development in modern countries. This approach is in line with the general trend, which is visible not only in Poland but all over the world. The aim of the paper is to present solutions in urban transport affecting sustainable urban development. Increasing traffic congestion in city centres, problems with commuting to the city centre at peak hours and insufficient parking space will naturally encourage residents to seek means of transport other than their own cars. Advanced and eco-friendly implementation of integrated transport solutions provides an opportunity to reduce both road congestion and the harmful impact of road transport on the environment.

Keywords: urban transport, sustainable mobility, sustainable city, Sustainable Cities Index

JEL Classification: O18, Q01, R41

1. Introduction

The processes that take place in the modern world, such as internationalization, globalization and regionalization, result from different factors such as: increased international trade (goods, services, culture, etc.), the development of business activities, the acceleration of freight traffic, the increasing flow of information, the removal of barriers and growing interdependencies between states. Contemporary development is most prominent in urban areas. Cities are the centres of innovation and economic development, in which human and social capital is accumulating. Urbanization is one of the most important processes of economic, spatial, political and social importance in recent years (Bibri & Krogstie, 2017). Currently, about half of the world's population lives in cities, whereas about 200 years ago, the population living in cities accounted for only 3% of the total population. It is expected that by 2030, almost 60% of the world's population will live in urban areas. Cities occupy only 3% of the Earth's surface, but they account for 60-80% of energy consumption and 75% of carbon emissions (Global Compact Poland, 2016). About 74% of the population of the European Union Member States currently live in urban areas, with an expected increase to 84% by 2050 (European Commission, 2013). Rapidly progressing urbanization processes have a negative impact on living conditions and quality of life. That is why sustainable development of cities is so important. Alleviating the unfavorable phenomena associated with the expansion of urban centers is one of the priorities of global development enumerated in a number of international documents, including: Agenda 21, adopted at the First Earth Summit in Rio de Janeiro (1992), the Territorial Agenda of the European Union (the so-called Leipzig Charter), created during the Informal Meeting of Ministers of the EU Member States for Territorial Cohesion and Urban Development (2007), the Lisbon Treaty (2007), as well as the renewed EU Sustainable Development Strategy (2006). According to the internationally adopted acts, cities should be managed in such a way as to maintain their efficiency, sustainably manage resources and improve the living conditions of the population.

Analysis of the city definition criteria conducted in 2006 on behalf of the World Urban Forum in about 230 countries has shown that in different regions of the world and in different countries, the choice of criteria for settlements to be considered cities is individual. In 105 countries this criterion is the administrative status of the locality (e.g. the seat of local authorities), and in 100 countries the definition of a city is based mainly on population and population density, although the minimum population is different in different countries. In 25 countries, the economic structure is the main criterion, especially the share of the population employed in non-agricultural activities. In 18 countries the most important determinant of urbanity is access to urban infrastructure (including streets, water supply and sewerage, power grid, telecommunications networks, etc.). It is recognized that the city is a human settlement meeting the basic criteria: demographic (minimum number of inhabitants), functional (bigger share of the population employed in non-agricultural activities), urban (compact and intensive development, high population density), sociological (dominance of the features of urban lifestyle) (Pawlak & Pawlak, 2010). The enlargement of urbanized areas and the simultaneous separation of the functions of residential areas, together with the concentration of service and leisure functions, are main factors that increase the mobility of urban dwellers and increase the average distance travelled. Therefore, the transport factor becomes the basic determinant of the development potential of large cities and the quality of life in the city (Tomanek, 2014)

The concept of transport planning through mobility management is linked to the creation of such an urban mobility system, which on the one hand will increase the availability of particular areas and services (becoming an important development impulse) and, on the other hand, will contribute to improving the quality of life and the environment (Kos-Łabędowicz, 2016). The idea of mobility planning results, among others factors, from the fact that high economic and social costs of providing transport infrastructure often prove inefficient. Expanding road infrastructure to increase capacity and to reduce congestion often proves to be only a short-term solution. Therefore, actions undertaken should aim to effectively create a city transport system, using all available resources and taking into account the need to promote green and energy-efficient travel. It is important to plan the necessary investments (including infrastructures) aimed at increasing the transport accessibility of key travel destinations, taking into account the principles of sustainable development (Wefering et al., 2014).

The aim of the paper is to present solutions in urban transport affecting sustainable urban development. Increasing traffic congestion in city centres, problems with commuting to the city centre at peak hours and insufficient parking space will naturally encourage residents to seek means of transport other than their own cars. Advanced and eco-friendly implementation of integrated transport solutions provide an opportunity to reduce both road congestion and the harmful impact of road transport on the environment.

2. Methods

There is no single methodology for measuring a sustainable city, but there are a number of guidelines in the literature that should be met to make the city sustainable. According to Agenda 21, *the sustainable development of human settlements* should provide shelter for all people in the world and reduce development models that are harming the ecosystem. Public authorities should ensure a rational water management through, inter alia, protection of water resources from depletion, contamination and degradation, and improvement of sewerage systems. Energy efficiency and promotion of the development of energy efficient technologies for energy recovery are also important elements. States should promote environmentally-friendly urban transport systems, including effective public transport and "non-motorized lifestyles" (e.g. walking or cycling). They should also reduce the negative impact on the environment of construction projects, by promoting local materials, efficient working methods, informal self-help methods, energy-efficient design, supporting the recovery of building materials, reducing environmental damage and protecting environmentally sensitive zones (United Nations, 1992).

Another problem is how to determine the number of inhabitants of particular urbanized areas, hence depending on the method of counting, different cities appear at the top of the different rankings of the world's most populous cities. These differences may be due to the methodology of calculating how many people live in a particular city. The city is not a static creation and the number of inhabitants is constantly changing; apart from births and deaths, some people are constantly moving, living nearby but working in the centre. In addition, slums are very often a part of most of the world's largest cities, and calculating the number of residents is hard at best. Another important factor for ranking the world's most populous city is how we set the borders of the urban area considered. (Uchiyama & Mori, 2017). Residents can be counted in the administrative area of the city or in the whole urban agglomeration and the differences may be significant. The most populous cities in the world include: Shanghai - 21,982,184 inhabitants, Mumbai - 14,472,081 inhabitants, Istanbul - 13,203,696 inhabitants (2013) and the most populated conurbations: Tokyo - 37,730,064 inhabitants, Chongqing - 31,442,300 inhabitants, Seoul - 24,472,063 inhabitants (2013).

As it is commonly believed that sustainable urban development will determine the development of countries and continents, the attractiveness and quality of life in cities are assessed by a number of complex indicators and indices – so-called Urban Indicators, which are tools for monitoring sustainable urban development. Urban Indicators are divided into urban monitoring indicators in terms of: shelter, community, environment, economic processes, urban (institutional) management.

3. Results

The Arcadis Sustainable Cities Index 2015 (Arcadis, 2015) presents the ranking of cities developing in the way that is most favorable for people and the environment. The study includes three key criteria - the quality of life of residents, the impact of cities on the environment and factors advantageous to economic development. Arcadis has surveyed 50 cities in 31 countries around the world, giving them places in the ranking based on a number of different criteria, grouped into three areas: People - measures social performance including quality of life, Planet - captures environmental factors like energy emissions and pollution, Profit - assesses business environment and economic performance. The People sub-index consists of indicators that try to measure the quality of life of the cities' inhabitants (transport infrastructure, health, education, income inequality, work-life balance, the dependency ratio, green spaces within cities). The Planet sub-index rates the city energy consumption and renewable energy share, recycling rates, greenhouse gas emissions, natural catastrophe risk, drinking water, sanitation and air pollution. The Profit sub-index takes on the business perspective combining different factors affecting economic success of the city (e.g. transport infrastructure, ease of doing business, the city’s importance in global economic networks, property and living costs, GDP per capita and energy efficiency). Table 1 shows the overall results obtained in 2015 for the 20 highest rated cities with their respective sub-indexes.

Table 1: Top 20 cities from Sustainable Cities Index 2015 ranking

No.	City	Overall	People	Planet	Profit
1	Frankfurt	1	9	1	1
2	London	2	3	12	2
3	Copenhagen	3	5	3	11
4	Amsterdam	4	7	6	4
5	Rotterdam	5	1	5	19
6	Berlin	6	10	2	26
7	Seoul	7	2	13	6
8	Hong Kong	8	6	19	3
9	Madrid	9	14	4	10
10	Singapore	10	16	7	9
11	Sydney	11	4	18	16
12	Toronto	12	15	9	18
13	Brussels	13	11	15	8
14	Manchester	14	12	14	21
15	Boston	15	13	21	14
16	Paris	16	20	11	28
17	Melbourne	17	8	23	5
18	Birmingham	18	17	10	29
19	Chicago	19	18	29	12
20	New York	20	33	20	13

Source: (Arcadis, 201)5

In 2015 some cities that did not rank in the top 20 according to overall index manage to rank in the top 20 in particular sub-indexes, e.g. considering People sub-index, Beijing was 19th, considering Planet sub-index, São Paulo was 16th and Rio de Janerio was 17th, considering Profit sub-index, San Francisco was 7th, Houston 15th, Los Angeles 17th and Philadelphia 20th.

In 2016 Arcadis (Arcadis, 2016) presented another report showing the ranking of cities developing in the way that is most favorable for people and the environment. The survey included 100 cities in the world, awarding them places in the ranking according to the criteria grouped in three areas: People, Planet, Profit. Changes in each of the areas concerning criteria were made. Accordingly, the People sub-index in the 2016 ranking includes: health, education, income inequality, work-life balance, the dependency ratio, crime, housing and living costs. The Planet sub-index includes so-called “green factors” such as city energy consumption, renewable energy share, green space within cities, recycling and compositing rates, greenhouse gas emissions, natural catastrophe risk, drinking water, sanitation and air pollution. As for the Profit sub-index, it rates the “economic health” of the city, combining different measures from a business perspective: transport infrastructure, ease of doing business, tourism, GDP per capita, the city’s importance in global economic networks, connectivity and employment rates. Table 2 shows the overall results obtained in 2016 by the top 20 highest rated cities with their respective sub-indexes positions.

Table 2: Top 20 cities from Sustainable Cities Index 2016 ranking

No	City	Overall	People	Planet	Profit
1	Zurich	1	27	1	5
2	Singapore	2	48	12	1
3	Stockholm	3	14	2	10
4	Vienna	4	4	4	14
5	London	5	37	9	3
6	Frankfurt	6	16	5	23
7	Seoul	7	1	26	18
8	Hamburg	8	3	10	25
9	Prague	9	6	31	7
10	Munich	10	8	24	11
11	Amsterdam	11	7	19	16
12	Geneva	12	30	3	42
13	Edinburgh	13	38	22	6
14	Copenhagen	14	24	13	17
15	Paris	15	20	32	9
16	Hong Kong	16	81	29	2
17	Berlin	17	5	16	32
18	Canberra	18	17	25	20
19	Rotterdam	19	2	17	46
20	Madrid	20	18	11	34

Source: (Arcadis, 2016)

In 2016 some cities that did not rank in the top 20 according to the overall index, manage to rank in the top 20 in particular sub-indexes, e.g. considering People sub-index, Muscat was 9th, Montreal 10th, Antwerp 11th, Brussels 12th, Barcelona 13th, Warsaw 15th and Lyon 19th, according to the Planet sub-index, Wellington was 6th, Rome 7th, Sydney 8th, Manchester 14th, Birmingham 15th, Vancouver 18th and Glasgow 20th, according to Profit sub-index, Dubai was 4th, New York 8th, San Francisco 12th, Abu Dhabi 13th, Macau 15th and Kuala Lumpur 19th.

4. Discussion

Despite the changes made to the Sustainable Cities Index by Arcadis in 2016, it can be seen that both in 2015 and in 2016, many European cities are in the top twenty. In 2015 it was 11 cities and in 2016 16 cities. 8 European cities are in the top twenty in both 2015 and 2016 rankings but in different positions. Only Paris maintained a similar position in 2015, 16th place and in 2016, 15th place. As the data in Table 1 and 2 indicate, different cities also differ from one another concerning particular sub-indexes. For example, Hong Kong was ranked 8th overall, People 6th Planet 19th, Profit 3rd in 2015, and overall 16th, People 81st, Planet 29th and Profit 2nd in 2016. In order to make comparisons and generalizations of research conclusions, research should be carried out on the basis of standardized measures over an extended period of time. Nevertheless, according to the authors of the Arcadis study, the sustainable city has an urban transport system that enables people to move quickly and inexpensively, clean water supply systems, social security systems and efficient public institutions, a healthy and educated workforce, and enabling conditions for business development. Differences between cities in developed and developing countries should be kept in mind when comparing results concerning their levels of sustainability (Mori & Christodoulou, 2012).

Another example of an attempt at measuring the sustainable city is the Green City Index (Siemens AG, 2012), a research project run by the Economist Intelligence Unit and sponsored by Siemens. It is aimed at creating a unique tool that would enable cities to benchmark their performance and share best practices concerning urban sustainability. More than 120 cities from around the world were included in the ranking on the basis of their size and importance (mostly capital cities, large population hubs and business centres). The Green City Index measured environmental performance using approximately 30 indicators across eight to nine categories depending on the region (including CO_2 emissions, energy, buildings, land use, transport, water and sanitation, waste management, air quality and environmental governance). The series began in 2009 and includes over 120 cities from Europe, Latin America, Asia, North America and Africa. Each report contains general conclusions about the region, as well as detailed city profiles describing individual performances and best practices (Meijering, Kern & Tobi, 2014). Many other indicators and frameworks for measuring urban sustainability are used for preparing ranking of sustainable cities (Phillis, Kouikoglou & Verdugo, 2017).

5. Conclusion

There are many definitions of sustainable development. The UN defines it as "a process designed to meet the needs of the present without compromising the ability of future generations to meet their own needs" (WCED, 1998). In the context of cities, this means cities able to provide decent living to the present population, without creating future problems for themselves and the rest of the world. In the case of agglomerations and large cities, the decisive influence on the emission of air pollutants from transport is organization and management of traffic (Dydkowski & Kos, 2014) and creating appropriate communication habits among city dwellers. Contemporary agglomerations are particularly interested in the development of public transport and the application of advanced technical and organizational solutions in this area.

Considering the issues related to the development of transport within the European Union, attention should be paid to the prominent importance of ICTs and their impact on transport and the demand for transport services (Kos-Łabędowicz & Urbanek, 2017). Utilizing IT tools and solutions, urban transport services can be better managed, their quality improved and solutions implemented to help passengers use the services. The basic innovations in public transport include e.g.: modern technologies in the sale of public transport services, passenger information system, monitoring, mobile access to timetables (Kocoń, Kos, Kosobucki & Urbanek, 2013). In the subject literature, considerable attention is paid to modern organizational and technical solutions supporting the development of a sustainable urban mobility system, such as: integrated electronic payment systems for public services (Kos, 2015), (Kos-Łabędowicz, 2014); integration of urban transport systems with regional and national transport systems, especially rail transport (Kos & Urbanek, 2014); promoting active and low-emission modes of transport or alternative ways of using existing means of transport facilitated by the opportunities offered by the sharing economy. It is necessary to conduct educational and promotional activities aimed at changing the individual's transport habits at the same time promoting the development of efficient collective transport (in order to increase its role in the travel of city residents) (Kos, 2017).

Developing sustainable mobility is one of the key challenges for successful cities and metropolitan areas of the future (Tomanek, 2016). Providing sustainable mobility for urban areas requires certain conditions to be met, including: presence of sustainable, energy-efficient and affordable public transport; infrastructure supporting active modes of transport (cycling and walking); easy access to travel destinations by different transport modes; interconnection between the local and regional transport networks; spatial development taking into consideration different functions and activities (e.g. social, cultural, economic). Mobility infrastructure must be planned and developed taking into consideration long-term perspective, future needs and potential future technological, spatial and urban development.

References

[1] Arcadis (2015). Sustainable Cities Index 2015. [Online]. Available: https://www.arcadis.com/media/E/F/B/%7BEFB74BBB-D788-42EF-A761-4807D69B6F70%7D9185R_Arcadis_whitepaper_2015.pdf

[2] Arcadis (2016). Sustainable Cities Index 2016. [Online]. Available: https://www.arcadis.com/en/global/our-perspectives/sustainable-cities-index-2016/

[3] Bibri, S. E. & Krogstie, J. (2017). Smart sustainable cities of the future: An extensive interdisciplinary literature review, *Sustainable Cities and Society,* vol. 31, pp. 183-212.

[4] Dydkowski, G. & Kos, B. (2014). Modelowanie ruchu jako narzędzie zarządzania ruchem w transporcie miejskim, *Ekonomiczne Problemy Usług,* vol. 113, pp. 232-243.

[5] European Commission (2013). EU transport in figures 2013. Luxembourg: Publications Office of the European Union, Belgium.

[6] Global Compact Poland (2016). Zrównoważone Miasta. Życie w zdrowej atmosferze. [Online]. UN Global Compact, Network Poland, Warsaw. Available: http://ungc.org.pl/wp-content/uploads/2016/10/RaportZr%C3%B3wnowa%C5%BCone-miasta.pdf

[7] Kos, B. (2015). Development of Electronic Payments in Poland Using the Example of Local and Regional Collective Transport. *Communications in Computer and Information Science Tools of Transport Telematics, pp.* 352-361.

[8] Kos, B. (2017). Finansowanie publicznego miejskiego transportu zbiorowego w Polsce w aspekcie zrównoważonej mobilności, *Zeszyty Naukowe Uniwersytetu Gdańskiego Ekonomika Transportu i Logistyka*, vol. 63, pp. 224-241.

[9] Kos, B. & Urbanek, A. (2014). Areas of Using Telematic Tools in the High Speed Rail Integration Process in Europe. *Telematics - Support for Transport Communications in Computer and Information Science*, pp. 341-349.

[10] Kos-Łabędowicz, J. (2014). Integrated E-ticketing System – Possibilities of Introduction in EU. *Telematics - Support for Transport Communications in Computer and Information Science*, pp. 376-385.

[11] Kos-Łabędowicz, J. (2016). ICT and the Future of Urban Transportation. European Perspective. *Communications in Computer and Information Science Challenge of Transport Telematics*, pp. 122-134.

[12] Kos-Łabędowicz, J. & Urbanek, A. (2017). Do Information and Communications Technologies influence transport demand? An exploratory study in the European Union, *Transportation Research Procedia,* vol. 25*,* pp. 2660-2676.

[13] Lubieniecka-Kocoń, K., Kos, B., Kosobucki, Ł. and Urbanek, A. (2013). Modern Tools of Passenger Public Transport Integration. *Communications in Computer and Information Science Activities of Transport Telematics*, pp. 81-88.

[14] Meijering, J. V., Kern, K. and Tobi, H. (2014). Identifying the methodological characteristics of European green city rankings, *Ecological Indicators,* vol. 43, pp. 132-142.

[15] Mori, K. and Christodoulou, A. (2012). Review of sustainability indices and indicators: Towards a new City Sustainability Index (CSI), *Environmental Impact Assessment Review,* vol. 32, no.1, pp. 94-106.

[16] Pawlak, N. and Pawlak, J. (October 2010). Zrównoważony rozwój miast. [Online]. Available: http://www.agenda21.waw.pl/index.php?option=com_content&view=article&id=55

[17] Phillis, Y. A., Kouikoglou, V. S. and Verdugo, C. (2017). Urban sustainability assessment and ranking of cities. *Computers, Environment and Urban Systems,* vol. 64*,* pp. 254-265.

[18] Siemens AG (2012). The Green City Index. A summary of the Green Index research series. [Online]. Germany, Munich. Available: https://www.siemens.com/entry/cc/features/greencityindex_international/all/en/pdf/gci_report_summary.pdf

[19] Tomanek, R. (2014). Telematics in the New EU Cohesion Policy on the Example of Integrated Territorial Investments Strategy. *Telematics - Support for Transport Communications in Computer and Information Science*, pp. 434-440.

[20] Tomanek, R. (2016). Intelligent Solutions in Sustainable Transport Upper Silesia Agglomeration. *Communications in Computer and Information Science Challenge of Transport Telematics*, pp. 342-353.

[21] Uchiyama, Y. and Mori, K. (2017). Methods for specifying spatial boundaries of cities in the world: The impacts of delineation methods on city sustainability indices. *Science of The Total Environment*, vol. 592, pp. 345-356.

[22] United Nations (1992). Agenda 21. [Online]. New York. Available: https://sustainabledevelopment.un.org/content/documents/Agenda21.pdf

[23] Wefering, F., Rupprecht S., Bührmann, S. and Böhler-Baedeker, S. (2014). Guidelines. Developing and Implementing a Sustainable Urban Mobility Plan. [Online]. Rupprecht Consult-Forschung and Beratung GmbH, European Commission Directorate – General for Mobility and Transport, Brussels. Available: http://www.eltis.org/mobility-plans/theSUMPprocess

[24] World Commission on Environment and Development (WCED) (1988). *Our Common Future.* Suffolk: Oxford University Press.

THE USE OF ONLINE MARKETING IN THE PRACTICE OF SELECTED CHOCOLATE COMPANY

Ingrida Košičiarová[1,a,*], Ľudmila Nagyová[2,b] and Martina Sedliaková[3,c]

[1]Slovak university of agriculture in Nitra, Faculty of Economics and management, Department of Marketing and Trade, Tr. A. Hlinku 2, 949 76 Nitra, Slovak Republic

[2]Slovak university of agriculture in Nitra, Faculty of Economics and management, Department of Marketing and Trade, Tr. A. Hlinku 2, 949 76 Nitra, Slovak Republic

[3]Mieru 150/8, 984 01 Lučenec, Slovak Republic

[a]ingrida.kosiciarova@mail.com, [b]ludmila.nagyova@uniag.sk, [c]martina.sedliakova@gmail.com

*Corresponding author

Abstract. Due the globalization trend, one of the mostly widespread and used forms of communication is the communication through the Internet. It is not surprising, that the number of entrepreneurs who think that the "classical" form of marketing is overcome and ineffective is constantly increasing. A new possibility and trend is the use of online marketing in the practice of sales promotion. The present paper deals with the issue of use of online marketing in the practice of selected chocolate company. The aim of the paper is to find out, to what extent is the chosen form of marketing communication positively perceived by the Slovak respondents. It means how Slovak respondents perceive the online marketing in the practice of selected chocolate company. The research methodology included a questionnaire survey conducted in the electronic form, where the total number of respondents was 1,257 from all over the Slovak Republic. For a deeper analysis, three assumptions and six hypotheses were formulated and tested with the use of Pearson's chi-square test, Cramer's contingency coefficient and Phi coefficient. As the results of the research show, the Slovak respondents perceive the online marketing activities of the chosen chocolate company quite positively – almost 52% of respondents claimed that they consider it to be interesting and unobtrusive; over 11% and 12% of respondents have visited its website and facebook and more than 15% of respondents claimed that this form of communication is for them the mostly addressing.

Keywords: online marketing, chocolate, facebook, website

JEL Classification: M31, M37, M39

1. Introduction

The marketing communication (MC) has passed a series of changes at the turn of the 20th and 21st century, and the proven schemes ceased to apply. The communication is nowadays more selective and the consumer more choosy. Although, the traditional media such as TV, radio, print and direct mail still attract the bulk of marketing budgets, companies spend an increasing percentage of their marketing budgets on new media such as web, email, and mobile marketing (Frey, 2011), (Ábelová & Kádeková, 2011), (Kubicová & Kádeková, 2012).

All the mentioned is mostly caused by the development of the technology and massive grow and use of the Internet (Turčínek & Motyčka, 2010), (Kelblová, 2012), (Chlebovský & Plšek, 2012), (Svatošová, 2015), (Holota et al., 2016), (Kubicová & Kádeková, 2016), (Holota et al., 2017), which brings with it the benefits like e.g. efficient communication between employees, the company and business partners accelerate the delivery process in the distribution network, reducing inventory and subsequent abandonment of tying funds in stocks, dropping from fixed prices and accession to a dynamic price model, increased sales on the market without increasing costs (Brončeková & Bernátová, 2005).

It can be stated that on the web, the company is able to create marketing step by step, gradually. It starts with its website, creates a "flagship" by which it becomes known, adds a blog, news via e-mail and social media. By publishing of the "good content" and communicating with the audience, people start to know, love and trust it (Franklin & Jenkins, 2014). As it is pointed out by Scott (2013), prior to the existence of the site, the organizations have two significant opportunities for attracting the customer's attention − buying expensive advertising or using a third party media. But the web has changed the rules and instead of one-way communication, the online marketing (OM) is about providing useful content exactly when the buyer needs it. By other words, unlike traditional forms of communication, the web (and by it the OM) presents a unique opportunity of two-way communication between the seller and buyer (Berthon et al., 1996b) – visitors at a corporate website are able to communicate directly with the company without concern for distance or time (Berthon et al, 1996a); thus, companies using their websites as an advertising tool have the ability to hear from visitors, whether in the form of a sale or customer e-mail comment (Brown, 2003).

This is why we can say that OM is about the interaction, information, education, and choices. Social media (which are the mostly used tool of OM) are online applications, platforms and media which aim to facilitate interactions, collaborations and the sharing of content (Richter & Koch, 2007), (Janouch, 2010). They take a variety of forms, including weblogs, social blogs, microblogging, wikis, podcasts, pictures, video, rating and social bookmarking. While commercial messages and interactions with consumers partner with media, events, entertainment, retailers, and digital services through social media, it is possible to perform integrated marketing activities with less effort and cost than before (Kim & Ko, 2012). According to Kim and Ko (2010), social media can have a dramatic impact on a brand's reputation – 1/3rd of respondents posted opinions about products and brands on the brand's blog, and 36% thought more positively about the companies, which have blogs. An another study by DEI Worldwide (2008) has provided the following statistics − 70% of consumers have visited social media sites to get information; 49% of these consumers have made a purchase decision based on the information they found through the social media; 60% said that they were likely to use social media to pass along information to others online; and 45% of those who searched for information cross the social media engaged in word-of-mouth. The result of the mentioned report is that companies who are not engaged in the social media as a part of their OM strategy are missing an opportunity to reach consumers.

2. Methodology and Data

The aim of the present paper is to find out, to what extent is the chosen form of marketing communication (MC) positively perceived by the Slovak respondents. It means how Slovak respondents perceive the OM in the practice of selected chocolate company – how many respondents look for it, how many of them are satisfied by it, what do they think about it etc. In order to achieve the formulated aim, as research method, there was used the method of questionnaire survey consisting of 15 questions formulated as closed, so that respondents (the total number of respondents was 1,257 randomly selected respondents from all regions of the Slovak Republic, Table 1) had the possibility to choose one, or more options.

Table 1: Characteristics of respondents

Category of respondents	**Number**	**Age structure of respondents**	**Number**
Male	733	15–20 years	131
Female	524	21–30 years	543
		31–40 years	226
		41–50 years	201
		Over 51 years	156
Economic activity of respondents	**Number**	**Educational structure of respondents**	**Number**
Employed	668	Primary education	66
Unemployed	44	Secondary education without A level	117
Student	431	Secondary education	579
Other (retired / on maternity leave)	114	Higher education	495

Source: Results of the research

For a deeper analysis of the obtained results, there have been set out three assumptions and six hypotheses. To test the formulated dependencies, there were used the methods of Pearson's chi-square test, Cramer's contingency coefficient and Phi coefficient, which have been counted in the statistical program IBM SPSS Statistics.

3. Results

As it was indicated in the introduction, OM presents a nowadays trend, which is more widely used by many of different companies. It represents a form of marketing, where the Internet and related digital information and communication technologies are used in order to achieve the marketing objectives (Gay et al., 2007). In other words, to support each of the classical 4 Ps of the marketing, OM involves the usage of digital tools based on Internet technologies (Klapdor, 2013). In general, we can talk about two different types of it – passive OM, which is about the website for itself and active OM, which tries to reach the potential customers on the Internet, what can be realised inter alia with newsletters, search engine marketing, branding and other tools (Adler, 2010). It is only up to the company, which form it will use. The only important is, that all the companies, which want to be successful on the present market must to adopt to the fast development and to start think much more online.

This is why the present paper deals with the issue of the use of OM in the practice of selected chocolate company and especially with the detection of that, to what extent is this form of MC positively perceived by our respondents. As the analyzed company, there was chosen a chocolate company which is considered to be the world's mostly beloved and recognisable chocolate brand (2016 Fact Sheet, 2016), whose history can be dated back to the year 1797 (Suchard, 2015). The mentioned company belongs to the group Modelēz International and it is the third largest producer of food in the world – each day there are produced more than three million chocolates around the world (Milka, 2016), which are distributed e.g. in Austria, Slovakia, Czech Republic, Germany, Hungary, Poland, Belgium, Bulgaria, Croatia, France, Italy, the Netherlands, Romania, Russia, Spain, Argentina, Turkey, Ukraine and Portugal (Milka, 2017). This is why the company has to pay big amounts of money for its MC and sales promotion. Table 2 shows only few of many different forms of company's presentation in the world, from which is clear that the company thinks much more globally and acts online, by which it tries to reduce its marketing budget and to reach more customers – few of the mentioned MC forms are difficult to be perceived separately because they essentially fall into one form of communication, namely OM (experimental, viral and OM are all held on the Internet and by that they can be commonly named as OM campaigns).

Table 2: Selected examples of MC of the selected chocolate company

Form of marketing communication	Example
Advertisement	German TV spot Milka Choco Break broadcasted on 7th March 2016 – it says that even if something is difficult in the beginning, the encouragement can come from the other side.
Public relations	"Milka Schokofest" – festival takes place in Bludenz every summer, and in 2016 (9th July) was held for the 33rd year. Visitors have the opportunity to meet with ski stars, participate in games, sports competitions and musical performances.
Promotion	In the form of gift to the purchase, larger pack, or the possibility of obtaining a pencil, cup, cows, or other objects with a Milka logo and in a typical colour combination – purple with white, when buying a certain number of Milka products.
Sponsoring	"Milka Ski Sponsoring" – sponsorship of downhill skiing. Milka is involved as a sponsor since 1995. Ski personalities and stars, which are supported by it include Curtoni Elena (ITA), Michaela Kirchgasser (AUT), Tina Maze (SLO), Sarka Zahrobska (CZE), as well as a 4-fold olympian and world champion Martin Schmitt. In addition, Milka supports several World Cup events, World Championships and also downhill mountain bike.
Guerilla marketing	2013 – vendor machine in Argentina, Buenos Aires, which did not sale the chocolate, but it has passed on a free chocolate if it has been at the same time held the button on the machine and the hoof on the sculptures of purple cow.
Experiential marketing	2013 – "Last Bar" campaign. 13 million Milka chocolate bars (where one square was missing – the last one) were produced within this campaign. Consumers could keep the missing square on a special website, where they could send it back to themselves, or to send it to someone as a gift. In this case, the chocolates were joined by a personalized greeting written on the website.
Viral marketing	"Milka Choco Jelly on YouTube" – the video was on the YouTube since 23rd June 2014 and subsequently appeared on the Milka Facebook page. Milka has surprised the guests of a Prague restaurant (Mama's Restaurant) with dishes that tasted differently than the customers would by the appearance and name expected. The video was filmed during two days by hidden cameras with the participation of non-actors. The whole campaign was marked by the slogan "surprise in every bit".
Online marketing	Cross email, or other social media like Facebook, Twitter, Instagram, YouTube are send new spots, short videos, news, messages, information about new competitions etc.
Product placement	1956 – 18 seconds long appearance of chocolate Milka in the movie "Und ewig rauschen die Wälder"
Merchandising	The most common form is the placing of a purple cow in a life-size in the store, but also in the form of stands, banners, billboards.

Source: (Nagyová et al., 2017)

To obtain the aim formulated in the part Methodology and Data, there was conducted a questionnaire survey in the time period from 1st January 2017 to 1th March 2017. As it can be seen from the Table 1, the total number of respondents was 1,257 randomly selected respondents from all regions of the Slovak Republic, where the majority of respondents was represented by female respondents (58.3%), respondents with the age between 21 to 30 years (43.2%), respondents with secondary and high education (46.1% and 39.4%) and employed respondents (53.1%). As it was also mentioned in the part Methodology and Data, the questionnaire survey consisted of 15 questions divided into three separate but logically interrelated blocks of questions. The classification questions were formulated in the absolute end of the questionnaire and therefore they are not part of the above mentioned 15 questions.

The first block of questions was aimed at the purchase of the products of the analyzed chocolate company. Up to their evaluation we can conclude that most of our respondents buy these products (51.5% buy them randomly and 28.3% buy them regularly), most of them buy them for few times in the year, resp. for once in a month (38% and 35.8%), they mostly buy them for their own pleasure, as a gift to their family/friends/colleagues, resp. for their usual daily consumption and they mostly buy them in a hypermarket/supermarket, resp. in the shop near to their home. Despite the fact that nowadays we are talking more about the globalization and unification of the world, as well as about the fast and consume form of living, the Internet as the place of purchase of the analysed company's products still very little used.

The questions aimed at the determination of that, which are the factors leading to the purchase of the analysed company's products, resp. what does mostly influence our respondents in their purchase of the company's products represent the second block of questions. Form their evaluation is clear that these reasons are still only classical – despite the fact that the analyzed company has many of different OM activities, by which it wants to be more attractive for its actual, but also potential customers, our respondents indicated that the factors which lead them to the purchase are mostly the quality of the product (35.2%) and the previous experience (31.7%). The price was indicated only as the fourth option (14.5%) and the OM activities were indicated as the sixth option (7.6%). Up to the question, what does mostly influence our respondents in their purchase of these products, they noted that it is the interesting advertising (23.3%) and the familiarity of the company and its products (67.9%). The good online communication and presentation was noted only by 6.5% of respondents.

The remaining questions represent the last block of questions, which was aimed at the OM activities, as well as the MC of the analysed company. Because of the need to find out which form of MC of the analysed company is (up to the opinion of our respondents) the mostly addressing, the first question from the third block of questions was formulated. Up to its results is clear that our respondents consider as the mostly addressing forms of MC the ads, present to the purchase and the merchandising in the place of purchase (assumption no.3 was confirmed). Because of the fact, that the respondents had the option to choose a combination of answers, it is very difficult to find out, which forms are mentioned mostly. Despite that, it can ben still stated that the OM was also mentioned, but it was in a minority.

Because of the need to find out how the Slovak respondents perceive the OM in the practice of the selected company, in the questionnaire there were formulated the questions about visiting the company's webpage, registration of some form of OM, perception of OM activities, seeing the OM activities as enough form of MC etc. Up to the results from their evaluation, it clear that the perception of OM activities of the selected company is pretty good – exactly 11.4% of our respondents have visited the company's website and 12.2% of them have visited its facebook; 27.2% of our respondents noted that they have registered some form of company's OM activities in the last few days, but they do not exactly remember which; 47.6% think that the promotion of the company's products is adequate; 66.9% think that the company's OM activities are interesting; 47.1% think that the company's OM activities are enough source of the “unification” of the world (globalization of the company's market); 39.5% valued the attractiveness of the company's OM activities with the mark 2;

49.5% think the OM is enough stimulus to the purchase of the company's products and 72.2% of our respondents think that the company's website is attractive. If we look to the evaluation of the above mentioned questions in more details, we should realise that the respondents with the age between 15 and 20 years know that they have registered some advertisement on the facebook, or some other form of the company's OM activities, respondents with the age over 21 years do not exactly remember what kind of OM it was (assumption no.1 was confirmed); while the same group of respondents (with the age between 15 and 20 years) marked the attractiveness of the company's OM activities with the mark 1, the remaining groups marked it with the value 2; and while the perception of the attractiveness of the company's OM activities is in the case of female and male respondents a bit different, the perception of the attractiveness of company's website is up to their gender same (assumption no.2 was wrong).

Connected to the above mentioned questions, there have also appeared the questions about the dependence, resp. the independence between some variables. This is why in the part Methodology and data were formulated the hypotheses about the relationship between seeing the promotion of the selected company to be adequate and the respondents' age, resp. his gender; about the relationship between seeing the OM activities of the selected company to be enough source of globalization of the company's market and the respondents' age; the relationship between the attractiveness of OM activities of the selected company and the respondents' age, resp. his gender; and the relationship between the perception of OM as the sufficient factor leading to the purchase of analysed company's products and the respondents' working position. All the mentioned relationships were tested with the use of the methods of Pearson's chi-square test, Cramer's contingency coefficient and Phi coefficient (significance level of alpha = 0.05). Up to their evaluation is clear that there does not exist only one dependence and it is the dependence between seeing the OM activities of the selected company to be enough source of globalization of the company's market and the respondents' age. In the case of other formulated hypotheses we must conclude that between the tested variables there exists a weak, but statistically still significant dependence.

4. Conclusion

The present paper was dealing with the issue of the use of OM in the practice of a selected chocolate company and by that with the issue of finding out, how do the Slovak respondents perceive these activities. Up to the results of our own research, we can conclude that the Slovak respondents perceive them really positively because more than 12% and 11% of our respondents have visited the company's facebook and website, almost 52% of respondents claimed that they consider the company's OM activities to be interesting and unobtrusive, over 51% of our respondents have in last few days registered some form of company's OM activities, over 49% of our respondents think that the OM is enough stimulus to the purchase of the company's products and more than 72% of our respondents think that the company's website is attractive. Because of the need to perform a deeper analysis of the issue, in the part Methodology and Data, three assumptions and six hypotheses were formulated. From their evaluation is clear that only one assumption and one hypotheses were wrong – it is not true, that the website of the selected company is considered to be attractive rather by female respondents than male respondents and there does not exist a dependence between seeing the OM activities of the selected company to be enough source of globalization of the company's market and the respondents' age. Despite the really positive results of our research, we must conclude that there are still some reserves which could be improved.

Acknowledgement

The paper is a part of the research project VEGA 1/0502/17 "Consumer personality and its impact on emotional behaviour and decision making" , solved at the Department of Marketing and Trade, Faculty of Economics and Management, Slovak University of Agriculture in Nitra.

References

[1] 2016 Fact Sheet. (2016). The Chocolate Brand Daring You to Be Tender. [Online]. Available: http://www.mondelezinternational.com/~/media/MondelezCorporate/Uploads/downloads/milka_Fact_Sheet.pdf

[2] Ábelová, V. and Kádeková, Z. (2011). Vnímanie reklamy potravinárskych produktov. *Nové trendy v marketingovej komunikácii*. Trnava, Slovakia, pp. 60-77.

[3] Adler, M. (2010). *A Study of Marketing and Online Marketing Tools which Improve Online Success.* GRIN Verlag.

[4] Berthon, P., Pitt, L. and Watson, R. T. (1996a). Re-surfing w3: Research perspectives on marketing communication and buyer behaviour communications on the World Wide Web, *International Journal of Advertising,* vol. 15, no. 4, pp. 287-301.

[5] Berthon, P., Pitt, L. and Watson, R.T. (1996b). The World Wide Web as an advertising medium: Toward an understanding of conversion efficiency, *Journal of Advertising Research,* vol. 36, no. 1, pp. 43-54.

[6] Brončeková, T. and Bernátová, D. (2005). Globalizacia a elektronicke podnikanie, *E + M Ekonomie a management*, vol. 3, pp. 105–112.

[7] Brown, M. T. (2003). An Analysis of Online Marketing in the Sport Industry: User Activity, Communication Objectives, and Perceived Benefits, *Sport Marketing Querterly*, vol. 12, no. 1, pp. 48-55.

[8] DEI Worldwide. (2008). The impact of social media on purchasing behavior. Engaging Consumers Online. [Online]. Available at www.deiworldwide.com/files/DEIStudy-Engaging%20ConsumersOnline-Summary.pdf

[9] Franklin, A. and Jenkins, T. (2014). *Web Marketing That Works: Confessions from the Marketing Trenches*. John Wiley & Sons.

[10] Frey, P. (2011) *Marketingová komunikace: Nové trendy 3.0*. Praha: Management Press.

[11] Gay, R., Charlesworth, A. and Esen, R. (2007). *Online Marketing: A Customer-Led Approach.* New York: OUP Oxford.

[12] Holota, T., Holienčinová, M., Kotus, M. and Chrastina, J. (2017). The use of TOPSIS method in the manufacturing process of clutch plate of agricultural machinery. *Agronomy Research*, vol. 15, no. 1, pp. 155-161.

[13] Holota, T., Hrubec, J., Kotus, M., Holienčinová, M. and Čapošová, E. (2016). The management of quality costs analysis model. *Serbian journal of management*, vol. 11, no. 1, pp. 119-127.

[14] Chlebovský, V. and Plšek, V. (2012). Research on Czech fi rms' marketing communication based on social media networks. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, vol. LX, no. 7, pp. 111-118.

[15] Janouch, V. (2010). *Internetový marketing: Prosaďte se na webu a sociálních sítích*. Brno: Computer Press.

[16] Kelblová, H. (2012). Legal aspects of some internet marketing instruments. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, vol. LX, no. 2, pp. 117-124.

[17] Kim, A. J. and Ko, E. (2010) Impacts of luxury fashion brand's social media marketing on customer relationship and purchase intention. *Journal of Global Fashion Marketing*, vol. 1, no. 3, pp. 64–71.

[18] Kim, A. J. and Ko, E. (2012). Do social media marketing activities enhance customer equity? An empirical study of luxury fashion brand. *Journal of Business Research,* vol. 65, pp. 1480-1486.

[19] Klapdor, S. (2013). *Effectiveness of Online Marketing Campaigns: An Investigation into Online Multichannel and Search Engine Advertising*. Munich: Springer Science & Business Media.

[20] Kubicová, Ľ. and Kádeková, Z. (2012). Revenue impact on the demand of slovak households for meat and meat products. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis,* vol. L, no. 2, pp. 503-510.

[21] Kubicová, Ľ. and Kádeková, Z. (2016). Development and level of consumption of chosen foods in Slovakia and Austria. *The agri-food value chain: challenges for natural resources management and society. Medzinárodné vedecké dni.* Nitra: Slovak University of Agriculture, pp. 777-782.

[22] Milka. (2016). [Online]. Available: http://www.milka.com

[23] Milka Alpenmomente. (2017). [Online]. Available: https://www.milka.de/marke/alpenmomente

[24] Nagyová, Ľ., Košičiarová, I. and Sedliaková, M. (2017). Corporate communication as one of the basic attributes of corporate identity – Case study of chocolate Milka, *Communication Today,* vol. 8, no. 1, pp. 86-102.

[25] Richter, A. and Koch, M. (2007) *Social software — status quo und Zukunft. Technischer Bericht*, Fakultät für Informatik. Universität der Bundeswehr München.

[26] Scott, D. M. (2013) *The New Rules of Marketing & PR: How to Use Social Media, Online Video, Mobile Applications, Blogs, News Releases, and Viral Marketing to Reach Buyers Directly*. 4 ed. John Wiley & Sons.

[27] Svatošová, V. (2015). The Use of Marketing Management Tools in E-commerce, *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, vol. 63, no. 1, pp. 303-312.

[28] Suchard. (2015). 28 Geshichte. [Online]. Available: http://www.suchard.at/Marke/Geschichte

[29] Turčínek, P. and Motyčka, A. (2010). Possibilities of using ICT for increase of customer feeling of exceptionality, *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis,* vol. LIX, no. 2, pp. 365-370.

COMPREHENSIVE EUROPEAN UNION'S ICT POLICY AS A MEANS TO ACHIEVE COMPETITIVENESS IN THE GLOBAL ECONOMY

Joanna Kos-Łabędowicz[1,a,*]

[1]University of Economics in Katowice, 1 Maja 50, 40-287 Katowice, Poland

[a]joanna.kos@ue.katowice.pl

*Corresponding author

Abstract. Changes in the global environment caused by different factors, like globalization, internationalization, demographics and vulnerability to financial crises, affect not only individuals or organizations, but also whole countries and regional integration groups. Rapid development and proliferation of information and communication technologies (ICT) only add to the scope and pace of the changes occurring in the various social, political and economic spheres. The positive impacts of ICT on productivity, economic growth and increasing quality of life are commonly recognized. But in addition to those positive outcomes, new threats are emerging due to unequal access to information (e.g. deepening of existing or emergence of new social and economic inequalities). Actions related to the use of ICT taken by the state administration at all levels, are important for both the achievement of potential benefits and counteracting potential threats. A comprehensive ICT policy should address a number of issues related to the development, management and integration of new technologies in all possible areas. In the case of European Union Members the national ICT policy depends on the recommendation concerning the development of the information society and wider use of ICT prepared at EU level. The aim of this article is to analyze EU strategies and documents dealing with the development of the information society and the widespread application of ICT using the framework proposed by Jorgenson & Vu (2016). The proposed framework consists of seven dimensions that should be taken into account while developing a comprehensive ICT policy.

Keywords: ICT policy, Digital Agenda, European Union, ICT policy framework

JEL Classification: O14, O19, O52

1. Introduction

Changes in the global environment caused by different factors, like globalization, internationalization, demographics and vulnerability to financial crises, affect not only individuals and organizations, but also whole countries and regional integration groups. Rapid development and proliferation of information and communication technologies (ICT) only add to the scope and pace of the changes occurring in the various social, political and economic spheres. These changes, more and more often referred to as the Internet revolution or the ICT revolution, are not limited to the highly developed countries in which they were initiated, but more or less spread to all other countries.

Research on the impact of ICT on productivity (Cardona, Kretschmer & Strobel, 2013), economic growth (Hofman, Aravena & Aliaga, 2016), (Dimelis & Papaioannou, 2011) and quality of life is widely conducted (Palvia, Baqir & Nemati, 2017). Nevertheless, there are new threats in the face of unequal access to information (Pick & Nishida, 2015), which may lead to the deepening of existing social and economic inequalities and the emergence of new ones (e.g. digital exclusion) (Warren, 2007). The actions taken by the state administration at all levels, with particular emphasis on overarching ICT use policies as indicators of overall directions, are important for both the achievement of benefits mentioned (economic growth, improvement of quality of life) and counteracting potential negative effects (Ali & Gasmi, 2017). The use of the "overarching" term is important in some instances where national policies for the use of ICTs may result from recommendations made by international standardization organizations or from strategic documents prepared within international integration groups (as is the case in the European Union). A comprehensive ICT policy should address a number of issues related to the development, management and integration of new technologies in all possible areas. In the case of European Union Members the national ICT policy depends on the recommendation concerning the development of the information society and wider use of ICT prepared at EU level.

The aim of this article is to analyze EU strategies and documents dealing with the development of the information society and the widespread application of ICT using the framework proposed by Jorgenson & Vu (2016). The proposed framework consists of seven dimensions that should be taken into account while developing a comprehensive ICT policy

2. Methods

Developing policies concerning the use of ICT is a complex process that involves taking into account many elements that are beyond the scope of regulation itself, its subsequent implementation and monitoring of implementation. The impact of new technologies on the economy, society, and politics should also be taken into account in the development of specific ICT use strategies. Comprehensive ICT use policy should address a number of issues related to the development, management and integration of new technologies in all possible areas.

Table 1 presents the dimensions of a comprehensive ICT policy with corresponding actions related to the promotion, development and monitoring of progress.

An additional impediment to the development of policies related to ICT use is the rapid pace of technological change. It influences the conditions of the economy and creates new phenomena in terms of the economy (new and innovative products and services not meeting current legal regulations), society (new behaviours and expectations towards the state or enterprises and their products/services) or policies (growing ease and popularity of bottom-up initiatives, growing requirements for transparency and involvement in decision-making processes). These changes in technology and their potential impact are usually difficult (or impossible) to predict and necessitate constant adaptation of ICT legislation, regulation and policies.

Table 1: Seven dimensions of comprehensive ICT policy with an indication of the areas that need to be involved in promoting, developing and monitoring progress.

No.	Dimension	Focused areas for promotion, upgrading, and progress monitoring
1	ICT connectivity and access	broadband connectivity; mobile phone coverage; cost and quality competition among ICT products and services providers.
2	ICT usage	use by individual; use by business; and use by government; incentives to promote ICT usage by the poor, rural communities, and SMEs.
3	ICT legal and regulatory framework	telecommunications regulation; spectrum frequency allocation e-commerce laws (digital signatures, intellectual property laws, e-payment); cybersecurity laws and regulations; ICT trade tariff and regulations; access to data and cross-border data transfer; investment regulations.
4	ICT production and trade	ICT-enabled services and ICT content provision; SMEs in the ICT sector (financing, investment, and capacity building); e-market places; innovation and R&D in the ICT sector; special industrial parks/zones/villages for ICT sector development (such as software, high-tech, call centers).
5	ICT skills and human resources	ICT skills in primary and secondary schools; ICT graduates and programs at universities and vocational schools; training projects to enhance the ICT workforce; incentives for private sector companies to organize/support ICT capacity building.
6	Cybersecurity	minimization of vulnerability to cyber-attacks; National Cyber Security Exercise programs; Emergency Response to Cyber-Attack plans.
7	New ICT applications	Smart city development; Big data analysis; Internet of things.

Source: (Jorgenson & Vu, 2016)

The national/local dimension of individual policies concerning the use of ICT requires consideration. Individual national ICT usage policies should (but do not always) include all the dimensions shown in Table 1, and may vary in weight distribution for the individual dimensions and areas of activity associated with them. In the next part, the most up-to-date strategies for the use of ICT in the European Union, *Digital agenda for Europe 2010-2020* (European Commission, 2010) and *i2010 A European Information Society for growth and employment* (European Commission, 2005) will be analyzed using the model presented.

3. Results

The current initiative concerning the use of ICT under the Europe 2020 Strategy is the *Digital agenda for Europe 2010-2020* (European Commission, 2010) - DAE. As an overall goal, DAE should "deliver sustainable economic and social benefits from a digital single market based on fast and ultra fast internet and interoperable applications" (European Commission, 2010, pp. 3). In this document the close relationship between the development and release of attractive content and services (boosting demand for high-speed broadband services), and investments in infrastructure development (allowing development of more and more innovative services demanding increase in the speed and bandwidth of the links) that was signaled before, was formalized. The self-sustaining process of the digital economy, together with the constraints identified (including, inter alia, insufficient levels of network investment, both stationary and wireless) has become the basis for the designation of action areas for years 2010-2020 (European Commission, 2010). DAE is the first ICT use policy that sets specific quantitative indicators for assessing the effectiveness of proposed actions. Defining these indicators as "key performance targets" indicates that achieving these levels should be sufficient to achieve the overarching goals of this strategy and, in particular, to harness the potential of rapid development of digital technologies. The importance of quantitative indicators in assessing the implementation of EU policies is also ensured by the introduction of a strict monitoring system in the form of the annual publication of statistical data in the form of the Digital Scoreboard (European Commission, 2017).

i2010 A European Information Society for growth and employment (European Commission, 2005) is a document from the period preceding the DAE and was prepared under the so-called Renewed Lisbon Strategy. This document proposed the following three priorities "the completion of a Single European Information Space (…), strengthening Innovation and Investment in ICT research (…), achieving an Inclusive European Information Society (…), which are fully integrated and consistent with the new Lisbon governance cycle" (European Commission, 2005, pp.4) in ensuring growth and creating new and better jobs.

Table 2 presents an analysis of the two selected documents using the methodology proposed by Jorgenson & Vu (2016), indicating whether all seven general dimensions attributed to a comprehensive ICT policy are included in them.

Table 2: The seven dimensions of comprehensive ICT policy present in DEA and i2010

No.	Dimension	DEA	i2010
1	ICT connectivity and access	X	X
2	ICT usage	X	X
3	ICT legal and regulatory framework	X	X
4	ICT production and trade	X	X
5	ICT skills and human resources	X	X
6	Cybersecurity	X	~
7	New ICT applications	X	X

Source: (Jorgenson & Vu, 2016), (European Commission, 2010), (European Commission, 2005)

All in all, DEA has eight areas where action is envisaged, defined as follows: a vibrant digital single market; interoperability and standards; trust and security; fast and ultra fast internet access; research and innovation; enhancing digital literacy, skills and inclusion; ICT-enabled benefits for EU society; international aspects of the Digital Agenda (European Commission, 2010). In i2010, the key areas of action have been presented in a very general manner, divided into three broad areas of action: a single European information space; innovation and investment in research; inclusion, better public services and quality of life (European Commission, 2005). In the DAE case, all seven dimensions were included (though not always under the same name). In the case of the i2010, it can also be assumed that all seven dimensions are taken into account, though not all are clearly defined: for example, cyber security focuses on the very fact of providing secure access without specifying how this should be done.

Table 3 provides a detailed analysis of both documents (DAE and i2010 respectively), including areas for action concerning promotion, upgrading and progress monitoring.

Table 3: Focused areas for promotion, upgrading, and progress monitoring present in DEA

Dimension.	Focused areas for promotion, upgrading, and progress monitoring	DAE	i2010
1	broadband connectivity	X	X
	mobile phone coverage	-	-
	cost and quality competition among ICT products and services providers	-	-
2	use by individual; use by business; and use by government	X	X
	incentives to promote ICT usage by the poor, rural communities, and SMEs	X	X
3	telecommunications regulation	-	X
	spectrum frequency allocation	X	X
	e-commerce laws (digital signatures, intellectual property laws, e-payment)	X	X
	cybersecurity laws and regulations	X	-
	ICT trade tariff and regulations	-	-
	access to data and cross-border data transfer	X	-
	investment regulations	X	-
4	ICT-enabled services and ICT content provision	X	X
	SMEs in the ICT sector (financing, investment, and capacity building)	-	X
	e-market places	-	
	innovation and R&D in the ICT sector	X	X
	special industrial parks/zones/villages for ICT sector development (such as software, high-tech, call centers)	-	-
5	ICT skills in primary and secondary schools	-	-
	ICT graduates and programs at universities and vocational schools	X	-
	training projects to enhance the ICT workforce	X	
	incentives for private sector companies to organize/support ICT capacity building	X	X
6	minimization of vulnerability to cyber-attacks	X	X
	National Cyber Security Exercise programs	X	-
	Emergency Response to Cyber-Attack plans	X	-
7	Smart city development	-	-
	Big data analysis	-	-
	Internet of things	-	-

Source: (Jorgenson & Vu, 2016), (European Commission, 2010), (European Commission, 2005)

A detailed analysis of the two documents (DAE and i2010) from the point of view of the areas for promotion, development and monitoring of progress shows some shortcomings in this regard, especially concerning the seventh dimension: new ICT applications.

4. Discussion

In the case of the Digital Agenda for Europe, all seven dimensions required for a comprehensive ICT use policy are included. It should be noted, however, that the different dimensions were taken into account in a slightly different way (e.g. legislative and regulatory actions were included in as many as three areas of the EU document, and new uses for ICT were indicated not in terms of specific technological solutions but in terms of the areas in which they are used). In addition, the DAE included the area of international cooperation with and within the organization responsible for Internet governance - which was not provided for in the model used for analysis.

A detailed analysis of the two documents (DAE and i2010) from the point of view of the areas of action required to promote, develop and monitor progress shows some shortcomings in this matter. Nevertheless we should remember three important facts that may cast some light on this issue.

Firstly, both the DAE and the i2010 continue the work that was included in the previous European Union documents concerning use of ICT dating back to the mid-1990s. The inclusion in the analysis of the previous three documents concerning use of ICT: eEurope (European Commission, 1999), eEurope2002 (European Commission, 2000), eEurope2005 (European Commission, 2002); points to areas and goals that were previously on the agenda but have already been achieved and abandoned for further, more advanced and current goals (e.g. Internet access for universities and research institutes have been completed and transformed to promoting innovation and R&D) (Kos-Łabędowicz, 2016).

Secondly, it should be noted that the two analyzed documents focusing on increasing the use of ICT potential are accompanied by other documents and initiatives that specify and clarify activities in particular areas, that are included both in DAE and i2010. For example, for activities included in the second dimension, that take into account the use of ICT in public administration, both i2010 and DAE have separate documents providing a more detailed description of what action should be taken in this area (e.g. Action Plan on e-Government or eCommission 2011-2015 Action Plan).

Thirdly, what is especially visible in the seventh dimension (the new ICT applications) in both analyzed documents (and in most of the preceding ones) a different approach to new ICT applications was used from the one proposed in the model. The emphasis in the model has been placed on specific types of solutions (e.g. Big Data Analysis, Internet of Things) or on very general use (Smart City Development). The EU documents were more focused on the benefits of ICT for society and the environment. Examples of ICT applications, that were included in DAE in i2010 concern, for example, development of e-health or intelligent transport systems (ITS). Of course, it should be noted here that both ITS can (and should) be part of Smart City development, the same as Big Data Analysis can (and should) be used for ensuring the efficient functioning of ITS. Then, it can be assumed that, despite the lack of consideration of the new ICT usage indicated in the model, both documents generally included the appropriate application and examples of new ICT solutions.

Taking all into consideration, it can be concluded that, despite some shortcomings in the areas of action required to promote, develop and monitor progress, the current policy - DAE meets the requirements of a comprehensive ICT policy. In the case of i2010, due to shortcomings in the area of cyber security and in other areas of activities, it is not possible to conclude that it meets the criteria of the comprehensiveness for the ICT policy.

5. Conclusion

The impact of ICT, both on the economy and society, is very difficult to predict, especially in the long run. Nevertheless, such attempts should be undertaken in order to create conditions that increase the benefits and minimize the risks associated with using the ICT potential (Hughes at. el., 2017).

In the case of EU documents on the use of ICT, it should be noted that both the character of the documents and the scope of suggested activities change with the passage of time and the progressing development of the information society and the increasing use of ICT potential (Kos-Łabędowicz, 2016). It is also worth emphasizing that documents prepared at EU level are implemented at the national level of individual Member States, which translates into a locally differentiated level of ICT development and use (Savulescu, 2015), (Vicente & López, 2011).

In conclusion, it should be stated that the analyzed EU documents concerning the use of ICT potential, especially DAE, fulfill the postulate of comprehensiveness. Policies concerning use of ICT potential are particularly important to maintain the competitiveness of the European Union economy relative to its main competitors in the world market (Desruelle and Stančík, 2014).

Acknowledgment

This paper is a product of the science project financed by grant-in-aid for the purposes of scientific research, development tasks, and tasks connected to both, serving the development of young researchers and postgraduate students at University of Economics in Katowice.

References

[1] Ali, M. S. and Gasmi, A. (2017). Does ICT diffusion matter for corruption? An Economic Development Perspective. *Telematics and Informatics*.

[2] Cardona, M., Kretschmer, T. and Strobel, T. (2013). ICT and productivity: conclusions from the empirical literature. *Information Economics and Policy,* vol.25, no.3, pp. 109-125.

[3] Desruelle, P., and Stančík, J. (2014). Characterizing and comparing the evolution of the major global economies in information and communication technologies. *Telecommunications Policy,* vol. 38, no 8-9, pp. 812-826.

[4] Dimelis, S. P. and Papaioannou, S. K. (2011). ICT growth effects at the industry level: A comparison between the US and the EU. *Information Economics and Policy,* vol. 23, no1, pp. 37-50.

[5] European Commission (1999). *eEurope: An Information Society for All*: Communication on a Commission Initiative for the Special European Council of Lisbon, 23 and 24 March 2000. Luxembourg: EUR-OP.

[6] European Commission (2000). *eEurope 2002: An Information Society For All: Action Plan prepared by the European Commission for the European Council in Feira: 19-20 June 2000.* Luxembourg: EUR-OP.

[7] European Commission (2002). *eEurope 2005: An information society for all.* Luxembourg: Commission of the European Communities.

[8] European Commission (2005). *i2010 A European Information Society for growth and employment.* Luxembourg: EUR-OP.

[9] European Commission (2010). *Digital agenda for Europe 2010-2020: Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions.* Luxembourg: EUR-OP.

[10] European Commission. (2017). Digital Scoreboard. [Online]. Available: https://ec.europa.eu/digital-single-market/en/digital-scoreboard

[11] Hofman, A., Aravena, C. and Aliaga, V. (2016). Information and communication technologies and their impact in the economic growth of Latin America 1990–2013. *Telecommunications Policy,* vol. 40, no. 5, pp. 485-501.

[12] Hughes, B. B., Bohl, D., Irfan, M., Margolese-Malin, E. and Solórzano, J. R. (2017). ICT/Cyber benefits and costs: Reconciling competing perspectives on the current and future balance. *Technological Forecasting and Social Change,* vol. 115, pp. 117-130.

[13] Jorgenson, D. W. and Vu, K. M. (2016). The ICT revolution, world economic growth, and policy issues. *Telecommunications Policy,* vol. 40, no. 5, pp. 383-397.

[14] Kos-Łabędowicz, J. (2016). The European Union's ICT focused policies as a means to achieve competitiveness in the global economy. *Proceedings of 16th International Scientific Conference on Globalization and its Socio-Economic Consequences.* Rajecke Teplice, Slovakia, pp. 988-995.

[15] Palvia, P., Baqir, N., & Nemati, H. (2017). ICT for socio-economic development: A citizens' perspective. *Information & Management.*

[16] Pick, J. B., Nishida, T. (2015). Digital divides in the world and its regions: A spatial and multivariate analysis of technological utilization. *Technological Forecasting and Social Change*, vol. 91, pp. 1-17.

[17] Savulescu, C. (2015). Dynamics of ICT Development in the EU. *Procedia Economics and Finance,* vol. 23, pp. 513-520.

[18] Vicente, M. R. and López, A. J. (2011). Assessing the regional digital divide across the European Union-27. *Telecommunications Policy,* vol. 35, no. 3, pp. 220-237.

[19] Warren, M. (2007). The digital vicious cycle: Links between social disadvantage and digital exclusion in rural areas. *Telecommunications Policy,* vol. 31, no. 6-7, pp. 374-388.

COMPARISON OF THE COMPETITIVENESS OF THE TOURIST ATTRACTIVENESS OF THE MORAVIAN-SILES REGION

Miroslava Kostková[1,a,*]

[1]Slezská univerzita v Opavě, Obchodně podnikatelská fakulta v Karviné, Univerzitní nám. 1934/3, 733 40 Karviná, Česká republika

[a]kostkova@opf.slu.cz

*Corresponding author

Abstract. Tourism as a factor of globalization is a phenomenon of today's times. It is one of the significant indicators of raising the standard of living of the population and it represents an opportunity for the development of small and medium-sized enterprises. Increasing the tourist attractiveness of the territory is one of the current tasks of tourism development in the Moravian-Silesian Region, which is identified in the strategic documents and based on the strategic objectives of the national State Conception of Tourism Development of the Czech Republic until 2020. The tourist attractiveness of the territory is determined by the tourist attendance and it is one of the important indicators of tourism development in the destination. The article briefly describes the most important tourist attractions of the selected Czech geographical area - the Moravian-Silesian Region, which are important tourist goals for inbound tourism from abroad as well as from the surrounding area. The article focuses on the measuring the tourist attractiveness of the Moravian-Silesian region using the Defert's function, based on the territory population density, using statistical data on capacities of collective accommodation facilities in the six districts of the region. Defined tourist areas have a different tourist potential with different tourist attractiveness and therefore have a different tourist attendance. A comparison of the results the measuring tourist attractiveness among the Moravian-Silesian Region and selected Czech regions with similar conditions was carried out. From the analysis it is possible to identify possibilities for increasing the tourist attendance of the region.

Keywords: Competitiveness, tourist attractiveness, tourist attendance, tourist region, the Defert's function

JEL Classification: R11, Z3, Z32

1. Introduction

Cestovní ruch je globálním fenoménem současnosti (Norum & Mostafanezhad, 2016). Je jedním z významných ukazatelů zvyšování životní úrovně obyvatelstva a také příležitostí pro rozvoj malého a středního podnikání (Mertlová, 2015). Patří mezi významné oblasti ekonomiky pro mnoho evropských států (Goeldner et. al., 2009). Nelze jej považovat za čistě ekonomické odvětví, jedná se spíše o souhrnný multiplikační faktor, spojující taková odvětví, která zabezpečují poptávku, vyvolanou návštěvníky, případně ji indukují (Vetráková, Gúčik & Kučerová, 2015). Svým rozsahem a progresivním růstem generuje vysoký objem produkce a pracovních příležitostí (Gúčik, 2010).

Zvyšování turistické atraktivity území je jedním z aktuálních úkolů rozvoje turismu v Moravskoslezském kraji, který je identifikován ve strategických dokumentech a vychází ze strategických cílů celorepublikové Státní koncepce rozvoje cestovního ruchu České republiky do roku 2020. Turistická atraktivnost území podmiňuje turistickou návštěvnost a je jedním z významných ukazatelů rozvoje odvětví cestovního ruchu daného území (Zelenka & Pásková, 2012, A). Článek se zaměřuje na měření turistické atraktivnosti Moravskoslezského kraje pomocí Defertovy funkce, vychází z osídlenosti území, s využitím statistických údajů o kapacitách a návštěvnosti hromadných ubytovacích zařízení v 6 okresech kraje, které mají rozdílný turistický potenciál, odlišnou turistickou atraktivitu a s tím související turistickou návštěvnost. Z komparace turistické atraktivnosti vybraných krajů České republiky se srovnatelnými demografickými podmínkami dle Defertovy funkce a z provedené analýzy šesti okresů Moravskoslezského kraje lze identifikovat možnosti pro zvyšování turistické návštěvnosti daného území.

2. Teoretická východiska a metodologie

Globalizace je podle Robertsona (1992) dlouhodobý ekonomický, kulturní a politický proces, který rozšiřuje, prohlubuje a urychluje pohyb zboží, lidí i myšlenek přes hranice států a kontinentů. Je to spontánní proces stále intenzivnější integrace zemí světa do jediného, propojeného ekonomického systému. To v důsledku znamená, že politika, ekonomika, společnost, technologie, legislativa a životní prostředí kdekoli na světě získávají a mají v nějakém smyslu celosvětový (globální) dopad nebo charakter (Klieštik et al., 2017).

Cestovní ruch má internacionální a současně globální charakter. Pro mnoho evropských států patří mezi významné oblasti ekonomiky. Svým rozsahem a progresivním růstem generuje vysoký objem produkce a pracovních příležitostí (Pellešová, 2015). Ve většině zemí světa se proto řadí mezi pět odvětví s největším podílem na vývozu zboží a služeb. Pro dvě pětiny států pak představuje největší zdroj devizových příjmů. Z hlediska obratu mezinárodního obchodu se cestovní ruch nachází na třetím místě po obchodu s ropou a obchodu s chemikáliemi. Cestovní ruch zahrnuje sektor ubytování, stravování, dopravu, činnost cestovních kanceláří a agentur, kulturní, sportovní či rekreační služby atd. Palatková (2013) uvádí, že poptávka v cestovním ruchu se v ČR po roce 1993 začala velmi výrazně měnit. Je ovlivněna:

- individuálními faktory,
- kulturními faktory,
- ekonomickými factory,
- ekologickými faktory,
- geologickými faktory,
- politickými a legislativními faktory,
- motivem účasti,
- požadavky na služby a zboží, což znamená nárůst dražších a kvalitnějších ve všech oblastech služeb,
- požadavky na prostředí a místo, což znamená nárůst poptávky po vzdálenějších destinacích,
- kvalitou umístění hotelu či místa realizace, což znamená lepší uspokojování požadavků klientů (např. blízkost restaurace, vzdálenost od more ap.).

Schopnost klienta formulovat své potřeby a požadavky je potřeba považovat za významný indikátor vývoje poptávky po cestovním ruchu. Pro odvětví cestovního ruchu existují určité podmínky atraktivity území, které ji utváří a ovlivňují. Atraktivita území podle Bíny (2014) souvisí s rekreačním potenciálem území, který je definován jako souhrn ekologických, vegetačních, kulturních a sociálních faktorů, určujících maximální schopnosti působení území na člověka a jeho rekreační aktivity. Lokalizační podmínky jsou vyjádřeny atraktivitou místní přírody a krajiny a místními kulturními hodnotami a pozoruhodnostmi. Pro uskutečňování nároků účastníků cestovního ruchu jsou důležité dopravní a materiálně technické předpoklady, vybavenost území ubytovacími, stravovacími, sportovními, zábavními a jinými zařízeními (Jurigová, 2016).

Návštěvnost destinace přímo souvisí s její turistickou atraktivností. Kvantitativní ukazatel, který vyjadřuje intenzitu turistické aktivity v dané oblasti (Zelenka & Pásková, 2012, B) je Index turistického zatížení, tzv. Defertova funkce T(f)), která je územním vyjádřením kvantitativního aspektu intenzity cestovního ruchu, resp. míry psychologicky a sociokulturně únosné potenciální návštěvnosti. Je konstruován jako poměr početní velikosti návštěvníků a rezidentů, resp. jako poměr dvou populací - „navštěvující" a „navštěvované".

$$T(f) = N \times 100 / P \tag{1}$$

kde N = kapacita stálých lůžek pro ubytování cizinců a P = počet rezidentů (destinace, resp. sídelního útvaru).

Čím je hodnota funkce T(f) vyšší, tím lze oblast považovat za území s vyšší turistickou aktivitou.

Intervaly T(f) jsou rozděleny následovně:

T (f) = 0 – 4 téměř žádná turistická aktivita,
T (f) = 4 – 10 nevýrazná turistická aktivita,
T (f) = 10 – 40 území s významnou, avšak nepřevažující funkcí cestovního ruchu,
T (f) = 40 – 100 převážně turistické území,
T (f) = 100 – 500 významné středisko cestovního ruchu,
T (f) = nad 500 hyperturistické středisko.

Podle Zelenky a Páskové (2012, C) lze Index turistické funkce využít také pro celkové posouzení významu cestovního ruchu v dané destinaci a odhadu míry jeho vlivu na socio-ekonomické mikroklima.

3. Současná charakteristika cestovního ruchu ČR

Cestovní ruch patří mezi významné oblasti ekonomiky České republiky, jeho ekonomický význam je na úrovni například Německa, Nizozemska či Švédska. Dle Českého statistického úřadu se spotřeba zahraničních návštěvníků ČR zvyšuje, přičemž nejdynamičtější kategorii tvoří tranzit. Průměrné výdaje na osobu a den meziročně klesají, ale celkový růst spotřeby je způsoben výrazným zvýšením počtu návštěvníků, kteří cestují do ČR. Zrychlil také růst tržeb v cestovním ruchu. Vyšší tempo růstu bylo naposledy zaznamenáno v předkrizovém roce 2008. V 1. čtvrtletí roku 2017 tržby ve službách rostly o 5,9 % a Česká republika tak překonala tempo růstu Evropské unie. Rostlo nejvíce odvětví ubytování, stravování a pohostinství (nárůst tržeb o 21,4 %) a letecká (nárůst až o 9,9 %) a pozemní doprava. Ubytování, doprava a stravování patří mezi tři rozhodující segmenty cestovního ruchu.

Oproti předcházejícím letům Češi v roce 2016 cestovali častěji, a to hlavně po naší republice. Stejně jako v předešlých letech směřovalo nejvíce zahraničních cest na Slovensko. Češi cestovali obvykle proto, aby si odpočinuli, nebo navštívili příbuzné či známé. Vzhledem k tradici chataření a chalupaření vysoký podíl pobytů byl ve vlastním rekreačním zařízení. Do ciziny se loni jezdilo hlavně na dovolenou, do hromadných ubytovacích zařízení i do soukromí. Nejčastějším dopravním prostředkem bylo osobní motorové vozidlo (56 %), letadlem se dopravovala čtvrtina cestujících.

Růst ekonomiky a vyšší zaměstnanost patřily k faktorům, které v řadě krajů přispívaly k meziročnímu zvyšování počtu hostů, návštěvnost rostla napříč všemi kraji.

Návštěvnost ubytovacích zařízení v ČR se postupně zvyšuje již několik let. Podíl cizinců na příjezdech je stabilní, pohybuje se mezi 50 a 52 %. Počet návštěv a přenocování domácí i zahraniční klientely rostlo v roce 2016 cca o 7 %. Dlouhodobě se potvrzuje trend postupného zkracování pobytů (v roce 2000 se host ubytoval v průměru na 4,1 noci), průměrná doba pobytu (2,7 noci) zůstala na stejné úrovni jako v roce 2015.

4. Moravskoslezský kraj a intenzita turistické aktivity

Moravskoslezský kraj je vymezen okresy Bruntál, Frýdek-Místek, Karviná, Nový Jičín, Opava a Ostrava-Město, svou rozlohou 5 428 km^2 zaujímá 6,9 % území celé České republiky a řadí se tak na 6. místo mezi všemi kraji a počtem 1 215 tis. obyvatel je třetí nejlidnatější v ČR. Od 19. století kraj patří mezi nejdůležitější průmyslové regiony střední Evropy. Jeho zaměření hospodářské činnosti - odvětvová struktura dnes přináší nemalé problémy, související s restrukturalizací regionu, s řešením sociálních problémů, zejména spojených s výší nezaměstnanosti a vylidňováním území.

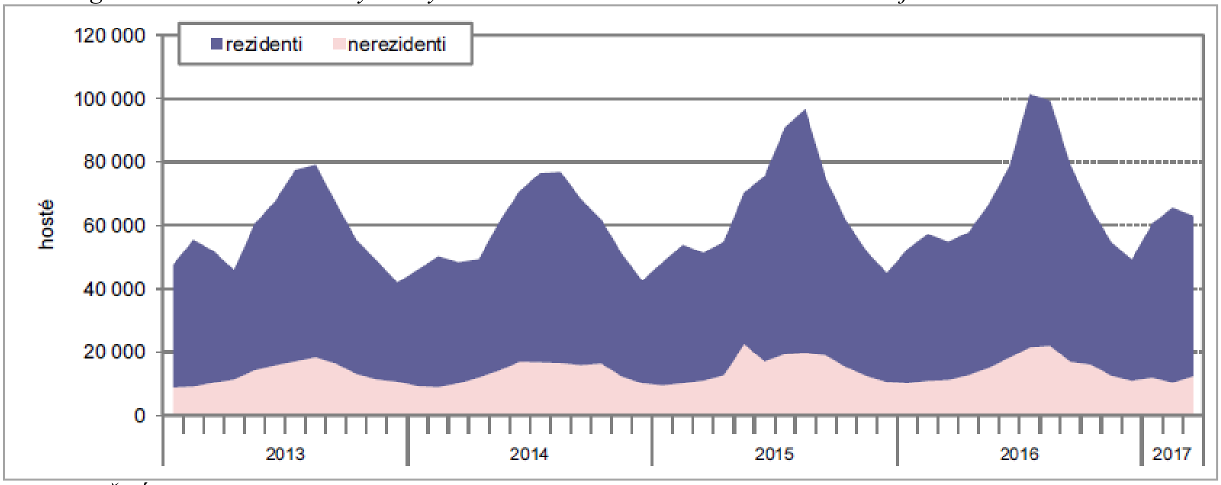
Kromě kulturního a sportovního vyžití ve městech a obcích poskytuje malebná a pestrá příroda severní Moravy a Slezska nesčetné možnosti pro rekreaci, turistiku, poznávání kulturních památek a léčebné pobyty, má dobré podmínky pro pěší turistiku a cykloturistiku, běžecké a sjezdové lyžování. Tradičními kulturními centry regionu jsou Ostrava, Opava a Český Těšín. Moravskoslezský kraj se může pochlubit mnoha kulturními památkami, na jeho území se nachází městské památkové rezervace (centrum Příbora, Nového Jičína a Štramberka). Zámeckými skvosty kraje jsou sídla v Hradci nad Moravicí, v Raduni, v Kravařích na Opavsku či ve Fulneku. Mezi nejvýznamnější hrady patří Sovinec na Rýmařovsku, Starý Jičín a Hukvaldy v Pobeskydí. Specifikem regionu jsou podmínky pro průmyslovou turistiku (Technické muzeum automobilů v Kopřivnici, Vagonářské muzeum ve Studénce, Hornické muzeum v Ostravě-Petřkovicích, areál Dolních Vítkovic, NKP Důl Michal aj.), vodní sporty na řece Moravici, Odře, nádržích Žermanice a Těrlicko, Slezské Hartě. Lázeňství v kraji je založeno na využití léčebných účinků jodobromové vody v Lázních Darkov a Klimkovice.

Možnosti rozvoje cestovního ruchu jsou předurčeny a zároveň limitovány kapacitními možnostmi ubytování v hromadných ubytovacích zařízeních, kterých má Moravskoslezský kraj méně v počtu (v republikovém průměru o více jak třetinu) i v disponibilním počtu lůžek.

Základní ukazatele cestovního ruchu v Moravskoslezském kraji v roce 2017 navazují na příznivé výsledky loňského roku, počet hostů hromadných ubytovacích zařízení se v kraji meziročně zvyšuje (Fig. 1). Obdobný trend lze vysledovat i v případě počtu přenocování –

průměrný počet přenocování (2,9 noci) řadí Moravskoslezský kraj na 5. místo v ČR. Nejvíce zahraničních hostů přijíždí již tradičně ze Slovenska, z Polska a z Německa (jejich počet každoročně stoupá), dále z Rakouska a Itálie. Zatímco v Moravskoslezském kraji tvoří zahraniční návštěvníci pouze 20 % klientely, např. v sousedním Žilinském kraji je to téměř polovina všech hostů. Počet hostů ubytovacích zařízení Moravskoslezského kraje byl v roce 2016 téměř o 15 % nižší než u slovenského souseda.

Figure 1: Hosté v hromadných ubytovacích zařízeních Moravskoslezského kraje v letech 2013 - 2017



Source: (ČSÚ, 2017)

Intenzita návštěvnosti Moravskoslezského kraje, vyplývající z intenzity přenocování v hromadných ubytovacích zařízeních jak tuzemských, ale zejména zahraničních hostů je téměř o dvě třetiny pod celorepublikovou úrovní (čisté využití lůžek: Hotely **** 32 %, hotely *** 24 %, hotely **, * a penziony 20 %). Relace návštěvnosti k celkové rozloze regionu poukazuje spíše na nízkou úroveň plošného zatížení území turismem, s potenciálně nízkými dopady na životní prostředí (Ročenka Moravskoslezského kraje, 2016).

Indexy turistické funkce T(f) jednotlivých okresů, vycházející z počtu stálých lůžek a počtu obyvatel jednotlivých okresů, charakterizující turistické zatížení území a jeho turistickou atraktivitu jsou uvedeny v Table 1 (výchozími daty jsou statistické údaje ČSÚ a Statistických ročenek Moravskoslezského kraje).

Table 1: Index turistické funkce Moravskoslezského kraje T(f)

Okresy Moravskoslezského kraje	Počet ubytovacích zařízení*	Počet stálých lůžek*	Index 2014/2015	Počet rezidentů*	Index 2014/2015	T(f) 2014	T(f) 2015
Kraj celkem	576	29 923	101,5	1 213 311	100,3	2,4190	2,4685
Karviná	39	2 200	99,9	253 518	98,6	0,8563	0,867
Bruntál	137	6 409	101,0	93 718	98,7	6,6851	6,838
Opava	62	3 149	101,2	176 742	99,9	1,7598	1,781
Frýdek - Místek	181	9 032	100,4	213 260	100,2	4,2240	4,235
Nový Jičín	90	4 081	113,0	151 762	99,9	2,3785	2,689
Ostrava - Město	67	5 052	97,1	324 311	99,3	1,5930	1,557

**stav počtu obyvatel, ubytovacích zařízení a stálých lůžek k 31.12.2015*
Source: vlastní zpracování

Pro komparaci Indexu turistické funkce Moravskoslezského kraje (Table 2) byly vybrány moravské kraje a ty české, s podobnými výchozími podmínkami (počet obyvatel, kapacitní ukazatele, socio-demografické podmínky ap.).

Table 2: Komparace T(f) u vybraných krajů ČR

Kraj	počet obyvatel*	počet lůžek v HUZ*	*T(f)*
Ústecký kraj (R)	822 826	23 351	**2,8375**
Moravskoslezský kraj	1 213 311	29 923	**2,4661**
Zlínský kraj	584 676	25 651	4,3872
Olomoucký kraj	634 718	22 834	3,5975
Jihomoravský kraj	1 175 025	45 236	3,8497
Kraj Vysočina	509 475	23 989	4,7085
Pardubický kraj	516 149	19 068	3,6942
Středočeský kraj	1 326 876	34 812	2,6236
ČR	10 553 843	529 250	**5,0147**

**data k 31.12.2015*
Source: vlastní zpracování

5. Diskuse

Komparace T(f) u vybraných krajů ČR prokazuje, že T(f) Moravskoslezského kraje, vzhledem k vybraným krajům i T(f) ČR je podprůměrná (MSK 2,4661, ČR 5,0147), v komparaci s krajem Ústeckým, který má srovnatelné podmínky (často je srovnáván s krajem Moravskoslezských pro podobné eko-socio-demografické charakteristiky - zhoršené podmínky životního prostředí, vylidňování území, vysoká míra nezaměstnanosti, nízké důchody, vyšší míra stárnutí populace, nižší úroveň vzdělanosti, dobrý potenciál pro rozvoj cestovního ruchu) je na nižší úrovni (T(f) = 2,8375).

Počet stálých lůžek v kraji mírně roste. Souvisí to s investicemi do nových ubytovacích kapacit a do rekonstrukcí stávajících. Turistická funkce Moravskoslezského kraje je dle Defertovy funkce nevýznamná, i když je v čase zaznamenán její růst. Okresy Karviná, Opava, Nový Jičín a Ostrava-Město patří do intervalu T (f) = 0 – 4, což vyjadřuje téměř žádnou turistickou aktivitu, pouze 2 okresy – Bruntál a Frýdek-Místek patří do intervalu T (f) = 4 – 10 s nevýraznou turistickou aktivitou. Dle Indexu turistické funkce T(f) lze konstatovat, že turisticky nejnavštěvovanějším okresem Moravskoslezského kraje je okres Bruntál a Frýdek-Místek, pro jejich kulturně historického bohatství, podmínky pro rozvoj lázeňství a vodní sporty a blízkost hor. Následuje okres Nový Jičín, Opava a Ostrava-Město. Index turistické funkce T(f) okresu Karviná je ve srovnání s ostatním okresy Moravskoslezského kraje nejnižší, souvisí to také s vylidňováním, které je zde nejmarkantnější v kraji (index počtu rezidentů 2014/2015 je 98,6%).

Table 3: Návštěvnost vybraných kulturně společenských a sportovních eventů v Ostravě v roce 2016

Akce	Počet návštěvníků
Zlatá Tretra	20 tis.
Karneval chutí	8,5 tis.
Colours of Ostrava	43 tis.
City Cross Sprint	3 tis.
Dny NATO	45 tis.

Source: vlastní zpracování

S restrukturalizací regionu se z pohledu vytváření nových pracovních příležitostí nejlépe vypořádal okres Frýdek-Místek, Opava a Nový Jičín.

Index turistického zatížení území okresů Moravskoslezského kraje se v čase mění, oproti roku 2014 se v roce 2015 zvýšil, až na okres Ostrava-Město, avšak v letošním roce 2017 se i zde očekává nárůst, díky zvýšení návštěvnosti kulturně sportovních akcí (Table 3), jako je Zlatá tretra, nebo Colours of Ostrava, kterých obliba u návštěvníků narůstá.

6. Conclusion

Součástí globalizace jsou její pozitiva i negativa. K negativům patří společenské, ekonomické a bezpečnostní hrozby, nekontrolovaný tok finančního kapitálu, mizení lokálních kulturních zvyků, snížení turistické atraktivnosti území apod. Některé z nich se projevují také na sledovaném území. Zvýšení intenzity turistické návštěvnosti je cílem řady strategických dokumentů.

Kraj a jeho okresy disponují dostatečnými ubytovacími kapacitami (Kajzar & Václavínková, 2014). Návštěvnost v hromadných ubytovacích zařízeních se zvyšuje a délka pobytu hostů je v průměru o něco vyšší, nežli republiková. Výrazně posilují příjezdy návštěvníků, především z blízkého zahraničí, což ovlivňuje aktivní propagační kampaň. Zvyšuje se prestiž území, to se lépe propaguje, roste zájem turistů a tím se zvýší také turistická návštěvnost oblasti. Regionální marketing je stále více uznávaným nástrojem pro podporu rozvoje regionů (Bucher et. al., 2015). Vytváří synergický efekt pro regiony, znevýhodněné pro jejich odlehlost, nebo restrukturalizaci.

Turistickou návštěvnost kraje by podpořila zvýšená péče o objekty turistického zájmu, zvýšení počtu turisticky atraktivních událostí a zaměření se na významné turistické segmenty a specifické služby pro ně. Svůj význam má péče o kulturní dědictví, doplňkový program má vždy multiplikační efekt. Významnou podporou by mohlo být získání dotací pro organizaci kulturně společenských akcí a vytváření partnerství. V rámci vyhodnocování efektů těchto akcí se provádí zjišťování socio-demografické struktury návštěvníků akcí, délky jejich pobytu a druh ubytování, data o výdajích, spojených s uskutečněným pobytem, spokojenost s navštíveným programem (Botlik et. al., 2015). Podle Novákové (2016) zvýšení intenzity návštěvnosti může sehrát významnější roli v tlumení regionálních disparit na trhu práce (nabídkou pracovních míst, zvýšením míry podnikání, zvýšením zájmu a podporou místních municipalit apod.). Zatraktivnění a dobrá propagace by mohla ovlivnit plošné zatížení území turismem - relaci počtu hostů (resp. jejich přenocování) k počtu trvale bydlících obyvatel v regionu, což by nepřímo ovlivnilo ekonomiku území.

Acknowledgment

Tento článek vznikl za podpory Ministerstva školství, mládeže a tělovýchovy ČR v rámci Institucionální podpory na dlouhodobý koncepční rozvoj výzkumné organizace v roce 2017.

References

[1] Bína, J., (2002). *Hodnocení potenciálu cestovního ruchu v obcích České republiky*. [Online]. Available: http://www.uur.cz/default.asp?ID=3690

[2] Botlik, J., Botliková, M. a Rzyman, V. (2015). The Economic - Social Development of the Border Area in the Moravian-Silesian Region. *Innovation Management and*

Sustainable Economic Competitive Advantage: from Regional Development to Global Growth, Vols I. – VI. Madrid: IBIMA.

[3] Bucher, S., Slivková, S. a Pasternak, T. (2016). Travel & Tourism Competitiveness Index in Slovakia and Czech Republic. *23rd Central European Conference on Central Europe Area in View of Current Geography.* Brno: Masarykova Univerzita, pp. 246-252.

[4] ČSÚ. (Prosinec 2016). *Charakteristika Moravskoslezského kraje*. [Online]. Available: https://www.czso.cz/csu/xt/charakteristika_moravskoslezskeho_kraje

[5] Goeldner, R., Ch. a Ritchie, J., (2009). *Tourism: principles, practices, philosophies. 9 edt*. Hoboken: John Wiley.

[6] GÚČIK, M., (2010). *Cestovný ruch.* Banská Bystrica: DALI-BB.

[7] Jurigová, Z., (2016). Tourism Industry Analysis with the Czech Republic as the Focal Point. *3rd Global Conference on Business, Economics, Management and Tourism (BEMTUR) Procedia Economics and Finance*. Amsterdam, Netherlands: Elsevier BV, vol. 39, pp. 305-312.

[8] Kajzar, P. a Václavínková, K. (2014). Support of Tourism in Moravian Silesian Region. *12th International Conference on Hradec Economic Days: Economic Development and Management of Regions.* Hradec Králové: Gaudeamus UHK, pp. 430-436.

[9] Klieštik, T., Virglerová, Z., Homolka, L. et al., (2017). Key Determinants of the Quality of Business Environment of Smes in the Czech Republic. E*&M Ekonomie a Management*. Liberec: Technická Univerzita, vol. 20, no. 2, pp. 87-101.

[10] Krajská správa Českého statistického úřadu v Ostravě (2016). *Statistická ročenka Moravskoslezského kraje 2016*, kód publikace 330100-16, ref. No: 166/2016-8501.

[11] Mertlová, L, (2015). Tourism and its Influence on the Development of the Region. *10th International Conference on Topical Issues of Tourism*. Jihlava: VŠPJ, pp. 314-330.

[12] Norum, R. a Mostafanezhad, M., (2016). A Chronopolitics of Tourism. *Geoforum*. Kidlington, UK: Pergamon-Elsevier Science Ltd, vol. 77, pp. 157-160.

[13] Nováková, B., (2016). Destination Management and Competitiveness of Destinations. *8th International Annual Scientific Conference on Hotel Services, Tourism and Education*. Praha: VŠH, pp. 144-150.

[14] Palatková, M., (2013). *Mezinárodní turismus*. Praha: Grada Publishing.

[15] Pásková, M. a Zelenka, J., (2012). *Výkladový slovník cestovního ruchu. 2. vyd*. Praha: Linde.

[16] Pellešová, P., (2015). Tourism and Multiplication Effects in the Region. *Int Business Information Management Assoc*., Vols I. - VI. Norristown, USA: IBIMA, pp. 515-520.

[17] Robertson, R., (1992). *Globalization: social theory and global culture*. London: Sage.

[18] Vetráková, M., Gúčik, M. a Kučerová, J., (2015). Tertiary Tourism Education in the Light of New Trends. *10th International Conference on Topical Issues of Tourism.* Jihlava: VŠPJ, pp.71 -81.

COMPETITION AND CONCENTRATION PROCESSES IN THE CONTEXT OF GLOBALIZATION (CASE OF THE RUSSIAN BANKING SECTOR)

Tatiana Kotcofana[1,a], Polina Stazhkova[2,b] and Vadim Pashkus[3,c,*]

[1]Saint-Petersburg State University, Faculty of Economics, Department of Economics and Economical Policy, Universitetskaya emb., 7-9, 199034, Saint-Petersburg, Russia

[2]Saint-Petersburg State University, Department of educational programs, Universitetskaya emb., 7-9, 199034, Saint-Petersburg, Russia

[3]Saint-Petersburg State University, Faculty of Economics, Department of Economics and Economical Policy, Universitetskaya emb., 7-9, 199034, Saint-Petersburg, Russia

[a]tankotsofan@mail.ru, [b]stazhkova@mail.ru, [c]pashkus@mail.ru

*Corresponding author

Abstract. The globalization of the world economy leads to increasing competition in most spheres of economic activity. On the other hand, in the conditions of hypercompetition, there is a tendency toward consolidation of firms and concentration of capital since large corporations have much greater financial resources, more opportunities to diversify their activities and, as a result, they occupy a relatively more stable position in the market. The banking sector that constitutes the circulatory system of any economy is not an exception. In developed countries, there is a quite high degree of concentration of banking markets, reflected in the corresponding values of concentration ratio and Herfindahl-Hirschman index. The Russian banking sector has certain characteristics concerning the dominance of banks that are under the state control, so special attention should be paid to the distribution of market power between the largest banks. Therefore, the authors analyzed the degree of concentration on the Russian banking market with the help of not only concentration ratio and Herfindahl-Hirschman index, but also the Linda index, which concentrates researchers' attention on this aspect. There is a clear dominance of one bank in the Russian banking sphere, but overall the concentration of the market is moderate (with the exception of the highly concentrated segment for attracting deposits from the individuals). At the same time, there is an upward trend in the concentration ratio and the Herfindahl-Hirschman index and accordingly it can be concluded that the degree of concentration in the Russian banking market now exceeds the European level.

Keywords: market concentration, competitive environment, oligopolistic kernel, banking sector

JEL Classification: D21, D43, G21, L13, L49

1. Introduction

In the era of economic globalization, there are significant changes in the functioning of the global financial market. The dependence of states on the international capital market is growing. The capital market has become a separate factor in the development of the world economy. (Gregova & Dengov, 2015). Banks that have competitive advantages, experience and financial capabilities, carry out foreign expansion. On the one hand, it promotes the development of international banking business and increases competition in the banking sector. On the other, it activates the consolidation of bank capital, which leads to an increase in the number of mergers and acquisitions in the banking sector, the transnationalization of activities and capital, the consolidation of financial and credit institutions, and the growth of banking alliances.

The increase in the size of banks though mergers and acquisitions, as well as their cooperation with other financial institutions, are aimed at strengthening competitive positions at the national level and gaining influence at the international level. Therefore, in modern conditions, banks affect not only the flow of corporate resources, but also provide credit financing at the local and global levels. (Nováčková & Sysáková, 2015), (Spuchlakov & Michalikova-Frajtova, 2016). In recent decades, the global market of financial services has reached significant proportions (Saifullina et al., 2016).

The centralization of bank capital directly and indirectly affects the level of competition. First of all, the share of merged banks in the assets of the banking system increases due to the decrease in the number of banks and their enlargement, the level of concentration of bank capital increases, as the result it affects position of banks and market power increases, competition weakens. Particularly obvious this trend is in the context of global financial instability, political and financial risks, growth in the number of bad debts (Vojtekova & Blazekova, 2016), (Ruščáková, 2015), (Dengov & Tulyakova, 2015).

2. Results and Discussion

Economists have developed a number of concentration indices, and some studies show that the final assessment of the degree of competition and its impact on the effectiveness of the economic policy depend on the choice of concentration indicators (Khan et al., 2016), (Maksimov et al., 2016). To analyze the degree of concentration of the Russian banking market, we selected three indicators, comparative characteristics of which, their advantages and disadvantages, as well as the rationale for the need for their joint use for the analysis of the Russian banking market are presented in the paper (Kotsofana & Stazhkova, 2011).

Concentration ratio for the three largest banks (CR3) is a simple indicator in terms of calculations and interpretations. We do not stop on one only, but we also use the concentration ratio of six, eight and ten largest banks, mainly to identify the relative importance of the largest banks that are not in the top three.

The Herfindahl-Hirschman index is considered the most adequate indicator in terms of reflecting the market situation in general and the monopoly power of the largest firms, since it takes into account the market shares of all firms and gives greater weight to firms with large market shares. (Petria et al., 2015). As practice shows, when calculating the Herfindahl-Hirschman index not for all firms, but only for the largest ones, the result obtained is somewhat understated, but quite adequate. This is true in our case, since the shares of the absolute majority of banks in all the surveyed markets are less than one percent. Accordingly, their squares give negligible values, and even summed they will not have a significant effect on the final value of the index.

Linda index identifies the largest banks and their separation from the rest. In our case, for all markets we study, the kernel consists of one, two or three banks, so our Linda index calculations are in all cases limited to four banks, as further calculation does not make sense. We will carry out a quantitative analysis of the concentration in four banking service markets: the lending market for individuals, the lending market for legal entities, the deposits services for individuals and the market for attracting deposits from legal entities. The quantitative indices of the concentration of each of these markets in dynamics over a period of ten years are presented in Tables 1, 2, 3 and 5.

Before we proceed to a direct analysis of the situation in specific markets, we consider it necessary to make two explanations. Firstly, the authors represent VTB (since 2017 VTB Bank of Moscow) and VTB 24 as a single bank, since they are actually branches of one bank, with different functions. VTB Bank of Moscow operates mainly with legal entities, and VTB 24 with individuals. As a result, in case of separate reporting on these banks, information on the shares of VTB group as a whole is underestimated. Secondly, for a more detailed picture, it is useful to represent not only the values of the concentration indices, but also the quantitative values of the market shares of the largest banks. However, their presentation in the table for ten years presents certain difficulties due to quite significant changes in the situation in the analyzed markets. Therefore, data on the specific quantitative values of the market shares of individual banks will be included in the text, when it is necessary.

The dynamics of concentration indicators in the consumer lending market (see Table 1) shows relative stability during 2008-2015 and quite a sharp increase in the degree of concentration in 2016 and especially in 2017.

Table 1: Indicators of market concentration in segment of consumer lending, 2008 -2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
CR3	48.16	49.13	50.75	50.02	49.08	49.19	50.18	52.19	54,92	60.17
CR6	54, 75	55.25	55.67	54.53	54.28	54.91	55.71	57.24	59.96	65.17
CR8	59.40	60.25	60.14	58.79	58.52	59.99	60.78	61.61	63.83	68.26
CR10	63.27	64.31	64.17	62.68	62.47	64.56	65.18	65.50	67.10	70.90
Herfindahl-Hirschman index	1 482	1 461	1 515	1 415	1 362	1 397	1 425	1 558	1 734	1 940
Linda index										
Two banks	602	407	359	322	313	318	291	292	297	238
Three banks	554	578	595	552	554	595	609	690	718	675
Four banks	556	607	705	707	626	631	655	746	749	734

Source: Authors based on banki.ru data

This trend is primarily due to changes in the market shares of the two largest banks: Sberbank and VTB group. The share of Sberbank in 2008-2015 remained quite stable, fluctuating slightly in the 35-36% range (the maximum value of 37.07% in 2008, the minimum value of 34.49% in 2012). In 2016, the share of Sberbank in the consumer lending market increased by more than two points: from 36.82% to 39.03%. In 2017 this increase continued, although it was not so significant – slightly more than one point, to 40,29%. A sharp increase in the concentration of this market in 2017 is due to a significant increase in the share of the second largest bank. Since 2008, VTB group has consistently increased its share in the market under investigation; as a result, this share was 13.13% in 2016 against 6.16% in 2008. In 2017, the VTB group's share increased sharply, reaching 16.86%, it was largely due to the legal merger of the Bank of Moscow, its share in the consumer lending market in 2016 was 2.15%. Because of these trends, the Herfindahl-Hirschman index, with value for 2008-2016 showing a moderate concentration of this market, approached level of 2000, significantly exceeding the threshold of 1800. Finally, we looked into the Linda index. In 2008 it showed the presence oligopolistic kernel of the three banks, and later this kernel has degenerated into a clear dominance of one of the banks. This is due not so much to the increase in the share of Sberbank, until 2016 it remained quite stable and its share even decreased in some years. The dominance can be explained though the loss of market positions by the "Russian Standard" bank, which in 2008 occupied 4.93% of the consumer lending market. In subsequent years, the share of the "Russian Standard" in this market has steadily decreased, and no other bank among those who took the third place in this market, has not gained more than 3.5%, and in recent years 2.5%. Therefore, the main competition in this market during almost the entire period studied was between the two largest banks: Sberbank and VTB group (in the consumer lending market it is mainly VTB 24), and the share of Sberbank is more than twice that of VTB group, despite confident growth of the latter.

In contrast to the market just considered, the indicators of concentration of the deposit market show a quite stable downward trend (see Table 2).

Table 2: Indicators of market concentration in segment of deposits from population, 2008 -2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
CR3	65.34	65.79	62.75	61.39	60.57	59.28	60.17	58.02	58.00	60.76
CR6	70.76	71.98	68.84	67.01	66.00	64.56	65.62	64.03	62.75	65.94
CR8	73.17	74.45	71.83	69.75	68.59	67.12	68.32	66.89	66.13	70.34
CR10	74.77	76.27	74.27	72.23	70.71	69.51	70.75	68.85	68.50	73.40
Herfindahl-Hirschman index	3 416	3 342	2 975	2 780	2 640	2 525	2 534	2 284	2 259	2 367
Linda index										
Two banks	1 225	967	836	735	661	655	584	545.	521	428
Three banks	1 421	1 288	1 245	1 203	1 135	1 132	1,082	922	906	867
Four banks	1 411	1 346	1 271	1 244	1 169	1 131	1,085	928	908	892

Source: Authors based on banki.ru data

As in the consumer lending market, Sberbank is the sole leader here. Its dominance in the deposit market is more pronounced, albeit somewhat weaker during the period under review. Sberbank's market share was declining from 58.08% in 2008 to 46.37% in 2016, and in 2017 it increases again slightly to 47%. Actually, the decline in market share of the Sberbank has a decisive influence on the dynamics of concentration indicators as the share of other market leaders, although changing, but remain very low compared to Sberbank shares. Share of VTB group increased from 4.74% in 2008 to 8.9% in 2016 and slightly decreased in 2017, amounting to 8.77%. The shares of the rest of the banks did not exceed 2.7% during the whole period. Gazprombank and Alfa-Bank occupied the third and fourth place in the rating and owned approximately the same share of the market. From what has been said, it is obvious that in this segment of the banking market of Russia Sberbank is unquestionable leader. The dynamics of Linda index confirms it. Accordingly, the concentration in the market is consistently high, albeit declining over the decade under consideration while Herfindahl-Hirschman index is consistently over 2000. Situation on the market of deposits from population can be explained in terms of specifics of the Russian banking system. Due to the history and traditions vast majority of Russians are not involved in business and economic culture is still insufficiently developed, this includes an understanding of how financial markets function. For example, many people are not exposed to economic concepts and still believe that Sberbank of Russia is a state owned bank and, consequently, the most reliable credit institution of the country. In fact, Sberbank is not a state bank, at least formally. According to its legal status, it is an open joint-stock company, a majority-owned by the Central Bank. As of mid-2017 the Central Bank owns 50% plus one voting share of Sberbank, the remaining shares are distributed between the independent shareholders (Sberbank, 2017). An important aspect in determining the leadership of the Sberbank, stands the fact that Sberbank is one of the oldest financial institutions in our country. The network of savings banks (Sberbank) encircled the entire territory of the USSR. None of the credit institution have the number of offices in the regions as Sberbank of Russia has. According to the official Sberbank web-page, it has 16,500 branches in 83 regions of Russia. (Sberbank, 2017).

The next part is dedicated to the analysis of the concentration in segments related to the services for legal entities.

Table 3: Indicators of market concentration in segment of credits to legal entities 2008 -2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
CR3	52,20	54.94	55,30	52.39	54.77	55.19	55.32	56.32	54.67	57.22
CR6	59.19	62.51	63.87	61.26	63.12	63.82	63.55	64.08	64.96	66.73
CR8	64.85	68.76	69.77	67.50	68.29	68.75	69.26	71.01	70.89	73.49
CR10	69.37	73.12	73.27	71.26	71.81	72.45	72.83	75.32	75,00	77.21
Herfindahl-Hirschman index	1 550	1 549	1 558	1 420	1 512	1 545	1 486	1 571	1 394	1 437
Linda index										
Two banks	366	272	278	315	293	329	303	316	246	211
Three banks	471	387	369	348	346	331	298	309	272	246
Four banks	514	470	421	395	409	406	389	433	311	332

Source: Authors based on banki.ru data

Table 3 shows details of the concentration of the credit market for legal entities in 2008-2017. In general, they suggest a moderate concentration of a given segment of the market, but their dynamics is rather contradictory. Concentration ratio has sufficiently torn trend and still shows a gradual increase, so that the total share of the three largest banks has grown over ten years to five points, from 52.2% in 2008 to 57.22% in 2017. Herfindahl-Hirschman index, in contrast, declined slightly from 1550 to 1437 over the same period, but it also showed insignificant fluctuations during the decade studied. We looked into the reasons for such a multidirectional dynamics of the analyzed indices. In order to correctly interpret the concentration indicators, it is necessary to turn to information on the market shares of individual banks. In corporate lending the top five banks remained unchanged during the ten years, but in 2016 they were joined by bank FC „Otkrytiye“. In recent years FC „Otkrytiye“ has increased its shares in all segments of the banking market that we are considering, as well as in the total assets and capital of the Russian banking system. In view of the above, we represent the market shares of the first six banks in corporate lending segment and their dynamics during a decade considered in the table (Table 4).

As we can see, the share of Sberbank over the years declined slightly, at the same time quite considerably increased the share of other leading banks. As a result, in 2014-2015 it was possible to confidently confidently talk about the kernel of the market of three banks as evidenced by the dynamics of the Linda index. And in 2016-2017, according to the Linda index, the kernel consists of two largest banks. Due to this redistribution of market shares, the competition among the leaders of this segment somewhat intensified. It resulted in increased competition in the market as a whole that was reflected in the dynamics of the Herfindahl-Hirschman index. At the same time, the aggregate share of the largest banks increased. And, as can be seen from the ratio of the dynamics of CR6, CR8 and CR10, the shares of not only the first five or six banks increased, but also the following ones them in size. This means that with increasing competition in the segment as a whole, the gap between leaders from market outsiders was widening.

Table 4: Market shares of the largest six banks' lending to the legal entities 2008 -2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sberbank of Russia	36.95	35.74	35.83	34.32	35.41	36.02	34.82	35.98	32.43	32.06
VTB group	10,10	13.13	12.89	10.89	12,10	10.94	11.49	11.39	13.19	15.21
Gazprombank	5.14	6.08	6.58	7.18	7.26	8.23	9.01	8.94	9.06	9.95
FC „Otkrytiye"	1.44	1.48	1.23	1.63	1.63	1.90	2.09	3.76	6.23	5.19
Rosselkhozbank	3.03	3.60	4.75	4.85	4.70	4.62	4.52	3.87	4.06	4.32
Alfa Bank	3.91	3.97	3.36	3.72	3.64	4.02	3.71	3.89	3.58	3.74

Source: Authors based on banki.ru data

Finally, Table 5 shows concentration indicators of the market for raising funds from legal entities. This segment is the most competitive of all we have discussed in this paper. However, all the concentration indicators demonstrate a clear upward trend. It signals the transition from a low market concentration in 2008 to a moderately concentrated market in 2015-2017.

Table 5: Indicators of market concentration in segment of deposits from legal entities 2008 -2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
CR3	41.25	45.69	46.35	45.14	44.37	44.95	47.89	51.76	55.01	54.02
CR6	49.01	53.09	53,40	53.19	54.06	53.98	56.14	60.17	62.16	62.71
CR8	55.34	59.05	59.18	58.76	60.16	60.53	61.77	66.04	67.73	68.38
CR10	60.42	64.76	64.58	63.03	64.01	65,01	66.04	70.63	72.34	73.15
Herfindahl-Hirschman index	759	880	829	792	773	826	881	1 046	1 206	1128
Linda index										
Two banks	180	207	150	150	134	165	150	157	165	124
Three banks	219	186	145	146	140	170	146	167	192	169
Four banks	306	305	272	248	224	256	258	274	321	266

Source: Authors based on banki.ru data

On this market, the leading positions in terms of market share, with a significant separation from the rest, were steadily held by three banks: Sberbank, VTB group and Gazprombank. This is confirmed by the dynamics of concentration ratio. Their overall increase is clearly determined by the increase in CR3. Information about the market shares of three of the largest banks and their dynamics are presented in Table 6.

Table 6: Market shares of the largest three banks attracting deposits from legal entities 2008 -2017

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Sberbank of Russia	21.52	23.47	20,29	19.78	18.55	21.31	21,00	24.08	27.12	23,51
VTB group	11.96	10.88	12.55	13.21	13.83	12.88	14,00	15.36	16.42	18.93
Gazprombank	7.64	11.34	13.50	12.12	11.97	10.72	12.86	12,30	11.45	11.57

Source: Authors based on banki.ru data

For comparison: in 2017 the fourth largest bank in this segment was Rosselkhozbank with a market share of 5.18%. In other years, the gap between the fourth bank (and, correspondingly, all others) from the three leaders was even more significant.

Thus, the kernel of the three banks can confidently named in this segment, although the Linda index in most cases shows two leaders. And the dynamics of the concentration indicators here is largely determined by the change in the market shares of VTB group and Gazprombank, since the share of Sberbank does not show a clear trend to increase. Although it fluctuates quite significantly over ten years having increased by only two points in 2017 compared to 2008 (23.51% vs. 21.52%). At the same time, VTB group and Gazprombank increased their share in total of 13 points. This increase corresponds to the increase in indicators CR3 – CR10. Therefore, the growth of the Herfindahl-Hirschman index is not as significant as it could be expected on the basis of the dynamics of concentration ratio. The competition between the major banks has increased, so, in spite of their growing isolation from outsiders, competition in the market as a whole remains quite strong.

The degree of concentration in the banking system as a whole can also be judged by the concentration of banking assets. For the Russian banking system (the assets of 600 banks) the Herfindahl-Hirschman index in January 2017 was 1220 (Banki.ru). It indicates moderate concentration. For comparison: in the seven largest world economies (G7) Herfindahl-Hirschman index in the banking market in the 2000s did not fall below 5000, and after 2010 it was consistently higher than 6000 (Parsons & Nguyen, 2016). However, the Russian market has a steady upward trend in concentration. In 2010 the Herfindahl-Hirschman index for the assets of 957 Russian banks was 907 (Raksha, 2010). A similar pattern is observed when analyzing the concentration ratio. The share of the first five banks in total assets (CR5) in January 2017 was 59,04% (Banki.ru), while in 2008 the concentration ratio for total assets of the first five banks was 42%, in 2010 – 48% (Khandruev & Chumatchenko, 2010). This growth rate is considered very high by world standards. As a result, the Russian banking sector today is more concentrated than the European one. According to official statistics of the European Central Bank, at the end of 2015, the Herfindahl-Hirschman index for Europe as a whole was 722, while the proportion of the first five banks in Europe was 47.98% (European Central Bank). However, it is worth noting that in some European countries, the level of concentration of assets of five largest banks is significantly different. It ranges from 31% in Germany and Luxembourg to 95% in Greece (European Central Bank). At the same time about 94 percent of the market share in Australia belongs to the four largest banks (Leigh & Triggs, 2016).

3. Conclusion

Globalization is often welcomed in developed countries but it raisies fears in the developing world. This is due to the fact that the advantages of globalization are distributed unevenly. To some extent, globalization and integration processes are an obstacle to the development of a competitive environment. They can lead to excessive concentration and monopolization of the economy. Overall, however, globalization has had a positive impact on the economies in transition, as it facilitates their integration into the world economy.

As for other sectors of the economy, the banking sector in all countries had witnessed the processes of centralization and concentration. The Russian banking sector as a whole in comparison with the developed countries is characterized by a relatively high concentration. On one hand, it will contribute to the integration of financial institutions in the global financial market, and on the other, it may lead to significant problems for the Russian banking system.

References

[1] Banki.ru [Online]. Available: http://www.banki.ru/banks/ratings/

[2] Dengov, V. V. and Tulyakova, I. R. (2015, C). Credit Risk Analysis for the Telecommunication Companies of Russia: the Fuzzy Model. Comparison of Results, *Proceedings of the 2nd International Multidisciplinary Scientific Conferences on Social Sciences and Arts (SGEM),* Book 2., Albena, Bulgaria, pp. 123-130.

[3] Gabbasova, L. B. and Mirzagalyamov, B, B. (2015). Trends in the development of international banking competition in the conditions of globalization, *Journal of economics, law and sociology*, vol. 4.

[4] 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,* Part I.*,* Zilina, Slovakia, pp. 150-156.

[5] Khan, H. H., Ahmad, R. B., and Gee, C. S. (2016). Bank competition and monetary policy transmission through the bank lending channel: Evidence from ASEAN, *International Review of Economics & Finance*, vol. 44, pp.19-39.

[6] Khandruev, A.A. and Chumachenko, A.A. (2010). Competition in the banking industry: trends, problems and forecasts, *Banking,* vol. 11, pp. 6-13.

[7] Kotsofana, T.V., Stazhkova, P.S. (2011). Comparative Analysis of Concentration Indicators Application: Case of Russian Banking Sector, *Vestnik of Saint-Petersburg University. Ser. 5: Economics*, vol. 4, pp. 30-41.

[8] Leigh, A. and Triggs, A. (2016). Markets, Monopolies and Moguls: The Relationship between Inequality and Competition, *Australian Economic Review*, vol. 49, no. 4, pp. 389-412.

[9] Maksimov, A. V., Dengov, V. V. and Tulyakova, I. R. (2016). Globalization in the Field of Food Retail St.Petersburg: Concentration and Competition. *Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences,* Part III.*,* Zilina, Slovakia, pp. 1277-1286.

[10] Nováčková D., Sysáková V. (2015). The Comprehensive Assessment of Selected Banks in Slovakia. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences,* Part I.*,* Zilina, Slovakia, pp. 505-514.

[11] Parsons, R., and Nguyen, J. (2016). Bank consolidation before and after the 2008 crisis, *Applied Economics Letters,* vol. 24, no. 2, pp. 98-101.

[12] Petria, N., Capraru, B. and Ihnatov, I. (2015). Determinants of Banks' Profitability: Evidence from EU 27 Banking Systems, *Procedia Economics and Finance*, vol. 20, pp. 518-524.

[13] Raksha, A.D. (2010). Competition in the banking sector. *Banking*, vol. 11, pp. 22-27.

[14] Report on financial structures, European Central Bank. October 2016. [Online]. Available: https://www.ecb.europa.eu/pub/pdf/other/reportonfinancialstructures 201610.en.pdf?592b728066f71be0788991e606b504bd

[15] Ruščáková, A. (2015). The European Sovereign Debt Crisis: The Result of the Financial Globalisation 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,* Part II., Zilina, Slovakia, pp. 617-626.

[16] Saifullina, Y. M., Borisova, E. I. and Omarova, A. T. (2016). Modern Trends Of Regional Bank System In The Context Of Globalization. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences,* Part IV,. Zilina, Slovakia, pp. 1927-1935

[17] Sberbank of Russia. Official web page. [Online]. Available: http://www.sberbank.com

[18] Spuchlakova, E. and Michalikova-Frajtova, K. (2016). Investment certificates as an instrument of structured products, *Ekonomicko-manazerske spektrum*, vol. 10, no. 2, pp. 13-25

[19] The Banker. [Online]. Available: http://www.thebanker.com

[20] The Bank of Russia. Official web page. [Online]. Available: http://www.cbr.ru

[21] Vojtekova, M. and Blazekova, O. (2016). Bad Debts as a Global Problem in Banking Sector. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences,* Part V., Zilina, Slovakia, pp. 2401-2408

EURO AREA AND JAPAN – DIFFERENT MARKETS, SIMILAR UNCONVENTIONAL MONETARY MEASURES, SAME DILEMMA

Jana Kotlebova[1,a,*]

[1]University of Economics in Bratislava, Faculty of National Economy, Department of Banking and International Finance, Dolnozemska cesta 1, Bratislava, Slovak Republic

[a]jana.kotlebova@euba.sk

*Corresponding author

Abstract. Globalization is accompanied by spillover processes in positive and negative manners. On the one hand, they improve the competition, on the other hand, the higher interconnectedness of economies makes international environment sensible to economic shocks as well as crises. Problems of one economy thanks to internationalization become the problems of another ones. The latest crisis seems to be solved by similar measures of monetary policy of different monetary authorities, but still the heterogeneity of the markets prevails, so unconventional monetary policies are not successful in the same extent. Unconventional monetary policies in EA19 and in Japan persist. It is visible, that zero (or lower bound) interest rate policy alone is ineffective to overcome the consequences of latest financial crises in these regions. Methodologically, we try to find the consistent features as well as the potential anomalies in reactions of their financial markets to unconventional measures of their monetary authorities. Special attention is paid to the development of money, credit, foreign exchange and stock markets. Analysis leads to the determination of positive consequences as well as potential risks for the future development. Dataset range covers times period from 2007 till 2016.

Keywords: unconventional monetary policy, ECB, BoJ, financial markets, financial crisis, spillover effects of globalization

JEL Classification: E58, E44, G01, F6

1. Introduction

The unconventional monetary policy (UMP) is a phenomenon which is under the estimation of huge number of economists over the world. In the conditions of globalized world economy, the problems of one economy become the illness of others. An UMP is needed when standard monetary policy is not able to solve the deterioration of economic system in the country. The timing of its starting as well as forms of application and the beginning of exit strategy are very crucial.

The key objective of this paper is to investigate the common and different features of UMPs in Euro Area and in Japan, especially their impact on the main macroeconomic and monetary indicators from 2007 till the end of 2016. Based on our analysis, we provide an assessment of their positive results altogether with the determination of potential risks which can arise from ignoring of some problems which persist or occur after their implementation.

2. Review of Empirical Studies, Methodology and Data

There is a huge scientific research concerning the assessment of UMPs' effects in Euro Area and in Japan. Among others the studies of Gertler and Karadi (2011), Vojtkova (2011), Aristei and Gallo (2014), Williams (2011), Joyce et al. (2012), BIS (2013), Gambacorta et al (2014), Kotlebova (2016), Kotlebova & Siranova (2016), BOJ (2016), Mallick et al. (2017), Matsuki et al. (2015), Shirai (2014), Hanisch (2017), Chen. et al (2016). They focus attention to the effectiveness of the different transmission mechanisms of the UMP.

For example, Gertler & Karadi (2011) build model about the impact of UMP on financial intermediaries that face balance sheet constraints. They confirm the positive effects of crediting by central banks on financial intermediation even if the nominal interest rate has reached zero lower bound. The interest rate channel is analysed in the study of Aristei and Gallo (2014). They show that the transmission of low central bank's interest rates into the lending rate to the bank clients is weaker, but still higher in the case of non-financial corporations than of households.

Williams (2011) summarizes the evidence of effectiveness of forward guidance (signalling channel) and asset purchase programmes (portfolio channel) in combating the financial crisis. In the case of large-scale asset purchases some uncertainty about future consequences persists regarding the size and composition of the central bank's balance sheet. Gambacorta et al (2014) examine changes of central bank balance sheets at the zero lower bound with impact on economic activity and consumer prices across countries. They conclude that the reaction of the price level is weaker and less persistent. Mallick et al. (2017) demonstrate that the low policy rate and asset purchase programmes have decreased a volatility of stock and bond markets, but not have significant impact on real economy.

Hanisch (2017) claims that the effects of different expansionary monetary tools have different impacts on economy. A decrease of short-term interest rate has a strong positive effect on output and a modest effect on prices. A monetary policy shock that raises the monetary base has a positive – but weak effect on output and strong effect on goods and stock prices. He demonstrates his findings by the Japanese economy during 1985 - 2014. Matsuki et al (2015) at the shorter period (during 2012 – 2014) show that a higher monetary base significantly lowers short-term interest rates and raises inflation. They find a positive relationship also between asset purchases (especially government bonds and ETF) and stock and foreign exchange markets. These findings confirm also the studies of Shirai (2014) and BOJ (2016).

In general, all of them agree that recessionary forces have been extremely strong, unconventional measures are helpful, but have limited impact on economic recovery or price stability and Joyce et al (2012) add that the growth of bank reserves can lead to the market malfunctioning. In line with previous findings Chen et al (2016) explain that we have still only few information about the impact of unconventional monetary policy on real economy. In the globalized world economy, it is needed to understand the cross-border monetary policy spillovers for the international policy coordination to cope with the challenges which arise from persisting problems in macroeconomic and financial stability.

Our data sample covers period from the start of 2007 till the end of 2016. We use daily as well as monthly data from the statistical databases of ECB, BoJ and Federal Reserve Bank of St. Louis. Methodologically, based on daily data we observe reaction of stock market indices and foreign exchange rates on changes of policy rates in short-term and by the monthly data reaction of monetary environment in longer-term period. Our findings we try to back up by correlation analysis and graphic analysis.

3. Results and Discussion

Both central banks follow the same goal of monetary policy – the price stability which is quantitatively limited by the annual growth of CPI.

The strategies applied are very similar, both use the combination of quantitative and qualitative UMP. BoJ's monetary policy strategy is now conducted by the control of yield curve of government bonds to strengthen impact of previous quantitative and qualitative easing (QQE) on short-term and long-term interest rates and by the regulation of monetary base to achieve the control over the inflation. BoJ has longer experience with quantitative easing in comparison with ECB. Quantitative easing in Japan was introduced in 2001 and purchase of Japanese government bonds belongs to the open market operations from 1995. Also, zero interest rate policy (ZIRP) is older in Japan, it was already used during 1999-2000. Policy of negative interest rates was introduced in Japan in 2016.

In the case of ECB, the operational tools are key interest rates of ECB. ZIRP was set in 2012 and negative interest rate on deposit facility was firstly announced in 2014. Government bonds serve as a collateral for refinancing operations from the beginning of monetary union, but outright purchases under the PSPP on secondary market have started in 2015 and from this time we can speak about quantitative monetary policy measures of ECB.

In both cases, there is very strong effort of central banks to improve conditions in crediting of real economy and by this way to support an economic recovery.

The first step of our analysis is to show the reaction of stock markets indices and foreign exchange rates to the changes of main interest rates of central banks on daily basis. The development of stock market we consider as a benchmark of the economic situation in domestic conditions and the movement of exchange rate serves as an external factor by which we can assess the strength of an economy in the global environment. With respect to the theoretical basis, we expect the opposite relationship - when interest rate on money market decreases, stock market index should increase and vice versa as the result of shift of investors among the segments of financial market to get higher appreciation of the invested capital as well as the result of cheaper money so easier financing of their activities. Higher interest rates lead to the appreciation of domestic currency in relationship to the foreign ones as for investors bring the higher returns.

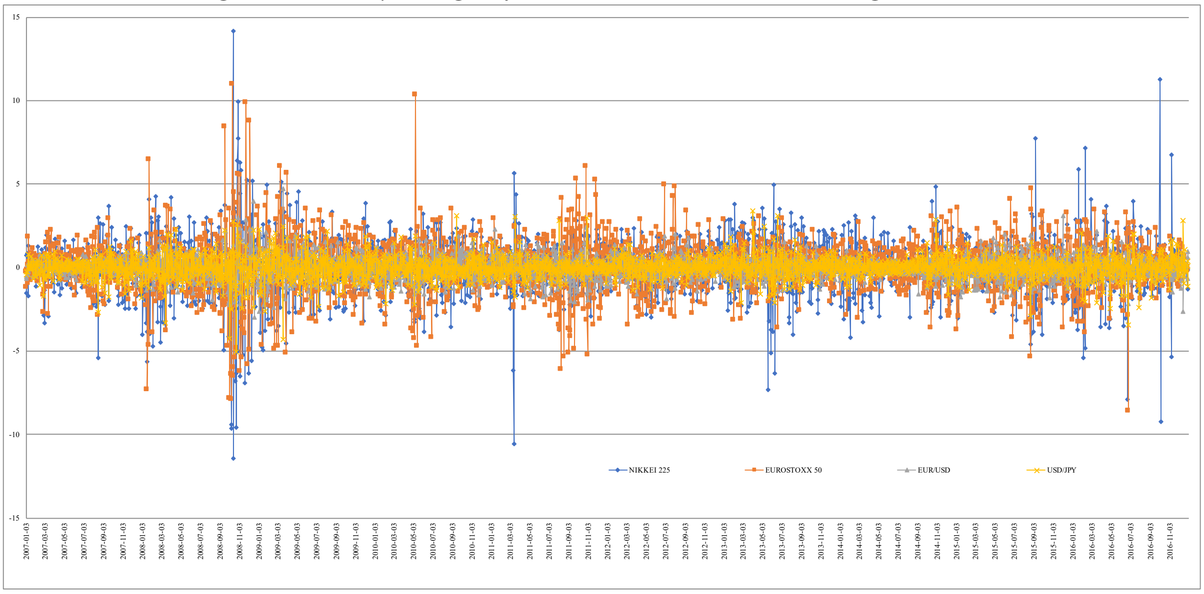
During our analysed period (2007-2016) ECB increased 5-times and decreased 15-times the interest rate of main refinancing operations. After the increase of interest rate (5 cases) there is more frequent decrease of EUROSTOXX 50 in day after the change. In the case of decline of interest rate (15 cases) the stock market index was also more volatile in increase one day after the change. Reaction was stronger to the decline of interest rate (Table 1) as to the increase of interest rate. Close to the present time, volatility of stock market index is lowering. The changes of foreign exchange rate EUR/USD regarding our expectations occurred mainly in the day of the change of interest rate. The size of intraday changes was lower against those of the stock market index.

Table 1: Reaction of stock market indices and exchange rates to the changes of main IRs

Date of change and level of IR of MRO	***Change of IR in % +/-***		***Change of EUROSTOXX 50 in % day of change/1 day after***		***Change of EUR/USD in % day of change/1 day after***	
14.03.2007.....3.75%	0.25		-2.78	2.03	0.21	0.17
13.06.2007.....4.00%	0.25		0.43	1.89	-0.22	0.12
09.07.2008.....4.25%	0.25		1.67	-1.78	0.58	0.17
15.10.2008.....3.75%		0.50	-6.48	-5.98	-0.67	-1.11
12.11.2008.....3.25%		0.50	-3.34	1.22	-1.58	-0.25
10.12.2008.....2.50%		0.75	0.60	-0.41	0.67	2.07
21.01.2009.....2.00%		0.50	-0.56	-1.30	-0.59	0.66
11.03.2009.....1.50%		0.50	0.69	1.54	0.17	0.20
08.04.2009.....1.25%		0.25	0.98	2.79	0.05	-1.05
13.05.2009.....1.00%		0.25	-2.77	-0.16	-0.19	-0.03
13.04.2011.....1.25%	0.25		0.60	-1.09	0.15	-0.09
13.07.2011.....1.50%	0.25		0.80	-0.73	1.09	0.11
09.11.2011.....1.25%		0.25	-2.34	0.25	-1.37	0.03
14.12.2011.....1.00%		0.25	-2.44	0.86	-0.93	0.32
11.07.2012.....0.75%		0.25	0.20	-0.81	-0.09	-0.37
08.05.2013.....0.50%		0.25	0.56	-0.41	0.70	-0.55
13.11.2013.....0.25%		0.25	-0.45	1.08	0.21	0.09
11.06.2014.....0.15%		**0.10**	**-0.75**	**-0.15**	**-0.08**	**0.18**
10.09.2014.....0.05%		0.10	-0.04	-0.20	-0.01	0.22
09.12.2015.....0.05%	-	-	-0.61	-0.22	0.99	-0.33
16.03.2016.....0.00%		0.05	-0.17	-0.62	-0.33	2.18
Date of change and level of IR of BL	***Change of IR in % +/-***		***Change of NIKKEI 225 in % day of change/1 day after***		***Change of USD/JPY in % day of change/1 day after***	
21.02.2007.....0.75%	0.35		-0.14	1.09	0.74	0.25
31.10.2008.....0.50%		0.25	-5.00	6.27	0.83	0.68
19.12.2008.....0.30%		0.20	-0.91	1.57	-0.37	0.66

Source: author's own processing, data ECB, BoJ (2017). On 11.6.2014 ECB firstly introduced NIRP at interest rate of deposit facility with later deepening on 10.9.2014, 9.12.2015 and 16.3.2016. BoJ firstly introduced NIRP at policy rate balances in January 2016. As main interest rates are used interest rate of main refinancing operations in case of EA19 and basic loan rate in the case of Japan.

Figure 1: Intraday changes of stock market indices and exchange rates in %



Source: author's own processing, data Federal Reserve Bank of St. Louis (2017).

BoJ changed the basic loan rate only 3-times (1 increase, 2 decreases). In the case of higher interest rate an expected decline of stock market index NIKKEI 225 occurs in the day of change, but movement is only moderate and at the next day stock market returns to the highest level in comparison with the previous day. After the decline of interest rate an expected growth of stock index is visible only day after the change and reaction is stronger in comparison with the growth of rate in previous case. It is needed to highlight that the changes of interest rate in Japan were done at the start of financial crisis (2008). In observed time a Japanese Yen was under the depreciation pressure and its expected reaction to that time already low interest rate brought only further depreciation of JPY against USD.

During whole analysed period the standard deviation of intraday % changes in the case of stock indices was higher (1.63 for NIKKEI 225 and 1.52 for EUROSTOXX 50) against this of exchange rate (0.64 for EUR/USD and 0.68 for USD/JPY), what corresponds with previous findings. Figure 1 shows a higher volatility of stock indices mainly at the pick of crisis in October 2008 and in 2013-14 in Japan when BoJ has introduced QQE. Next step of our analysis is to confirm the strength of relationship among money market, foreign exchange and financial market by correlation analysis during observed decade.

Table 2 Cross correlation of selected variables from 2007 till the end of 2016

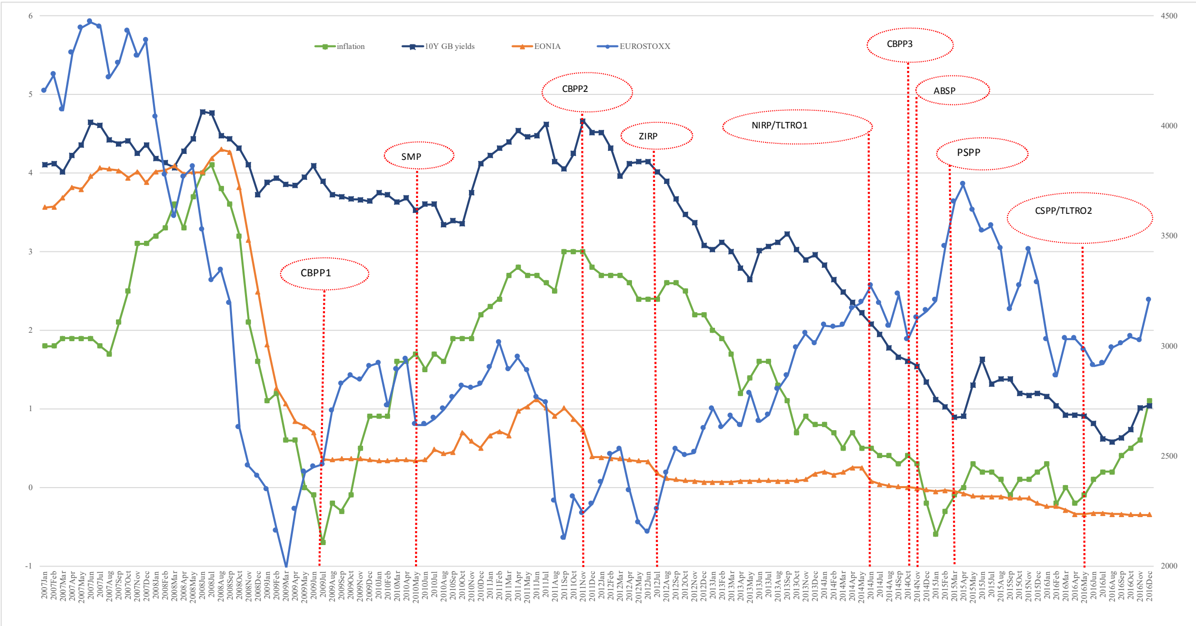
Nikkei 225	EUROSTOXX 50	ECB MRO	J IR BL	CALL RATE	EONIA	EURUSD	USDJPY	
1.00	0.73	-0.11	0.19	0.09	0.01	-0.48	0.91	**NIKKEI 225**
	1.000	0.48	0.68	0.63	0.57	0.07	0.75	**EUROSTOXX 50**
		1.000	0.91	0.94	0.99	0.61	0.12	**ECB MRO**
			1.00	0.97	0.94	0.46	0.38	**J IR BL**
				1.00	0.96	0.55	0.31	**CALL RATE**
					1.00	0.58	0.23	**EONIA**
						1.00	-0.37	**EURUSD**
							1.00	**USDJPY**

Source: author's own processing, data ECB, BoJ (2017), 5% critical value (two-tailed) = 0,0385 for n = 2589

Analysis confirms very strong positive correlation among the interest rates of different types not only in the same area but also across economies in line with our expectations. Middle strong positive correlation is observed between the stock market indices (0.73). Analysis shows statistically strong correlation also between exchange rate and stock market index, but only positive one between USD/JPY and NIKKEI 225, what can be explained by the shift of interest of investors among different segments of financial market. Relationship among the other variables are not significant (details in Table 2).

In the case of EA19 the multiple lowering of key interest rates during the crisis period brings the decline of interbank money market EONIA as well as 10 years' government bonds yields with improving conditions on stock market. After the enormous injecting of liquidity, the economy moves from deflation to inflation up to the inflation target (Figure 2).

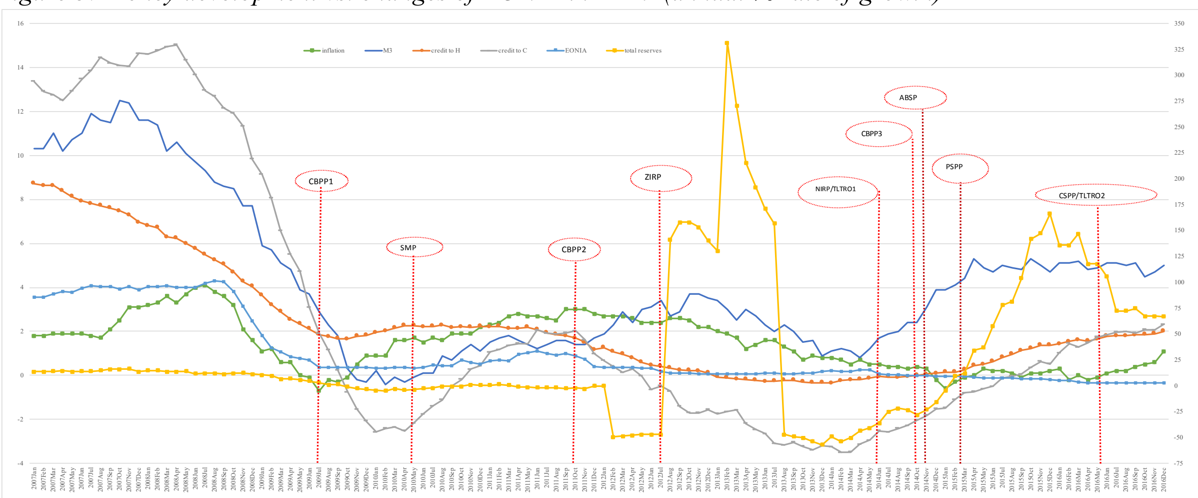
Figure 2: Reaction of financial market to the changes of EONIA in EA19 (annual % rate of growth)



Source: author's own processing, data ECB (2017), right axis EUROSTOXX 50 (index)

Initial problem of low increase of money stock M3 (Figure 3) is solved after the introduction of asset purchase programmes with positive tendency in growth of credits to the households and nonfinancial corporates. As negative consequence of unconventional monetary measures can be considered historically the biggest creation of voluntary reserves (excess of reserves over minimum).

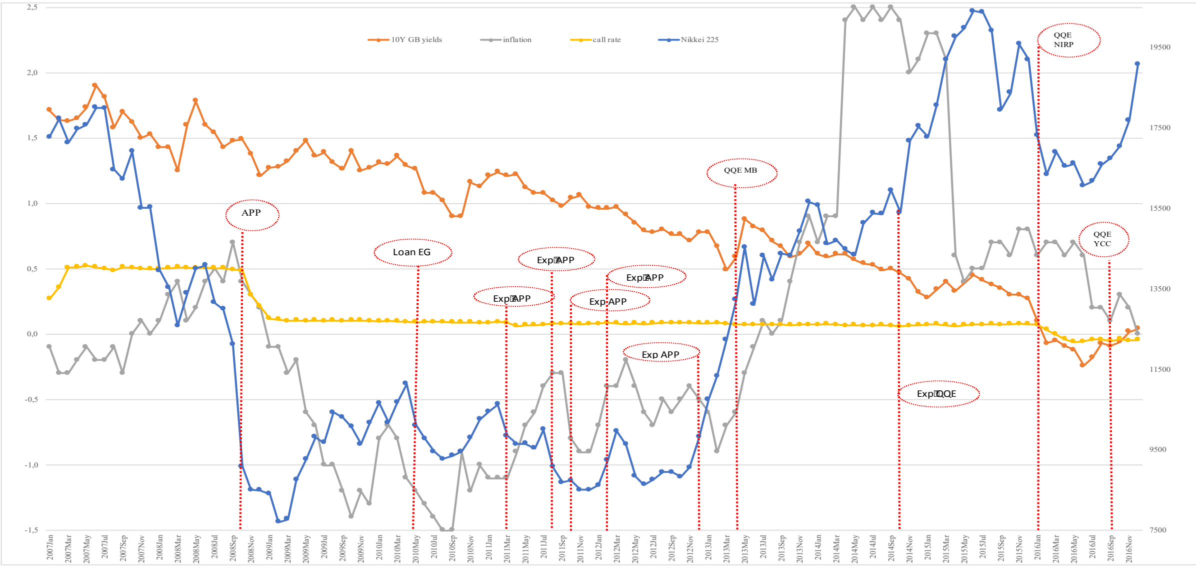
Figure 3: Money development vs. changes of EONIA in EA19 (annual % rate of growth)



Source: author's own processing, data ECB (2017), right axis total reserves (annual % rate of growth)

In Japan, besides the problems of financial crisis, BoJ must solve the negative consequences of multiple disasters (Earthquakes). Its measures to eliminate them are not subject of our analysis. Positive reaction of stock market to the UMP is visible from the end of 2012 after the multiple expansion of asset purchase programmes (Figure 4). At the same time the economy leaves the period of deflation. After the rapid growth of inflation during 2014 and the first half of 2015 the stabilized inflation below 1% arrives with stronger decline to the end of 2016 close to 0%.

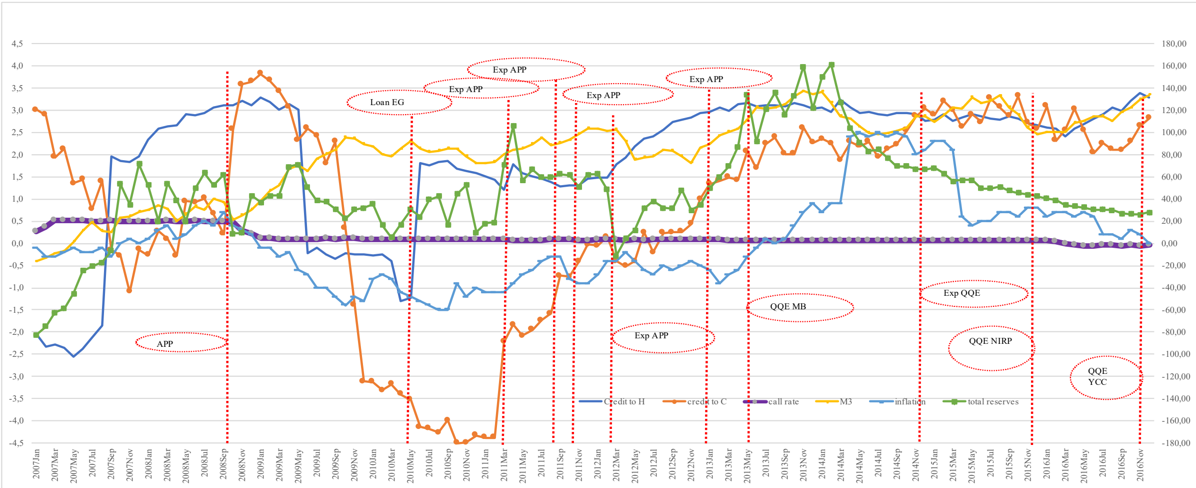
Figure 4: Reaction of financial market to the changes of call rate in Japan (annual % rate of growth)



Source: author's own processing, data BoJ (2017), right axis NIKKEI 225 (index)

ZIRP as well as NIRP in Japan stabilize the growth of credits to households and to nonfinancial corporations from the end of 2014. From 2008 money stock M3 grows by stable 2-2.5% of annual growth rate and after the introduction QQE based on regulation of monetary base in 2013 the growth is little bit stronger. From the same time the huge creation of excess of reserves continually declines.

Figure 5: Money development vs. changes of call rate in Japan (annual % rate of growth)



Source: author's own processing, data BoJ (2017), right axis total reserves (annual % rate of growth)

4. Conclusion

Our analysis confirms that after the multiple injections of liquidity by quantitative as well as qualitative tools of UMPs of ECB and BoJ some improvements occur in crediting of households and non-financial corporations as well as on stock and bond markets development what we can positively assess in line with an effort to support economic recovery. On the other hand, as negative aspects of this decade we consider enormous creation of excess of reserves, increase of central banks' balance sheets size and insufficient control over the inflation (in Japan inflation is closer to 0% at the end of our decade).

Stock markets face higher volatility in comparison with foreign exchange markets on daily basis, but they have ability to absorb shocks from unconventional monetary tools. Depreciation of EUR and JPY against USD can be supporting tool of economic recovery in short-term but is risky from long-run perspective. As Vojtkova (2011) argues, exchange rate intervention without change in interest rate may be effective only in short-time period. However, even in such a case the implication on change in interest rate may not even have a significant impact on exchange behaviour. On top that, change in interest rate my burst carry trade activity and central bank finds itself in vicious circle. And as BIS (2013) claims, flexible exchange rates play important role in smoothing of output volatility, but if their volatility is high too, can become the reason of economic vulnerability. Because of high degree of engagement of both economies into the globalisation processes an interconnectedness of stock markets is visible in strong positive correlation in analysed period. As monetary policies of these economies show in some extent similar features and spillovers effects among financial markets are present, cooperation of central banks is required to discuss the timing of potential exit strategies after the stabilisation of inflation.

Acknowledgment

This paper is an output of the science project VEGA 1/0326/15 "Accelerating the Process of Economic Recovery from the Perspective of the Financial Sector - a Common Approach versus Individual Solutions".

References

[1] Aristei, D. and Gallo, M. (2014). Interest Rate Pass-Through in the Euro Area during the Financial Crisis: A Multivariate Regime-Switching Approach. *Journal of Policy Modeling,* vol. 36, pp. 273-295.

[2] BIS (2013). Market Volatility and Foreign Exchange Intervention in EMEs: What Has Changed? BIS Papers No 73.

[3] BOJ (2016). Comprehensive Assessment: Developments in Economic Activity and Prices as well as Policy Effects since the Introduction of Quantitative and Qualitative Monetary Easing (QQE) [Online]. Available: http://www.boj.or.jp/en/announcements/release_2016/rel160930d.pdf

[4] Chen, Q., Filardo, A., He, D. and Zhu, F. (2016). Financial Crisis, US Unconventional Monetary Policy and International Spillovers. *Journal of International Money and Finance*, vol. 67, pp. 62 – 81.

[5] Gambacorta, L., Hofmann, B. and Peersman, G. (2014). The Effectiveness of Unconventional Monetary Policy at the Zero Lower Bound: A Cross-Country Analysis. *Journal of Money, Credit and Banking*, vol. 46, no. 4, pp. 615-642

[6] Gertler, M. and Karadi, P. (2011). A Model of Unconventional Monetary Policy. *Journal of Monetary Economics* voil. 58, no. 1, pp. 17-34.

[7] Hanisch, M. (2017). The Effectiveness of Conventional and Unconventional Monetary Policy: Evidence from a Structural Dynamic Factor Model for Japan. *Journal of International Money and Finance*, vol. 70, pp. 110-134

[8] Joyce, M., Miles, D., Scott, A. and Vayanos, D. (2012). Quantitative Easing and Unconventional Monetary Policy – an Introduction. *The Economic Journal*, vol. 122, no. 564, pp. F271-F288

[9] Kotlebova, J. (2016). The Growth of Loans to Households in Individual EA19 Countries Has Own Limits. Proceedings of the 9th ICCBIF 2016 "Challenges for Financial Sector of CEE Countries in Overcoming Problems of Economic Integration in the EU". Bratislava, Slovakia, pp. 171-177

[10] Kotlebova, J. and Siranova, M. (2016). When Credit Matters – Possible Room for ECB's Success in Quantitative Easing from Selected EA Members' Point of View. Proceedings of the 15th ICFB, Karvina, Czechia, pp. 209-220

[11] Mallick, S. K., Mohanty, M. S. and Zampolli, F. (2017). Market Volatility, Monetary Policy and the Term Premium. BIS Working Paper No. 606.

[12] Matsuki, T., Sugimoto, K. and Satoma, K. (2015). Effects of the Bank of Japan's Current Quantitative and Qualitative Easing. *Economic Letters*, vol. 133, pp. 112-116.

[13] Shirai, S. (2014). Japan's Monetary Policy in a Challenging Environment. *Eurasian Economic Review*, vol. 4, no. 1, pp. 3-24.

[14] Vojtkova, M. (2011). Implication of Carry Trade on Monetary Policy during the Financial Crisis. Proceedings of 13th International Conference on Finance and Banking "Lessons Learned from the Financial Crisis", Karvina, Czech Republic, pp. 748-758.

[15] Williams, J. C. (2011). Unconventional Monetary Policy: Lessons from the Past Three Years. *FRBSF Economic Letter*. October 3, 2011, pp. 2011-31.

BANKRUPTCY LAW AND ITS QUALITATIVE ASPECTS IN GLOBALIZED EUROPE

Maria Kovacova[1,a,*], Jana Kliestikova[2,b]

[1]University of Zilina, Faculty of Operation and Economics of Transport and Communications, Department of Economics, Univerzitna 1, 010 26 Zilina, Slovak Republic

[2]University of Zilina, Faculty of Operation and Economics of Transport and Communications, Department of Economics, Univerzitna 1, 010 26 Zilina, Slovak Republic

[a]maria.kovacova@fpedas.uniza.sk, [b]jana.kliestikova@fpedas.uniza.sk

*Corresponding author

Abstract. Qualitative aspects of bankruptcy law are discussed worldwide. There are various methods of its qualitative or quantitative evaluation but scientists are still very cautious about creation of definitive ranking of bankruptcy law quality. It is because such a ranking could evoke that some laws are definite and unique patterns for improving effectiveness of other law regimes. But such a state is according to market practice undesirable. The reason is that these evaluations of bankruptcy law quality are mostly influenced by subjective attitudes of their creators who want to modify position of countries in rankings of quality of bankruptcy law. So, it is vital to define what is real quality of bankruptcy law and how to propose objective method for its evaluation as well as to formulate framework strategies for bankruptcy law. To do that, we analysed the data from World Bank 2016 Doing Business Report and we used standard methods of formal logic at the sample of EU countries. We found out that quality of insolvency law consists of ability to enforce contracts and ability to accomplish contractual duties. When applying this, we state that only Denmark, Finland, Germany and Sweden can be signed as quality insolvency law. We also identified one group of countries which should preventively checked the quality of their insolvency law and other group of countries which should imperatively checked this quality.

Keywords: bankruptcy, insolvency, financial health, creditor, debtor

JEL Classification: G32, G33, K15

1. Introduction

A growing body of research in economics and in business and economic history has shown the key role of bankruptcy and insolvency law on business organization, firms' governance, and entrepreneurial choices. (Sutton & Callahan, 1987), (Richter, 2011), (Hautcoeur & DiMartino, 2013), (Omar, 2014), (Chapsa & Katrakilidis, 2014), (Popescu, 2016), (Zogning, 2017). But the topic of optimal bankruptcy law has not been discussed in scientific literature enough. (Das et al., 2007), (Greblikaite et al., 2016). The same occurs also when the topic of bankruptcy law quality is discussed. (Goldenberg Serrano, 2013), (Zhang, 2017), (Tian, 2015). First modern attempts to identify what optimal bankruptcy law is, are dated to the end of 20th century. Until then there have been only partial identifications of optimal construction of bankruptcy law institutes.

Berkovitch and Isreal (1997, 1999) were the first who characterise an optimal bankruptcy law and who model fundamental differences across economic systems and propose optimal bankruptcy laws. They show that creditor-debtor relationships in a given economy are affected by the ability of creditors to obtain information about fundamentals and the managers' ability to strategically use their private information. An optimal bankruptcy law utilizes creditors' information while minimizing managers' use of strategic information. Their proposed laws fur a developed bank-based system like Germany include a creditor chapter only, for a developed market-based system like the United States include both a creditor chapter and a debtor chapter, and for an underdeveloped system include both a creditor chapter and a debtor chapter that gives the manager more protection than in a market-based system. (Armour, 2008)

According to the fact that from then, there miss developed theories of optimal bankruptcy law, it seems that scientists are afraid to start their discourses in such a delicate theme which influences the overall effectiveness of market functioning. (Knot & Vychodil, 2005), (DiCagno & Spallone, 2012)

Other very important term is quality of bankruptcy law. It is crucial for effective functioning of market. (Brunstad, 2000), (Ayotte & Yun, 2009), (Araujo et al., 2012), (Georgescua & Baciub, 2014). Unlike the theory of optimal bankruptcy law, in this case is contemporary science different. There are some studies which are breakthrough in scope of bankruptcy law theory and practice. It is because they indicate the gap which exists between optimal bankruptcy law patterns and efficiency of their implementation in specific conditions of national legal and economic systems.

Camacho-Minano et al. (2013) analysed the bankruptcy law ex-ante efficiency when companies were in financial distress. To test it out, two research questions were submitted: 1) Is solvency, the criterion used in the Spanish law, the best one to assess the relative significance of the main indicators, which determine bankrupt firms? 2) Is the Spanish bankruptcy law efficient according to solvency or are there better criteria? The main conclusion was that the solvency criterion is adequate to classify bankrupt companies although currently Spanish Bankruptcy law is not as efficient as it could be.

The most recent research in this field analyses how personal and corporate bankruptcy laws affect risk perceptions of entrepreneurs at time of entry and therefore their growth ambitions. Previous theories have reached ambiguous conclusions as to whether countries with more debtor-friendly bankruptcy laws (i.e. laws that are more forgiving towards debtors in bankruptcy proceedings) are likely to have more entrepreneurs, or whether, creditor-friendly regimes have positive effects on new ventures via enhanced incentives for the supply of credit to entrepreneurs. Responding to this ambiguity, Estrin et al. (2016) apply prospect theory to propose that entrepreneurs do not attach the same significance to different elements of bankruptcy codes-and to explain which aspects of debtor-friendly bankruptcy laws matter more to entrepreneurs. Based on this, they derive and confirm hypotheses about the impact of aspects of bankruptcy codes on entrepreneurial activity using the Global Entrepreneurship Monitor combined with data on both personal and corporate bankruptcy regulations for 15 developed OECD countries. They use multilevel random coefficient logistic regressions to take account of the hierarchical nature of the data (country and individual levels). Because entrepreneurs and creditors are sensitive to different elements of the codes, there is scope for optimisation of the legal design of bankruptcy law to achieve both an adequate supply of credit and to encourage high-ambition entrepreneurship.

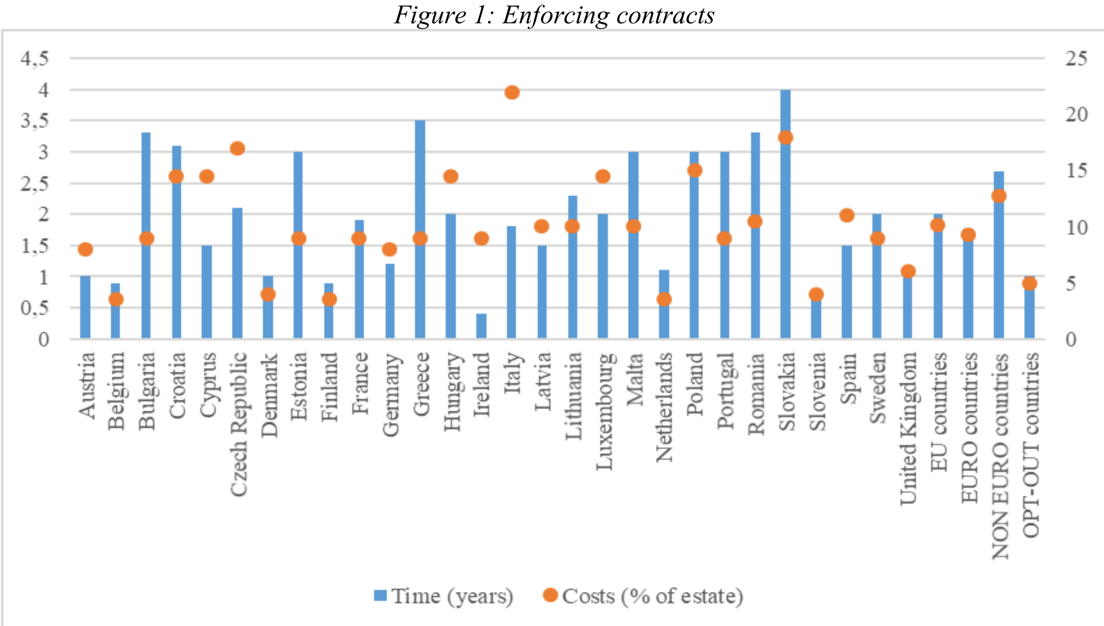
Rohlin and Ross (2016) focuses also on market implications of "quality" of bankruptcy law highlights the importance of territorial aspects of bankruptcy law by examining how differences in state bankruptcy laws, specifically the homestead exemption, affect business turnover by studying both new and existing businesses. They find that an increase in the homestead exemption attracts new businesses but also has a positive impact on existing businesses, suggesting that asset protection through bankruptcy law encourages successful entrepreneurs to incur the risks.

Unfortunately, both terms are not defined clearly in scientific literature. (Rose, 2016). So, due to the gap in theoretic background, there is a danger of inappropriate application of contemporary theoretic postulates on corporate practice. (Funchal, 2008). This is also reason for statement of the aim of this paper which is to define what is real quality of bankruptcy law and how to propose objective method for its evaluation as well as to formulate framework strategies for bankruptcy law. To do that, we analysed the data from World Bank 2016 Doing Business Report and we used standard methods of formal logic at the sample of EU countries. The Doing Business project provides objective measures of business regulations and their enforcement across 190 economies and selected cities at the subnational and regional level.

2. Bankruptcy law quality and its objectification

An important dimension, which makes the system of bankruptcy law more efficient and reduces the risk of bankruptcy and related litigations, is the *ability to enforce contracts* (see Fig. 1). This indicator partially consists of: 1) time (length of insolvency proceedings in years) and 2) costs (% of estate).

Figure 1: Enforcing contracts

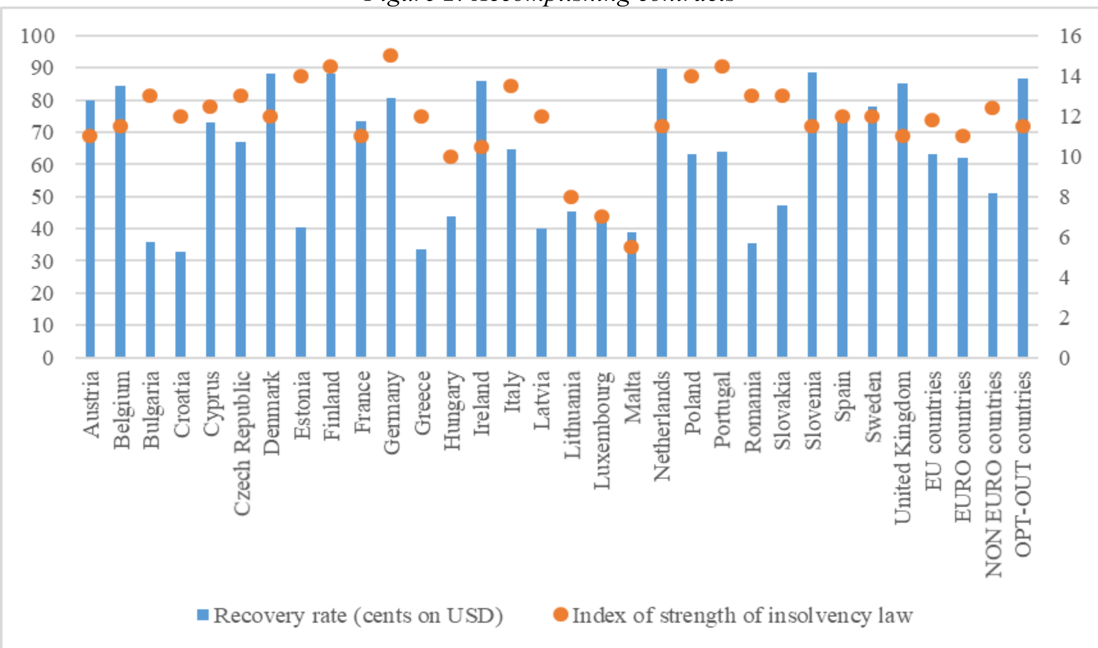


Source: own processing according to World Bank 2016 Doing Business Report (available on: http://www.doingbusiness.org/.)

Generally, the European Union, on average, is doing relatively well compared to other advanced economies. However, the differences across countries are huge. In countries like Slovakia; Greece; Bulgaria; Croatia and Romania, enforcing a contract may take on average more than 3 years. It is much more than average of EU (2 years). On the other hand, Ireland; Slovenia; Belgium and Finland reach the value of time much under 1 year. When costs expressed by % of estate are discussed, the situation is similar, i.e. there are huge differences across countries. It is more than 15% in Italy (22%); Slovakia (18%) and Czech Republic (17%) and at the same time less than 5% in Belgium; Finland; Netherland (3,5%) and Slovenia; Denmark (4%).

Another important dimension is the *ability to accomplish contractual duties* (see Fig. 2). This indicator partially consists of: 1) recovery rate (cents on USD) and 2) index of strength of insolvency law (0-16).

Figure 2: Accomplishing contracts



Source: own processing according to World Bank 2016 Doing Business Report (available on: http://www.doingbusiness.org/.)

In average, the recovery rate is not very high (only 63.1 cents on USD). There are big discrepancies which indicate diversity of quality of insolvency law. The lowest recovery rates (Croatia with 32.7 cents on USD; Greece with 33.6 cents on USD and Romania with 35.6 cents on USD) are under the level of the lowest recovery rates of high income OECD countries (Chile with 40.8 cents on USD; Estonia with 40.6 cents on USD and Latvia with 40.1 cents on USD). The highest recoverable rates (Netherlands with 89.7 cents on USD; Slovenia with 88.7 cents on USD and United Kingdom with 85.7 cents on USD) are still lower than Norway (93.1 cents on USD) or Japan (92.4 cents on USD). Index of strength of insolvency law is more homogeneous than other analysed indicators. Its value oscillates mainly plus or minus one point around 11 points. The lowest value is reached by Malta (5.5); Luxembourg (7) and Lithuania (8). On the opposite, its highest value is reached by Germany (15); Portugal and Finland (equally 14.5).

So, the heterogeneity across European union countries in scope of national insolvency laws is obvious. But is this heterogeneity rigid across indicators with positive correlation between them or is there negative correlation? Or moreover – is there any correlation? These are the questions which should be answered if we really want to improve quality of insolvency law. Quality of insolvency law is a new term which consists of two basic dimensions: 1) ability to enforce contracts and 2) ability to accomplish contractual duties.

At the example of Slovak Republic, it is visible that good performance in one indicator does not lead to good performance in another. In other words, the recovery rate in conditions of Slovak republic reaches under-average value of 47,3 cents on USD (under-average value) while the value of indicator of strength of insolvency law is 13 (above-average value). Similarly, the indicators "time" and "cost" reach above-average value while this should be under-average to be more pro creditor oriented. So, complex overview of the quality of insolvency law indicates ineffectiveness of insolvency proceedings in practice which could be hardly identified without applying such an approach. More information available at Tab. 1.

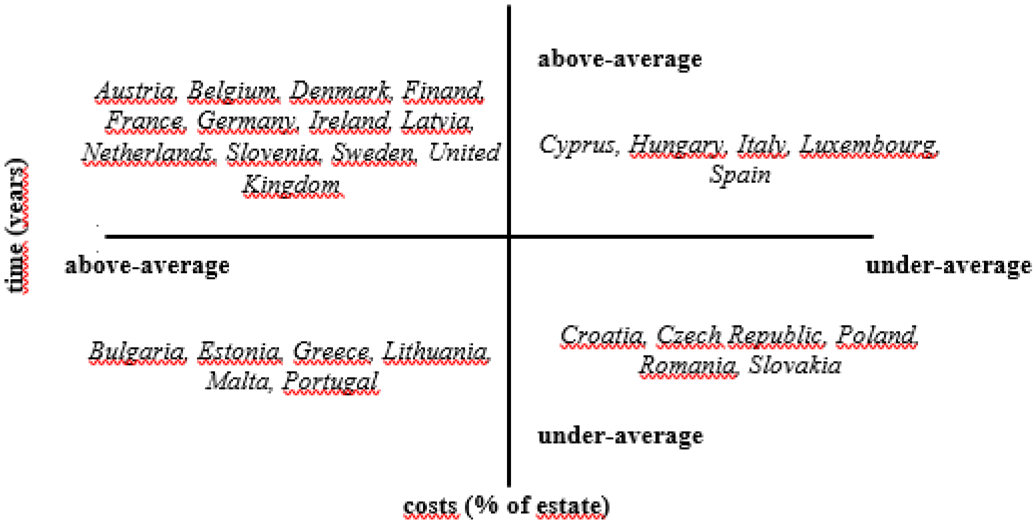
Table 1: Comparison of main insolvency law indicators (Slovak Republic versus selected supranational entities)

Indicator	Slovak Republic	EU	OECD high income	Overall Best Performer
Recovery rate (cents on the dollar)	47.3	63.1	71.2	93.1 (Norway)
Time (years)	4.0	2	01.1	0.4 (Ireland)
Cost (% of estate)	18.0	10.2	09.1	1.00 (Norway)
Strength of insolvency framework index (0-16)	13.0	11.8	12.1	15.00 (6 economies)

Source: own processing according to World Bank 2016 Doing Business Report (available on: http://www.doingbusiness.org/.)

The relationship between these indicators can be graphically expressed by special matrixes. Two partial matrixes (matrix "time/costs" and matrix "recovery rate/index of strength") are composed by both relevant dimensions where starting point is average value of these indicators in EU. According to this, countries are categorized in four groups due to the value they reach in each indicator (either above-average or under-average). Matrix "time/costs" is shown in Fig. 3. In this figure, optimal combination lies in quadrant no. 1. This group is the most numerous what indicates that the level of overall ability to enforce contracts is quite high across countries of EU.

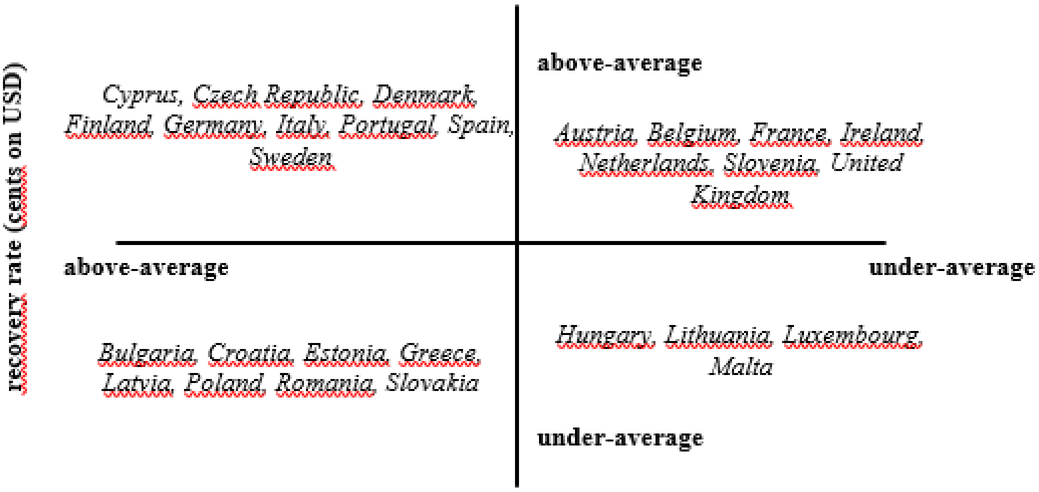
Figure 3: Matrix "time/costs"



Source: own processing

Matrix "recovery rate/index of strength" is shown in Fig. 4. In this figure, optimal combination also lies in quadrant no. 1 but in this case, there are less countries and the overall variation of the matrix is higher.

Figure 4: Matrix "recovery rate/index of strength"



Source: own processing

When transposition of these matrixes is provided, we can state that only Denmark, Finland, Germany and Sweden can be signed as quality insolvency law when all evaluated aspects are taking into account. It is less than separate matrixes indicate. But on the other hand, we found out that there is also less bankruptcy laws which can be signed as non-quality. Countries, which have to check quality of bankruptcy law are Austria, Belgium, France, Ireland, Latvia, Netherlands, Slovenia, United Kingdom, Cyprus, Czech Republic, Italy, Spain and Portugal. In their case, this checking should be more preventive and focused on their skip to the group of quality. All these countries have potential to do so, because they reach optimal value of indicators either in indicator of ability to enforce contracts or ability to accomplish contractual duties. There is also another group which should be checked bankruptcy law, but in this case, it is more imperative than recommendation. It is because these countries should prevent not to skip to the group of countries specific by non-quality of its bankruptcy law. This is also case of Slovak Republic, which has surprisingly relatively high index of strength of insolvency law. Other members of this group which should be aware are Bulgaria, Estonia, Greece, Lithuania, Malta, Hungary, Luxembourg, Croatia, Poland and Romania.

3. Conclusion

The topics of optimum construction and quality of insolvency law are not discussed in contemporary literature in the way they should be. Both are vital for effective market and economy functioning, but their definitions are missing. So, due to this gap, it is almost unreal to apply contemporary theoretic postulates of bankruptcy law theory on corporate practice appropriately. To fulfil this gap and to contribute to the avoidance of bankruptcy law failure, we defined basic dimensions of bankruptcy law and we proposed objective method for its evaluation as well as to formulate framework strategies for bankruptcy law. We found out that quality of insolvency law consists of ability to enforce contracts and ability to accomplish contractual duties. When applying this, we state that only Denmark, Finland, Germany and

Sweden can be signed as quality insolvency law. We also identified one group of countries which should preventively checked the quality of their insolvency law and other group of countries which should imperatively checked this quality. By providing this, we expect the improvement of bankruptcy law patters leading to sustainable development of economy in conditions of EU (and after modifications also in global prospective).

Acknowledgment

This paper is an output of the project APVV-14-0841: "Comprehensive Prediction Model of the Financial Health of Slovak Companies" in the frame of the program of Slovak Research and Development Agency.

References

[1] Araujo, A. P., Ferreira, R. V. X. and Funchal, B. (2012). The Brazilian bankruptcy law experience. *Journal of Corporate Finance*, vol. 18, no. 4, pp. 994-1004.

[2] Armour, J. and Cumming, D. (2008). Bankruptcy Law and Entrepreneurship. *American Law and Economics Review,* vl. 10, no. 2, pp. 303-350.

[3] Ayotte, K. and Yun, H. Y. (2009). Matching Bankruptcy Laws to Legal Environments. *Journal of Law Economics & Organization*, vol. 25, no. 1, pp. 2-30.

[4] Berkovitch, E., Isreal, R. and Zender, J.F. (1997). Optimal bankruptcy law and firm-specific investments. *European Economic Review*, vol. 41, no. 3-5, pp. 487-497.

[5] Berkovitch, E. and Isreal, R. (1999). Optimal bankruptcy laws across different economic systems, *Review of Financial Studies*, vol. 12, no. 2, pp. 347-377.

[6] Brunstad, G. E. (2000). Bankruptcy and the problems of economic futility: A theory on the unique role of bankruptcylaw. *Business Lawyer*, vol. 55, no. 2, pp. 499-+.

[7] Das, S. R., Duffie, D., Kapadia, N. and Saita, L. (2007). Common failings: How corporate defaults are correlated. *Journal of Finance*, vol. 2, no. 1, pp. 93-117.

[8] DiCagno, D. and Spallone, M. (2012). An experimental investigation on optimal bankruptcy law. *European Journal of Law and Economics*, vol. 33, no. 1, pp. 205-229.

[9] Camacho-Minano, M. D., Pascual-Ezama and D., Urquia-Grande, E. (2013). On the Efficiency of Bankruptcy Law: Empirical Evidence in Spain. *International Insolvency Review*, vol. 22, no. 3, pp. 171-187.

[10] Estrin, S., Mickiewicz, T. and Rebmann, A. (2017). Prospect theory and the effects of bankruptcy laws on entrepreneurial aspirations. *Small Business Economics*, vol. 48, no. 4, pp. 977-997.

[11] Funchal, B. (2008). The effects of the 2005 Bankruptcy reform in Brazil. *Economics Letters*, vol. 101, no. 1, pp. 84-86.

[12] Georgescua, I. and Baciub, E. C. (2014). Insolvency Law as a Main Pillar of Market Economy-A Critical Assessment of the Greek Insolvency Law. *Procedia Economics and Finance*, vol. 15, pp. 1-27.

[13] Goldenberg Serrano, J. L. (2013). Basis for Contractual Approach to Insolvency Law. *Revista Chilena de Derecho Privado*, vol. 20, pp. 9-49.

[14] Greblikaite, J., Sroka, W., Daugeliene, R. et al. (2016). Cultural Integration and Cross-Cultural Management Challenges in the Central European Countries: Lithuania and Poland. *European integration studies*, vol. 10, pp. 29-43.

[15] Hautcoeur, P. C. and Di Martino, P. (2013). The Functioning of Bankruptcy Law and Practices in European Perspective (ca. 1880-1913). *Enterprise & Society*, vol. 14, no. 3, pp. 579-605.

[16] Chapsa, X. and Katrakilidis, C. (2014). Assessing economic convergence in the EU: is there a perspective for the 'cohesion countries'? *Applied Economics*, vol. 46, no. 33, pp. 4025-4040.

[17] Knot, O. and Vychodil, O. (2005). What drives the optimal bankruptcy law design? *Finance A Uver-Czech Journal of Economics and Finance*, vol. 55, no. 3-4, pp. 110-123

[18] Lee, S. H., Peng, M. W. and Barney, J. B. (2007). Bankruptcy law and entrepreneurship development: A real options perspective. *Academy of Management Review*, vol. 32, no. 1, pp. 257-272.

[19] Omar, P. J. (2014). A Reform in Search of a Purpose: French Insolvency Law Changes (Again!). *International Insolvency Review*, vol. 23, no. 3, pp. 201-220.

[20] Popescu, G. H. (2016). Does Economic Growth Bring About Increased Happiness? *Journal of Self-Governance and Management Economics*, vol. 4, no. 4, pp. 27-33.

[21] Richter, T. (2011). Reorganizing Czech Businesses: A Bankruptcy Law Reform under a Recession Stress-Test. *International Insolvency Review*, vol. 20, no. 3, pp. 245-254.

[22] Rohlin, S.M. and Ross, A. (2016). Does bankruptcy law affect business turnover? Evidence from new and existing business. *Economic Inquiry*, vol. 54, no. 1, pp. 361-374.

[23] Rose, S. J. (2016). Income Changes during the Great Recession and the Recovery. *Journal of Self-Governance and Management Economics*, vol. 4, no. 4, pp. 16-26.

[24] Sutton, R. I. and Callahan, A. L. (1987). The Stigma of the Bankruptcy – Spoiled Organizational Image and Its Management. *Academy of Management Journal*, vol. 30, no. 3, pp. 405-436.

[25] Tian, S. N., Yu. Y and Guo, H. (2015). Variable selection and corporate bankruptcy forecasts. *Journal of Banking & Finance,* vol. 52, pp. 89-100.

[26] Zogning, F. (2017). Comparing Financial Systems around the World: Capital Markets, Legal Systems, and Governance Regimes. *Economics, Management, and Financial Markets*, vol. 12, no. 4, pp. 43-58.

[27] Zhang, Q. Y. (2017). Composition in Enterprises Bankruptcy Law of China: Crises, Reflection and Reshaping. *American Bankruptcy Law Journal*, vol. 91, no.1, pp. 55-85.

ELECTED TOPICS OF FOREIGN TRADE IN THE CZECH REPUBLIC AND IN SLOVAKIA

Jaroslav Kovárník[1,a,*], Eva Hamplová[2,b]

[1]University of Hradec Králové, Faculty of Informatics and Management, Department of Economics, Rokitanského 62, 500 03 Hradec Králové, Czech Republic

[2]University of Hradec Králové, Faculty of Informatics and Management, Department of Economics, Rokitanského 62, 500 03 Hradec Králové, Czech Republic

[a]jaroslav.kovarnik@uhk.cz, [b]eva.hamplova@uhk.cz

*Corresponding author

Abstract. The Czech Republic and Slovakia are both countries in the Central Europe, which share not only common history and geographical location, but also similar economic development. Moreover, both of them entered the European Union in the same year and both of them are members of Visegrad Four, but despite these similarities there exists one significant difference in modern history of these countries. Slovakia has been using Euro as currency since 2009, while in the Czech Republic is still used Czech crown. Foreign trade plays important role in the economy of every country, especially in modern globalized world; it solves the proportionality problem, builds the demonstrative effect, but most of all, it supports economic development (in theoretical point of view, foreign trade is part of the Gross Domestic Product formula). This article deals with selected topics of foreign trade in both analysed countries, namely in the Czech Republic and Slovakia. The aim of the article is to compare the development of foreign trade in the country with Euro and without Euro. Special attention is paid on the situation in the Czech Republic, where Czech National Bank intervened on the exchange rate between the Czech crown and Euro for several months with the aim to support the export of the Czech Republic. Despite these interventions, the development of the export of the Czech Republic is not stable, as well as the development of the export of Slovakia. Brief results are described in this article.

Keywords: Czech Republic, Foreign Trade, Globalization, Slovakia

JEL Classification: F43, F49, O11

1. Introduction

Foreign trade is very important for every state all around the world because it is, among others, part of macroeconomic Gross Domestic Product (GDP) formula. Because of this fact, net balance of foreign trade can either improve the GDP level (in case that this balance is positive) or worsen it (in the opposite case). This basic theory has been explained in many books and articles, for example in Andrews et al. (2011), or Samuelson & Nordhaus (2010).

Nevertheless, foreign trade is important for every country because of other reasons as well. It helps to solve the proportionality problem in almost all countries worldwide, it has demonstrative effect too, and it has also other benefits, such as support of peaceful cooperation among partners, reducing of the risk of conflict, growth of education, and others.

From above mentioned text is clear that foreign trade is very important for every country. The importance of foreign trade has been evaluated in other articles by other authors, for example Baier et al. (2014), Cieslik et al. (2016), Do et al. (2016), Fracasso & Marzetti (2015), Giordano & Zollino (2016), Gladkov (2016), Sacio-Szymanska et al. (2016), or Vannoorenberghe (2014). Authors themselves already analysed the topic of foreign trade several times, for example in Kovárník & Hamplová (2016).

The Czech Republic and Slovakia are not only neighbour states, but these countries share a long common history as Czechoslovakia. The dismemberment happened in 1993, and both countries have been developing separately since this year. However, these countries are very important trade partners, they entered European Union in the same year, and they are also members of Visegrad Four (together with Poland and Hungary). Nevertheless, one important difference in development in these countries happened in 2009, when Slovakia started using Euro as official currency. On the other hand, the Czech Republic was making interventions on exchange rate between Czech crown and Euro for several months with the aim to support exports of the Czech Republic. Situation in Visegrad Four countries has been also analysed by other authors, for example by Paškrtová (2016), or by Zdražil & Kraftová (2012).

The aim of this article is to analyse and to compare the selected aspects of foreign trade in the Czech Republic and in Slovakia. Firstly, this article analyses the development of GDP in selected countries, because of the importance of foreign trade for this indicator. The development of foreign trade in terms of goods and services in these countries is next topic for analysis. Consequently, the exports of the Czech Republic and of Slovakia into different countries are analysed as well. The aim is to verify the hypothesis whether the development of both GDP and foreign trade of these countries is similar or not, and also to analyse the influence of interventions in the Czech Republic.

2. Methodology and Data

Covered period of time for analysis is 2000 – 2016, where the data were obtained in general available database Eurostat and calculated by authors (Eurostat, 2017, A, and Eurostat, 2017, B). Methods of comparison and comparative analysis have been used, where these methods allow comparing same indicators in different countries. The authors are aware about the existence of different statistical tools for comparison, such as correlation, regression, etc., however, due to the limited space of this article have been used only above mentioned methods. The authors plan to use other statistical methods in next articles.

3. Results

3.1 The Analysis of GDP Development

Based on the fact that the Czech Republic has currently around 10.5 billion of inhabitants and Slovakia has only around 5.4 billion, it is quite obvious that GDP in billions of euro is significantly higher in the Czech Republic than in Slovakia. However, for mutual comparison is necessary to recalculate GDP per capita. According to this is the Czech Republic still better than Slovakia, but the difference between these two countries is not so significant.

Deep analysis of GDP development shows that in both analysed countries was significant decrease (both in absolute value and in per capita value) in the year 2009 as a consequence of global economic crisis. However, the after-crisis development is different. The Czech Republic was growing between 2009 and 2011, it was decreasing between 2011 and 2014, and it has been growing since 2014 again, while Slovakia has been growing since 2009. Moreover, the Czech Republic managed to exceed pre-crisis year in 2011 (and GDP per capita decreased below the value from pre-crisis year again in 2012, 2013, and 2014), Slovakia managed to exceed pre-crisis year already in 2010.

Following Table 1 shows the growth rate in GDP per capita for the whole analysed period (2000 – 2016), and after economic crisis (2009 – 2016). Authors are aware about the possibility to calculate year-to-year growth rate, nevertheless, they decided to use this growth rate with the aim to analyse especially after-crisis development. The growth rate of whole EU28 is in this Table 1 for mutual comparison too.

Table 1: Growth Rate of GDP per Capita (%)

Country	2000 – 2016 Growth Rate	2009 – 2016 Growth Rate
Czech Republic	156.38%	17.38%
Slovakia	259.47%	25.42%
EU28	46.38%	18.59%

Source: own calculations based on Eurostat (2017, B)

Surprisingly huge overall growth rate in Slovakia is probably the reason of the fact that Slovakia had really low GDP per capita in 2000. However, more interesting results are presented by after-crisis development. It is obvious that the Czech Republic has been dealing with serious problems in terms of GDP after crisis. Even if it has been growing since 2014, the after-crisis growth rate is below the average growth rate of the whole EU28. On the other hand, Slovakia has been growing since 2009 and this growth has been relatively rapid. After-crisis growth rate in Slovakia is not only higher than in the Czech Republic, but also significantly higher than the average growth rate of EU28.

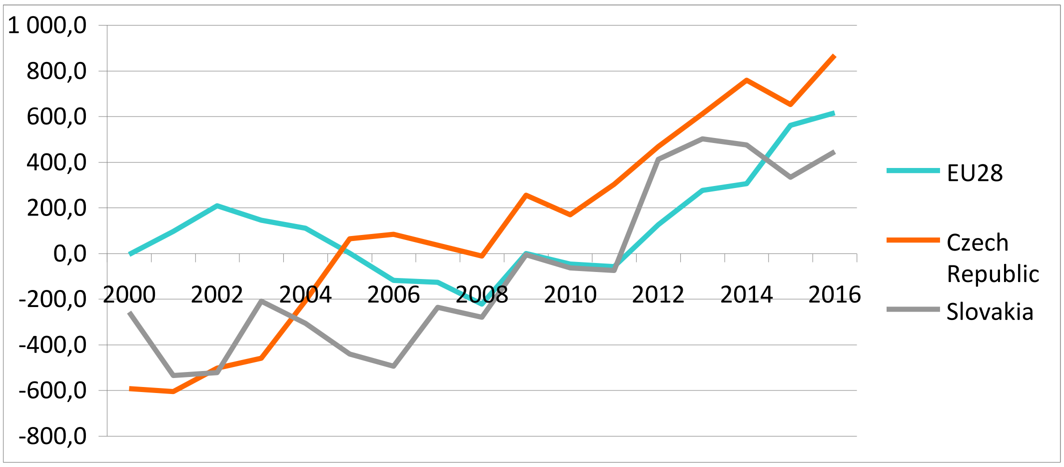
The Czech Republic is ahead of Slovakia, however, its lead was decreasing especially during 2011 – 2014, where the GDP in the Czech Republic was decreasing, and GDP in Slovakia was growing. This lead has been growing since 2014 again; nevertheless, it is lower than before 2014. If the Czech Republic will be capable to grow in following years, this lead will probably grow again, but if it will have some problems with economic development (as it had between 2011 and 2014), it will be possible that Slovakia will exceed the Czech Republic in terms of GDP per capita.

3.2 Foreign Trade Development – Trade with Goods

With respect to the foreign trade is quite obvious that the net balance of total European Union will be significantly higher than the net balance of both analysed countries. It is true that there are countries with relatively weak position in foreign trade, but on the other hand, there is for example Germany in a position of one of the strongest country all around the world.

However, for mutual comparison is interesting to compare the development not only between the Czech Republic and Slovakia, but also with overall development in the whole European Union. Nevertheless, the mutual comparison of net balances will be relatively pointless, because for example EU28 had net balance more than 314 538 million euro in 2016, where the Czech Republic had only around 9 170 million, and Slovakia around 2 423 million. Therefore, net balances are recalculated per capita again in the following Figure 1.

Figure 1: Net Balances per Capita in Trade with Goods (Euro)



Source: own calculations based on Eurostat (2017, A)

This figure shows that the development in both analysed countries after economic crisis is relatively similar, but this development was different before 2009. Slovakia had very irregular development with several increases and decreases, where the Czech Republic had more stable development. Relatively surprising fact is that the entrance into EU meant increase in net balance for the Czech Republic, but decrease for Slovakia. Moreover, it is possible to find some years, where the net balance of EU was decreasing, while net balance of analysed countries was growing. Another interesting fact is that the year 2009, where Slovakia started using euro, meant again decrease in net balance in this country. On the other hand, Slovakia recorded extraordinary increase in the year 2012. Despite the fact that the Czech Republic is the strongest country in this figure, there is no significant increase in overall net balance in 2013 as an expected result of intervention of Czech National Bank, quite the opposite, there is a decrease in the year 2015.

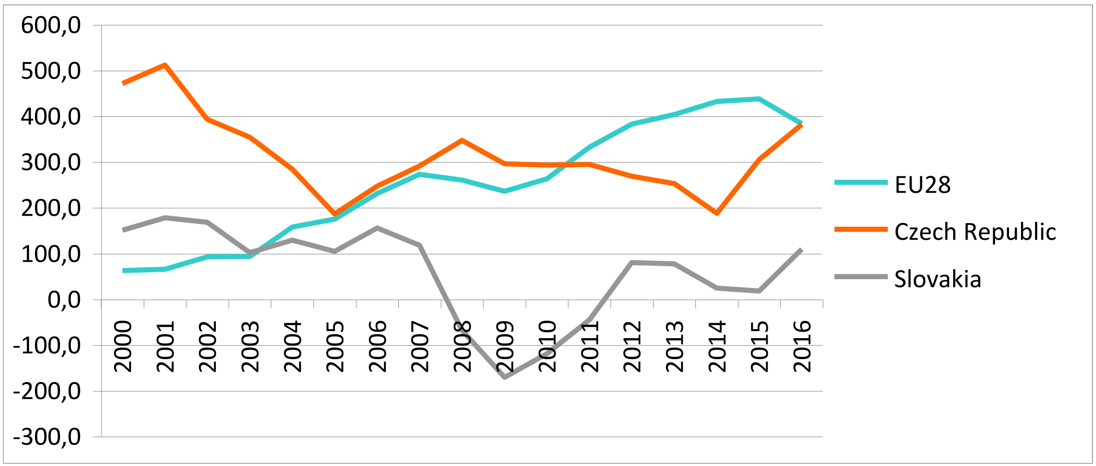
With respect to previous analysis of GDP development is possible to conclude that foreign trade is far more important for European Union than for both analysed countries. European Union has been growing in terms of GDP, but the growth rate is low compared to analysed countries, however, the results are completely different in terms of net balance with goods. Since 2009, European Union has been growing, net balance has been developing from serious deficit into huge surplus, and it is obvious that foreign trade is important factor for the GDP development. However, both analysed countries do not have such strong position in foreign trade. Trade with goods seems to be important in these countries, the growth rates are higher than the rates for GDP, but the difference is not as huge as for overall EU28. It can be explained in that way that there exist other countries in EU28, where foreign trade with goods is far more important for GDP than in these two analysed countries.

It is also possible to find some years, where the developments of GDP and net balance with goods are opposite. When GDP grows, net balance decreases, and vice versa. This different development can be explained with some delay. The change of net balance will probably affect GDP in following years, not in the same year, and the change of GDP will affect behaviour of inhabitants and imports consequently; therefore net balance of foreign trade will be affect in following years again. It means that there will be kind of vicious circle of mutual influences, but calculation of this time delay is very complicated and it is not the aim of this article.

3.3 Foreign Trade Development – Trade with Services

First of all, it is important to add that the trade with services is significantly less important than the trade with goods not only in whole EU28, but also in both analysed countries. The export of goods was more than eight times higher than the export of services in EU28 and in the Czech Republic and even more than ten times higher in Slovakia, in 2016. It is obvious that the absolute amount of net balance is again significantly higher in EU28 than in the Czech Republic and Slovakia, therefore following Figure 2 describes net balance in trade with services recalculated per capita again.

Figure 2: Net Balances per Capita in Trade with Services (Euro)



Source: own calculations based on Eurostat (2017, A)

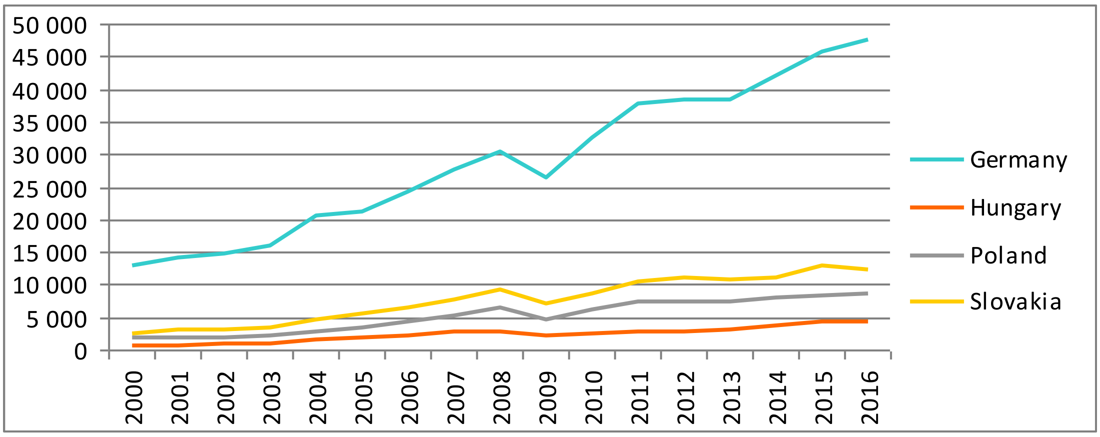
The results presented in this Figure are quite interesting. It is obvious that net balance has been in surplus in all analysed countries, with the only exception of Slovakia between 2008 and 2011. However, compared to the trade with goods, the net balance has been growing only in whole EU28, where it even decreased in the Czech Republic and Slovakia (comparison of 2000 and 2016). It can be explained in such way that the trade with services is important for other member states of the European Union, where the net balances probably have increased, while the importance of this trade in both analysed countries has been decreased. However, it is important to add that Germany has one of the highest surpluses in trade with goods, but it is in deficit in terms of services. That means that there are other countries in the EU28 focusing on trade with services.

Neither the entrance to European Union, nor the introducing of Euro in Slovakia, nor the intervention of Czech National Bank have significant influence on net balance in the Czech Republic or in Slovakia. There are increases in Slovakia in 2010 and in the Czech Republic in 2014, but the question is whether these increases are delayed consequences of situations in analysed countries (Euro in Slovakia and interventions in the Czech Republic), or just irregular development of net balances.

3.4 The Export Development Analysis

Following text analyses the development of export of both analysed countries with respect to important events, which happened in these countries. That means introduction of Euro in Slovakia in 2009, and intervention on exchange rate between Czech crown and Euro in the Czech Republic in 2013 and 2014. Following Figure 3 describes the development of export of the Czech Republic into several important exporting destinations.

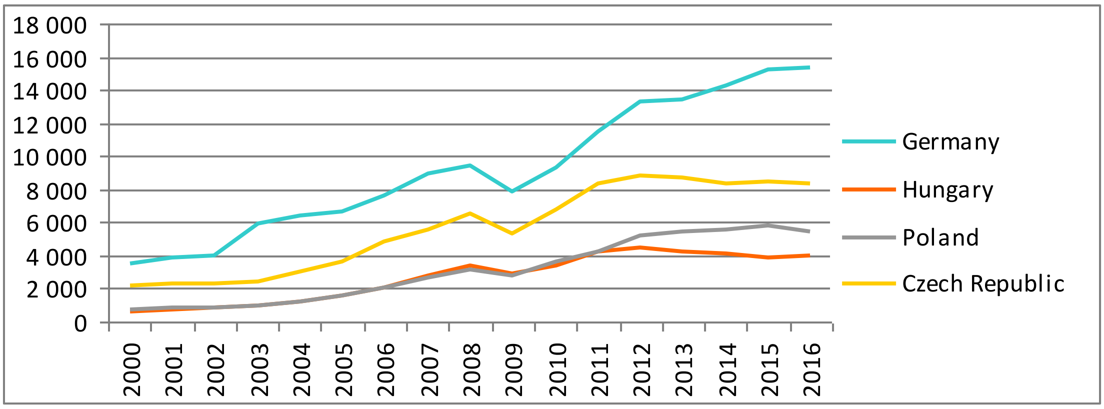
Figure 3: Export of the Czech Republic into Selected Destinations (mill. Euro)



Source: own calculations based on Eurostat (2017, A)

It is quite obvious that the most important exporting destination for the Czech Republic is Germany, where other member states of Visegrad Four are on next positions, but the amounts of exports into these countries are significantly lower. The export into Germany was growing till economic crisis, it dropped in 2009, and it has been growing since 2009 again. However, there was an increase in the growth rate of export into Germany in 2014, which can be result of interventions. On the other hand, in case of Slovakia, where this country is using Euro since 2009, is no significant increase in 2014. Moreover, exports into Slovakia even decreased in 2016. Exports into Poland and Hungary have been growing since economic crisis, despite the fact that these countries are not using Euro. It can be concluded that intervention was successful in case of Germany, but it was not successful in case of Slovakia. Following Figure 4 analyses the exports of Slovakia.

Figure 4: Export of Slovakia into Selected Destinations (mill. Euro)



Source: own calculations based on Eurostat (2017, A)

It is again quite obvious that the introduction of Euro has had probably positive effect on export of Slovakia into Germany. The analysis is distorted by economic crisis, but the export into Germany has been growing since 2009 significantly. It is also possible to see the effect of interventions in the Czech Republic, where these interventions made goods from Slovakia more expensive in the Czech Republic, therefore the export into this country has been decreasing since 2013. However, export into Hungary has been decreasing as well, where this country made no interventions. Nevertheless, this figure describes the strong position of the Germany, where this position is even stronger since the introduction of Euro in Slovakia, compared to other member states of Visegrad Four.

4. Conclusion

Foreign trade is important for every state all around the world, because it not only solves the proportionality problem, but it also helps to build the GDP (it is part of GDP formula). The aim of this article was to analyse and to compare the selected aspects of foreign trade in the Czech Republic and in Slovakia. Firstly, this article analysed the development of GDP in selected countries, because of the importance of foreign trade for this indicator. The development of foreign trade in terms of goods and services in these countries was next topic for analysis. Consequently, the exports of the Czech Republic and of the Slovakia into different countries were analysed as well.

As far as GDP is concerned, Slovakia has been growing since economic crisis (2009), while the Czech Republic has been dealing with problems in this indicator. However, this country has a lead, but the growth rate in Slovakia is a little bit higher than in the Czech Republic. Talking about trade with goods, this trade is important especially for the Czech Republic. However, the development of net balance in both analysed countries is quite irregular. In 2013 and 2014, the Czech Republic was making interventions on exchange rate with the aim to support export, where the export really increased in 2014. Slovakia introduced Euro in 2009, but there is no significant increase in its export. Trade with services is not so important in both countries. It is quite surprising, because in the whole EU28 has been the net balance growing.

The interventions of Czech National Bank probably had positive influence on the export, however, only into Germany. The export into Slovakia, despite the fact that Slovakia uses Euro as well, was not affected. There is also some time delay, therefore it is possible that the increase of the export into Germany has been caused by other reasons. Introduction of Euro in Slovakia in 2009 had probably positive influence on the export into Germany, where exports into other members of Visegrad Four with different currencies decreased.

Acknowledgment

This study is supported by internal research project No. 2103 “Investment evaluation within concept Industry 4.0” at Faculty of Informatics and Management, University of Hradec Kralove, Czech Republic. It was prepared in cooperation with student of Ph.D. study at Department of Economics, namely with Ing. Martin Král.

References

[1] Andrews, A. B., Bernake, B. and Croushore, D. D. (2011). *Macroeconomics*, 6th ed. Boston: Addison-Wesley.

[2] Baier, S. L., Bergrstrand, J. H. and Feng, M. (2014). Economic integration agreements and the margins of international trade, *Journal of International Economics*, vol. 93, pp. 339-350.

[3] Cieslik, E., Bieganska, J. and Sroda-Murawska, S. (2016). The Intensification of Foreign Trade in Post-Socialist Countries and Their Role in Global Value Chain, *Acta Oeconomica*, vol. 66, pp. 465-487.

[4] Do, Q. T., Levchenko, A. A., and Raddatz, C. (2016). Comparative advantage, international trade, and fertility, *Journal of Development Economics*, vol. 119, pp. 148-166.

[5] Eurostat A. (August 2017). International Trade of EU, the Euro Area and the Member States by SITC Product Group. [Online]. Available: http://ec.europa.eu/eurostat/web/international-trade-in-goods/data/database.

[6] Eurostat B. (August 2017). GDP and Main Components. [Online]. Available: http://ec.europa.eu/eurostat/web/national-accounts/data/database.

[7] Fracasso, A. and Marzetti, G. V. (2015). International trade and R&D spill overs, *Journal of International Economics*, vol. 96, pp. 138-149.

[8] Giordano, C. and Zollino, F. (2016). Shedding Light on Price- and Non-price-competitiveness Determinants of Foreign Trade in the Four Largest Euro-area Countries, *Review of International Economics*, vol. 24, pp. 604-634.

[9] Gladkov, I. S. (2016). European Union in Modern International Trade, *Contemporary Europe-Sovremennaya Evropa*, vol. 1, pp. 85-94.

[10] Kovárník, J. and Hamplová, E. (2016). The Analysis of Foreign Trade Development in the Countries of Visegrad Four. *Proceedings of 19th International Colloquium on Regional Sciences*. Brno, Czech Republic, pp. 240-246.

[11] Paškrtová, L. (2016). Dependence of Slovak Economy Growth on Foreign Trade. *Proceedings of 16th International Scientific Conference Globalization and Its Socio-economic Consequences.* Rajecké Teplice, Slovakia, pp. 1642-1648.

[12] Sacio-Szymanska, A., Kononiuk, A., Tommei, S., Valenta, O., Hideg, E., Gaspar, J., Markovič, P., Gubova, K. and Boorova, B. (2016). The Future of Business in Visegrad Four, *European Journal of Futures Research,* vol. 4, pp. 25-37.

[13] Samuelson, P. A. and Nordhaus, W. D. (2010). *Economics*, 19th ed. Boston: McGraw-Hill/Irwin.

[14] Vannoorenberghe, G. (2014). International trade, risk taking and welfare, *Journal of International Economics*, vol. 92, pp. 363-374.

[15] Zdražil, P. and Kraftová, I. (2012). Konvergují regiony zemí V4? *Proceedings of 15th International Colloquium on Regional Sciences*. Brno, Czech Republic, pp. 48-58.

CORPORATE COMPETITIVENESS AND ITS SUPPLY CHAIN MANAGEMENT ASPECTS

Tímea Kozma[1,a,*]

[1]Szent István University, Faculty of Economics and Social Sciences, Hungary

[a]kozma.timea@gtk.szie.hu

*Corresponding author

Abstract. Nowadays the competitiveness of companies is greatly influenced by the efficiency of supply chain operations. In our constant and rapidly changing globalised world building strategic partnerships is a must for all businesses to survive the intensive competition in the global market. However, it is not exclusively the sole proprietors who are competing but also entire corporate groups. The recent financial and economic recession has had a deep impact and influence on the value-creating processes. Globalisation is observable at international businesses that make further headway and due to the turbulent competition in the market production and manufacturing companies have to rethink their strategies. Thus, under such external circumstances, entrepreneurs must develop their skills in decision-making. The supply chain management concept enables the increase of efficiency on planning and managerial levels, the enhancement of co-operation with suppliers and customers, as well as the response capacity. Moreover, it results in the reduction of incurring – marketing, logistic and manufacturing – costs along the whole supply chain. The objective of this study is to get a deeper insight into and understanding of relationships and factors to determine the supply chain competitiveness of the Hungarian companies in practice. My examination is based on research, interviews and a case study. The latter one includes the timely processing of expansion strategies along the supply chain and the competitive strategy.

Keywords: supply chain, competitiveness, relationships, cooperation, strategy, Hungary

JEL Classification: M10, L21, L10

1. Introduction

The basic purpose of companies is to achieve profit while satisfying customer needs (Chikán, 2006). At the same time, the company performs a double value creating activity: it should create customer value and ownership value (Chikán, 2006 p. 44.). In business life the most important question for companies is how they can efficiently survive in the long term.

In the current economic environment, relatively few companies are able to operate competitively that does not take into account the direct or indirect external relations. Complex processes take place in the course of globalization when specialized companies engage in networks, and there are countless new challenges which are still waiting to be answered. At this moment, the most important question is how to provide a new competitive advantage for companies for which strategies and network concepts or management tools are available. Effective management and the coordination of paradigms given by new perspectives can enhance corporate efficiency and affect the current corporate practice, the tools required, and the leadership/management reform.

The objective of this study is to introduce the factors of corporate competitiveness, the role of globalisation and supply chain (SC), and explore competition in the supply chain network. In addition to the systematic analysis of Hungarian and international literature on the topic, this study is also based on primary research to demonstrate the factors of competitiveness in the Hungarian supply chain network.

2. Corporate Competitiveness

Many Hungarian researchers (Csath, 2010), (Czakó & Chikán, 2009), (Palotai & Virág, 2016), scientific companies (Versenyképesség Kutató Központ, Ipar 4.0 Nemzeti Technológiai Platform, Versenyképességi Tanács), international literature and organisations (Porter, 1990), (Wach, 2014), (World Economic Forum (WEF) as well as the International Institute for Management Development (IMD)) deal with corporate competitiveness and its influencing factors.

According to the EU commission study (2000) the economy can be competitive if it constantly improves the standard of living for the population in addition to ensuring high employment in a sustainable way. According to the definition of the Competitiveness Research Center, corporate competitiveness means the company's ability to offer product and services to the customers, who are willing to pay for it instead of competiting products. The condition of competitiveness is that the company is able to recognize and adapt to the change of the external and internal environment within the company. (Czakó & Chikán, 2007) Czakó & Chinkán (2009) interpret competitiveness in a complex system as 3 factors have a prominent role in their model: households, the government and businesses. In contrast, Findrik & Szilárd (2000) measures competitiveness by the growth of market share and realized profit. We can interpret competitiveness on an international level also. Competitiveness shows to what extent the economy of a country can produce goods and services, which can be effectively marketed in international markets and, as a result, the welfare of citizens can be increased (Cohen, 1984). Porter (1990) went even further by saying that the competitiveness of a nation is equal to the competitiveness of its firms. Furthermore, he examined how a country – with free and fair market conditions – can produce goods and services that are looked for on international markets and how long it can increase the real income of population. (OECD, 1997) According to Barney (1991) firms achieve a competitive advantage when they implement value creating strategy that is not simultaneously implemented by any current or potential competitors.

Corporate competitiveness is influenced by a number of internal factors that can be changed by decision-makers, as well as many external influences from the environment. Although the external environment can not be changed or changed to a small extent by the organization, it is their own decision and preparedness to choose how to approach the environment.

One part of the external factors influencing corporate competitiveness comes from the macro environment of the company (like: business environment, legal security, predictability, institutional system, trust). PEST(EL) analysis is the most commonly used method for analyzing these conditions and classifying the factors. Kotler (1991) presents elements of a macro environment as part of the company's marketing environment which are external forces and impacts that the company can not influence and adapting to them is an indispensable condition for successful market operation. Elements of the macro environment include demographic, economic, social and cultural, natural, technological, and political and legal environments. (Kotler & Keller, 2006).

The other part of the external factors influencing corporate competitiveness can be related to the company's micro-environment (business or market environment); Porter's diamond model most accepted and commonly used. Porter's diamond model contains sources of competitive advantages for companies, industries and clusters: factor availability, demand conditions, related and supply industries, corporate structure and competition. (Porter, 1990). Another model of Porter is systematizing the competitive forces that determine industrial competition. With the help of this model one can measure that in the industry where businesses operate (or whether to enter or not) what forces make up competition, who have the greatest bargaining power, and who has the chance to shape the others.

In the last decade, supply chain investigation has appeared in the toolkit of microcirculation analysis. This method, similarly to the 5 factors model, focuses on the players in the business, but from a different approach. The supply chain describes the players in the business and describes the relationship system as participants work together to produce a product, service (value for the end user) created for the end user. Using this method, it is possible to map out in the industry who contributes to the production of the final product, service, what kind of co-operation there is between the individual members, what forms of cooperation are successful, and who the major players are.

Attention should also be paid to map the expectations of stakeholders during the situation analysis because the best strategy is also unfeasible if it does not count with the interest of those concerned. The external stakeholders include the environmental actors, including the state, buyers, suppliers, professional organizations. The internal stakeholders are the owners, managers of different levels, and colleagues. (Freeman, 1984)

Another key area of corporate competitiveness analysis is the assessment of internal capabilities. The aim of the analysis is to give a realistic picture of the company's operations and resources for the contractor who has know what kind of capabilities can be built in the future. The study basically focuses on three areas:

- Estimates of operating in the environment (BCG matrix): gives an overview of the status of business units, which one is and how it is worth developing and which are not. Moreover, it provides information about the balance of activities of the company.
- Resources analysis: Resources are the inputs of the business, On the one hand, assets (financial and material assets, human resources) and on the other hand, non-material resources (such as brand value and reputation, copyrights, trademarks, patents) can be a competitive advantage for the company.
- Abilities assessment. Ability means suitability of resources for certain tasks, activities necessary for integrated operation. For establishing the essential capabilities, we have to examine which abilities adapt with the greatest extent to the satisfaction from customers expected value. In this case, the company can considerably be regarded as better than its competitors.

Practice shows that the most interesting and the most exciting games can be found in the companies' micro environment, namely, in the industrial supply chain.

3. Globalisation; the global supply chain

In the last ten years, the materialized global-level economic and non-economic changes have had a significant role in the supply chain management's becoming conspicuous and its change. Companies playing on the international level are continuously facing innovative competitiveness facts and the challenges of the completely modern market environment (Tóth & Karmazin, 2016). Today, not only the independent enterprises, their products or services but also the supply chain networks that compete with each other. On the basis of all this the companies have to co-operate for the success of economic activity. The working processes are formed by taking their stretching beyond the corporate borders over the international frontier and cost optimisation into consideration. The supply chain mission is the effective and successful transportation of goods from the suppliers to the customer (Bittici et al., 2004), by using an integrated, informative, appreciated system between the organisations where the risks, experience and the common interest ensure the concerted action (Mellat & Spillan, 2014).

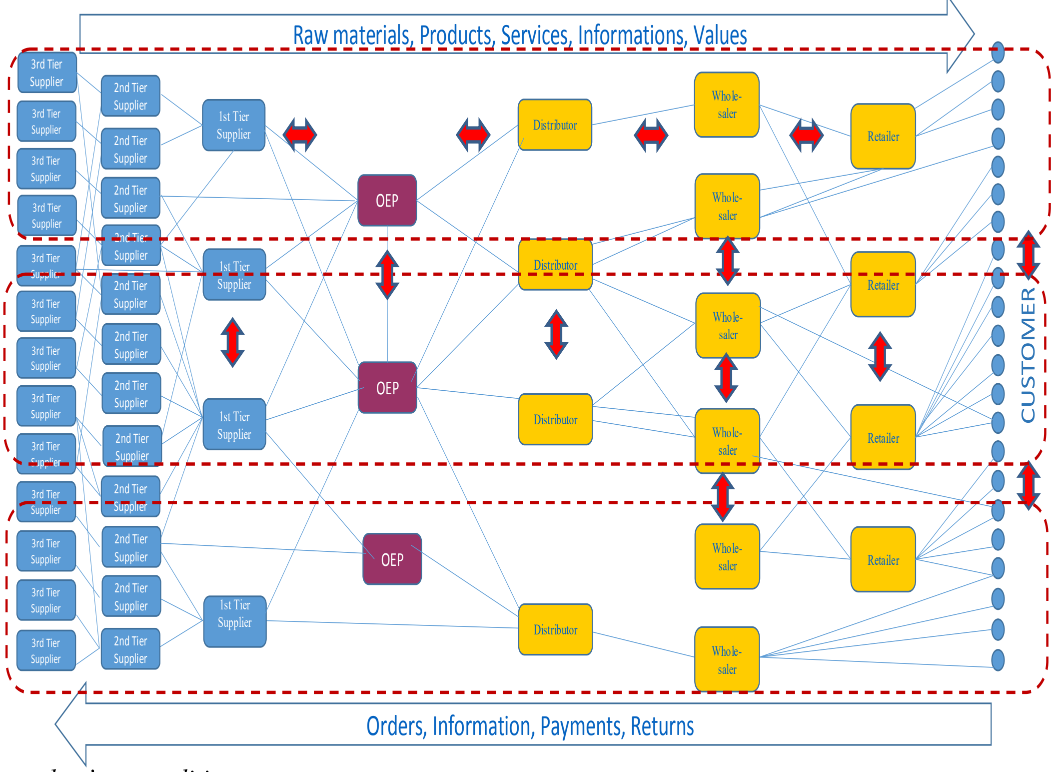
The supply chain is able to ensure the largest value added and competitive advantage provided it goes through harmonizing the knowledge, skills and abilities of common interest, sorted by mechanisms which serve efficiency and success – in a qualified sense the customer's, and in a wider sense the community's (for example: environmental achievement) interest. The certain working stages of the value chain are outsourced to different developing countries, where specialized working processes are carried out. This structure is able to ensure the maximum utilisation of skills and competencies in certain countries. The success of the resulting synergetic co-operation is keeping customers, the quality of partnerships and also the abilities of companies of how they can exploit their own and their partners' resources and capabilities as part of a complex network. Decisions on network planning have a strong impact on performance because they determine supply chain configuration and set up the barriers alongside which total costs can be reduced or efficiency can be enhanced by using supply chain elements (Barabási, 2013). On the one hand, the multi-and the transnational companies appear everywhere due to globalisation processes, where they can find purchasing power, which poses a menace to smaller organizations, and also, their presence generate longer and more complicated supply chains. However, they create an opportunity for the smaller companies to outsource their basic operation and also meet the needs of specific, individual and regional markets. Globalisation offers a wonderful opportunity with the increased risk in supply chain development. Conversely, numerous supply chains are not prepared for the increased risk caused by globalisation. As a consequence, managers have to face the opportunities and unpredictable factors when planning a global supply chain network in the long term. When entering the network, companies specialized as a result of globalization meet numerous new challenges, which are still unanswered at this moment. The most essential question to be answered is how we can create the sources of new competitive advantages by strategies that reach beyond companies and network. In the organisational structures processes create the connection between the companies' objectives, strategy, environmental expectations, and available resources as well as the ongoing events. This analogy could be used on the level of supply chain, as well. Developing processes cannot be managed simply from a technical point of view, rather, as the synchronized and well-devised synergy of company's strategy, the organisation, processes and the technologies used, which comes into being with regards to the facilities of the organisation and the network, the cultural and the regulatory background in a cooperative way, i.e. organic development.

4. Stages of competition in the supply chain network

Nowadays instead of supply chains, it is the supply networks that compete. Supply chain management (SCM) was introduced in order to respond to fierce competition among companies (Oliver & Webber, 1982). Over time, a growing number of corporations realized the significance of integrating their operations into key supply chain processes instead of managing them separately, thus extending the supply chain management evolution (La Londe, 1997). Various studies stated that the competitive environment of industries was changing from competition among independent firms to competition among supply chain's (Xiao & Yang, 2008). The term 'supply network' illustrates the more and more complex relationships as the result of outsourcing the functions of the company in addition to its core competences. According to Lavie (2006) to win the advantage in the networking field, the modern competitive scenario pushes firms to explore new inter-corporate organisational relationship models in two complementary directions. These are the flexibility and the intensive use of ICT to manage information and knowledge, to exploit innovation and collaborative relationships in a more efficient and effective way (Esposito & Evangelista, 2014). In recent environments co-ordination and cooperation between competitors and partners would add to the competitive success of modern SCs (Wang et al., 2007). Thus, the focus of supply chain management has shifted from the competitive advantage of individuals to the competitive advantage of the entire supply chain.

In the supply network structure completion can be formed on several levels (Figure 2):

Figure 2: The relationship between the competitors and the places of competition



Source: author's own editing

The first level is competition between the individual chains: when competition occurs between the members of the same level. The more members in a link, the stronger the competition between the level-paying field members, for example between the supplier and another supplier competition is strong. The second one is competition along the chain: when the only decision maker in the chain is the customer and the members of the supply chain compete for the money paid by the customer. The competition is horizontal, which means that the preceding members of the chain share the amount of money, "the money cake" that the customer pays. The third level is competition between supply chains: One manufacturer's supply chain competes with another one, namely, how much money the supply chain can win from their customer, i.e. how big piece of "money cake" the supply chain can get. Nowadays the strongest competition takes place on this level. And in the turbulently changing competitive environment the companies able to integration their suppliers and better cooperate with the suppliers and also who can operate the entire expanded supply chain more efficiently can come to the foreground while competing.

5. Results of the primary survey

To achieve the objectives of my research, first I studied and critically evaluated the national and foreign literature on the topic with a systematic approach based on secondary data. I used comparisons, document analysis, comparative analyses and model creation meanwhile studying literature. In the primary research in-depth interviews, processed case studies and questionnaire surveys were used. We have been analysing the place and role and competitiveness of the Hungarian enterprises in their industrial supply chain for almost 3 years. Our analyses cover the following areas: the role of logistics in the company, its relationships with customers and suppliers, the presence of green logistics; expansion strategies along the supply chain, business supply chain management, and competitiveness factors.

In the present study, we examined 76 Hungarian companies through processing case studies based on in-depth interviews and applying structured questionnaires. The data of the questionnaires were recorded in Microsoft Excel programme and the questionnaire database was processed (statistically analyzed) by SPSS statistic programme. Case studies were analysed by content analysis.

Two-third parts of the examined companies have separated systemic logistics modules, which contain the following functions: Warehousing, Shipping, Freight Forwarding, Product Inventory Adjustment and Purchasing. Seventy-eight percent of shipping and freight forwarding activities were outsourced to other companies. The respondents added a good rate (mean=3.9 on the scale from 1 to 5) to the contraction of the several logistic activities within corporate organizational level. Between the logistics system characteristics and corporate competitiveness, 94% of the respondents thought that there was a connection. When comparing the given company's competitiveness to the industrial average, they rated it medium while the quality of the finished product or services was rated as good in contrast with the competitors'. The competitiveness of the company is significant affected by the contraction of the several logistic activities within corporate organizational level while the logistic activities on the higher level in the company hierarchy have a medium effect. According to the respondents, participation in supply chain has a significant role in the company growth (mean=3.9 on the scale from 1 to 5). Fifty-six percent of the customers have a dominant role in the supply chain but the manufacturers also dominate according to the respondents. The dominance of the given chain member was manifested in the delivery terms, price and payment terms. The most functional area of collaboration with partners is purchasing-logistics. Sixty-three percent of the respondents think that considering purchasing we can talk about the globalisation of the procurement market.

Based on the research the following factors can hinder the competitiveness of the company: lack of financial resources (costs for research and development), lack of state subsidies, difficulty of connecting to a larger subcontractor chain, and lack of modern business models, know-how and knowledge, lack of best practices.

6. Conclusion

Nowadays, among other things, the supply chain approach used in practice in order to enhance corporate competitiveness is gaining more and more ground as one of the consequences of globalization. It can lead to the successful operation of the company if the company tries to react to the environmental circumstances as fast as possible after constantly and thoroughly observing and analysing the events, changes and trends. They should prepare for the changes of the environment and show proactive behaviour. Nowadays the key to business success can be that the companies must continue their activities by cooperating. And the companies capable of operating their supply chain effectively can perform well in the competition. The main observations of the research are the following:

- The examination of the external environment serves to count in the factors relevant for company development for the entrepreneur to examine their changes and evaluate the potential effects.
- The competitiveness of companies cannot be separated from the competitiveness of their products or services. Corporate competitiveness is shaped by the effect of several factors together. It is not practical to examine them at a given moment but always dynamically and evaluate them by taking into consideration the tendencies of changes.
- The successful supply chain management requires changing from managing the functions alone to integrating them into key supply chain processes. The business processes are activities which create specified output values for the key decision maker, i.e. the customer.

Acknowledgment

Supported by the ÚNKP-17-4 New National Excellence Program of the Ministry of Human Capacities.

References

[1] Barabási A. L. (2013). *Behálózva - A hálózatok új tudománya*. Helikon Kiadó.

[2] Barney, J. (1991). Firm resources and sustained competitive advantage, *Journal of management*, vol. 17 pp. 99-120.

[3] Bittice, Umit S. and Martinez, V., Albrores, P. and Parung, J. (2004). Creating and Managing Value in Collaborative Networks, *International Journal of Physical Distribution and Logistics Management*, vol. 34, no. 3/4, pp. 251-268.

[4] Chikán A. (2006). A vállalati versenyképesség mérése, *Pénzügyi Szemle*, vol. 1, pp. 42–56.

[5] Cohen, S. (1984). *Global Competition: The New Reality.* Washington, DC. Working Paper of the President's Commission on Industrial Competitiveness. Vol. 3.

[6] Csath M. (2010). *Versenyképesség-menedzsment*. Nemzeti Tankönyvkiadó.

[7] Czakó E. and Chikán A. (2007). Gazdasági versenyképességünk vállalati nézőpontból. 2004–2006, *Vezetéstudomány*, vol. 38, bno. 5, pp. 2–8.

[8] Czakó E. and Chikán A. (2009): Versenyben a világgal - Vállalataink versenyképessége az új évezred küszöbén. Akadémiai Kiadó.

[9] Esposito, E. and Evangelista, P. (2014). Investigating virtual enterprise models: Literature review and empirical findings, *International Journal of Production Economics*, vol. 148, pp. 145-157.

[10] European Commision (2000). European Competitiveness Report 2000. Brussels

[11] Findrik M. and Szilárd I. (2000). *Nemzetközi versenyképesség – képességek versenye*. Kossuth Kiadó, Budapest.

[12] Freeman, R. E. (1984). Strategic Management: A Stakeholder Theory, *Journal of Management Studies,* vol. 39, no. 1, pp. 1-21.

[13] Kotler, P. (1991). *Marketing management*. Műszaki Könyvkiadó, Budapest.

[14] Kotler, P. and Keller, K. L. (2006). *Marketing Management*. Upper Saddle River, New Jersey.

[15] La Londe, B. J. (1997). Supply Chain Management: Myth or Reality?, *Supply Chain Management Review*, vol. 1, Spring, pp. 6-7.

[16] Lavie, D. (2006). The competitive advantage of interconnected firms: An extension of the resource-based view, *Academy of Management Review*, vol. 3,1 pp. 638-658.

[17] Mellat, M. and Spillan, John E. (2014). Logistics and Supply Chain Process Integration as a Source of Competitive Advantage an Empirical Analysis, *International Journal of Logistics Management*, vol. 25, no. 2, pp. 289-314.

[18] OECD (1997). Industrial Competitiveness. OECD. Paris.

[19] Palotai D. and Virág B. (2016). *Versenyképesség és növekedés*. Válasz Könyvkiadó

[20] Porter, M.E. (1990). *The Competitive Advantage of Nations The Free Press*, New York.

[21] Tóth R. and Karmazin Gy. (2016). Az ellátásilánc-menedzsment szervezeti struktúrájának alapjai. *LOGISZTIKA - INFORMATIKA - MENEDZSMENT LOGISZTIKA-INFORMATIKA*, vol.1, pp. 50-58.

[22] Wach, K. (2014). *The Theoretical Modelling of the Firm-Level International Competitiveness in Business Studies* (chapter 5), In: D. Kiendl-Wendner & K. Wach

(eds), International Competitiveness in Visegrad Countries: Macro and Micro Perspectives. Graz: Fachhochschule Joanneum.

[23] Wang, M., Wang, H. and Liu, J. (2007). Dynamic Supply Chain Integration through Intelligent Agents, *IEEE the 40th Hawaii International Conference on System Sciences,* pp. 44-46

[24] White, D. S. and Griffith, D. A. (1997). Combining corporate and marketing strategy for global competitiveness, *Marketing Intelligence & Planning*, vol. 15, no. 4, pp. 173-178.

[25] Xiao, T. and Yang, D. (2008). Price and service competition of supply chains with risk-averse retailers under demand uncertainty, *Int. J. Prod. Econ.*, vol. 114, no. 1, pp. 187-200.

TAX BENEFITS INTERCEPTION IN THE CONTEXT OF GLOBALIZATION

Sonia Kozub-Skalska[1,a,*]

[1]The University of Economics in Katowice, Poland

[a]sonia.kozub.skalska@edu.uekat.pl

*Corresponding author

Abstract: In the age of globalization of the market economy and the related process of harmonization and standardization of taxes on a global scale, it is observed a growing importance for corporate finance and the resulting from this tax benefits, especially for companies which are competing with each other for interception of tax benefits. Tax benefits are understood as an element that affects the value of a company in connection with the effect of a tax shield. The problem is important in connection with the possibility of choice of territorial allocation and territorial allocation of production. The issue of tax benefits interception has become the subject of close observation and survey by state authorities, which implemented clauses against the tax avoidance in many countries. Corporations operating on global markets in their tax strategies use tax competition between countries. In many countries this competition leads to race down in terms of tax rates. This action encourages companies to allocate sales precisely in these countries. The article shows how company called „Zara" used tax competition for territorial sales allocation (taxation of income). It is becoming increasingly important to exploration how clothing industry companies have used the processes of globalization to shape the tax burden.

Keywords: tax competition, globalization, tax privileges, clothing industry

JEL classification: H7, H87, H25

1. Introduction

Globalization is thought to reduce the ability of governments to collect taxes. If labor and capital can move between jurisdictions, then attempts to tax these factors will lead to a "vanishing taxpayer" as factors flee from high-to low-tax regions. More broadly, globalization suggests that there will be some convergence in tax rates across countries (Neumann et al., 2009**)** This is also the case in the clothing industry, which uses the processes of globalization through appropriate territorial allocation of production and sales to intercept the tax advantages of tax competition between states. Thus, using the fact that states are increasingly competing between themselves by lowering their tax rates.

2. Tax benefits resulting from tax competition

Tax competition has created a possibility for companies operating on the global market the opportunity of the tax benefits interception resulting from the company's strategy of territorial allocation and production. The use of these strategies is clearly visible in the clothing industry. This industry is characterized by a well-thought-out allocation strategy that is primarily designed to gain competitive advantage in the industry (low production costs) and then select such a territorial allocation strategy which will allow to capture the tax advantage resulting from the difference between the low cost of production and selling price. Gap, H&M GROUP, GK LPP, Next, Zara are examples of such clothing apparel companies operating on the global market. Their common feature is not only the industry and end-user but also the territorial allocation of production. The main territorial production of production takes place in Bangladesh. It is therefore obvious that the processes of globalization have allowed clothing companies to intercept the benefits of the allocation of production. This process has certainly made clothing companies more competitive, but it only shows in part how companies in the industry have benefited from globalization, because it is equally important to focus on tax benefits.

The diversity of the tax systems of European Union countries generates tax competition that has a huge impact on the global economy. In the national economies, the most noticeable manifestation of global competition can be seen in applying for foreign, direct investments. It is a very concrete manifestation of global competition (Kozub-Skalska, 2016). It should be noted that tax competition is a phenomenon directly linked to globalization processes. It refers to the rivalry between the various territories for territorial production factors. The main „tool" of this competition is lowering tax rates.

The theory of economics indicates that competition is a desirable occurrence. Quoting Milton Fredman: "Competition between national governments in delivering public goods and taxes by imposing them is equally productive as the competition between individuals or companies in providing goods and services for sale at their assigned prices" (cited for: Mitchell, 2004).

Siebert and Koop (1990) listed four basic benefits of institutional competition. First of all, institutional diversification is a way for countries to distinguish themselves from other countries and gain competitive advantage. Secondly, thanks to the competitive processes the best solutions are discovered and implemented. Thirdly, harmonization can be ineffective if a non-optimal solution is implemented and disseminated. Fourthly, according to Brennan's and Buchanan's (1980) conclusions, institutional competition allows "leviathan power" to be broken. It should be noted, however, that in the absence of tax competition, the country with higher consumption externality attracts more capital. In contrast, under tax competition, because the country with higher consumption externality will impose a higher tax rate on capital, due to the negative effect of taxation, the country with lower externality attracts more capital (Chang et al., 2017).

The European Union monitors corporate taxation, because tax incentives in some country can attract companies operating in other countries. Therefore, member states of the EU are required to adhere to a Code of Conduct in this area. (Oręziak, 2007). An example of a country where there is relatively strong tax competition is Switzerland. Thus, the canton of Obwald, one of the smallest cantons in the country, by decision of its residents in the referendum on December 12th, 2005 transformed into a „tax haven". The corporate income tax rate has been set at 6.6% and this is the lowest tax rate in Switzerland. Thanks to these steps, Obwald joined the group of Swiss cantons for decades in pursuit of tax reduction (Nidwald, Schywyz, Schaffhouse, Zoug). Actions which were taken in Obwald have raised concerns in other parts of Switzerland as well as in other countries, especially in the European Union. The European Commission has asked the Swiss authorities to clarify whether the use of some relatively low taxes by some cantons does not constitute unlawful public aid, but Switzerland has rejected the charges against (Duparc, 2006)

An important study of tax competition was conducted by Amerighi, Oscar; De Feo, Giuseppe, in which they showed, the public firm acts as a disciplinary device for the foreign multinational that will always choose the efficient welfare-maximizing location. (Amerighi & De Feo, 2017).

Analysis of world tax rates in the years 2003-2017 shows unequivocally that individual countries compete in attracting businesses by lowering their tax rates. It is important to point out that corporate tax competition is more acute at the regional level (Tudor & Appel, 2016). Tab.1 shows the level of corporate tax rates for 2003-2017 in the European Union.

Table 1. Corporate income tax rates in the European Union for the years 2003-2017

LOCATION		2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Austria		34,00	34,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00
Belgium		33,99	33,99	33,99	33,99	33,99	33,99	33,99	33,99	33,99	33,99	33,99	33,99	33,99	33,99	33,99
Bulgaria		23,50	19,50	15,00	15,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00
Croatia		20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00	20,00
Cyprus		15,00	15,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	10,00	12,50	12,50	12,50	12,50	12,50
Czech Republic		31,00	28,00	26,00	24,00	24,00	21,00	20,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00
Denmark		30,00	30,00	28,00	28,00	25,00	25,00	25,00	25,00	25,00	25,00	25,00	24,50	22,00	22,00	22,00
Estonia		26,00	26,00	24,00	23,00	22,00	21,00	21,00	21,00	21,00	21,00	21,00	21,00	20,00	20,00	20,00
Finland		29,00	29,00	26,00	26,00	26,00	26,00	26,00	26,00	26,00	24,50	24,50	20,00	20,00	20,00	20,00
France		34,33	34,33	33,83	33,33	33,33	33,33	33,33	33,33	33,33	33,33	33,33	33,33	33,33	33,30	33,33
Germany		39,58	38,29	38,31	38,34	38,36	29,51	29,44	29,41	29,37	29,48	29,55	29,58	29,72	29,72	29,79
Greece		35,00	35,00	32,00	29,00	25,00	25,00	25,00	24,00	20,00	20,00	26,00	26,00	29,00	29,00	29,00
Hungary		18,00	16,00	16,00	16,00	16,00	16,00	16,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	9,00
Ireland		12,50	12,50	12,50	12,50	12,50	12,50	12,50	12,50	12,50	12,50	12,50	12,50	12,50	12,50	12,50
Italy		38,25	37,25	37,25	37,25	37,25	31,40	31,40	31,40	31,40	31,40	31,40	31,40	31,40	31,40	24,00
Latvia		19,00	15,00	15,00	15,00	15,00	15,00	15,00	15,00	15,00	15,00	15,00	15,00	15,00	15,00	15,00
Lithuania		15,00	15,00	15,00	15,00	15,00	15,00	20,00	15,00	15,00	15,00	15,00	15,00	15,00	15,00	15,00
Luxembourg		30,38	30,38	30,38	29,63	29,63	29,63	28,59	28,59	28,80	28,80	29,22	29,22	29,22	29,22	27,08
Malta		35,00	35,00	35,00	35,00	35,00	35,00	35,00	35,00	35,00	35,00	35,00	35,00	35,00	35,00	35,00
Netherlands		33,00	34,50	31,50	29,60	25,50	25,50	25,50	25,50	25,00	25,00	25,00	25,00	25,00	25,00	25,00
Poland		27,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00
Portugal		25,00	27,50	27,50	27,50	25,00	25,00	25,00	25,00	25,00	25,00	25,00	23,00	21,00	21,00	21,00
Romania		25,00	25,00	16,00	16,00	16,00	16,00	16,00	16,00	16,00	16,00	16,00	16,00	16,00	16,00	16,00
Slovakia		25,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	19,00	23,00	22,00	22,00	22,00	21,00
Slovenia		35,00	25,00	25,00	25,00	23,00	22,00	21,00	20,00	20,00	18,00	17,00	17,00	17,00	17,00	19,00
Spain		35,00	35,00	35,00	35,00	32,50	30,00	30,00	30,00	30,00	30,00	30,00	30,00	28,00	25,00	25,00
Sweden		28,00	28,00	28,00	28,00	28,00	28,00	26,30	26,30	26,30	26,30	22,00	22,00	22,00	22,00	22,00
United Kingdom		30,00	30,00	30,00	30,00	30,00	30,00	28,00	28,00	26,00	24,00	23,00	21,00	20,00	20,00	19,00

Legend: Green – increase of rate compared to the previous period; Red – drop of rate compared to the previous period; Yellow – maintenance of the tax rate in relation to the previous period
Source: Own study

The analysis of the data in Tab.1 clearly shows that in only 28 member states of the EU in 2003-2017 only six countries have decided not to significantly reduce the corporate tax rate. Among the countries that kept the rates unchanged (high) are: Belgium, France, Malta. Malta throughout the period considered 35% tax rate. Looking at the data in Tab.1 in a holistic manner, it should be categorically stated that the majority of countries in 2003-2017 significantly reduced their tax rates. Among the countries that significantly reduced the tax rates during the period considered are Bulgaria, Hungary, Slovenia. This is certainly due to the use of free movement of capital and goods in the processes of globalization. Globalization processes have sought to use individual states to attract investors with low tax rates but also companies through territorial allocation of sales and production in the lowest tax rate countries. These actions have enabled the use of the tax shield effect.

Due to the Gap company mentioned in this article it should also refer to the rates of tax in force in the United States. The corporate income tax United States rate is approximately 40%. The marginal federal corporate income tax rate on the highest income bracket of corporations (currently USD 18,333,333) is 35%. State and local governments may also impose income taxes ranging from 0% to 12%, the top marginal rates averaging approximately 7.5%. A corporation may deduct its state and local income tax expense when computing its federal taxable income, usually resulting in a net effective rate of approximately 40%. The effective rate may vary depending on the locality in which a corporation conducts business. The United States also has a parallel alternative minimum tax (AMT) scheme, which is generally characterized by a lower tax rate (20%) but a broader tax base.

3. Interception of the tax benefits in the processes of globalization by clothing companies

As noted in the preceding paragraph, clothing industry companies use globalization processes for territorial production allocation, which significantly reduces production costs of the goods which are offered. However, the question arises how the clothing industry has used the processes of globalization to shape the tax burden? Referring this question to a particular company, as an example, Zara operating under the name Inditex can be given. Zara, the well-known Spanish brand, which has a successful business model and it's also a year to help the sustainable development of the society and the environments with which it interacts. Actually, this commitment to the environment is a part of the Inditex group corporate social responsibility (Dragonici, 2014). The company has the best margin in the industry - it amounts to almost 15%, because the company uses gaps in tax laws that they are carefully analyzing by international regulators, now. Only in the years 2009-2014, Inditex has moved nearly $ 2 billion in profit to a small company (subsidiary) operating in the Netherlands and Switzerland – ITX Merken. It is significant that this company employs only about 0.1% of all Inditex employees, according to a financial report in 2013 earned nearly 20% of the total income of the main company. Zara records low margins (from 3 to 5%) in high-tax countries, which reduces the taxes the company has to pay in its major European markets: Italy, Germany, France and the United Kingdom. This allowed the company to save on taxes as much as $ 325 million since 2009, including $ 100 million in 2013 alone, and increase net income by more than 3%. The small Dutch subsidiary had a higher profit in 2013 than all Zara subsidiaries in these countries combined in 2009-2014. The Dutch company paid taxes at a 16% rate, half the rate of corporate income tax in Italy, France and Germany.

Zara is a brand that has hit the market with low prices for clothes based on designs of expensive brands. Low prices of clothing have guaranteed territorial allocation policy (Bangladesh). Inditex Company has grown beyond the Zara brand. The company sells inexpensive italian clothing under the brand Massimo Dutti and offers products for young people under the brands Bershka and Pull & Bear. Zara continues to sell the most – giving Inditex $ 13.6 billion from the total turnover of $ 20.6 billion recorded in fiscal year 2013. Inditex spokeswoman Jesús Echevarria claims that the Dutch subsidiary is "a major player in Inditex's business model" and has nothing to do with "tax savings". Inditex emphasizes that it gives Europe more than the income tax of € 764 million in the accounting year ended January 31st, 2013 (Inditex Annual Report 2013). The annual report shows that local governments collected € 4.1 billion in VAT from network customers and real estate taxes in 2012. On the one hand, Zara presents itself as a socially responsible enterprise and, on the other, its territorial allocation of production locates in Bangladesh and through its appropriate organizational structure it intercepts tax benefits in the Netherlands.

Zara is obviously not the only brand in the process of globalization that goes after intercepting tax benefits. The largest clothing network in Poland LPP similarly optimized tax costs – it transferred its trademark rights to the Cypriot company Gothals, which afterwards transferred it to LPP Jaradi Limited which is based in Dubai. As a result the Arab company granted a license to use the trademarks of Cypriot company and subsequently of Polish company. This has led to the interception of a tax advantage of at least 16,390,640.00 PLN[1]. In this case, however, the Polish taxpayer decided not to be helpless and after the tax audit, he issued the decision of the Head of the Pomeranian Tax and Treasury Office in Gdynia dated 30th May 2017 determining the tax liability in corporate income tax for 2012 at the height of 16 390 640.00 PLN for this period (Decision of the head of the Pomeranian Tax and Tax Office in Gdynia of 30th May 2017.).

The avoidance of paying taxes by multinational corporations has been at the forefront of discussions on international political fora. Both the G20 and the European Commission are trying to limit them. However, as it can see, until now quite unsuccessfully. Tax avoidance is not just a problem originating in the corporation. Corporate tax avoidance is a practice that involves different corporations and different territories simultaneously (Evertsson, 2016). In addition, lowering the corporate tax burden has its social consequences. Globalization exerts a pressure to increase taxes on labor income (Onaran, 2012).

4. Conclusion

The progressing globalization processes in the economy are related to the need to provide investors with the most favorable fiscal policy, which in turn leads to tax competition between states (Hybka, 2002). National governments seem to adjust their corporate tax rates to the level chosen in countries that are more populated, and they tend to set higher corporate tax rates when their country enjoys a high real market potential. Through the latter effect, trade integration exerts a positive influence on the level of corporate taxation (Exbrayat, 2017). Considering that globalized companies will obviously seek to intercept the tax benefits of territorial allocation of production and territorial allocation of sales, tax competition between states will significantly affect the decision to allocate capital and the flow of goods. Globalization processes have a significant impact on the tax burden of clothing industry companies. Unfortunately, competition between countries is also manifested in the tax area, when economically underdeveloped countries try to attract foreign investors from economically-developed countries to their country by lowering the tax burden on companies that are considered to be harmful tax competition (Blechova, 2016). As long as there are differentiated rates of corporate taxation in globalization, so long as businesses will seek to intercept tax benefits.

Greater international mobility of economic activity, and associated responsiveness of the tax base to tax rates, increase the economic distortions created by taxation (Hines & Summers, 2009).

[1] This mechanism of intercepting the tax advantage the company also applied in 2011 and 2013.

References

[1] Amerighi, O. and Feo, G. D. (2017). Tax competition for foreign direct investments and the nature of the incumbent firm. *Journal of Public Economic Theory,* vol. 19, no. 4, pp. 811-826.

[2] Blechova, B. (2016) The Impact of Tax Competitions on the FDI Flows within EU in Conditions of Globalization. *Proceedings of the 3rd International Conference on European Integration.* Ostrava, Czech Republic, pp. 93-99.

[3] Brennan, G. and Buchanan, J. M. (1980). Brennan and Buchanan's Leviathan Models *The Social Science Journal,* vol. 27, no. 4, pp. 413-433.

[4] Chang, J., Cheng, Y. and Peng, S. (2017). Social comparisons in consumption, international capital flows and tax competition. *International Journal of Economic Theory,* vol. 13, no. 1, pp. 47-71.

[5] Decision of the head of the Pomeranian Tax and Tax Office in Gdynia of 30th May 2017. [Online]. Available: http://www.lppsa.com/1607050

[6] Dragonici, D. T. (2014). A new perspective on Zara's social responsibility and consumers perception of the Zara fashion brand. *Management and Economic Engineering International Management Conference.* CLUJ-NAPOCA, Romania, pp. 22-30

[7] Durpac, A. (2006). Suisse: la gauche bataille contre le dumping fiscal des petits cantons. *Le Monde*.

[8] Evertsson, N. (2016). Corporate tax avoidance: a crime of globalization. *Crime, Law and Social Change,* vol. 66, no. 2, pp. 199-216.

[9] Exbrayat, N. (2016). Does Trade Liberalisation Trigger Tax Competition? Theory and Evidence from OECD Countries. *The World Economy,* vol. 40, no. 1, pp. 88-115.

[10] Hybka, M. M. (2002), Harmonizacja podatków, a konkurencja podatkowa między państwami Unii Europejskiej, *Zeszyty Studiów Doktoranckich*, vol. 4, pp. 5-41.

[11] Inditex Annual Report (2013). [Online]. Available: http://static.inditex.com/annual_report_2013/en/

[12] Jr., J. R. and Summers, L. H. (2009). 4How Globalization Affects Tax Design. *Tax Policy and the Economy,* vol. 23, no. 1, pp. 123-158.

[13] Kozub-Skalska, S. (2016), The active role of the state and tax competition in the era of globalization. *Globalization and Its Socio-Economic Consequences.* Rajecke Teplice, Slovak Republic, pp. 2022-2027.

[14] Mitchell D. J. (2004) Ending the Tax Harmonization Threat *The Insider* no 299/2004, Washington D.C.

[15] Neumann, R., Holman, J. and Alm, J. (2009). Globalization and Tax policy. *North American Journal of Economics and Finance,* vol. 20, no. 2, pp. 193-211.

[16] Onaran, O., Boesch, V. and Leibrecht, M. (2011). How Does Globalization Affect The Implicit Tax Rates On Labor Income, Capital Income, And Consumption In The European Union? *Economic Inquiry,* vol. 50, no. 4, pp. 880-904.

[17] Oręziak, L. (2007). *Konkurencja podatkowa i harmonizacja podatków w ramach Unii Europejskiej. Implikacje dla Polski*. Wyższa Szkoła Handlu i Prawa w Warszawie, Warszawa

[18] Siebert and Koop, M. J., (1990). Institutional competiton: a concept for Europe? *Institute for World Economics,* no. 440.

[19] Tudor, C. L. and Appel, H. (2016). Is Eastern Europe to Blame for Falling Corporate Taxes in Europe? *East European Politics and Societies,* vol. 30, no. 4, pp. 855-884.

TAX POSITION OF MANAGERS IN GLOBAL EUROPE

Renáta Krajčírová[1,a,*], Alexandra Ferenczi Vaňová[2,b] and Jozef Bojňanský[3,c]

[1]Slovak University of Agriculture in Nitra, Faculty of Economics and Management, Department of Accounting, Tr. Andreja Hlinku 2, 949 76 Nitra, Slovak Republic

[2]Slovak University of Agriculture in Nitra, Faculty of Economics and Management, Department of Accounting, Tr. Andreja Hlinku 2, 949 76 Nitra, Slovak Republic

[3]Slovak University of Agriculture in Nitra, Faculty of Economics and Management, Department of Accounting, Tr. Andreja Hlinku 2, 949 76 Nitra, Slovak Republic

[a]renata.krajcirova@uniag.sk, [b]alexandra.ferenczi@uniag.sk, [c]jozef.bojnansky@uniag.sk

*Corresponding author

Abstract. One of the four freedoms enjoyed by European Union citizens is the free movement of labour within the global Europe. This includes the rights of movement and residence for workers, the rights of entry and residence for family members, and the right to work in another European Union Member State. Free movement and migration of individuals within the global Europe is every-day reality and are fundamental principles of the European Union. Migration of employees is directly connected with determination of their tax position. The objective of the paper is to review the tax position of managers in the territory of the Slovak Republic from the Slovak tax perspective. In particular, the tax residency rules and the conflict of dual residency are taken into account from the Slovak tax view point and according to the OECD Model Tax Convention on Income and Capital. It should be pointed out that the income of managers considered as Slovak tax non resident, moving from another European Union Member States, are under certain circumstances, not taxable in the territory of the Slovak Republic. Therefore, the key issues, such as the personal income tax rates, definition of taxable income and non-taxable items are further reviewed within selected European Union countries.

Keywords: tax position, personal income tax rate, Slovak tax non resident, Slovak tax resident

JEL Classification: H24, H26, K34

1. Introduction

Globalization is implemented through trade, through investments, through human resources or through an exchange of knowledge (Saxunová, 2015). Schultzová (2010) further declares that the process of economic globalization assists to growth of cross boarder investment of movement of goods, services, capital and labour. Developments in globalization have important implications for taxation (Evertsson, 2016). The tax on individual personal income is an important tax for the state as well as for the taxpayer, since it is one of the budget revenue generating taxes, and affects the interests of the entire working population of any state (Sevryukova & Belousova, 2016). According to Popova (2016) the share of personal income tax amounts to 20-25% of total fiscal revenues in many European countries as well as other developed economies because of its important role in enhancing social equity. On the other hand, high personal income tax rates are considered a significant factor for inefficiencies in labour markets. Therefore, over the last decades most industrialized countries initiated reforms aiming at reduction of overall tax burden, an in particular personal income tax rates. Importance of personal income taxes is not only in their financial contribution to the public budgets (in average, personal income taxes are the second most important source of tax revenues in line with Eurostat tax classification), but also in their impact on other government policies and goals (e.g. economic growth, a redistribution, country's competitiveness, a functioning of labour markets or fiscal federalism) at the same time (Szarowská, 2014). As personal income taxes contribute significantly to the overall tax burden on a labour, it is also relevant factor of international competitiveness (Paturot et al., 2013). When subnational governments have tax competence to setting the personal income tax rates, it is clearly the most important aspect of their fiscal sovereignty (Yilmaz et al., 2012). Tax burden and its comparison among individual countries is one of the most discussed topics (Váryová et al., 2013). In terms of the European Union, each EU country applies unified fiscal regulation principles (Kundeliene & Stankevicius, 2016). After the EU integration of Slovak Republic and Czech Republic it can be recognized a movement based on globalization and harmonization trends linked to a unification of tax norms of the EU states (Kouba et al., 2015). On the contrary, the tax policy of EU countries is governed by the common principles, however the tax systems of EU Member States is characterized with considerable differences (Schultzová, 2010). Baštincová (2016) presents, that national systems of direct taxes (income taxes) become related from the structure point of view. Chalupka (2004) predicates that all taxes affect the behaviour of subjects to some extent; in the case of an employee, taxes affect how many hours they are willing to work, i.e. what is their labour supply. In this respect, the analyses of both non-linear taxation and linear taxation carried out Mirrlees (1971) and he argued that the income tax proposed in Slovakia in 2004 is in line with theoretical recommendations. Currently, a progressive moving tax rate is applied on the income from dependent activity (Krajňák, 2015). The particular issues of taxation of individuals are solved also by Bojňanský et al. (2017).

2. Methods

The objective of paper is the assessment and presentation of tax position of managers as taxpayers of personal income tax in the selected states of the European Union, especially in the countries of the Visegrad group (further "Visegrad Four countries"). The paper assesses and compares the residency for tax purposes, personal income tax rate and taxable income received by individual from dependent activity. In relation to the above mentioned the explanation and emphasize of assignment of individual employee within the assessed countries including the international rent of labour force is indispensable.

Pursuant to the paper content the data sources present:

- tax residency, conflict of tax residency and taxable income of individual is assessed on the basis of OECD Model Tax Convention[2] (2014), as well as in accordance with the

[2] Model Tax Convention on Income and on Capital

selected provisions related to the personal income tax of individuals from dependent activity of the national tax legislation in the Visegrad Four countries,
- personal income tax rate is compared pursuant to the selected national tax legislation in the Visegrad Four countries,
- taxation of employment income in the period of individual assignment is treated pursuant to the OECD Model Tax Convention (2014) and selected provisions of double tax treaties.

3. Results and Discussion

3.1 Tax residency status

Free movement of labour is a fundamental principle of the Treaty enshrined in Article 45 of the TFEU[3] and developed by EU secondary legislation. People working in some occupations may also be able to have their professional qualifications recognized abroad. Mobility is a key driver for employment growth. The free movement of foreign employees into the territory of the Slovak Republic is important, however many highly qualified Slovak managers are assigned from Slovak companies to other foreign countries. The tax position of such individuals needs to be taken into consideration.

The criteria for tax residence vary considerably from jurisdiction to jurisdiction. For individuals, physical presence in a jurisdiction is the main test. Some jurisdictions also determine residency of an individual by reference to a variety of other factors, such as the ownership of a home or availability of accommodation, family, and financial interests. Most of the double taxation treaties are based on the OECD Model Tax Convention (2014). According to the OECD Model Tax Convention (2014) the term of "resident of a contracting state" means any person who, under the laws of that state, is liable to tax therein by reason of his domicile, residence, place of management or any other criterion of a similar nature. The criteria for residence in double taxation treaties may be different from those of national law.

In accordance with Slovak tax legislation, an individual will be considered a Slovak resident for tax purposes if (i) has a place of permanent residence in the Slovak Republic in case of Slovak citizens, or (ii) has a permanent stay in the Slovak Republic in case of non Slovak citizens, or (iii) usually stays in the Slovak Republic (more than 183 days in a calendar year). The Czech tax law defines the residency for tax purposes as the person with permanent residence (permanent abode) in the Czech Republic or the person who resides usually in the Czech Republic (for at least 183 days in a given calendar year, either continuously or intermittently). A Hungarian citizen automatically qualifies as a Hungarian income tax resident based on solely Hungarian citizenship. The Polish tax law defines the tax residency based on the (i) the closer personal or economic relations with Poland (center of vital interests), or (ii) individual's stays in the territory of Poland longer than 183 days in a given fiscal year.

Should an individual be considered as tax resident in more than one country in terms of the domestic national legislation, the respective "tie-break rules" according to the applicable

[3] Treaty on Functioning of the European Union

double tax treaties concluded between the countries in question shall be taken in consideration to assess the residency for tax purposes. Residency or citizenship taxation system is typically linked with worldwide taxation, as opposed to territorial taxation. In general, the persons qualified as tax residents according to the national tax law are taxed on their worldwide income, i.e. such individuals have unlimited tax liability. On the contrary, the tax non residents have limited tax liability and are taxed only from territorial source income. Therefore, it is particularly relevant when two countries simultaneously claim a person to be a resident within their jurisdiction. Generally, the tie-break rules on dual-resident individuals according to the OECD Model Tax Convention (2014) begin by determining in which contracting state the individual has a permanent home "available" to him (except for the own home of the taxpayer this may be a home rented-out or otherwise made available). If this tie-break does not decide the issue the next test is the individual's "centre of vital interests", i.e. to which country the personal and economical relations are closer. The particular emphasis is given on the fact where his/her family lives. Subsequent tie-breaks are "habitual abode" (i.e. in which country the taxpayer usually resides), nationality and agreement of the tax authorities.

Table 1: Comparison of personal income tax rates in the countries of Visegrad group

Country/Year	**2000**	**2008**	**2016**
Slovak Republic	42	19	19/25
Czech Republic	32	15	15
Hungary	44	40	15
Poland	40	40	18/32

Source: own processing based on Taxation trends in the European Union, 2017 Edition

The important issue in this respect is to consider the amount of personal income tax rate in selected countries. Table 1 presents the comparative analysis of the personal income tax rate in the countries of Visegrad Four over the period of last 16 years. Over the years, it can be stated that the personal income tax rates in the selected countries has lowered, currently ranged from 15% to 32%. The lowest personal income tax rate is introduced in Hungary and in the Czech Republic which is currently at a flat rate in the amount of 15%.

Within the period of 16 years, the most significantly reduced the personal income tax rate in Hungary, i.e. by 29 percentage points. On the other hand, the progressive personal income tax rate is introduced in the Slovak Republic and also in Poland. The personal income tax rates in the Czech Republic and the Slovak Republic are compared by Vavrová (2015). Czech Republic and Slovak Republic were formerly established as a unique state but since their separation the system of employee taxation has been shaped by regular tax reforms and this type of taxation is still subject to permanent changes (Kočkovičová, 2015). Following our empirical research, it could be stated that the personal income tax rate in the year 2017 is presenting the same value as in the year 2016 within the selected countries.

Further, based on the comparable analysis it can be concluded that in the selected European countries, both cash and in kind income which relates to employment activities are taxable. Each country defines differently tax exempt income in respect of employment activities. In most cases per diem allowances related to business trips of employees, certain life insurance, vouchers or in kind payments provided by employer as possibilities to use sport, health, culture activities are also tax exempt. The tax law in Hungary allows exempt from tax housing providing to employee during the assignment, while in other countries such income is to be taxable.

3.2 Cross border assignment

Cross-border assignment regularly leads to uncertainty in which country the employment income of the assigned individual employee is to be taxed. There is no EU law that states how people moving from one country to another within the EU should be taxed. The OECD Model Tax Convention (2014) as well as the double tax treaties and the national tax law determine the rules on taxation. In general, pursuant to the OECD Model Tax Convention (2014) if an individual employee is sent abroad, the right of taxation for employee's income is in principle in the country where the work is actually exercised (Article 15 Sec. 1). However, according to Article 15 Sec. 2 of the OECD Model Tax Convention (2014), the right of taxation stays with the country of residence, if the individual: (i) has not spent more than 183 days abroad, (ii) the remuneration is paid by an employer, or on behalf of an employer, who is not resident in the state of assignment, (iii) the remuneration is not borne by a permanent establishment of the employer in the state of assignment. Therefore, currently focus is more on short term assignments.

In case the foreign employer which assign an individual employee to the territory of the Slovak Republic while the work is going to be performed on behalf of the foreign employer and the needs for him and the period of assignment of the individual to the territory of the Slovak Republic does not exceed 183 days, as regards the taxation of income from dependent activity of an assigned individual it is indispensable to follow the Article 15 Sec. 2 of the OECD Model Tax Convention (2014). Remuneration which individual employee treated as tax non resident receives for the work performed in the territory of the Slovak Republic is taxed only in the territory of home country, if all the above mentioned conditions are met, regardless the regulation set in the Article 15 Sec. 1 of a particular double tax treaty.

Pursuant to the above mentioned facts it means that the income of tax non resident individual shall be tax exempt from Slovak taxation, i.e. will be subject to tax only in a particular home country. In contrary if any above mentioned condition is not met (e.g. the period of individual assignment exceeds 183 days), the employment income of assigned non resident individual for the work performed in the territory of the Slovak Republic presents the taxable income. Before mentioned manner is applied as well as vice-versa, it means that if Slovak individual employee is assigned by the Slovak employer to any selected countries, e.g. Hungary, for the purpose of their employment, such individual is taxed only in home country, i.e. in the territory of the Slovak Republic, and not in host country (Hungary), if the conditions set in the respective double tax treaty are met.

3.3 Economic employer concept

For the purpose of prevention of abuse of above mentioned exception from the general rule for the taxation of employment income in case of international hiring out of labour, it is necessary to reclassify the employer. The OECD's concept of the "economic employer" plays an important role in this context, as it indicates that the "employer" of a globally mobile individual may not necessarily be the legal employer.

The economic employer is not used by the OECD Model Tax Convention (2014). However, in 2010 the OECD revised its commentary relating the Article 15. Based on the OECD Model Tax Convention (2014) the term employer should be considered in a broader sense. An economic employer is to be understood an entity which bears the costs of the remuneration, has the right to carry out works, and assumes related risk and responsibility. This means that even if the individual employee is legally employed by the home country (formal employer), the host country entity that is receiving the benefit could be considered as economic employer and, therefore Article 15 Sec. 2 would not be applicable to exempt the income from tax in the host country. In the case of cross-border assignments, the individual employee will remain formally employed with the sending company, but will exercise his work for the receiving company to which his remuneration is recharged by the sending company.

The Slovak economic employer needs to follow the payroll evidence for the hired individuals and remit the Slovak tax to the Slovak tax authorities even such remuneration for this work based on the contract is paid by means of a person residing abroad. The obligations of individual taxpayers in relation to an individual income and the tax authorities are solved also by Bieliková & Chlebíková (2015).

The decision lies with the respective selected countries if and in what way they apply an economic employer approach. Following the empirical research, in general, the countries of Visegrad Four adopt the economic employer approach except the Poland. The concept of economic employer is not formalized in Polish tax law, however, in practice the authorities should as a rule apply the principles set down by the OECD. In Hungary, the economic employer approach is adopted for assignment starting after 1 November 2012 (Table 2).

Table 2: Economic employer approach in the countries of Visegrad group

Country	EE concept
Slovak Republic	Yes
Czech Republic	Yes
Hungary	Yes
Poland	Not

Source: own processing based on A new kind of mobility. Economic employer approach in the CEE Region 2013

4. Conclusion

It can be concluded that in the field of taxation there are no rules at Community level regarding the division of taxing rights between Member States or the tax rules to be applied. Tax position of the individual is determined pursuant to the criteria of tax residence defined in the OECD Model Tax Convention (2014) however in every national legislation the adjustment differentiates. In general, in the selected countries the tax residency is determined in accordance with the place of permanent residence, respectively the usual place of residing while individuals who reside usually in the respective country are understood to be persons who stay therein for at least 183 days in a given calendar year, either continuously or intermittently.

According to Geško (2009), Schanz, D. & Schanz, S. (2010) most of the countries impose the income taxes based on the relation of the taxpayer, his/her taxable income respectively, and the given country. This relation can have a direct form when a taxpayer is considered in the given country as an unlimited tax duty taxpayer or an indirect form when the country taxes only that taxpayer's income which has its source in its territory.

The personal income tax rate has developed over the last 17 years in the countries of Visegrad Four. The lowest personal income tax rate has been introduced in Hungary and in the Czech Republic which is currently at a flat rate in the amount of 15%. While the Slovak Republic and Poland currently impose the progressive personal income tax rate. Following the above, it can be concluded that the personal income tax rate could be one of the form of the tax incentives. This is also confirmed by Vavrová (2015).

In general, according to the OECD Model Tax Convention (2014) an employment income is subject of taxation in the country where the work is actually exercised. The exception from this rule is the meeting of three conditions stated in the Article 15 of the OECD Model Tax Convention (2014) which in case that they are simultaneously met so the income from employment activity is exempt from taxes in the state of real activity performance. However, this rule is not applicable and the tax is chargeable in host country if there exist an economic employer in a country of assignment. The countries of Visegrad Four adopt the economic employer approach in the national tax legislation. The concept of economic employer is not formalized in Polish tax law, however in practice this approach is accepted by the tax authorities.

Acknowledgment

This paper is an output of the science projects VEGA no. 1/0666/17 with the title "Impact of Integration and Globalization on Business Risk in Slovak Agriculture" and KEGA no. 041SPU-4/2017 with the title "Financial Management and Business Risk in Slovak Agriculture".

References

[1] A new kind of mobility. Economic employer approach in the CEE Region. (2013). [Online]. Available: https://www.pwc.com/sk/en/publikacie/assets/2013/economic-employer-approach_cee.pdf

[2] Baštincová, A. (2016). *Účtovníctvo a dane právnických osôb. (An accounting and taxes of legal entities.)* Bratislava: Wolters Kluwer, s.r.o.

[3] Bielikova, A. and Chlebikova, D. (2015). Tax inspection of the tax on personal income in the global economy. *Proceedings of 15th International Scientific Conference Globalization and Its Socio-Economic Consequences.* Žilina, Slovak Republic, pp. 33-38.

[4] Bojňanský, J., Krajčírová, R. and Ferenczi Vaňová, A. (2017). *Dane podnikateľských subjektov. (Taxes of entrepreneurs.)* Nitra: SPU.

[5] Evertsson, N. (2016). Corporate tax avoidance: a crime of globalization. *Crime Law and Social Change*, vol. 66, pp. 199-216.

[6] Geško, M. (2009). The development of bilateral double taxation prevention treaties in the world and in the territory of current Slovak Republic. (Vývoj dvojstranných zmlúv na zamedzenie dvojitého zdanenia vo svete a na území súčasnej Slovenskej republiky.) *Financie a riziko – prístupy mladých ekonómov (elektronický zborník príspevkov z XI. ročníka medzinárodnej vedeckej konferencie)*. Bratislava, Slovak Republic, pp. 36-41.

[7] Chalupka, R. (2004). Tax Reform in Slovakia. *Finance a úvěr – Czech Journal of Economics and Finance*, vol. 9-10, no. 54. pp. 382-390.

[8] Kočkovičová, J. (2015). Analysis of the Significant Changes in the Tax System of the Slovak Republic. *Era of Science Diplomacy: Implications for Economics, Business, Management and Related Disciplines (EDAMBA 2015).* Bratislava, Slovak Republic, pp. 455-461.

[9] Kouba, L., Mádr, M., Nerudová, D. and Rozmahel, P. (2015). On policy autonomy, coordination, harmonization and centralization in integrating Europe. *18th International Conference on Enterprise and the Competitive Environment.* Brno, Czech Republic, pp. 404-414.

[10] Krajňák, M. (2015). Development of an Effective Tax Rate and other Selected Indicators of Personal Income Tax in Years 1993-2014. *7th International Scientific Conference on Finance and Performance of Firms in Science, Education and Practice.* Zlín, Czech Republic, pp. 738-752.

[11] Kundeliene, K. and Stankevicius, E. (2016). Analytical Modelling of Globalization Impact on VAT Gap Level Variation in EU Countries. *Proceedings of 16th International Scientific Conference Globalization and Its Socio-Economic Consequences.* Žilina, Slovak Republic, pp. 1119-1127.

[12] Mirrlees, J. A. (1971). An Exploration in the Theory of Optimum Income Taxation. *Review of Economic Studies*, vol. 38, pp. 175-208.

[13] Model Tax Convention on Income and on Capital (2014). [Online]. Available: http://www.oecd.org/tax/treaties/model-tax-convention-on-income-and-on-capital-2015-full-version-9789264239081-en.htm

[14] Paturot, D., Mellbye, K. and Brys, B. (2013). Average Personal Income Tax Rate and Tax Wedge Progression in OECD Countries. OECD Taxation Working Papers. Paris, France, paper # 15.

[15] Popova, N. (2016). Personal income tax system in Bulgaria. *Proceedings of 13th International Scientific Conference on Economic and Social Development (ESD)*. Barcelona, Spain, pp. 152-160.

[16] Saxunová, D. (2015). Innovative Financing Mechanisms in Global Environment. *Proceedings of 15th International Scientific Conference Globalization and Its Socio-Economic Consequences.* Žilina, Slovak Republic, pp. 642-652.

[17] Sevryukova, L. and Belousova, S. (2016). Trends in taxation of personal income: Russian and foreign experience. *Economic Annals-XXI*, vol. 157, no. 3-4(1), pp. 41-43.

[18] Schanz, D. and Schanz, S. (2010). Finding a New Corporate Tax Base after the Abolishment of the One-Book system in EU Member States. *European Accounting Review*, vol. 19, no, 2, pp. 311-341.

[19] Schultzová, A. (2010). *Daňové sústavy štátov Európskej únie. (Tax systems of the European Union Member States.)* Bratislava: Ekonóm.

[20] Szarowská, I. (2014). Personal income taxation in a context of a tax structure. *Enterprise and the Competitive Environment 2014 conference, ECE 2014.* Brno, Czech Republic, pp. 662-669.

[21] Taxation trends in the European Union, 2017 Edition. (2017). [Online]. Available: https://ec.europa.eu/taxation_customs/business/economic-analysis-taxation/data-taxation_en

[22] Váryová, I., Košovská, I. and Ferenczi Vaňová, A. (2013). Tax burden in Slovakia and European Union countries = Obciażenia podatkowe w Slowacji i innych krajach Unii Europejskej. *Acta scientiarum polonorum,* vol. 12, no. 3, pp. 91-100.

[23] Vavrová, K. (2015). Tax Incentives of Business Entities in Selected Countries of the EU in the Context of Globalization. *Proceedings of 15th International Scientific Conference Globalization and Its Socio-Economic Consequences.* Žilina, Slovak Republic, pp. 855-863.

[24] Yilmaz, S., Vaillancourt, F. and Dafflon, B. (2012). State and Local Governments: Why they Matter and How to Finance Them. *The Oxford Handbook of State and Local Government Finance.* In Ebel, R. D., Petersen, J. E. (Eds.) Oxford University Press, Oxford, pp. 105-136.

[25] Zákon č. 595/2003 Z.z. o dani z príjmov v znení neskorších predpisov. (Act No. 595/2003 Coll. on Income Tax as amended.)

EVALUATION OF SELECTED ECONOMIC INDICATORS OF THE COMPANY CZECH RAILWAYS

Michal Krajňák[1,a,*], Vojtěch Meier[2,b]

[1]VSB-Technical Univerzity of Ostrava, Faculty of Economics, Department of Accounting and Taxes, Sokolská třída 33, 702 00 Ostrava, Czech Republic

[2]Self-employed Person, Mozartova 2048/2, 700 30 Ostrava, Czech Republic

[a]michal.krajnak@vsb.cz, [b]vojta.meier@gmail.com

*Corresponding author

Abstract. Globalization of the economy and its interconnection increases the pressure on disclosure of business information. This causes pressure on the unification of information systems, increase of clarity and comparability of all the economic information. This information is primarily provided by accounting, particularly through the financial statement statements included in the annual report. The paper deals with analysis of selected indicators from the annual reports of the company Czech Railways. The annual report is an important document presenting the summary of the profit or loss of an accounting unit during the reference period. Czech Railways operates passenger rail transport in the Czech Republic. This transport is provided both at regional and national level, in cooperation with foreign carriers across the European continent too. The results show that the business of the company is improving, one of the reasons being the increasing number of transported passengers and hence increasing sales of services. Passenger rail transport represents one of Czech Railways basic activities. The long-term goal is to provide their customers with the best services in the field of transport at competitive prices. The article contains the methods of description, comparison, analysis, synthesis, methods for analysis of time series and method of correlation analysis.

Keywords: Accounting, Annual Report, Czech Railways, Financial Statements

JEL Classification: C02, M20, M41

1. Introduction

With the growing global character of the economy, rail transport is becoming increasingly important as well. Together with road transport, it forms the basis of the transport network in the Czech Republic. The largest carrier in the Czech Republic is the joint stock company Czech Railways. The aim of the article is to assess the dependence and development of selected indicators of the Czech Railways company drawn from the annual reports of the analyzed company. The annual report also includes the financial statements, that are the primary source of information for the needs of financial management and decision-making process.

A part of the financial statements is created by the balance sheet, the objective of which is to provide information about the financial position. Income statement show profit for the year. A cash-flow table is not always the compulsory part to the financial statement. The main purpose of the financial statements and annual report is to provide users with information on assets, debt, equity, costs and revenues as well as profit, including the ability of the accounting entity to continue its activities (Hakalová et al., 2016). For more details about the financial statements, e.g., Leiwy & Perks (2013) or McKeith & Collins (2013).

These financial statements are prepared by entities in accordance with national or multinational accounting standards. If an entity accounts and prepares its financial statements only according to national accounting rules, the explanatory power and comparability in a transnational context is significantly limited. Globalization of the economy is therefore a factor that increases the need of comparing the accounting information. The main instruments of accounting harmonization are IFRS (International Financial Reporting Standard) and US GAAP (United States Generally Accepted Accounting Principles). The procedure of converting financial statements prepared in accordance with national accounting rules into financial statements in accordance with IFRS is stated by e.g. Hakalová et al., (2014). Preparation of financial statements in accordance with IFRS increases the comparability of information (Yip & Young, 2012 or Franco et al., 2011). However, the calculation of the corporate income tax is based on the profit or loss assembled according to the national accounting regulations. More about this problem e.g. Kuznetsova et al. (2017).

2. Czech Railways

Czech Railways is a national rail carrier in the Czech Republic, operating several categories of trains in passenger transport: passenger train (Os), express passenger train (Sp), fast train (R) and higher quality trains. These trains include Express (Ex), InterCity (IC), EuroCity (EC), EuroNight (EN) and SuperCity (SC). Since the end of the year 2014, a new category has been introduced – higher quality fast trains (Rx). Currently, these trains are operated on selected national routes (fast train routes R6, R13, R18, R19). The concept of trains, which, in a fixed, usually one to two-hour tramline, connects important cities has already appeared in the past not only in the Czech Republic (Baron, 1995). The defining feature of the Czech passenger railway market is that with the exception of the Prague–Ostrava route, the operation of all other services is subsidised: long-distance traffic by the Ministry of Transport, and regional traffic by the regional transport authorities (Tomes et al., 2014).

Czech Railways pays increased attention to the quality of the fleet and the level of provided services. As Table 1 shows, the number of transported passengers is gradually increasing, but the problem is a negative economic result, especially for a group of passenger transport. In case of suburban routes in particular, there may be problems with barrier-free vehicles in selected regions (Matuška, 2017), since there are operated, for example, electric units of series nr 452 that were produced in the 80s of the last century and are now beyond the limit of their operational life.

3. Methodology

To achieve the objective of the paper authors used standard positivist economic methodology which also included the scientific methods of description, deduction, comparison, as well as study of other sources and finally synthesizing methods. For specific analysis of dependency between the examined factors, the correlation analysis was used.

The mutual relation of various dependency rates is assessed by the correlation analysis (Newbold et al., 2013). One of the most commonly used indicators is the Pearson correlation coefficient *r* (1) which reflects the linearity degree of dependence,

$$r = \frac{\sum_{i=1}^{n}(x_i-\bar{x})(y_i-\bar{y})}{\sqrt{\sum_{i=1}^{n}(x_i-\bar{x})^2\sum_{i=1}^{n}(y_i-\bar{y})^2}}, \tag{1}$$

where $\bar{x}$ and $\bar{y}$ are sample average. If the value *r* is close to 0 the considered values are independent from each other. The more the value is closer to 1 the higher is the level of dependence

For analysis of time series, there is a calculation of absolute increment in *AC* (2), relative increment *RC* (3), the growth factor *CG* (4) and average growth factor AGV (5). To learn more on options of time series analysis, see e.g. Buglear (2012).

$$AC = y_1 - y_{t-1} \tag{2}$$

$$RC = \frac{y_t - y_{t-1}}{y_{t-1}} \tag{3}$$

$$CG = \frac{y_t}{y_{t-1}} \tag{4}$$

$$AGV = \sqrt[n-1]{\frac{y_n}{y_{n-1}}} \tag{5}$$

where y_1 is the amount of the indicator in year 1 and y_{t-1} is the indicator in the year t-1.

4. Analysis and Results

Table 1 contains selected indicators obtained from the Czech Railways annual reports in years 2010 to 2016. According to Pospíšil (2013), one of the problems of low efficiency is the change in the concepts of transport policy or subsidies from the state.

Table 1: Selected indicator of the Czech Railways in the period of 2010-2016

Year	Profit or loss	Profit for passenger transport	Number of passengers			Average transport distance	Category of train			Occupancy rate of offered capacity
			Domestic transport	International transport	Total		Ex, IC, EC,SC	R	Sp, Os	
Unit	Mil. CZK	Mil. CZK	Thousand	Thousand	Thousand	Km	%			%
2016	882	-644	.	.	171 500	43,00	.	.	.	27
2015	-1375	-1422	165 876	3 840	167 716	42,25	20	30	50	27
2014	156	-865	166 841	3 304	170 145	40,86	18,8	30,1	51,1	26
2013	-1953	-1795	166 005	3 277	169 282	40,90	17	32	51	25
2012	-1594	-512	166 033	2 754	168 787	40,92	18	32	50	24
2011	491	-583	163 208	2 544	165 752	40,03	12	38	50	23
2010	-981	.	160 352	2 388	162 690	40,28	14	36	50	23

Source: own processing

There is a weakness in form of the negative economic result (in the period of 2012, 2013 and 2015) when the loss exceeds 1 billion CZK. The wage and the material, energy and services consumption costs are the most costly. Neither interests on loan costs (debt exceeds over 50% of the value of assets) or depreciation of fixed assets are negligible.

Appropriate support from the government is the fact that in the Czech Republic is on the regular land public transport of passengers and their accompanying luggage applied the first reduced value added tax rate. The influence of value added tax rate on the behaviour of economic agents and subsequent impact on the tax revenue dealt in their study e.g. Krzikallová & Střílková (2015).

Data relating to the number of passengers transported separately for domestic and international transport and the structure of trains operated in 2016 as well as the separate profit for the group of passenger transport for 2010 has not been published.

4.1 Correlation analysis

To assess the interdependence between individual indicators, the Pearson correlation coefficient *r* determined by the relation (1) was used.

Table 2: Pearson correlation coefficient

	VH	VHO	PDT	PIT	PT	TD	EX	R	Sp, Os	OR
VH	1,00									
VHO	0,63	1,00								
PDT	-0,19	-0,34	1,00							
PIT	-0,29	-0,72	0,74	1,00						
PT	0,21	-0,01	0,98	0,65	1,00					
TD	0,19	-0,09	0,58	0,89	0,64	1,00				
EX	-0,46	-0,38	0,78	0,83	0,71	0,87	1,00			
R	0,42	0,44	-0,81	-0,84	-0,77	-0,81	-0,99	1,00		
Sp,Os	0,02	-0,45	0,54	0,38	0,66	0,01	0,33	-0,48	1,00	
OR	0,15	-0,32	0,74	0,98	0,75	0,89	0,89	-0,89	0,41	1,00

Source: owns calculation

Note: VH = economic result, VHO = economic result for the group of passenger transport, PDT = number of passengers in domestic transport, PIT = number of passengers in international transport, PT = total number of passengers, TD = average transport distance, EX = category of higher quality trains, R = fast train, Sp, Os = express passenger train, passenger train, OR = occupancy rate of offered capacity

The highest dependence was found between the total number of passengers and the number of passengers in domestic transport (r = 0,98). It is true that most passengers are domestic passengers, even though the number of passengers transported in international transport is increasing. The coefficient r for assessing the total number of passengers and the number of passengers in international transport takes lower value (r = 0,65).

A high degree of dependence can be observed for variables in combination with higher quality trains – a heavy dependence on the number of passengers in domestic (r = 0,74), but especially in international transport (r=0,89). It also has a link with the average travel distance which is rising mainly due to increasing international transport.

With the increasing number of transported persons, the occupancy rate of the offered capacity increases as well. Occupancy rate of the offered capacity shows the high degree of dependence also on the share of the higher quality trains, international transport or average travel distance.

A high degree of negative dependence is between a combination of selected indicators for the share of operated transport services in fast train category. The volume of these services has decreased and, on selected routes, the given services were replaced by higher quality trains.

The conclusions of the correlation analysis show that the quality of the fleet has an influence on the number of persons to be transited in both domestic and international transport. This fact leads to an increase of occupancy rate of the offered capacity of services and to the extension of the average travel distance. In the domestic fast train transport, modern Interpanter units are deployed on selected routes, on long-distance route Ex3 connecting Prague and Brno there has been operating the Railjet train since 2014 that are operated in Austrian territory in cooperation with the Österreichische Bundesbahnen. The existing fleet was modernized in the section between Prague and Děčín on the same long-distance route on the Eurocity services. The line is now serviced not only by Bmz section wagons, but also by large-size coaches (Bdmpz and Bhmpz). These comfortable services ensure the connection of the Czech Republic with Germany on the route Prague - Dressden - Berlin - Hamburg.

4.2 Analysis of time series

For the time series from Table 1 depicting the total number of transported passengers, the absolute increments (AC), relative increments (RC) and growth coefficients (CG) are calculated in Table 3 using (2), (3) and (4).

Table 3: Time series – Number of passengers in the period of 2010-2016

Year	AC	RC	CG
2011	3 062	0,018821	1,018821
2012	3 035	0,01831	1,01831
2013	495	0,002933	1,002933
2014	863	0,005098	1,005098
2015	-2 429	-0,01428	0,985724
2016	3 784	0,022562	1,022562

Source: own calculation

The number of passengers, as the results in the table show, increased annually except for the year 2015. The reason for the decrease in 2015 was the more extensive repair activity of the company Správa železniční dopravní cesty. Absolute increment is the highest between 2010-2011 and 2015-2016. An increasing trend confirming the growth coefficients that usually exceed value of 1.

The number of passengers has increased in the long term especially in case of routes where there have been deployed new or modernized vehicles – the routes Ex3 (Břeclav – Prague – Děčín) and Ex7 connecting Prague – Tábor – České Budějovice. When the new working timetable for 2018 becomes valid, the carrier plans to introduce a category of express trains on the Prague - Plzeň - Cheb / Klatovy route. Currently, there are two pairs of SuperCity category trains operating on this route that show a growing occupancy trend. Regarding the deployment of better quality vehicles, there is the potential for further growth of number of passengers. However, the problem of this section is the obsolete track section Prague –

Beroun, which has not been modernized yet by the Správa železniční dopravní cesty. The modernization of this segment is dealt with in more details by e.g. Bohatková & Bohatka (2010).

As a part of the provision of additional services, the ČD Minibar service was extended by an installation of vending machines with small snack items on the Prague – Česká Třebová – Brno fast train line. In mid-2017, the modernization of the electronic units 680 (Pendolino) was initialized. This extensive modernization can bring more passengers to the Prague – Ostrava route, where these units are primarily deployed.

The average growth rate determined by (5) takes value of 1,01, which again confirms the growing trend. This means that the number of transported passengers grew by 1% on average each year. According to ongoing statistics, 72 million passengers were transported in the first five months of the year 2017 compared to the same period in 2016, which is by 1 million more than last year.

5. Conclusion

The aim of this article was to assess the dependence and development of selected indicators of the company Czech Railways, the primary business objective of which is the provision of transport services. There are a number of factors influencing the number of passengers, such as the quality of the deployed vehicles or the level and quality of the additional provided services. Railways are multiproduct enterprises. Their outputs have a spatial dimension as well as quality attributes (Oum et al., 1999).

In spite of the rising trend of the number of transported persons, Czech Railways do not achieve a positive result in the group of passenger transport. One of the reasons for this is generally continued low level of total occupancy rate of the offered capacity, especially in marginal transport times or in less lucrative track sections. In addition to the potential for growth of number of passengers in selected sections in the Czech Republic in the context of increasing globalization trends, there is also a potential for international transport. Also in this area, the number of transported persons has been increasing in the long term, especially in case of the routes linking the Czech Republic with Germany or Austria.

The data source for the assessment of the analyzed indicators is an annual report. In order to ensure the accuracy of the analysis, it is not only necessary to adequately apply the methods for assessment, but also to ensure accurate and relevant accounting data as well. An advantage for Czech Railways is that its financial statements are prepared also in accordance with international financial reporting standards, which also, due to globalization, increases the explanatory power of both accounting statements or other analyzes for which the accounting is the primary source of information.

Acknowledgment

This paper is an output of the science project SGS SP2017/118 Application of selected quantitative methods for assessment of domestic and international aspects of taxation and insolvency.

References

[1] Baron, P. (1995). Transportation in Germany: A Historical Overwiew, *Transportation Research Part A: Policy and Practice,* vol. 29, pp. 9-20.

[2] Bohatková, L. and Bohatka, J. (2010). Prague - Beroun, New Railway Connection - Geotechnical Survey in Extravillan for a Tunnel with a High Overburden in the Czech Republic. *Proceedings of 11th International Conference on Underground Construction Prague 2010*. Prague, Czech Republic, pp. 542-547.

[3] Buglear, J. (2012). *Quantitative Methods for Business and Management,* 1st ed., Harlow: Pearson Education.

[4] Franco, G., Kothari, S. and Verdi, R. S. (2011). The Benefits of Financial Statement Comparability, *Journal of Accounting Research,* vol. 49, pp. 895-931.

[5] Hakalová, J., Pšenková, Y. and Losová, M. (2014). First Time Adoption of International Financial Reporting Standards for Business Corporations Based in EU Member State that are Issuers of Securitiers Admitted to Trading on Regulated Market. *Proceedings of International Conference on European Integration 2014.* Ostrava, Czech Republic, pp. 192-201.

[6] Hakalová, J., Palochová, M. and Dušan, R. (2016). Problems with the Breach of the Obligation to Publish Financial Statements and Annual Reports of Business Entities in the Czech and Slovak Republic in the Context of Global Requirements for Reporting and Disclosing Information. *Proccedings of 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*. Žilina, Slovak Republic, pp. 603-610

[7] Krzikallová, K. and Střílková, R. (2015). Value Added Tax Rates Applied to Labour-Intensive Services and Impact of their Changes on the VAT Revenue. *Proceedings of the 7th International Scientific Conference Finance and Performance of Firms in Science, Education and Practice*. Zlin, Czech Republic, pp. 779 – 794.

[8] Kuznetsova, S., Krzikallová, K. and Kuznetsov, A. (2017). Performance Indicators for Management Control of Direct Taxes: Evidences from the Czech Republic and Ukraine, *Financial and credit activity: problems of theory and practice*, vol. 1, pp. 189-198.

[9] Leiwy, D. and Perks, R. (2013). *Accounting – Understanding and Practice*, 4th ed. London: McGraw-Hill.

[10] Matuška, J. (2017). Railway System Accessibility Evaluation for Wheelchair Users: Case Study in the Czech Republic, *Transport,* vol. 32, pp. 32-43.

[11] McKeith, J. and Collins, B. (2013). *Financial Accounting and Reporting*, 2nd ed, London: McGraw-Hill.

[12] Newbold, P. W., Carlson, W. and Thorme, B. M. (2013). *Statistics for Business and Economics*, 8th ed., Harlow: Pearson.

[13] Oum, T. H., Waters, W. G. and Chunyan, Y. (1999). A Survey of Productivity and Efficiency Measurement in Rail Transport, *Journal of Transport Economy and Policy,* vol. 33, pp. 9-42.

[14] Pospíšil, T. (2013). An Analysis of the Czech Railway Allocation Effectiveness. *Proceeding of Regulated and Unregulated Competition on Rails*. Telč, Czech Republic, pp. 180-191.

[15] Tomes, Z., Kvízda, M., Nigrin, T. and Seidenglanz, D. (2014). Competition in the Railway Passenger Market in the Czech Republic, *Reseach in Trasportation Economics,* vol. 48, pp. 270-276.

[16] Yip, R. and Young, D. (2012) Does Mandatory IFRS Adoption Improve Information Comparability, *Accounting Review,* vol. 87, pp. 1767-1789.

[17] Annual reports of the company Czech Railways from the years 2010, 2011, 2012, 2013, 2014, 2015, 2016.

DEVELOPMENT AND FINANCING OF CLUSTERS IN THE EU AND IN SLOVAKIA

Emília Krajňáková[1,a,*]

[1]Faculty of Socio-Economic Relations, Trenčin University of Alexander Dubcek in Trenčin, Slovak Republic

[a]emilia.krajnakova@tnuni.sk

*Corresponding author

Abstract. Phenomenon of clusters, i.e. branch agglomerations that are formed through connecting companies economically within a certain territory, has been known since the times of mediaeval craft guilds. However, it was only in the last quarter of 20th century, when industrial clusters started to be perceived as an important factor in regions' economic development. The regions that were birthplaces of clusters became leaders of economic development. In the past years, we have witnessed boom in cluster development in all industrial, technological or service-oriented fields. In addition to fostering the competitiveness of regions, clusters lead to an improved quality of products and services and to a higher rate of innovations. This study identifies conditions necessary for the successful creation of clusters and the methods through which clusters are formed. We characterize the position of clusters within the national economy, state the advantages and disadvantages of such a cooperation, describe clusters' activities, and touch upon the cooperation of clusters within the EU. We look into various ways through which cluster initiatives, activities and regional policies are financed in the EU. We provide a general overview of the clusters' position in Slovakia, specifically the Clusters' union in Slovakia, and we shortly characterize selected Slovak clusters.

Keywords: cluster initiative, cluster financing, regional development, competitiveness

JEL Classification: D2, D21, M12, R11

1. Introduction

Aktuálnosť vzniku a efektívneho fungovania klastrov v kontexte globalizácie spočíva v tom, že inovačný rozvoj podnikov je dôležitým faktorom ekonomického rastu, čo ovplyvňuje nevyhnutnosť integrácie podnikov a vznik kooperačných spojení medzi nimi. Prax ostatných desaťročí svedčí o vysokej úrovni klasterizácie ekonomickej činnosti v rozličných regiónoch sveta. Skúsenosti zo sveta dokázali, že klastrový prístup zvyšuje efektívnosť vzájomného pôsobenia súkromného sektoru, štátu, obchodných a profesijných asociácií, výskumných a vzdelávacích inštitúcií v inovačných procesoch. Mnoho vedeckých publikácií svedčí o vysokej efektívnosti činnosti klastrov a o ich vplyve na ekonomický a sociálny rozvoj jednotlivých regiónov. Realizácia inovačných a kreatívnych prístupov, vrátane klastrov, pre rozvoj ekonomiky regiónov, stimulovanie zamestnanosti, zvýšenie konkurencieschopnosti a pod. v podmienkach hospodárskeho rozvoja krajín Strednej a Východnej Európy sa stretávajú s určitými prekážkami. Preto je nevyhnutná hlboká analýza skúsenosti realizácie inovačných prístupov v hospodárskom rozvoji regiónov a zvlášť tvorby a realizácie klastrov (Stejskal, 2011), (Vojtovič, 2016).

1.1 Teoreticko-metodologické aspekty klastov a klastrovej politiky

Britský ekonóm Marshall (1920) ako prvý obrátil pozornosť na fenomén klastra. Aj v keď jeho diele nenachádzame súčasné pojmy, z ich kontextu je evidentná analýza klastrov z medzifiremným podielom práce. Zásluha Marshalla spočíva v tom, že zdôvodnil synergetický efekt, ktorý sa dosahuje pri zlúčení a zvýšení špecializácie malých podnikov. (Schumpeter,1934) skúma inovačný vplyv klastrov na hospodárky rozvoj, vyvinul teóriu inovácií nazývanú Mark I a Mark II. V rámci prvej teórie argumentoval, že inovácie a technologické zmeny realizujú podnikatelia, zabezpečujúci fungovanie ekonomiky krajiny. V modeli Mark II, tvrdí, že skutočnými zdrojmi inovácii a hýbateľmi ekonomiky sú veľké spoločnosti, ktoré investujú do výskumu a vývoja.

Súčasný záujem o klastre je spojený s dielami M. Portera, podľa ktorého „*klaster je geograficky blízke zoskupenie vzájomne previazaných firiem, špecializovaných dodávateľov, poskytovateľov služieb a súvisiacich inštitúcií v konkrétnom odbore a taktiež firiem v príbuzných odboroch, ktoré spolu súťažia a spolupracujú, majú spoločné znaky a taktiež sa dopĺňajú*“ (Porter, 1990). Neskôr túto definíciu rozšíril a uvádza, že klastre sú miestne koncentrácie vzájomne prepojených firiem a inštitúcií v konkrétnom odbore. Obsahujú dodávateľov špecializovaných vstupov, ako aj stroje, služby a poskytovateľov infraštruktúry. „*Klastre sa rozširujú smerom dolu k odbytovým kanálom, zákazníkom a k výrobcom komplementárnych produktov a spoločnostiam v príbuzných priemyselných odvetviach. Viaceré klastre tiež zahŕňajú vládne alebo iné inštitúcie – univerzity, agentúry, výskumné tímy a obchodné asociácie, poskytujúce špecializované školenia, vzdelávanie, informácie, výskum a technickú podporu*“ (Porter, 1998).

Existuje veľa definícií klastrov a líšia sa podľa vnímania autorom a ďalšej potreby narábania s týmto pojmom. Podľa OECD klastre sú lokálne združenia horizontálne alebo vertikálne prepojených firiem, špecializujúce sa na podobné oblasti obchodu, spolu s podpornými organizáciami (OECD, 2007). Francúzski vedci Tolenado a Soulie používali „*pojem „filieres“ na opísanie skupín technologických sektorov*“ (Tolenado, 1978; Soulie, 1989). Formovanie „filieres“ sa vysvetľovalo závislosťou jedného sektoru od iného podľa technologickej úrovne. Filieres predstavuje úzku interpretáciu klastra, zakladá sa na potrebe vytvorenia technologických spojení medzi odvetviami a sektormi ekonomiky pre realizáciu ich potenciálnych výhod. Švédska klastrová teória sa formuje na štruktúre národnej ekonomiky, presnejšie na skúmaní vzájomných spojení veľkých švédskych mnohonárodných korporácií. Základom konkurenčného úspechu je podľa Dahmena (1950) „*existencia spojenia medzi schopnosťou jedného sektoru sa rozvíjať a schopnosťou zabezpečiť pokrok v druhom*“.

Súčasné teórie rozvoja konkurencieschopnosti na základe klastrov rozpracovali (Feldman & Audretsch, 1999). Prednosti danej teórie spočívajú v tom, že vznikli na základe rozsiahlych empirických výskumov diverzifikačných foriem v rozličných krajinách Podľa autorov „*diverzifikácia často nasleduje matricu typu „náklady – výroba“ alebo kontakty medzi odvetviami*“. To sa zhoduje s mechanizmami, ktoré vedú k tvorbe klastrov.

Hodnoteniu potenciálu a miery vplyvu klastrov na rozvoj Slovenskej republiky a manažmentu rizík malých a stredných podnikov v kontexte zapojenia do činnosti klastrov sa venujú (Haviernikova & Strunz, 2014), (Krajňáková & Krajčo, 2016), (Navickas et al., 2016). Klastrová politika zásadným spôsobom ovplyvňuje rozvoj kreatívneho priemyslu. Samotný pojem a jeho definíciu zaviedol (Florida, 2002) známy koncepciou kreatívnej triedy a jej dôsledkami pre obnovu miest. Kreatívny priemysel, zakladajúci sa na tvorivej činnosti ľudí v sfére kultúry zahŕňa úžitkové umenie, hudbu, tvorbu rádio a televíznych programov, počítačové programovanie, tvorbu internetových portálov, reklamy, marketingové poradenstvo a výskum, písanie a vydávanie kníh, umelecké a zábavné činnosti atď. (Cikánek, 2009), (Mura & Sleziak, 2014), (Vojtovič & Karbach, 2014). *„Vzhľadom na úlohu tvorivého priemyslu v podmienkach slovenského priemyslu je potrebné zdôrazniť, že koncepcia tvorivého priemyslu a kreatívneho hospodárstva ešte nebola vyriešená, ale je dôležitou súčasťou slovenskej ekonomiky"* (Kordoš, 2016). (Pavelková & Jirčíková, 2008) píšu, že *„zapojeným podnikom umožňujú klastre zlepšovať konkurencieschopnosť a dosahovať tak vyššiu výkonnosť*". Meraniu výkonnosti klastrov a firiem v rámci klastrov pomocou modelu zostatkových príjmov sa venujú autori (Dehning & Pavelkova, 2009). Z uvedeného vyplýva, že dnes neexistuje jednoznačné ponímanie pojmu „klaster" a využívané definície vychádzajú z podmienok, úloh a cieľov jednotlivých subjektov skúmajúcich klastre. Výsledky výskumov kvantitatívnych charakteristík klastrov bazírujú na rozličných teoretických prístupoch, metódach a kritériách identifikácie a podstatne sa odlišujú medzi sebou. Teoreticko-metodologickým základom pre náš príspevok boli práce domácich a zahraničných bádateľov. Pre dosiahnutie vytýčeného cieľa sme použili všeobecne vedecké a špeciálne výskumné metódy, také ako systémový prístup, metódy analýzy a syntézy, techniky logického zovšeobecnenia.

1.2 Predpoklady a podmienky vytvárania klastrov

Najrozvinutejšie klastre spĺňajú nasledujúce principiálne podmienky, ktoré môžu byť chápané ako štartovacie predpoklady pre ich tvorbu a realizáciu:

1. Existencia konkurencieschopných podnikov, pričom jej indikátorom je vysoká úroveň produktivity spoločnosti a sektorov, tvoriacich klaster, vysoká úroveň exportu produkcie a služieb, vysoké ekonomické ukazovatele činnosti spoločnosti.
2. Zemepisná koncentrácia a blízkosť kľúčových účastníkov klastra umožňujúca im aktívne vzájomne pôsobiť. Geografická poloha vplýva na typ a zvláštnosti klastra a môže zachytiť jeden alebo niekoľko regiónov štátu.
3. Prítomnosť v regióne konkurenčných výhod: prístup k surovinám, výhodná zemepisná poloha, existencia špecializovaných ľudských zdrojov, dodávateľov, špecializovaných vzdelávacích zariadení a programov, zodpovedajúcich organizácii, nevyhnutnej infraštruktúry a iné faktory.
4. Potreba spojenia a vzájomného pôsobenia medzi účastníkmi klastrov. Tieto spojenia môžu mať rozličnú podstatu, zahrňovať formalizované vzájomné vzťahy medzi hlavnou spoločnosťou a dodávateľmi, medzi samotnými dodávateľmi, partnerstvo s dodávateľmi zariadenia a špecializovaného servisu.
5. Široká škála účastníkov klastra, súčasťou ktorého môžu byť spoločnosti, tvoriace konečnú produkciu a služby exportované za hranice regiónu, dodávatelia kompletizujúcich zariadení, špecializovaných služieb a odborné vzdelávacie zariadenia. Za indikátor sú považované ukazovatele, charakterizujúce vysokú mieru zamestnanosti v podnikoch a v sektoroch, tvoriacich klaster.

Vznik klastrov je spojený s dostupom k surovinám, tradičným „know-how“, špecifickými požiadavkami určitej (zemepisne ohraničenej) skupiny spoločnosti alebo spotrebiteľov, dislokáciou firiem alebo podnikateľov, využívajúcich dôležité technologické inovácie. Po vzniku prvotného jadra postupne sa nadväzujú širšie spojenia - objavuje sa sieť servisov, špeciálni dodávatelia a určitý segment trhov práce. Ďalším krokom bol vznik biznis – asociácií, vzdelávacích zariadení a iných inštitúcií, obsluhujúcich vo vznikajúcom klastri celú radu firiem.

2. Analýza súčasného stavu klastrovej politiky v SR a v krajinách EÚ

Klastrová politika ako nástroj stimulácie inovačného rozvoja sa začala formovať v EÚ v poslednom desaťročí 20. storočia na základe rozvoja tesnej spolupráce výrobných spoločnosti, vedeckých organizácií a miestnych orgánov štátnej moci. Takéto vzájomné pôsobenie bolo pomenované ako „trojitá špirála“ - základ súčasného rozvoja klastrov. Zvláštnosťou činnosti orgánov štátnej moci je to, že sú povolané nie iniciovať vytvorenie klastrov, ale napomáhať formovaniu priaznivých podmienok pre ich rozvoj prostredníctvom uskutočnenia efektívnej daňovej, rozpočtovej, úverovej, colnej politiky, a taktiež vybudovanie súčasných vedecko-výskumných centier, objektov dopravnej a energetickej infraštruktúry.

Okrem toho, štátna podpora systému inovačného rozvoja sa môže uskutočňovať vo forme priameho financovania, dosahujúceho taktiež polovicu výdajov na vytvorenie novej produkcie a technológií; poskytnutie daňových úľav, legislatívnej ochrany práv intelektuálneho vlastníctva, účelových dotácií na rozpracovanie vedecko-výskumných problémov, subvencií, vytvorenia špeciálnych fondov pre zavedenie inovácií. Explicitný dôraz na rozvoj klastrov bol deklarovaný v množstve strategických dokumentov súvisiacich s obnovou Lisabonskej stratégie v roku 2005 v súvislosti so zvyšovaním konkurencie schopnosti regiónov jednotlivých členských štátov. Európska klastrová aliancia (ECA) združujúca 55 regiónov bola založená Európskou komisiou v roku 2006 so zámerom stimulovať spoluprácu medzi regionálnymi vládami a iniciovať medzi nimi záujem o identifikáciu príležitostí a prenos skúseností.

2.1 Klastre na Slovensku a v krajinách EÚ

Keďže SR patrí k priemyselným krajinám väčšinu klastrov tvoria technologické zoskupenia, ktoré vznikli spontánne s využitím infraštruktúry a tradície priemyslu v hostiteľských regiónoch. „*V prípade technologických zoskupení platí, že väčšina z nich bola vytvorená okolo mnohonárodných firiem, ktoré sú najdôležitejšími zdrojmi PZI pre regióny a slovenskú ekonomiku. Pôsobia hlavne v automobilovom priemysle, inžinierstve, IKT a energetickom priemysle a následne priťahujú iné firmy, najmä subdodávateľov a firmy, ktoré poskytujú špecifické podporné služby*“ (Kramarova, 2016). Na Slovensku prvý klaster vznikol v roku 2004 (BITERAP v Košickom kraji) a posledné tri v roku 2015 (Agroenvironmentálny klaster, z.z.p.o. v Nitrianskom kraji, Klaster Liptovských Inovácií a Rozvoja Regiónu v Žilinskom kraji a Technologický klaster pre využívanie zemských zdrojov z.p.o. v Košickom kraji). Nateraz celkovo v SR mame 35 klastrov, z toho najviac 8 v Trnavskom kraji, tesne za ním nasleduje kraj Košický s počtom 7 klastrov a najmenej t.j. 1 klaster existuje v Trenčianskom kraji. Pri zisťovaní *„informovanosti o význame kreatívneho priemyslu v rozvoji Trenčianskeho kraja sa zistilo, že 48% oslovených predstaviteľov firiem kreatívneho* *priemyslu, nepoznajú rozsah ani vplyv kreatívneho priemyslu na hospodársky rozvoj, 11% nepoznajú jeho význam, ale 5% si uvedomuje jeho dôležitosť a 36% si uvedomuje vplyv kreatívneho priemyslu na prosperitu hospodárskeho vývoja"* (Vojtovič & Karbach, 2014).

V rámci EÚ dôležitou tendenciou je rast vzájomného pôsobenia malých a stredných klastrových firiem v nových odvetviach ekonomiky s nadnárodnými korporáciami – firmami, pôsobiaci najmenej v dvoch krajinách. Pritom všetky európske klastre, v ktorých nie sú zastúpené nadnárodné korporácie, patria k tradičným odvetviam. Patria k ním dva klastre, ktoré sa špecializujú na výrobu potravinárskych produktov v Grécku, klaster na výrobu technických zariadení v Luxemburgu, klaster zaoberajúci sa stavbou lodí v Holandsku a obuvnícky v Španielsku.

V súčasnosti existuje celá rada regionálnych klastrov, pôsobiacich v prihraničných oblastiach niekoľkých krajín. Napríklad, v Európe to je:

- výroba skla v Hornom Rakúsku, Bavorsku a na severe Česka;
- textilný priemysel v Dolnom Rakúsku a na severe Česka;
- farmaceutické a biotechnologické firmy a spolupracujúce s nimi univerzity, kliniky pri univerzitách v Dánsku a Švédsku po obidvoch stranách prielivu Sound;
- biotechnologický klaster, ktorý zachvacuje severovýchod Švajčiarska, juh krajiny Baden (Nemecká spolková republika) a provinciu Alsaska vo Francúzsku.

V Nórsku od roku 1998 funguje štátny program REGINN – „Regionálny inovačný systém". Jeho cieľom je stimulovanie spolupráce medzi firmami a miestnymi vzdelávacími a bádateľskými inštitúciami.

Klastrová politika v Českej republike je zameraná na *„podporu zhlukovania podnikov, pracovných miest, vedomostí a verejných subjektov"* (Stejskal, 2011). Zámerom je zvýšenie konkurencieschopnosti regiónov a miery inovácií, podpora výskumu a vedy, priemyslu a obchodu a posilnenie celkovej ekonomickej výkonnosti.

Vo svete sledujeme rôzne prístupy k formovaniu a rozvoju klastrov, čo je spojené s rozličnými úrovňami rozvoja podnikateľského prostredia, kultúrnymi a inštitucionálnymi zvláštnosťami a rozličnými systémami štátneho riadenia. Po druhé, v rozličných krajinách sa používajú rôzne prístupy k určeniu klastrov. V Dánsku, Francúzsku, Holandsku, Škótsku, Švédsku praktizujú politiku podpory klastrov na celonárodnej a regionálnej úrovni. V Belgicku a v Španielsku podpora klastrov sa deje na regionálnej úrovni. Vo Fínsku, Nemecku Taliansku, Rakúsku a Nórsku opatrenia zamerané na rozvoj klastrov sa využívajú ako nástroje realizácie inovačnej, technologickej a regionálnej politiky.

2.2 Financovanie klastrových iniciatív

Program „Európa 2020" predpokladá rozšírenie finančnej podpory klastrových systémov vďaka stimulujúcim programom Európskej komisie. Jedným z dôležitých smerov klastrovej politiky je medzinárodná klastrová kooperácia krajín EÚ a vytváranie európskych klastrových programov financovaných ako z národných prostriedkov, tak aj z rozpočtov fondov EÚ.

Kým podiel národných ministerstiev činí 63% objemu financovania rozvoja klastrových programov v EÚ, tak na štruktúrne fondy EÚ, podnikateľské štruktúry a regionálne rozpočty pripadá 19%, 7% a 3% objemu financovania. Časť iniciatív z inovačného klastrového rozvoja je financovaný z pôžičiek a grantov Európskej investičnej banky. Podľa mnohých analýz, rozvoj medzinárodných klastrových systémov v zóne EÚ prebieha v nasledujúcich smeroch:

- vytváranie klastrov za účasti podnikov dvoch a viac krajín, ak sú ich súčasťou špecializované spoločnosti, vedecké a vzdelávacie zariadenia z dvoch a viacerých krajín; vytvorenie cezhraničných klastrov, ktoré sa formujú v prihraničných regiónoch susedných krajín;
- formovanie tzv. globalizujúcich klastrov, ktoré zahŕňajú jednu alebo dokonca niekoľko nadnárodných spoločnosti, formujúcich bezprostredne jadro klastra.

Nehľadiac na určité existujúce medzi nimi rozdiely, všetky tri typy medzinárodných klastrových systémov sú dôležitými článkami medzinárodnej výrobnej kooperácie, čo v podstate formuje mechanizmus rozvoja regionálnej ekonomickej integrácie v EÚ. V celej rade krajín a regiónov Európskej únie sa uskutočňujú programy na podporu klastrov predovšetkým cez Európsky fond regionálneho rozvoja. V tomto smere dôležitou iniciatívou Európskej komisie je program „Regionálne inovačné stratégie“, realizovaný Európskym fondom regionálneho rozvoja od roku 1994. Jeho hlavné smery sú nasledovné:

- premena inovácií na jednu z priorít regionálnej politiky;
- zväčšenie počtu uskutočňovaných firmami inovačných projektov;
- rozvoj kooperácie a spolupráce medzi firmami a štátnymi inštitúciami;
- zvýšenie efektívnosti využitia miestnych zdrojov pre potreby inovačného rozvoja.

Pri realizácii tohto programu hlavná pozornosť sa venuje malo rozvinutým prvkom regionálnych inovačných systémov. Hlavnou európskou iniciatívou na rozvoj cezhraničných klastrov v EÚ je program Nadnárodnej klastrovej aliancie na podporu posilnenia kooperácie, spájajúcej radu dôležitých európskych klastrových agentúr, povolaných vypracovať politiku na podporu rozvoja medzinárodných klastrov v oblasti EÚ, zahrňujúc financovanie inovačnej činnosti priemyselných klastrov. Ako príklad úspešnej práce v tomto smere môžeme uviesť biotechnologický sektor, kde v rámci už vyššie uvedeného spoločného programu Bio Valley Basel funguje cezhraničný klaster zjednocujúci biotechnologické spoločnosti troch krajín. „*V podstate takýto útvar je jedným z najväčších biotechnologických regiónov v Európe, spájajúcich 250 spoločnosti, zahrňujúc hlavné svetové spoločnosti v oblasti farmácie, 5 univerzít, viac ako 40 vedeckých organizácii*“ (OECD, 2007).

3. Conclusion

Na základe predložených teoretických predpokladov ponúkame nasledujúce metodické postupy k určeniu podmienok pre tvorbu a úspešnú realizáciu klastrov:

- realizácia výskumov s cieľom zistenia podmienok a potenciálu tvorby a realizácie klastrov v jednotlivých regiónoch krajiny;
- určenie potenciálnych životaschopných klastrov na základe analýzy konkurencieschopnosti podnikov, ktoré sú zapojené do tvorby klastra, určenie jeho silných a slabých stránok;
- expertná metóda určenia parametrov, podľa ktorých tie alebo iné podniky môžu byť zaradené k jadru klastra a definovanie jadra klastra;
- zabezpečenie zberu a spracovania nevyhnutných štatistických údajov;
- určenie hraníc identifikovaného klastra a tvorba modelov klastra;

- skúmanie mechanizmov spojenia členov klastra s výrobnými determinantmi, finančnými inštitúciami, vedecko-výskumnými a vzdelávacími inštitúciami a pod.;
- vypracovanie odporúčaní na zabezpečenie podmienok pre efektívne fungovanie klastra.

Podľa nášho názoru úspešný rozvoj klastrov v krajinách, v ktorých absentujú nevyhnutné historické podmienky pre ich tvorbu a rast, je možný v rámci štátneho a súkromného partnerstva, pričom je nevyhnutné podstatne inovovať prístup M. Portera k tvorbe a realizácii klastrov. V modeli Portera úloha štátu v tvorbe a realizácii klastrov je takmer irelevantnou. V predkladanom modeli by štát mal byť jedným z dôležitých subjektov klastra. Opatrenia štátu by mali, z jednej strany, spočívať v nepriamej podpore determinant regionálnej konkurenčnej politiky, a z druhej – v bezprostrednej priamej podpore samotného procesu tvorby a fungovania klastrov. Opatrenia nepriamej podpory by mali zahrňovať organizáciu aktivít súkromného a štátneho partnerstva v oblasti konkurencie, formovania dopytu a podpory príbuzných odvetví. Štát by mal skoncentrovať úsilia na vlastnú podporu klastrov, medzi iným aj na odstránenie bariér, napomáhať exportu za hranice regiónu, rozvíjať vzdelávacie a rekvalifikačné programy, prepojenia s vedou, podporovať infraštruktúru klastra, podmienky štandardizácie, investičné stimuly, realizáciu konferencií, protimonopolnej politiky, poistenie rizík a pod.

Acknowledgment

Príspevok je súčasťou riešených výskumných úloh VEGA 1/0953/16 a VEGA 1/0918/16.

References

[1] Cikánek, M. (2009). *Kreativní průmysly příležitost pro novou ekonomiku*. Institut umění – Divadelní ústav.

[2] Dahmen, E. (1950). *Entrepreneurial Activity and the Development of Swedish Industry 1919-1939*. Stockholm.

[3] Dehning, B. a Pavelková, D. (2009). Measuring the Performance of Clusters and Firms within Clusters Using the Residual Income Model. *Ekonomický časopis,* vol. 57, no. 3, pp. 230-246.

[4] Feldman, V. and Audretsch, D. (1999). Innovation in Cities: Science based Diversity, Specialization and Localized Competition. *European Economic Review*, vol. 43, pp. 409-429.

[5] Florida, R. (2002). *The Rise of the Creative Class: And How It's Transforming Work, Leisure and Everyday Life*.1 st edition. New York: Basic Books.

[6] Fovel, M. (1929). *Economia e corporativismo*. Ferrara.

[7] Haviernikova, K. et al. (2013). *Teoreticko-metodologické aspekty merania ekonomickej výkonnosti klastrov v Slovenskej republike*. Trenčín: TnUAD.

[8] Haviernikova, K. a Strunz, H. (2014). The comparison of selected methods used for identification of cluster potential in the regions of the Slovak Republik. *Conference: International Multidisciplinary Scientific Conferences on Social Sciences and Arts (SGEM 2014) Location: Albena, Bulgaria.* Vol IV, pp. 693-700.

[9] Kordoš, M. (2016). Creative industry within the european regional policy – effects and benefits.. *International Scientific Conference on Knowledge for Market Use 2016 - Our Interconnected and Divided World Location: Olomouc,* pp. 199-207.

[10] Krajňáková, E. a Krajčo, K. (2016). The risk and clusters in the V4 countries and in the EU 27. *3rd International Multidisciplinary Scientific Conference on Social Sciences and Arts,* SGEM Location: Albena, Bulgaria. Vol III, pp. 1135-1142.

[11] Kramarova, K. (2016). Business clusters and initiatives as a tool of promoting competitive ness in a globalizing environment. *16th International Scientific Conference on Globalization and its Socio-Economic Consequences*. Rajecké Teplice, Slovakia, Part III., pp. 1061-1068.

[12] Marshall, A. (1920). *Principles of Economics* (Revised Edition ed.). London: Macmillan; reprinted by Prometheus Books.

[13] Mura, L. and Sleziak, J. (2014). Innovation and Entrepreneurship Network. *5th Central European Conference in Regional Science (CERS) Location: Kosice, Slovakia. Sponsor(s): Tech Univ Kosice; Univ Econ Bratislava,* pp. 643-651.

[14] Navickas, V., Vojtovič, S. and Svazas, M. (2016). Clusterization processes influence to competitiveness: biomass clusters case. *1st International Conference Contemporary Issues in Theory and Practice of Management,* Czestochawa, Poland, pp. 302-308.

[15] OECD (2007). *Competitive Regional Clusters: National Policy Approaches*. [Online]. Available: https://www.oecd.org/cfe/regional-policy/38678677.pdf

[16] Pavelková, D. and Jirčíková, E. (2008). Klastry jako nástroj zvýšení konkurencieschopnosti firem. In: *Ekonomie a management.* Roč. 11, č. 3, s.63-72.

[17] Porter, M. (1990). *The Competitive Advantage of Nations* The Free Press. New York.

[18] Porter, M. (1998). *On Competition.* Harvard Business School Press, Boston.

[19] Schumpeter, J.A. (1934). *The Theory of Economic Development.* NewYork, Oxford U.

[20] Soulie, D. (1989). Filieres de Production et Integration Vertical. In: *Annales des Mnes.* Janveer. pp. 21-28.

[21] Stejskal, J. (2011). *Prumyslové klastry a jejich vznik v regionech*. Praha, Linde.

[22] Strunz, H. a Vojtovič, S. (2014). Vocational training and employment in the creative industry. *Conference: International Multidisciplinary Scientific Conferences on Social Sciences and Arts*, SGEM Albena, Bulgaria. Vol III, pp. 787-794.

[23] Tolenado, J. A. (1978). Propis des Filires Industrielles. In: *Revue d'Economie Industrielle.* Vol. 6, no. 4, pp. 149-158.

[24] Vojtovič, S. (2016). Creative clusters and their importance for regional development. Political sciences, law, finance, economics and tourism conference proceedings, Vol III. Book Series: *3rd International Multidisciplinary Scientific Conferences on Social Sciences and Arts,* SGEM 2016 Albena, pp. 799-806.

[25] Vojtovič, S. and Karbach, R. (2014). Evaluation of creative industry in Trencin region. *2th International Conference on Hradec Economic*: Economic Development and Management of Regions Location: Univ Hradec Kralove. Dil III, pp. 418-425.

KEY ATTRIBUTES OF SUCCESSFUL GLOBAL BRAND MANAGEMENT (GMB)

Pavol Kral[1,a,*], Katarina Janoskova[2,b]

[1]University of Zilina, Faculty of Operation and Economics of Transport and Communication, Department of Economics, Univerzitna 8215/1, 010 26 Zilina, Slovak Republic

[2]University of Zilina, Faculty of Operation and Economics of Transport and Communication, Department of Economics, Univerzitna 8215/1, 010 26 Zilina, Slovak Republic

[a]pavol.kral@fpedas.uniza.sk, [b]katarina.janoskova@fpedas.uniza.sk

*Corresponding author

Abstract. The long-term globalization process has significantly influenced international brand policy. Planning, creating, organizing and then maintaining a successful global brand is a long-term and costly process involves effective marketing strategies and tactics. The introductory part of the article is devoted to the definition of a global brand and the characteristics of its essential features. Key attributes of successful global brand management (GBM) that have been formulated on the basis of studying and analysing of a number of domestic and foreign studies, scientific articles and author´s views on this issue are identified in the following part. These contentions are verified on a sample of the most important global brands, which are placed annually at the top of the ranks of the most valuable brands made by prestigious consulting companies. The space is also devoted to the characteristics of basic global brand strategies, advantages and disadvantages of applying of global brands and brand portfolio diversification. These attributes are largely determined by specific conditions of environment in which the global brand is applied (industry, competitive environment, target groups, economic environment, etc.). Despite the specific and changing conditions of global markets, the contribution includes attributes of GBM that can be considered as universal and at present undeniable. A successful brand in the domestic market is not a prerequisite of success in global markets. The primary aim of the article is identification of attributes of successful global brand. It can be assumed that GBM will be ineffective without accepting and correctly applying these attributes.

Keywords: global brand, brand strategy, brand portfolio, consumers

JEL Classification: F61, M31, M39

1. Introduction

Brands are an important aspect for costumers and companies. They allow consumers to exercise their preferences in the marketplace. Brands come with a reputation for quality, functionality, reliability and other attributes, ultimately enabling consumers to exercise choice in their shopping decision making (establish an identity for the company's product or products, serve as a symbol that is easily recognized by consumers, guide and simplify consumer choice, differentiate one product offering from another etc.). Significant characteristics of the current brand management are (Machkova, 2015):

- „private labels“ – increasing importance of private brands,
- „corporate brands“ - enhancing the role of corporate brands,
- „global brands“ – building of global brands,
- „brand unification“ – international unifying of brands,
- „co-branding“ – cooperation within the brand support.

2. Global brand

A global brand is defined as the worldwide use of a name, term, sign, symbol, design, or combination thereof intended to identify goods or services of one seller and to differentiate them from those of competitors. Companies with strong brands strive to use those brands globally. There are local brands sold in part of a domestic markets, national brands sold throughout a domestic market, panregional brands that are sold in two or more countries and global brands. Currently, markets are rapidly integrating across borders, and for many product categories, consumers are able to choose between global and local alternatives. The basic characteristics of global brands are: large geographic reach, perceived by consumers as global, uniform positioning and image worldwide.

2.1 Literature review

Brand globalness is defined as the extent to which “consumers believe that a brand is marketed in multiple countries and is recognized as global in these countries” (Steenkamp et al., 2003). Consumers perceive global brands as brands of high quality. At the same time, global brands are seen as sources of symbolic values such as status, prestige, social approval, excitement, and modernity (Özsomer, 2012), (Nam et al., 2011). Global brands are brands having “global awareness, availability, acceptance and desirability, and are often found under the same name with consistent positioning, image, personality, look, and feel in major markets enabled by standardized and centrally coordinated marketing strategies and programs” (Özsomer & Altaras, 2008). Brand globalness has become a prominent construct in branding research following the decision of many international companies to disengage from their local brand focus and turn to the development of global brands (Schuiling & Kapferer, 2004). Consumers in emerging countries are experiencing improved standards of living and lifestyle and exhibiting a desire to consume global brands (Bhardwaj, Park, & Kim, 2011). The process of globalization implies a number of questions connected with strategic brand management (Machan, 2016), (Sahin et al., 2011). Managers confront difficult questions when developing the ideal brand portfolio (Swinkels & Yan, 2017), (Matanda & Ewing, 2012). They must decide which brands to retain, and which to remove (global or local brands) (Douglas, Craig, & Nijssen, 2001). Consumers may prefer either local or global brands, depending on contextual factors such as the particular product-category (Farías, 2015). A key advantage of globalization is firms' opportunity to benefit from strong economies of scale. Standardized brands can generate significant cost reductions in all areas of the business system, including research and development, manufacturing, and logistics (Craig & Douglas, 2000). Global brands have been consistently associated by consumers with strong functional value, enhanced symbolic benefits and identity-expressing capabilities (Halkias et al., 2016), (Akaka & Alden, 2010), (Winit et. Al, 2014).

2.2 Successful global brand and GBM

A successful brand is the most valuable resource a company has. The brand name encompasses the years of advertising, good will, quality evaluation, product experience and other beneficial attributes the market associates with the product. Brand image is at the core of business identity and strategy. Customers everywhere respond to images, myths and metaphors that help them define their personal and national identities within a global context of world culture and product benefits. Even for products that must be adapted to local market conditions; a global brand can be successfully used. A global brand gives a company a uniform worldwide image that enhances efficiency and cost savings when introducing other products associated with the brand name, but not all companies believe a single global approach is the best. (Xie et al., 2015), (Bahadir et al., 2015). Companies that already have successful country-specific brand names must balance the benefits of a global brand against the risk of losing the benefits of an established brand. The cost of reestablishing the name level of brand preference and market hare for the global brand that the local brand has must be offset against the long-term cost savings and benefits of having only one brand name worldwide. In those markets where the global brand is unknown, many companies are buying local brands of products that consumers want and revamping, repackaging, and finally relaunching them with a new image (Cateora & Graham, 2002).

We can conclude that the brand is an integral intellectual part of the product that finds expression relating only to this product whether in name or in design and has a stable and strong communication with the customer. All elements of the brand can be divided into two main groups (Majerova & Kliestik, 2015):

- *rational elements* – these are focused on the content of brand communication, its proposals and promises, explain to the consumer what this brand can do for him/her and also, they are perceived by logical reasoning.
- *emotional elements* - this is, so to speak, a "feeling" of the brand, which is its expression directed to satisfy the spiritual needs of the customer without affecting the scope of rational reasoning.

In the context of globalization, there are at least five key trends accelerating global marketing strategies (Deshpandé, 2000):

- *The democratization of technology* - technology is now available to everyone, there is relatively easy access to business angel capital and venture capital.
- *Social ant technological leapfrogging* - a lot of customers with pen-up demand who wants tomorrow today, firms no longer sell their oldest products and older technologies in emerging markets, countries that previously would have bought a product later in its lifecycle are now demanding the newest technologies.
- *Knowledge transparency* - traditional rules about segmenting markets and countries are breaking down, technology are new market agents allow consumers to be knowledgeable about products and prices the world over, also new technology facilitate the development of new markets like internet auctions and exchanges.
- *The rise of the born globals* - companies that starting from inception, decide to be global, once a firm puts up a website, it is potentially selling to the whole world, the majority of the companies that take advantage of this new reality are business-to-

business firms who are selling a significant breakthrough in technology of process and want to make greater use of licensing, franchising, and joint ventures.

- *Customer empowerment* - knowledge is power, and nowadays not only manufacturers and retailers have the knowledge, increasingly, the customer has it too. Thus, firms have to change the way they interact with consumers, from a transaction perspective to a relationship once.

Brands provide a consistent and enduring way of identifying a company's offerings. Some companies have a single brand for all their products while others choose to establish separate brand names for each distinct product. The reasons for these choices are many and varied (Craig & Douglas, 2000).

In a very broad sense there are a range of forces in the environment that are fostering and facilitating the emergence of global brands. These include the following (Craig & Douglas, 2000):

- Increased standard of living: consumers in both the developing world and the developed world can afford to purchase an expanded range of products. This opens up markets and makes it feasible to develop global brands.
- Consumer mobility: increasingly consumers are world travelers and are being exposed to products in different countries. They expect to be able to obtain the same products wherever they travel. Mobility also takes the form of immigration, where new residents look for familiar brands in their new surroundings.
- Globalization of media: in addition to consumer mobility, consumers who stay in their own country are increasingly exposed to advertising messages. Teenagers in over 80 countries are exposed to MTV and its commercial messages. Even where ads are not a factor, movies and TV programs show life-styles and products that extend beyond a single culture. These establish aspirations, expectations, and markets for new products and ideas.
- Rising media costs: at the same time media costs are increasing worldwide and firms are eager to economize on these costs as well as leverage established images worldwide.
- Shifts in power relationships: increasingly manufacturers are finding themselves at the mercy of retailers. As retailers have grown in size and power, they are dictating the terms and conditions of sale. In many cases retailers are creating their own brands. To provide shelf space for these `store brands' they are dropping weak manufacturer brands. To retain distribution, manufacturers need to have strong brands with identities that span multiple countries.

Global brands have certain advantages (Craig & Douglas, 2000):

- *economies of scale* - driving down the average unit cost,
- *customer recognition* - easily recognized by consumers,
- *leverage power with retailers* - brands give manufacturers more power with retailers as retailers expand beyond their national borders,
- *potential for extensions* - global brands provide a solid platform from which is possible to make new brands.

On the other hand, there are the disadvantages of applying global brands (Craig & Douglas, 2000):

- *not locally responsive* - consumers have very specific preferences that can best be met by local brands,
- *demotivating for country managers* - global brands can undermine country manager motivation,
- *difficult to manage* - consistent image across a large number of countries requires extensive coordination and control.

GBM needs to understand how various markets compare on these issues in order to determine how best to manage the brand globally.

Regarding how to communicate global brands, firms should (Batra et al., 2000):

- Reinforce risks of quality ambiguity and stress authority and expertise from scale and scope.
- Focus on these quality advantages more than on the benefits of prestige and „connectedness“, since this appeal is wider in scope and more durable over time.
- Segment messages by the level of development of the country: is developing and emerging markets, prestige and connectedness should be used to communicate the benefits of buying global brands.
- Firms should feature „used worldwide“ and „universal needs (lifestyles) aspirations in advertising themes; also, stress the ideas of modernity and cosmopolitanism.
- However, globalization in not the same as homogenization; local interpretations and symbols should be used in communicating global brands.

For example brand management in the Slovak Republic is characterized by a number of specifics (long-term absence of branding in marketing management of domestic brands due to the effects of the principles of a centrally planned economy, which turns out in the lack of experience with branding of domestic managers and the lack of literature dedicated to the specificities of branding in Slovak Republic, reckless acceptance of foreign branding concepts without taking into account socio-cultural and psychographic characteristics of target segment in the Slovak Republic, as well as lax approach to measuring brand value, without knowing which it is impossible to maximize the efficiency of the process of branding etc.), (Majerova & Krizanova, 2015).

2.3 Brand portfolio

Generally, one brand does not allow complex coverage of the whole market, mainly in cases of significantly differentiated market. If the company's desire is to increase the market share, it is necessary to select multi-brand strategy, i.e. building own portfolio. The company growth is generally accompanied by creation of new brands, if the company's desire is to reach new segments or apply new distribution channels.

Risk diversification should be one of the key tasks of brand portfolio development. In case of company's sources and efforts concentrated to a smaller number of brands, failure of one brand may have a disastrous impact to the whole portfolio. Higher number of brands represents more favourable risk diversification. Success in reaching the company's strategic goals is greatly dependent on the brand portfolio diversification level, which may be executed according to the presented criteria reflecting conditions of the external as well as internal company environment:

- *Ties between brands* - the closer and more interconnected relations between brands included in the portfolio, the greater the danger of transferring failure from one brand to other brands. The principle applies in case of favourable development as well. Apart from the existing ties, it is also necessary to make provision for brand value, being in a mutual relation. Mutual interconnection (dependency) of valuable brands constitutes situation with the highest risk.
- *Synergistic effect* - if certain brands create synergy effect, it is necessary to make strategic decisions in consideration to the synergy effect existence. Such effect may become evident in a negative fashion, therefore, when making decisions, it is favourable to make provision for the net synergistic effect being the difference between positive and negative synergy value.
- *Portfolio consistence from the point of brand nature and type* - enormously non-homogenous brand portfolio cumulating segment-unrelated brands, causing difficulties in resource management, increasing marketing costs, suppressing generation of positive synergetic effect and disabling concentration of company efforts into one area with permanent improvement.
- *Costingness* - combination of brands financed from own and external sources. Ratio between own and external portfolio sources should be deduced from the source structure of the whole company. Experience shows that share of external sources on the overall volume of company sources should not exceed the empiric value of 70%.
- *Risk rate* - balancing of the portfolio with brands with various risk levels. High-risk brands carry substantial problems related to their realization, however, they are able to produce a significant value in comparison with the total portfolio value. We also have to think about balancing the portfolio by lower risk rate brands where we expect production of planned income value with high rate of probability.

Correctly-balanced portfolio, making provision for the aforesaid diversification criteria, is not only directed to achieve company's strategic goals, at the same time, it is a basic prerequisite for risk elimination, efficient utilization of company's sources, prevention against additional costs as well as a prerequisite of achieving success in other areas of portfolio management.

3. Conclusion

Globalization process creating greater "interconnectedness" of world cultures by bringing together diverse meanings and ideals, branding and branded products have become important symbols for both companies and consumers. Research also suggests that global brands have effectively created feelings of global belongingness by increasing consumer desire for quality and image. A growing body of research suggests that in response to globalization, many consumers strive to integrate their local identities with global citizenship (glocal).

How best to manage a global brand largely depends on the aspects discussed in this paper. Global brand strategy is not a given and needs to be permanent reassessed. Brand portfolio managers must decide what is the best course of action for their global brands, based on an analysis of the relevant internal and external influences on the global brands.

Acknowledgement

This paper is an outcome of project APVV-15-0505: Integrated model of management support for building and managing the brand value in the specific conditions of the Slovak Republic.

References

[1] Akaka, M. A. and Alden, D. L. (2010). Global brand positioning and perceptions International advertising and global consumer culture. *International Journal of Advertising*, vol. 29, no. 1, pp. 37-56.

[2] Bahadir, S. C., Bharadwaj, S. G. and Srivastava, R. K. (2015). Marketing mix and brand sales in global markets: Examining the contingent role of country-market characteristics. *Journal of International Business Studies,* vol. 46, no. 5, pp. 596-619.

[3] Batra, R., Steenkamp, J. B. and Alden, D. (2000). Global brands: Consumer Motivations and Mechanisms. *Global Branding. Marketing sciences institute*, pp. 13-19.

[4] Bhardwaj, V., Park, H., and Kim, Y. (2011). The effect of Indian consumers' life satisfaction on brand behavior toward a U.S. global brand. *Journal of International Consumer Marketing,* vol. 23, no. 2, pp. 105-116.

[5] Cateora, P. R. and Graham, J. L. (2002). *International marketing*, 11th edition, John Biernat, pp. 367-368.

[6] Craig, C., S. andDouglas, S.P. (2000). Building global brands in the 21st century. *Japan and the World Economy,* vol. 12, no. 3, pp. 273-283.

[7] Craig, S., and Douglas, S. (2000). Configural advantage in global markets. *Journal of International Marketing,* vol. 8, no. 1, pp. 6-26.

[8] Deshpandé, R. (2000). Leveraging the Internet for global branding. Global Branding. *Marketing sciences institute*, pp. 25-28.

[9] Douglas, S., Craig, S., and Nijssen, E. (2001). Integrating branding strategy across markets: Building international brand architecture. *Journal of International Marketing,* vol. 9, no. 2, pp. 97-114.

[10] Fariás, P. (2015). Determinants of the success of global and local brands in Latin America. *RAE-REVISTA DE ADMINISTRACAO DE EMPRESAS,* vol. 55, no. 5, pp. 539-550.

[11] Halkias, G., Davvetas, V. and Diamantopoulos, A. (2016). The interplay between country stereotypes and perceived brand globalness/localness as drivers of brand preference. *Journal of Business Research,* vol. 69, no. 9, pp. 3621-3628.

[12] Machková, H. 2015. *Medzinárodný marketing*. 4. vyd. Praha: Grada, pp. 106-110.

[13] Machan, T. R. (2016). On Economic Individualism, *Psychosociological Issues in Human Resource Management,* vol. 4, no. 2, pp. 145–184.

[14] Majerova, J. and Kliestik, T. (2015). Brand valuation as an immanent component of brand value building and managing. *Procedia Economics and Finance*, 26, pp. 546 – 552.

[15] Majerova, J. and Krizanova, A. (2015). Slovak Consumer´s Perception of The Product Policy Activities in The Process of Brand Value Building and Managing. *Procedia Economics and Finance,* 23, pp. 1084 – 1089.

[16] Matanda, T. and Ewing, M. T. (2012). The process of global brand strategy development and regional implementation. *International Journal of Research Marketing,* vol. 29, no. 1, pp. 5-12.

[17] Nam, J., Ekinci, Y. and Whyatt, G. (2011). Brand Equity, Brand Loyality and Consumer Satisfaction. *Annals of Tourism Research,* viol. 38, no. 3, pp. 1009-1030.

[18] Özsomer, A. (2012). The interplay between global and local brands: A closer look at perceived brand globalness and local iconness. *Journal of International Marketing,* vol. 20, no. 2, pp. 72-95

[19] Özsomer, A. an Altaras, S. (2008). Global brand purchase likelihood: A critical synthesis and an integrated conceptual framewor. *Journal of International Marketing,* vol. 16, no. 4, pp. 1-28.

[20] Sahin, A., Zehir, C. and Kitapci, H. (2011). The Effects of Brand Experiences, Trust and Satisfaction on Building Brand Loyalty; An Empirical Research On Global Brands. Proceedings of 7th International Strategic Management Conference, Paris, France, vol. 24, pp. 1288-1301.

[21] Schuiling, I. and Kapferer, J. N. (2004). Executive insights: Real differences between local and international brands: Strategic implications for international marketers. *Journal of International Marketing,* vol. 12, no. 4, pp. 97-112.

[22] Steenkamp, J. E. B., Batra, R. and Alden, D. L. (2003). How perceived brand globalness creates brand value. *Journal of International Business Studies,* vol. 34, pp. 53-65.

[23] Swinkels, L. and Yan X. (2017). Is the Equity Market Representative of the Real Economy?, *Economics, Management, and Financial Markets*, vol. 12, no. 2, pp. 51–66.

[24] Xie, Y., Batra, R. and Peng, S. Q. (2015). An Extended Model of Preference Formation Between Global and Local Brands: The Roles of Identity Expressiveness, Trust, and Affect. *Journal of International Marketing,* vol. 23, no. 1, pp. 50-71.

[25] Winit, W., Gregory, G., Cleveland, M. and Verlegh, P. (2014). Global vs local brands: how home country bias and price differences impact brand evaluations. *International Marketing Review,* vol. 31, no. 2, pp. 102-128.

FDI IN SLOVAKIA AND THEIR ANALYSIS

Katarina Kramarova[1,a,*]

[1]University of Zilina, Faculty of Operation and Economics of Transport and Communications, Department of Economics, Univerzitna 1, 010 26 Zilina, Slovak Republic

[a]katarina.kramarova@fpedas.uniza.sk

*Corresponding author

Abstract. Globalization and its gradual acceleration manifests itself in different ways of economic, social, cultural or political nature. Economic globalization – an increasing economic integration and interdependence is characterized inter alia by cross-border capital flows, which (in the meaning of private capital flows) include also FDI. FDI are a specific source of external financing, which are considered as important mean of implementation of sustainable development aims and growth of a private sector. More or less demonstrably, they conductive to the economic growth of target countries/regions mainly thanks to their positive direct and spill-over effects. FDI have been playing important role in the process of development of the Slovak economy, too. Based on this, the main aim of the article is to point out the importance of FDI for Slovakia. The first part is devoted to the theoretical aspects related to FDI and synthesis of existing knowledge; in the following parts, mainly analytical, will be presented chosen findings from the study that is dealing with the relationship between inward FDI inflows and selected macro indicators in Slovakia at the national level and at the level of regions (NUTS 3). The statistical analyses is conducted based on already officially published data. Except that, results from other researches on FDIs are used and presented.

Keywords: competitiveness, economic growth, financial globalization, FDI, unemployment

JEL Classification: F21, O12, F60

1. Introduction

Investments in the general meaning (together with savings) are considered as an important vehicle of the economic growth from the macroeconomic point of view. In the strict sense, they are referred to the spending on capital goods by economic entities that allow increasing current production possibilities of consumer goods and services and consequently "push" the limits of possible future consumption. Investments are also considered as decisions to purchase financial instruments, other assets or to lend money to other entity to order to gain profitable returns in the form of interest, income or appreciation of the value of investment instruments. Investment activities at the international level represent foreign investments covering FDI, portfolio investments, and debt instruments. The executors of FDI at the global level are mainly MNC.

2. Foreign direct investment – general overview

FDI are specific kind of cross-border investments (capital flows) made by the resident in one economy (direct investor) with the objective to establish a lasting interest in the enterprise (direct investment enterprise or foreign affiliate) that is the resident in the economy other than that of the direct investor. *"Lasting interest"* comprises the existence of a long-term relationship between them and investor´s significant degree of influence on the management and control of the direct investment enterprise. (IMF, 1993), (OECD, 2008), (Shin, 2017) FDI involve initial transactions establishing relationship between the direct investor and direct investment enterprise and other subsequent capital transfers between them and among affiliated enterprises, both incorporated and unincorporated. Based on this, FDI include *stake in the direct investment enterprise* (equity capital), *reinvested earnings and other capital flows* (intra-capital transactions) including *borrowing and lending of funds*, *debt securities* and *trade credits* (both long- and short-term). As specific sources of external financing FDI are a sign of financial globalization, which has proceeded at an even more rapid pace than the trade globalization over the last few decades even in periods of their year-on-year decline. (UNCTAD, 2015, 2017b). From the perspective of the investor, FDI are seem as a vehicle of possible business expansion. As the topic FDI are being discussed at several levels – from the point of view of theorists, researchers, practitioners, politicians, investors etc. The subject of theoretical discussions and empirical studies are mainly effects of FDI (economic, social, and environmental) on the host country/region and reasons for their carrying out analysed from the point of view of FDI investors. The views can mutually overlap and differ in the same time, but in general, there is some consensus about their rather positive effects – FDI contribute to growth through their positive effect, e.g. capital accumulation, fixed capital formation, transfer of advanced technology, know-how, skilled labour and superior managerial knowledge, improvements in labour productivity and efficiency of local firms etc. (Findlay, 1978) that can help to stimulate industries and regions in long run, and generate productivity growth in the economy. (Lim, 2001), (EC, 2006), (Dudáš, 2015), (Kantarelis, 2016) However, empirical experience and studies also point out their negative effects, possibly restrictions of functionality and market distortions. Several studies point to the fact that final effects of FDI on the growth of the host country depend on country´s features (macroeconomic stability, institutional capability, infrastructure, FDI incentive, trade regimes, market protection etc.), country´s ability to absorb technology spill-overs, human capital abundance etc. (e.g. Borensztein et al., 1998; Žilinskė, 2010; Economou et al., 2017). The type of FDI may take a role, too (e.g. Balasubramanyam et al., 1996; UNCTD, 1999; Loungani & Razin, 2001).

3. Foreign direct investment in Slovakia

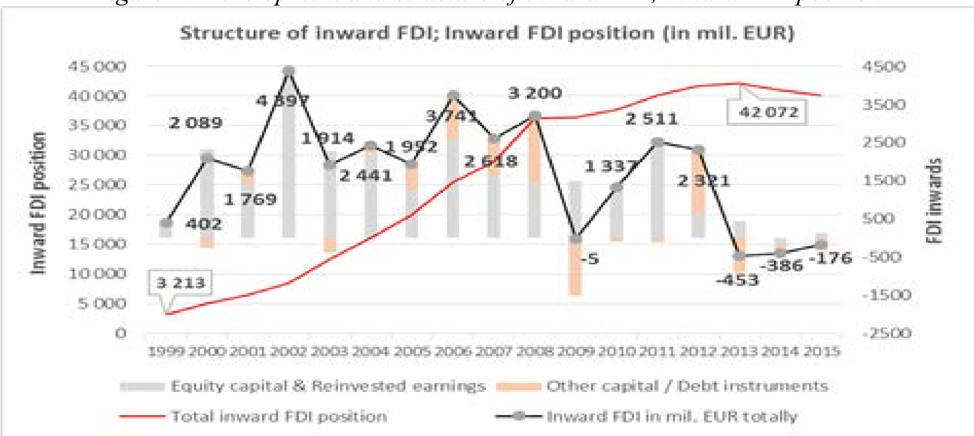
3.1 FDI inflows in Slovakia – chosen information (1993 – 2015)

Slovakia has the character of the open economy and participates in the global trade, international division of labour, and international capital movement. Inflows of FDI to Slovakia are generally considered as an expression of its international competiveness. (Gregova & Dengova, 2014) Economists and politicians more likely present an opinion that FDI play an important role in the stimulating Slovak growth as they are seem to be a critical supplement of insufficient domestic investment sources.[4] The development of inward FDI since 1999 to 2015, processed based on the officially published data by the National Bank of Slovakia, is depicted in the Figure 1. The definition of FDI that is published in the *Act No. 202/1995. Coll. on Foreign Exchange Act as amended; Section 1 (j)*, the structure and classification of FDI, are consistent with the definition, structure and classification presented by the IMF and OECD. The most significant inflow of FDI to Slovakia was recorded in 2002 as the result of the privatization process. By 2008, Slovakia recorded relatively steady inflow of FDI; however, the global financial crisis affected them, too. In 2009, inward FDI dropped to the negative level despite expected positive effects of the accession of Slovakia into the EMU on FDI. Unfortunately, the openness of the our economy, trend of global investment decline, high level of specialization of the Slovak economy on the automotive industry, one of the biggest industry depended on FDI and exporter in case of our country, negatively affected also the economic growth, employment rate, and productivity. FDI recovery occurred in the coming years, but the pre-crisis level has not been reached yet (in 2004 when Slovakia joined the EU to 2008 inward FDI represented app 7.8 % of the Slovak GDP, in 2009 – 2015 app only 2.1 %) Since the crisis, Slovakia recorded the biggest FDI inflows in 2011, but in 2013 – 2015 inward FDI dropped again. The negative values of FDI were "pulled" mainly by negative flows of other capital and debt instruments (discharges of liabilities, advance and redemption of inter-company loans, short-term credit movements), in 2013 – 2014 also thanks to significant divestment in equity capital and negative value of reinvested earnings (considering cumulative values of components of inward FDI). Reasons for divestment in the equity capital could be a vanishing comparative advantage of low labour costs, corporate tax

[4] With a lack of investment sources Slovakia has been competing practically since the socialist era. Since 1993 as the transition economy, it had been trying to attract private investments. At the beginning, the entrance of private investments was mainly made through the privatization of state-owned companies. However, from the political point of view until 1998 *"chosen"* domestic private investments were preferred by which the privatization gained the title of *"insider"*. The economic and political instability and relatively high level of corruption had played an important role in the case of foreign investors, too. Until this year, only 19 foreign direct investors were participated in the process of privatization and the total FDI inward positon of Slovakia reached only 2 811 mil. Eur. Since the political change in 1998, the attitude to foreign investments has changed. New government realized their importance for the economy and took measures to attract foreign investors by offering them more favourable conditions and various incentives. In this time, the Slovak economic environment improved and politic environment stabilized, in addition, that has been seen as a key factor of localization of financially major investments. Gradually, the government took measures to prepare a process of privatization of natural monopolies (particularly in the area of network industries – energetics and telecommunications) and the banking sector. These investments had character rather M&A and they brought to Slovakia except financial sources already existing technologies, know-how, and managerial experience. Despite some reservations, they mostly helped to restructure weak capital and ineffective businesses. After 2000, Slovakia has been recorded the significant inflow of greenfield investments (or their alternative in the form of brownfield investments), too, mostly in the automotive, electrotechnical industry and IT services. Both types of FDI have the character of export-oriented and as well market-seeking investments depending on their target industry. Since 2003, it is also noticeable qualitative shift in FDI projects that are characterized by a higher value added or by a positive multiplier effect on subcontracting, which is typical mainly for automotive industry. On the other side, major foreign direct investors have been still preferring to carry out R&D in the domestic countries and so the value of FDI carrying out R&D in Slovakia is relatively low. (SARIO, 2017).

increase, still missing physical infrastructure, and government´s attitude to energetics as a network industry. Referring to reinvested earnings, the situation is not important to consider as so serious – outflow of earnings is a natural economic process and does not usually indicate an interest in closing the investment, but rather it points on good economic results of investors. In 2015 the total inward FDI position of Slovakia was 40 129 mil. EUR that is almost 51% of the Slovak GDP, but still below the post-crisis maximal inward FDI position in 2013 app by 4,3%.[5]

Figure 1: Development and structure of inward FDI, inward FDI position



Source: author based on data provided by the National Bank of Slovakia

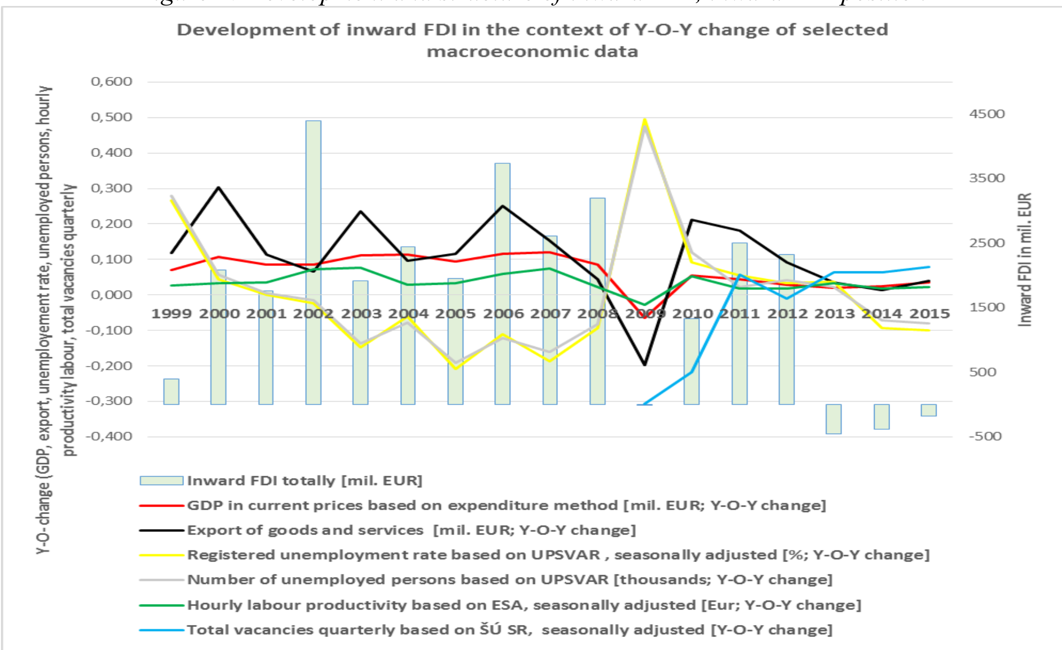
3.2 FDI inflows in Slovakia in connection with selected macro indicators at the national level and at the level NUTS 3

In the Figure 2 inward FDI are depicted together with selected economic indicators in 1999 – 2015. The only exception was the indicator of total vacancies – the analysis was performed for the period 2009 – 2015 due to missing data. The indicators are expressed as chain indexes indicating the data´s year-on-year change (Y-O-Y; $y_{t+1}/y_t - 1$). When examining their mutual relationship, we assumed that *FDI had rather positive impacts on selected indicators* – promote economic growth, export, labour productivity, employment, support reducing of

[5] According to the classification by economic activities, most FDI figure actually in manufacturing (33%), financial and insurance activities (25%), wholesale and retail trade including repair of motor vehicles and motorcycles (9 %), real estate activities (8%), administrative and support services (8%), professional scientific and technical activities (4%), information and communication (4%), electricity, gas, steam and air conditioning supply (4%), and transportation and storage (3%). Most FDI come from Netherlands (20%), Austria (16%) Czechia (10%), Germany (9%), Luxemburg (8%), South Korea (6%), Italy (6%), Hungary (5%), and Belgium (5%). Overall until 2016 Slovakia has registered 1 175 announced greenfield projects with the value exceeded 59 000 mil. USD and 408 cross-border M&A totalling 8 503 mil. USD. (UNCTAD, 2017b). More detailed following the NACE Rev. 2 classification, the largest FDI were made in financial service – in banking sector (except insurance, pension funding, 21%), real estate activities (8%), automotive production (7%), manufacturing of computer, electronic and optical products, electrical equipment and other machinery and equipment (6%). The largest number of completed investment projects until 2016 were recorded in the automotive including their contractors at the level TIER 1, TIER 2 (29%), electrotechnical industry including contractors (14%), engineering industry (10%), chemical industry, plastics proceeding and pharmacy (9%), BPO/SSC (5%) etc.

unemployment and generate new vacancies. At first, the character of relationship was solved graphically then followed the analysis of the intensity of relationship between FDI and other indicators by using a simple linear correlation analysis (Pearson´s r; *"r"*) and nonparametric analysis (Spearman´s r; *"r_S"*), which does not require the normal distribution of data (Achimská, 2011). Consequently, it was justified, the admissibility of the statistical model (testing of the quality of relationship between the variables; Pearson´s r) was verified by means of the F-test.

Figure 2: Development and structure of inward FDI, inward FDI position



Source: author based on data provided by the National Bank of Slovakia, Slovstat, and DatStat.

It was found out – *FDI positively correlated with GDP* (r = 0.65; r_S = 0.68; relatively strong dependence), *export* (r = 0.46; r_S = 0.90; moderate/strong dependence), and *hourly labour productivity* (r = 0.53; r_S = 0.32; moderate/weak dependence). The statistical admissibility of the regression model that describes the relationship between FDI and selected variable at the confidential level (α) of 0.05 *was proved in case of FDI and GDP* (p-value = 0.004) and *labour productivity* (p-value = 0.003). It points to the fact that changes in inward FDI have relatively strong impact on the Slovak economic growth measured in GDP. The coefficient of determination R^2 of value 0.43 explains the variability of GDP to 43%. In the case of *labour productivity*, inward FDI are moderate positively correlated with it – contribute to its increase. Statistically, the model is able to describe 28% variability of labour productivity. However, despite the statistical admissibility of models according to Achimská (2011), the values of R^2 lower than 0.7 indicate rather their theoretical than practical usage. In case of *FDI and export*, the statistical significance of the model was not confirmed (p-value of 0.06 > α) – changes in the Slovak export are influenced also by other factors than inward FDI. *FDI negatively correlated with unemployment rate* (r = - 0.39; r_S = - 0.29; weak dependence; p = 0.12) and *number of unemployed persons* (r = - 0.41; r_S = - 0.36; moderate/weak dependence, p = 0.1). The relationship of FDI and both variables is desirable. Likewise, the F-test did not confirmed the statistical significance of both models – the initial hypothesis on positive impacts of FDI on unemployment rate and number of unemployed persons was not proved. The assumption of *positive correlation between FDI and indicator of* *vacancies* was not surprisingly confirmed, but despite this finding, with no doubts, companies with foreign ownership in Slovakia belong among the most important employers.[6]

At the NUTS 3 Slovakia consists from eight regions and except other they are characterised by disproportion of distribution of FDI. In general, FDI have a tendency to concentrate in more developed regions, and so it is in the Slovak economy.[7] (Gontkovičová, Ručinský, 2014) The most significant part of FDI are located in the Region of Bratislava (app 69% of total inward FDI) – part of investments are connected with the privatization, the other are localized there, however investors carry on business throughout Slovakia (e.g. banks, insurance companies, retail trade, real estate companies, consulting companies and other companies operate in quaternary sector etc.). The other important foreign investors in the west of Slovakia are e.g. carmakers and their subcontractors. The Region of Banská Bystrica and Prešov are in the worst positions in the long run despite the observed increase of investors´ interest in these regions – the number of completed projects there has been increasing, but their capital value is relatively low in comparison to existing investments in the west regions. The economic importance of FDI for the Regions was statistically analysed in the same way as in the case of the whole Slovakia. The selection of economic indicators was narrowed to two – *regional GDP* and *regional unemployment rate*. Unfortunately, insufficient time series of data did not provide full-valued research findings (existing database provides information about the regional structure of inward FDI from 2009). The results are in the *Figure 3*. As you can see, in the time *"n"* the expected positive impact of *FDI on the regional economic growth* was not confirmed in case of the Regions Trnava, Nitra, and Banská Bystrica – inward FDI surprisingly negatively correlated with the regional GDP. Relatively strong dependence was observed in the Region Žilina and Košice. Unfortunately,

[6] However, the relationship between inward FDI and selected indicators is important to consider in a wider context. Several studies point to the fact (and author identifies with them) that it cannot be unequivocally stated that a higher level of FDI definitely means higher GDP, export, lower unemployment etc. Firstly, FDI are an item in the B.O.P., they do not represent an increase of real investments, which are a part of GDP. In transferring to real investments, there is some time lag of their transformation and typically, they do not transform in the full extent. (Mišún & Tomšík, 2002) In fact, it is only an approximate variable, which may not be immediately reflect in other macroeconomic indicators. The role also plays a way in which FDI are executed. FDI executed as M&A are only a change of ownership from the hands of domestic investors to the hands of foreign investors, they do not represent real investments; market-searching FDI focusing on the target country of investments may not support increase of export etc. In some cases, FDI may negatively affect domestic investments (companies), too. They can crowd out them and ultimately counterproductive act on the growth, employment etc. Based on the assumption about delayed impact of FDI on macroeconomic variables, according to e.g. Mišún & Tomšík (2002), Dudáš (2013), author also searched causality between FDI and indicators in case of the time shift of data n + 1. Unfortunately, the findings have lower quality than previous and the assumption about positive impacts of FDI on variables was not confirmed at all.

[7] The most of FDI are rather located in the west part of Slovakia – Region of Bratislava, Trnava, Žilina, Nitra, and Trenčín, the regions with the highest economic performance. The concentration of FDI there is partly predetermined historically – the role has been playing the West-East gradient, more developed physical infrastructure in comparison to the middle and eastern parts of Slovakia and good geographic connectivity to the other European markets. In these regions FDI generate many jobs and concentrate labour force from the other parts of Slovakia that can be consequently consider as their localization advantage. A partial exception is the Region of Košice – the factor of settlement hierarchy plays some role there – it is the biggest city in the East part with the developed engineering industry.

the significance of regression models was confirmed just in the case of the Region of Žilina – the model is statistically significant at the confidential level (α) of 0.05 with the p-value 0,04. The coefficient R^2 explains app 67 % variability of the regional GDP, but it has rather theoretical than practical foundation. Regarding the causality between *inward FDI and unemployment rate*, author assumed that they would correlate negatively – FDI inflows contribute to a reduction of the regional unemployment. The applied statistic confirmed the assumption *in time n* in all Regions except Trnava. In rest Regions, coefficients of correlation point to the weak level of dependence with the exception of the Region Žilina – the Pearson´s coefficient of linear correlation levelled of (-) 0.63, unfortunately the hypothesis that model is statistically significant was not confirmed (p-value = 0.18 > α). Assuming a time shift *n + 1*, the assumption of significant desirable causality (moderate to strong correlation) between *FDI and regional economic growth* was identified in the Regions Trenčín, Nitra, and Prešov. However, the statistical significance of the model of linear regression was proved only for the Region of Nitra (p-value of 0.004, $R^2 = 0.96$). According to the ability of *FDI to support the reduction of regional unemployment*, the desirable and statistically valuable relationship was identified only in the Region Nitra. Unfortunately, the linear model of regression is not statistically significant, which does not entitle us to claim that FDI are capable of contributing to the reduction of unemployment rate in the Region concerned.

Table 1: Results of correlation analysis

Region of	Bratislava		Trnava		Trenčín		Nitra		Žilina		B. Bystrica		Prešov		Košice	
Inward FDI totally [mil. EUR; in time "n" / "n+1"]; Pearson´s r	"n"	"n+1"	"n"	"n+1"	"n"	"n+1"	"n"	"n+1"	"n"	"n+1"	"n"	"n+1"	"n"	"n+1"	"n"	"n+1"
GDP in current prices [mil. EUR; Y-O-Y change]	0.45	-0.01	-0.48	-0.07	0.29	0.66	-0.02	0.98	0.82	**-0.13**	-0.10	0.03	0.28	0.54	0.76	-0.40
Registered unemployment rate based on ŠÚ SR [%; Y-O-Y change]	-0.33	0.12	0.56	0.29	-0.21	-0.44	0.21	-0.69	-0.63	0.37	0.26	-0.22	-0.33	0.05	-0.29	0.09
to (+, -) 0,4 weak positive/negative					undesirable relationship						to (+, -) 0,6 moderate positive/negative					
to (+, -) 0,8 relatively strong positive/negative											above (+, -) 0,8 strong positive/negative					

Source: author

4. Conclusion

FDI are consider as an important external source of financing with important links to the national and regional economies. Their positive impact on the economic growth, labour market, transfer of technologies, know-how, market structure in target regions etc. is generally expected. However, relationships between inward FDI and selected quantitative and qualitative economic or social indicators are not yet clearly identified, as they are complex. The time horizon of the scope of FDI effects and ways, how the inward FDI are undertaken play a role, too. In the case of Slovakia, impacts of FDI inflows are rather perceived more positive than negative; unfortunately, there are lacks of empirical studies that would demonstrate positive or negative causality of FDI. In the case of the presented article, author statistically analysed the causality of relationship of inward FDI and selected macroeconomic indicators at the national and regional level. Author by using the simple correlation and regression analysis was trying to identify if there exist desirable FDI impacts on the national/regional economic growth, national/ regional unemployment, national labour productivity, creation of new vacancies, and export. Unfortunately, the robust empirical evidence on positive impacts of FDI on selected indicators was not identified. At the national level author identified statistically significant desirable causality just in the case of FDI and GDP (relatively strong correlation) and FDI and hourly labour productivity (moderate correlation) – FDI positively affect these economic variables – they contribute to the economic growth and have significant impact on increasing labour productivity. As well, the statistical admissibility of both linear regression models were confirmed. However based on the values of the coefficient R^2, the linear regression models have rather theoretical than practical application. The significance of the causality of inward FDI at the regional growth was not statistically confirmed with the exception of the Region of Žilina (in time "n") and Region of Nitra (in time "n + 1"). Based on findings it can be stated that the economic growth in these Regions is significantly influenced by FDI inflows located in these regions. Regarding to inward FDI at the regional level and regional unemployment rate, the correlation of both indicators was not statistically significant – the unemployment rate at the regional level is most likely influenced rather by other factors than FDI inflows.

References

[1] Agarwal, J. P. (1980). Determinants of FDI: A Survey, *Weltwirtschaftliches Archiv*, vol. 67, pp. 26-31.

[2] Achimská, V. (2011). *Modelovanie systémov*. Žilina: Žilinská univerzita.

[3] Balasubramanyam, V. N. et al. (1996). FDI and growth in EP and IS countries, *Economic Journal*, vol. 106, pp. 92-105.

[4] Borensztein, E. et al. (1998). How does foreign direct investment affect economic growth?, *Journal of International Economics*, vol. 45, pp. 115-135.

[5] Dudáš, T. (2013). Vplyv PZI na nezamestnanosť na Slovensku, *Journal of International Relations*, vol. 9, no. 1, pp. 22-31.

[6] Dudáš, T. (2015). Theories of FDI and Economic Development - A Critical Review. 4th ICSSS, Paris, France, May 20-21, 2015, pp. 176-181.

[7] Economou, F. (2017). FDI Determinants in OECD and Developing Countries. *Review of Economics Development*, vol. 21, no. 3, pp. 527-542.

[8] EC. Directorate-General for Regional Policy. (2006). *Study on FDI and regional development. Final report.* [Online] Available: ec.europa.eu/regional_policy/sources/docgener/studies/pdf/fdi2006.pdf

[9] Findlay, R. (1978). Relative Backwardness, FDI and the Transfer of Technology: A Simple Dynamic Model, *Quarterly Journal of Economics,* vol. 92, pp. 1-16.

[10] Gontkovičová, B. and Ručinský, R. (2014). Konkurencieschopnosť regiónov a PZI. *XVII. mezinárodní kolokvium o regionálních vědách*, Hustopeče, ČR, pp. 143-149.

[11] Gregova, E. and Dengova, E. (2014). Program budgeting at the level of municipality government in Slovakia. Economics and social science: 2nd international conference on economics and social science (ICESS 2014), Shenzhen, China, pp. 45-51.

[12] IMF. (1993). *Balance of payments manual.* [Online] p. 188. Available: https://www.imf.org/external/pubs/ft/bopman/bopman.pdf

[13] Kantarelis, D. (2016). A Measure of Net Dependency between the Economies of the USA and Its Major Trading Partners, *Geopolitics, History, and International Relations*, vol. 8, no. 1, pp. 113–145.

[14] Lim, E. G. (2001). *Determinants of, and relation between, FDI and growth: A summary of a recent literature.* IMF working paper WP/01/175. [Online] p. 28. Available: https://www.imf.org/external/pubs/ft/wp/2001/wp01175.pdf

[15] Linzodo, J. S. (1991). Determinants and systematic consequences of international capital flows. *IMF Occasional Paper No. 77*, p. 77.

[16] Loungani, P. and Razin, A. (2001). How beneficial is FDI for developing countries. *Finanace and Development*, vol. 38, no. 2.

[17] Mišun, J. and Tomšík, V. (2002). Does FDI crowd in or crowd out domestic investment?, *Eastern European Economics*, vol. 40, no. 2, pp. 38-56.

[18] OECD. (2008). *OECD benchmark definition of FDI.* 4the edition. [Online] p. 254. Available: https://www.oecd.org/daf/inv/investmentstatisticsandanalysis/40193734.pdf

[19] SARIO. (2017). *Prehľad úspešných projektov SARIO*. [Online] Available: http://www.sario.sk/sites/default/files/content/files/sario-success-stories-SK-2017-02-09.pdf

[20] Shin, H. Y. (2017). The IMF's Financial Programming, Financialization, and Stagnant Corporate Investment in Korea after the Asian Financial Crisis, *Economics, Management, and Financial Markets*, vol. 12, no. 4, pp. 11–42.

[21] UNCTAD. (1999). *World Investment Report 1999.* FDI and the challenge of development. [Online] p. 577. Available: http://unctad.org/en/Docs/wir1999_en.pdf

[22] UNCTAD. (2015). *World Investment Report 2015.* Reforming international investment governance. [Online] p. 253. Available: unctad.org/en/PublicationsLibrary/wir2015_en.pdf

[23] UNCTAD. (2017a). *World Investment Report 2017: Annex tables.* [Online] Available: http://unctad.org/en/Pages/DIAE/World%20Investment%20Report/Annex-Tables.aspx

[24] UNCTAD. (2017b). *World investment report 2017. Investment and the digital economy.* [Online] p. 252. Available: http://unctad.org/en/PublicationsLibrary/wir2017_en.pdf

[25] Žilinskė, A. (2010). Incoming Foreign Investment: holly water or menu of potential troubles? *Engineering Economics*, vol. 21, no. 5, pp. 518-524.

PROJECT MANAGER'S LEADERSHIP STYLES AS A REFLECTION OF FAMILY EDUCATION STYLES

Jana Krátká[1,a,*], Lenka Hrušková[2,b]

[1]Metropolitan University Prague, Czech Republic

[2] Metropolitan University Prague, Czech Republic

[a]jana.kratka@mup.cz, [b]lenka.hruskova@mup.cz

* Corresponding author

Abstract. Globalization is a phenomenon involving and coming from the integration of economies, cultures and political movements around the world. Despite complex business globalization, many project managers are facing an inability to make proper decisions when it comes to project risks. They would list all potential risks that could affect a project, instead of carefully considering what the common business risks of every project are and what the real risks are; otherwise the list of risks may become too long. Where are the origins of the project managers' decisions concerning the project risks? The project managers' leadership style is a success factor on leading projects and on managing the risks in the projects. In this paper, we work with the relevant literature on the topic. Surprisingly, there is a lack of studies reflecting the connection between the project managers' leadership styles and family education styles. We aim to show that the project manager's leadership style is influenced by the styles of family education the managers experienced in the childhood. We suppose 1) that different leadership styles are appropriate for different types of projects and 2) that different leadership styles arise from different family education styles. The education styles experienced in the family create a fundamental self-image of the future project manager and it's a particular family education style that influences strongly whether the future manager will be able to reject or accept the project risks. Those decisions are his / her self-image response, arising from his / her childhood education experiences.

Keywords: leadership; family education; literature; project risks; educational styles

JEL Classification: I21, I26, J24

1. Introduction

Risk management is one of the main components of a project manager's work. Skalický, Jermář & Svoboda (2010) describe the term risk as an event that may occur with a certain probability and will affect a given project in a certain way. Indeed, risks as such can also be positive (the so-called opportunities), but those threatening the project are crucial in this perspective. How can a project manager (as an individual with specific professional and personal competencies) actually be able to work with risks? Is he / she able to adequately consider them for the sake of his / her team and then accept or reject them? The authors search for a link between topics that are not usually interlinked, while it is likely that their context plays a very important role.

The objective is to analyse particular studies of individual authors on relevant topics concerning a probable relationship between systemic thinking and its importance in relation to the competencies allowing acceptance and / or rejection of risks. How is this ability formed with regards to an individual during childhood? Why is he / she able to accept or reject a risk in some professional situations? What does this part of personality competencies stem from? The objectives are being fulfilled here by the analysis and synthesis of existing knowledge through conducting particular research of authors on the given topics.

It is assumed that the concepts of "acceptance" and "rejection" closely correspond to the terminology of education sciences. The authors´ aim is to apply specific pedagogical and psychological issues of existing education strategies, which primarily come under education sciences, to the concept of abilities to reject and accept risks in project management. Also, it is assumed that certain education strategies fundamentally influence the formation of competencies of a project manager. As for discourse, this analysis is embedded in the wider concept of systemic thinking (Sorgo et al., 2014).

The process of thinking is characterized by analysing and absorbing perceptions and information. It allows one to classify the essential from the insignificant, the causes and the consequences and to distinguish the links and other connections. To orientate oneself in the complex structure of a project team´s corporate culture is a broad-spectrum and demanding activity (expected from a project manager). It is therefore necessary for him / her to evince the ability of systemic thinking to clarify what the inputs and the outputs are, and above all, to be capable of a comprehensive insight. Project managers capable of systemic thinking understand and combine the ability to understand a particular behaviour of individuals together forming social systems (cf. Smejkal & Rais). As well as that, interaction is the basic characteristic of the functionality of team relationships and no problem or no individual exist separately.

Additionally, Phillips (2012) or Bureš (2011) states that it is necessary for a project manager to think systemically within the area of working with people and when dealing with emotions (including working with risks in this case – to reject or to accept a risk is the ability a priori limited by the formulas learnt in childhood). Again, this places demands on a given manager´s social and emotional intelligence and competencies. On the one hand, it is advisable for him / her to be empathic, while at the same time, to be able to look systemically at social ties.

2. Theoretical Basis

2.1 Risks in Project Management

According to Čapková (2000), risk is a certain kind of result uncertainty in a particular situation; it also means that there is a prerequisite for the occurrence of an event and the way it will occur. Smejkal and Rais (2003) define risk as a probability or a possibility of a loss (generally failure) occurrence. These authors further see it as: Variability of possible results or an uncertainty of their achievement, Deviation of actual and expected results, Danger of negative deviation from the target (the so-called net risk), Danger of making a wrong decision, and lastly, Options that a specific threat will use a specific vulnerability.

In addition, the word risk itself contains certain doubts about the future as well as the fact that a certain result may get one into a worse situation than there is at present (Čapková, 2000). However, the subject of ways of risk aggregation and rapid skipping even into the issue of quantitative strategies will not respond to the problem of an individual's preparedness for his / her successful performance of this activity. Regarding the initial phases of project management, it is common that the topic of risk(s) is intuitive or formalized, yet the ongoing work in progress with risks (whether in terms of accepting, clustering, rejecting and dealing with risks in general) is less monitored.

Also, risks are circumstances that threaten a given project and thus, their overlooking means conscious threatening of the whole project. A sufficient effort must be made to learn and work with them, or additional resources need to be used to work with risks (in the form of averting a minimization of damages, etc.), but above all, it is essential to identify risks well enough. Furthermore, one should not be afraid to invest to eliminate risk(s), but also consider what the possible damages and costs of such risk treatment would be. At times, it may be preferable to deliberately reconcile with the risk(s), to resolve it (them) on other occasions, or, on the contrary, to withdraw from the given project due to high risks.

Then, the aggregation of risks may be seen as an attempt to group them into a larger unit, which, however, presupposes not only the ability to implement certain rules and practices (procedures), but also the ability of systemic thinking. These rules of grouping segments into a larger unit are based on the belief that only segments with similar economic characteristics can have a similar long-term performance. The similarities should then fall under the area of performances, own process, clients or customers, distribution and environment.

To be more specific, the basic strategies of risk management are usually divided into four categories:

1. Risk Avoidance: It is possible to create such measures so that a defined risk cannot occur. If the risk cannot be avoided, other measures should be taken to eliminate its effects. In practice, however, this strategy also means to sacrifice certain opportunities.
2. Risk Transfer: The risk itself is not transferable, but may be (under certain circumstances) possibly transferred to another entity that cooperates with the project (typically suppliers). It is then possible to set such parameters (in relation to cooperating with the risk-linked entity) that the chances for the risk/s) to occur are minimal. The disadvantage of this strategy usually involves increasing costs. Still, it is the most common risk management strategy.
3. Risk Acceptance: It is not merely coming to terms with the fact that the risk cannot be avoided, but also preparing for a situation, where the risk does occur. In case of any risk(s), there are typically reserves created (being of a different kind), e.g. time, financial, inventory, of other professionals, suppliers, etc.
4. Mitigation of Risk Impacts: The risk has already occurred and a certain way is sought to minimize it. It is possible to create more options and plans.

2.2 Acceptance and Rejection as Educational and Psychological Concepts

In situations, which involve working with project risks (their rejection or acceptance), an individual acts on the basis of stereotypes he / she experienced in the earliest childhood. Personality competencies do not arise quite randomly, but they are the result of an interplay of many variables accompanying one since an early childhood education. The individual can continue to work on himself / herself the whole life, be educated and capable of a good quality and deep self-reflection, cooperate with quality coaches or therapists, but he / she will always carry with him / her the deepest formulas of reactions based on the styles of education.

To further add to this, the basic principle of education (and its effects) lies in the fact that rewarded responses and activities are strengthened and therefore, they occur more frequently; the punished ones weaken, but in some cases, they are fixated and the unrewarded ones tend to fade away (Hartl & Hartlová, 2000), (Bemš, 2015). When an individual does not learn to accept or reject a certain kind of behaviour, it will become difficult for him / her in the future (i.e. as regards project risks in this respect).

In terms of social learning, rewards and punishments are essential as a set of processes by which (and through a certain contact with other people) an individual learns to live in society and integrate in it actively, adhere to its norms or to take on various social roles (Hartl & Hartlová, 2000), (Vrba, 2013). The forms of social learning mainly include social reinforcement learning (reward and punishment), where the individual is rewarded or punished for a certain behaviour, recognizing what actions are desirable within a family, a social group or even the whole society (Čáp & Mareš, 2007), (Frýdková, 2008), (Kubiatko, 2013).

For the purposes of this paper, the most basic division of education styles – with a particular focus on the outputs achieved on an individual's personality (Matějček, 2007), (Matějček, 2008), (Train, 2001) – is presented here:

1. Democratic (Authoritative) Education (authoritatively mutual style): It promotes a healthy authority in education that is consistent, flexible, with a strong leadership and an open communication and cooperation. Children have enough space to develop their creativity and they learn responsibility. The result is an individual who will be collaborative, friendly, independent, pushing through and striving for the best performance.
2. Authoritarian (Autocratic) Education: An individual child is constantly and strictly directed, with this education being based on orders, bans as well as pressure and strength by the adult, where no discussion is allowed. The child is often negatively criticized by his / her educator and there is no room for the child´s own activity. The result is an individual who will be dependent, indifferent, unhappy and withdrawn, and his / her suppressed inferiority may take the form of aggressive behaviour. The individual does not act spontaneously, but according to the learned stereotypes (and the way they were rewarded and punished).
3. Benevolent Education: A strong emotional support from an educator on the one hand and a low level of demands on the other. Boundaries are not set even where needed. The result is an individual who (as an adult) will act as emotionally immature, with no control over his / her emotions, and who does what he / she wants and is unreliable without any sense of responsibility.
4. Neglected Education: It is a passive (and even indifferent) approach to an individual. The demands placed are unsystematic and inconsistent without an overall interest. It is a relationship without emotional expressions (and occasionally even rejections). The result is a moody individual as though with no social and emotional intelligence to

communicate interactively, he / she is shy, withdrawn and not self-confident, which can yet be manifested by aggression as well.

3. Links between Education Styles and the Ability to Work with Risks

Following from the above stated, it is obvious that one´s basic patterns of social behaviour are formed in childhood and may be influenced only partially. People's behaviour is influenced by a number of factors, such as personality and individual characteristics and expectations, an individual´s identification with a particular organization and work, organizational (workplace) culture and climate, work team, systems of management and leadership (Dobelli, 2013), (Fiala, 2016), etc. In particular, the area of interest here is the question of how an individual´s personality and individual setting for work emerge at the moment of deciding whether to accept or reject the risk. These personality qualities are formed during childhood, and a particular way of upbringing is the main element shaping the personality´s future focus.

Two topics, which are traditionally not seen or analyzed as being directly linked, are put into a certain perspective in this paper, yet the perspective presented here is closely connected. There are three basic approaches to risk as such – it is possible to incline towards it, avoid it or both options may be balanced.

1. Risk Aversion (Risk-Averse Person): An individual with risk aversion seeks to avoid high-risk projects and looks for projects that (with a high level of certainty) guarantee him / her to achieve acceptable results. Obviously, this is an individual who has difficulties with acceptance in that sense. He / She probably rejects accepting responsibility and accepting oneself, is highly critical to himself / herself, and rejecting represents a kind of certainty and prevention that will lead to the feeling of safety he / she lacks.
2. Risk Inclination (Risk-Seeking Person): A risk-prone person is seeking high-risk projects with a potential to achieve better results (though with a higher risk of loss). The same person is looking for challenges, yet he / she may have problems with accepting rejection (and eventually accepting himself / herself). Here, the reactions are different to those of an individual showing aversion to risk, but can stem from the same personality sources. Moreover, by accepting risk(s) as a challenge, these people may have a need to prove their qualities to themselves and their surroundings (as opposed to a tendency to avoid low-risk projects, since they do not prove anything). At the expense of their own competition, they may be taking too many risks, whose accepting may be costly and dangerous for both the project and the organization.
3. Neutral Approach (Risk-Neutral Person): Risk-neutral individuals manifest a balance of risk aversion and risk tendency (inclination). They can adequately evaluate both of the approaches and their personal goals and interests are reflected in their decisions rather minimally. They are also capable of systemic thinking that allows them a comprehensive view of the given subject. Whether they eventually take on the project risk or avoid it, depends on many related factors.

Additionally, if a manager is not able to accept risk(s) in almost any degree, he / she cannot become successful. A healthy decision to accept or reject a certain risk must not be based on any predominance of personality needs, but should primarily involve considering "riskiness" for both the project and the organization. A relatively high risk may be a challenge for a strong organization, but may be unacceptable for a weak organization. On the other hand, small organizations have to enter risky projects to gain and strengthen their market positions.

Regarding systemically thinking managers, they must first try and identify the risk(s). Practically every risk leads not only to economically unambiguous and quantifiable damage(s), but also to other consequences that need to be considered, e.g. a reduction in the overall economic result, a loss of trust by the cooperating subjects (employees, business partners), etc. To solve these difficult matters, it is appropriate to assign truly competent individual(s) that will not respond to risk issues mainly due to their learned patterns of acceptance / rejection. Thus, they will not instinctively make their decisions according to their own personality stereotypes based on the way their personality was shaped by education strategies in childhood.

As the person largely (or exclusively) responsible for working with risks and based on the consideration of all variables and possible consequences, the so-called risk manager must be able to see the front positions as those leading to a responsible and maximally complex decision. For risk aggregation, this person may also use quantitative strategies to relieve him / her of a fairly common feeling that he / she is too patterned on his / her own intuition and experience. The level of demands on a risk manager is really high and the personality traits, which can be helpful in this role, may turn out to be a burden as well.

As well as that, what individuals hear of themselves in their child age, remains forever stored in their personality basis. This brings about a fundamental self-image that can be further altered during life, but its origins had already been created in the early childhood (Krátká, 2014). Other people participating in education and upbringing of the individuals are basically programming them for their life scenarios: it is being decided whether the individuals will be able to reject risks or accept them as a reaction to their self-image.

4. Conclusion

Finally, it should be noted that it is quite unrealistic to find a project manager (or a risk manager) who would be the result of perfect education without anyhow undamaged self-image. Each individual is unique, no education is perfect and on top of that, each person carries a certain degree of self-confidence and self-esteem (in any direction and manner). There is no individual who, while making decisions about accepting or rejecting risk(s), would be able to act only so systemically to completely free himself / herself from his / her self-image and self-esteem.

Being aware of the above-described knowledge and context, it is advisable to introduce and work with these prerequisites already within the future managers´ studies. The qualities related to the presented topic of personality competencies can be further developed through a self-reflection, and the students can also realize that the expected kind of reasoning is not adequate for them (cp. Střelec & Krátká, 2007, 2010). The fact that the students begin to think about themselves, and can therefore critically admit whether or not they are suitable candidates for the role of a (project) manager, may be seen as the contribution here. During their classes (and using collective problem self-reflections), it may be ideal to involve the individuals´ self-reflections on the topic of working with risks. For instance, some students could discuss problem situations in a team or a group, which would be an artificial context (or situation) setting for story-sharing in classes using a fictional story that is not a personal story of anyone involved.

References

[1] Bemš, J. et al. (2015). Innovative default prediction approach. *Expert Systems with Applications*, vol. 42, no. 17, pp. 6277-6285.

[2] Bemš, J. et al. (2015). Modeling of nucelar power plant decommissioning financing. *Radiation Protection Dosimetry*, viol. 164, pp. 519-522.

[3] Bureš V. (2011). *Systémové myšlení pro manažery*. Příbram: Pbtisk.

[4] Čáp, J. and Mareš, J. (2007). *Psychologie pro učitele*. Praha: Portál.

[5] Čapková, D. (2000). *Jak pojistit firmu?* Praha: Computer Press.

[6] Dobelli, R. (2013). *Umění správného rozhodování: 52 chyb, kterých se zkuste vyvarovat.* Praha: Vyšehrad.

[7] Fiala, J. et al. (2016). Value Perception in the Ultimatum Game: A Blinded Randomized Trial. *Ekonomický časopis*, vol. 64, no. 6, pp. 519-538.

[8] Frýdková, E. (2008). Postmoderná rodina a výchovná zodpovednosť. *Výchova v pedagogickom výskume a praxi: zborník z medzinárodnej vedeckej konferencie*. Trnava: Univerzita sv. Cyrila a Metoda v Trnave.

[9] Hartl, P. and Hartlová, H. (2000). *Psychologický slovník*. Praha: Portál.

[10] Krátká, J. (2014). Tacit Knowledge of Trainee Teachers in Unexpected Educational Situations. *Advances in Education Research*, vol. l, no. 61, pp. 264-271.

[11] Kubiatko, M. (2013). The comparison of different age groups on the attitudes toward and the use of ICT. *Educational Sciences: Theory & Practice*, vol. 13, no. 2, pp. 1263-1272.

[12] Matějček, Z. (2007). *Co kdy a jak ve výchově dětí*. Praha: Portál.

[13] Matějček, Z. (2008). *Co děti nejvíc potřebují.* Praha: Portál.

[14] Phillips, C. (2012). *Taktické myšlení: 50 cvičení pro rozvoj taktického myšlení.* Praha: Grada.

[15] Skalický, J., Jermář, M. and Svoboda, J. (2010). *Projektový management a potřebné kompetence*. Plzeň: ZČU.

[16] Smejkal, V. and Rais, K. (2003). *Řízení rizik*. Praha: Grada Publishing.

[17] Sorgo, A. et al. (2014). A cross-cultural study on freshmen's knowledge of genetics, evolution, and the nature of science. *Journal of Baltic Science Education*, vol. 13, no. 1, pp. 6-18.

[18] Střelec, S. and Krátká, J. (2007). Class teachers' views on the methods to influence pupils' health. *School and health*, vol. 21, no. 2, pp. 183-94.

[19] Střelec, S. and Krátká, J. (2010). The preparation of trainee teachers for the responsibilities of a class teacher. *New Pathways in the Professional Development of*

Teachers. Neue Wege in der Professionalisierung von Lehrer/-inne/-n. Wien, Münster: LIT Verlag.

[20] Train, A. (2001). *Nejčastější poruchy chování dětí.* Praha: Portál.

[21] Vrba, Z. (2013). Mobilita pracovních sil v ČR 2012. Znalosti pro tržní praxi 2013. Olomouc: *Veřejná ekonomika – současnost a perspektiva*.

CRITERIA FOR SELECTION OF THE EXPORT TARGET COUNTRIES

Megija Krievina[1,a], Velga Ozolina[2,b,*]

[1]Riga Technical University, Faculty of Engineering Economics and Management, Kalnciema 6, Riga, Latvia

[2]Riga Technical University, Faculty of Engineering Economics and Management, Kalnciema 6, Riga, Latvia

[a]megija.krievina@gmail.com, [b]velga.ozolina@rtu.lv

*Corresponding author

Abstract. In the era of increasing globalization, international cooperation and international trade, it is becoming more important to focus the attention to particular markets and countries to facilitate exports. It ensures more targeted approach and thus more efficient use of the scarce resources. The choice of the export target countries is done in several levels – government, associations and enterprises. If the same export target countries are chosen at different levels, it is possible to enhance the overall results. In Latvia the collaboration in the selection process of the export target countries is ensured by the memorandum of understanding. However, 3 criteria stated in the main export facilitation planning document are not enough to provide the best results. Therefore the research aims to identify more optimal choice of the factors. Based on the Latvian exporting companies', export related institutions' and other partnership's opinion, the results show that the main criterions, which have to be considered for the selection of the export target countries, are important export market for Latvia; economic indicators; quality of infrastructure; stable and secure banking and financial markets; national security; political stability; perception of corruption; geographical proximity; membership of international organizations; import volume. The analysis of these criterions provides export authorities comprehensive information on the potential export markets thus ensuring more qualitative outset of the export target country selection process.

Keywords: export target countries, target countries selection, selection criteria, trade policy

JEL Classification: F10, F13, F14, F60

1. Introduction

For a small country with open economy like Latvia, export is one of the most important pillars of the economic growth (Broocks & Van Biesebroeck, 2017). Export values in Latvia decreased sharply during the crisis (by 12.9% in 2009) and afterwards increased again. Since Latvia has recovered from the global economic crisis (Navickė & Lazutka, 2017), global market share of its national goods has increased. In the first years of recovery, a significant increase in exports of goods and services was determined by both stable external demand and the improvement of the competitiveness of Latvian enterprises in connection with the reduction of labour costs during the rapid decline of the economy. International trade is also evidence to Latvia's resilience to large changes in the market. Due to the reduced demand from Russia, its sanctions and the devaluation of the rubble, which affected several countries, competition between the Latvian neighbouring countries also increased, export had to be directed to other countries (Kraatz, 2014).

In the period of 2013-2015 export growth rates are low (1.1-3.9% annually), which indicates that there is a need for export facilitation. Some authors argue that at the national level exports not always facilitate GDP growth, the opposite causality is also possible (Kónya, 2006). However, in general the importance of exporting in global economy is widely acknowledged (Azar & Ciabuschi, 2017).

The choice of a new or existing export market for a company that wants to expand its business globally is a very significant step. Successful external economic relations and their efficiency are ensured by correctly selected international markets (Utama, Chan, Gao, & Zahoor, 2017). As the economy develops and competition between the markets grows, it has become increasingly important to organize identification of target countries and research for export markets in order to increase efficiency of international trade Therefore there is a need to select the markets for which export activity will be most valuable (Dzemydaite, 2017). Determining the main criteria is important step towards the choice of the export market. Export target country can be determined only after the analysis of the relevant criteria. In the publication on the rationale for the choice of export market, authors Kazlauskaite, Miečinskiene, Stasytve (Miečinskienė, Stasytytė, & Kazlauskaitė, 2014) have indicated the criteria for choosing the target country of export. They emphasize that the most important criteria when evaluating the export market are economic, political, social and technological.

It is necessary to investigate the target market, as the institutional distance is affected by two types of costs - unfamiliarity hazards and relational hazards. The first arises from the lack of knowledge and information about the host country of exports, and the other – from the difficulties of managing and monitoring the partnerships (Hitt, Li, & Xu, 2016). Gaston-Breton and Martina (Gaston-Breton & Martín Martín, 2011) point out that the choice of the foreign market, which focuses on international marketing and business peculiarities, is the key of the successful export strategy. When evaluating the possibilities to enter a foreign market, enterprises evaluate the need to enter the international market by analysing the company's potential for a given region. They investigate the political and normative force - state policy, taxes, and legal restrictions for enterprises of other countries. In the field of economics and finance such indicators as inflation, interest rates, credit facilities, market demand are analysed, using indicators such as GDP, purchasing power, etc. Demography is also important - the age of potential clients, education, also evaluating the labour factor. Other factors include science development and technological innovation, social and cultural environment and visit to the selected country.

Less explored markets are analysed more precisely using the following criteria: economic factors (income level), political factors (unstable political situation), geographical factors (climate, geographic proximity, natural resources), cultural environment (language barrier, level of education, religion), technological factors (employee qualification, competence, production and technology level), foreign trade policy (tax barriers, free tariff barriers, trade policy. It is important to cover a variety of factors in order to more accurately and thoroughly explore the export target countries. All this is needed to reduce the risk by knowing the export partner country better.

In many cases enterprises need direct or indirect assistance from the public sector to fulfil their export strategies. The authorities responsible for export facilitation ensure the strengthening, improving and developing foreign trade relations. Effective information exchange and cooperation between public authorities, the private and public sectors regarding the ongoing and future export-facilitation activities are ensured by a targeted and effective set of necessary export support measures (Molander, Fellesson, & Friman, 2017). Targeted approach also implies common choice of the export target countries and joint activities in these countries.

2. Export Strategy of the Latvian Export Authorities

In Latvia, Ministry of Economics, Ministry of Foreign Affairs, Investment and Development Agency of Latvia are the responsible authorities and export policy developers, Employers' Confederation of Latvia is the social partner of these institutions and the Latvian Chamber of Commerce and Industry is the partner. Enhanced cooperation between these five institutions in export matters could improve the results of foreign visits, export measures such as business forums, missions. The work of all five institutions in relation to exports is ensured by the Memorandum of Understanding on Co-operation in representing Latvia's economic interests abroad, which is based on the establishment of large-scale councils, and one of them is the Council for the Coordination of External Economic Policy. Within the framework of the Foreign Economic Policy Coordination Council, the target countries are evaluated and determined annually.

Ministry of Economics as the leading institution has developed export guidelines for 2013-2019, which were designed to achieve the breakthrough of the Latvian economy included in the National Development Plan 2014-2020 and to successfully implement the goals included therein, including facilitation of exports (Cabinet of Ministers, 2013). The guidelines define the criteria for Latvian export target countries, where the choice of countries is based on three main criteria: important export markets of Latvia; economically stable and developed countries, geographic proximity; the market demand corresponds to Latvia's offer opportunities. The guidelines do not define specific target countries for export, only the specified criteria for determining target countries that are not sufficient enough to choose export destination.

Similarly to the Ministry of Economics, Investment and Development Agency of Latvia has defined the criteria for the target countries of export. The criteria are divided into four groups: Important criteria for company; the selected export markets in-depth study; industry overview; market parameters. For each group there are more sub-criteria, in total 23.

The Ministry of Foreign Affairs has not created a single document, which would combine the purpose and tasks, nor defined the criteria of the export target countries. Also Employers' Confederation of Latvia and Latvian Chamber of Commerce and Industry do not have a single document that would regulate the employer's initiative and view on export growth; they choose the countries of interest of their members.

Analysis shows that there are no common criteria used by the parties involved in the export facilitation activities in Latvia. It seems that the criteria are only formally defined and should be updated and expanded and afterwards included in the new Export Guidelines of the Ministry of Economics in 2019.

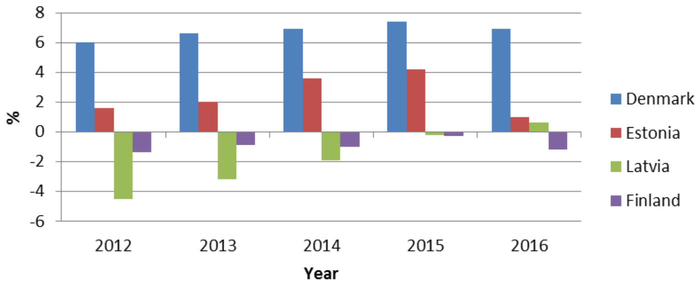
3. Methodology

In order to select the criteria, which are significant both for the policy makers and enterprises, several methods were used in this research.

In the first stage information on the export policies of several countries was analysed to identify export target countries selection strategies of similar economies and further clarify the possibilities to adopt and implement them in Latvia. Estonia, Denmark and Finland were selected for analysis as these countries are also the target export countries of Latvia. According to the data of the Central Statistical Bureau of the Republic of Latvia (CSB, 2015), Estonia is the 2nd largest export partner of Latvia (5th largest importer), Finland is ranked as the 12th exporter (6th importer), Denmark is ranked as the 8th exporter (13th importer). These three countries are OECD member states and are similar in size, demographics, culture and politics, as well as export documents are publicly available in English.

Net exports of the selected countries vary (see Figure 1). Denmark and Estonia have a positive trade balance with a tendency to increase every year, but it is negative for Finland and Latvia.

Figure 1: Net exports of goods and services in 2007-2015, % of GDP.



Source: (The World Bank, 2017)

For Denmark and Latvia export values as a share of the GDP are similar, about 55-59%, but Denmark imports less goods and services from other countries (47.8% of GDP) than Latvia (60.1% of GDP). Estonia has comparatively higher export values (% of GDP). This indicates that these countries may have stronger export strategies, which can be used as the benchmarks for policy changes also in Latvia.

In the second stage the authors conducted a survey to find out the views of Latvian exporters on the current and possible export partner countries, as well as to identify the main criteria to be included in the export guidelines. The questionnaire consisting of 6 questions was sent by e-mail to 198 companies selected from the exporters TOP100 of Latvia (Baltic Export, 2012) and The Red Jackets (The Red Jackets, 2015) Export Excellence Awards. The companies were selected to represent all the statuses - micro, small, medium and large enterprises - as well as various sectors - food, clothing, woodworking, ICT, etc. in order to get more comprehensive results. The survey was conducted from November 14, 2016 until January 6, 2017. The authors received 54 responses to emails. In addition, the authors contacted the head of the Latvian Chamber of Commerce and Industry member's team, who also posted the poll in the monthly magazine of the Latvian Chamber of Commerce and Industry in December, 2016. It was available to members from December 5, 2016 until January 6, 2017, but they were not willing to participate in the survey. Latvian Chamber of Commerce and Industry is the largest non-governmental organization of business, which brings together more than 1,800 members, including industry associations, companies, city business clubs and other associations (LCCI, 2016).

One of the main questions in this survey was the company's opinion about the selection criteria for the export target countries. In addition to the three criteria mentioned in the EM Export Guidelines, the authors added 22 new criteria to determine whether it is important for enterprises to change something in existing system of determining key export target countries. The new criteria were chosen to cover several groups of factors that were identified previously. The criteria given in Table 1 were rated individually by enterprises on a scale from 1 (less important) to 5 (very important).

Table 1: Authors defined selection criteria of export target countries

Social	Economic	Political	Other
Rapidly growing number of cities; Access to educated workforce; The largest country in terms of population; Average age of the population; Confidence in business partners; Security.	A fast growing economy; Significant export markets (the company already operates in this market) Stable and secure banking and financial markets; Developed research and innovation; Investment potential; Foreign direct investment; Low level of corruption; "Lowest Price" Market and "Quality Market"; Place in the Doing Business 2016 assessment.	Political stability; Government priorities; Small trade barriers; Existing Double Taxation and Anti-Fraud Agreement; Participation in international organizations; Secure legal system; An Existing Investment Protection Agreement.	Geographic proximity; Infrastructure availability

Source: authors

In addition to the 25 criteria cited by the authors, the last question also allows companies to name other important criteria: climate, market potential, and the criteria also give the opportunity to choose a sector, as it changes priorities.

In order to ensure the selection of the most appropriate criteria, it is necessary to know also the opinion of the Latvian export policy planners, their cooperation partner and the social partner. Therefore the authors conducted individual interviews during the period from March 2 to March 10 2017, with the export Policy planners from five institutions. The authors asked six questions in relation to the existing criteria for export target countries, cooperation between the institutions, and the opportunity to supplement the existing criteria, as well as their views on the introduction of a new selection instrument of the export target countries. The interviewees were selected on the basis of their connection to the export policy development, work with the target countries of export, participation in the councils, and other current export facilitation activities.

4. Results and Discussion

Export policy planners in Latvia indicate that it is necessary to change the list of criteria for the selection of export target countries and to supplement it with new ones, because currently each institution is working with their personalized criteria and are not referring to ones mentioned in export guidelines for 2013-2019. Latvia's export policy is not very different from the policies of Estonia, Denmark and Finland, as their main goal is to successfully export to the selected countries and increase export volumes. Analysis of the planning documents shows that the good practice in Estonia is the definition of precise, numerical goals (*Estonian Entrepreneurship Growth Strategy 2014–2020*, 2013), in Finland - the determination of export countries (*Team Finland: Strategy Update 2015*, 2014), but in Denmark – aim to reach a positive net exports (Statista, 2015).

The results of the survey show that when choosing export target countries, 55% of export companies make a market survey on their own and 44% of respondents are looking at the rivals' experience. Only 3 Latvian export companies responded that the decision is based on the information of the Ministry of Economics, Investment and Development Agency of Latvia or Employers' Confederation of Latvia. 66% of the respondents also point out that the government plans do not influence their decisions. Thus it can be concluded that the current plans established by the state institutions are not topical or binding for Latvian companies. In many cases enterprises are not aware of the existence of these plans or the plans are too extensive to understand. The enterprises also do not show the willingness to participate in the development of these plans.

The authors summarized the enterprise opinions about the importance of the proposed and additional criteria for the selection of export target countries. Ten most important ones are presented in Table 2. Remaining criteria are not shown in the table because they received fewer score than 170, which is mainly small or average importance. Two criteria from the export guidelines - significant export market and geographic proximity, are found to be important also by enterprises. However, also the majority of respondents think that 3 criteria are not enough for the selection of export target countries.

Table 2: Ten Most Important Criteria for the Selection of the Export Target Countries for Latvian Enterprises

Criterion	Score
Significant export markets (the company already operates in this market)	223
A fast growing economy	216
Infrastructure availability (logistics, energy, communications)	213
A stable and secure banking and financial market	207
Political stability	198
"Lowest Price" Market and "Quality Market"	195
Security	192
Concluding international agreements (Double Taxation and Anti-Taxation Agreement, Investment Protection Agreement, WTO, EU, OECD)	189
The rule of law (corruption)	183
Geographic proximity	177

Source: authors

The next step of the research would be to choose indicators, which characterise selected criteria and to develop a methodology for the analysis in order to make the selection process of export target countries more understandable to all the involved parties. The authors stress that it is imperative to update the export guidelines after expiry in 2019, and to ensure that the export target countries are selected in such a way that the export policy planning authorities are able to set long-term goals and appropriate tasks. The results of surveys and interviews conducted by the authors can be used to improve the guidelines. The selection process of country-specific criteria must involve not only export-responsible institutions and their social / cooperative partners, but also enterprises. Existing cooperation practice between 5 institutions can be considered as positive, but the work of the Foreign Economic Policy

Coordination Council needs to be improved to facilitate information exchange and to set more precise tasks for the promotion of export activities.

5. Conclusions

Both export planning institutions and enterprises are sure that the three export target countries defined in the Export Guidelines - important export markets in Latvia, economically stable and developed countries and geographic proximity, as well as the market demand that corresponds to Latvia's supply potential - are not enough to analyse the market of the foreign trade partner. Therefore, it is necessary to increase the number of criteria. The results show that the main criterions, which have to be considered for the selection of the export target countries, are important export market for Latvia, economic indicators, quality of infrastructure, stable and secure banking and financial markets, national security, political stability, perception of corruption, geographical proximity, membership of international organizations and import volume. The analysis of these criterions provides export authorities comprehensive information on the potential export markets at the very beginning of the process of determining the countries of destination of the exports thus ensuring more qualitative outset of the export target country selection process. It is advisable for state institutions to make a similar survey with updated choice of possible criteria before new export planning documents are developed.

Acknowledgment

The paper was supported by the National Research Program 5.2. “Economic Transformation, Smart Growth, Governance and Legal Framework for the State and Society for Sustainable Development - a New Approach to the Creation of a Sustainable Learning Community (EKOSOC-LV)”.

References

[1] Azar, G. and Ciabuschi, F. (2017). Organizational innovation, technological innovation, and export performance: The effects of innovation radicalness and extensiveness. *International Business Review*, vol. 26, no. 2, pp. 324–336.

[2] Baltic Export. (2012). Latvijas eksportētāju TOP 100 [Top 100 exporters in Latvia]. [Online]. Available: http://balticexport.com/?article=latvijas-eksportetaju-top-100&lang=lv

[3] Broocks, A. and Van Biesebroeck, J. (2017). The impact of export promotion on export market entry. *Journal of International Economics*, vol. 107, pp. 19–33.

[4] Cabinet of Ministers. (2013). Par Latvijas preču un pakalpojumu eksporta veicināšanas un ārvalstu investīciju piesaistes pamatnostādnēm 2013.–2019.gadam [Export Promotion of Latvia’s Products and Services and Guidelines for attracting foreign investment in 2013-2019.] (2013). Cabinet of Ministers regulations of the Republic of Latvia. [Online]. Available: https://m.likumi.lv/doc.php?id=257597

[5] CSB. (2015). Exports and imports by combined nomenclature sections and country, country group and territory by quarter (euro), 2004-2016. [Online]. Available:

http://data.csb.gov.lv/pxweb/en/atirdz/atirdz__isterm__atirdz/AT0050c_euro.px/?rxid=cdcb978c-22b0-416a-aacc-aa650d3e2ce0

[6] Dzemydaite, G. (2017). External influences for balance of trade in small and open economies. *Journal of Applied Economic Sciences*, vol. 12, no. 2, pp, 402-412.

[7] *Estonian Entrepreneurship Growth Strategy 2014–2020*. (2013). [Online]. Available: http://kasvustrateegia.mkm.ee/index_eng.html

[8] Gaston-Breton, C. and Martín, O. (2011). International market selection and segmentation: a two-stage model. *International Marketing Review*, vol. 28, no. 3, pp. 267–290.

[9] Hitt, M. A., Li, D. and Xu, K. (2016). International strategy: From local to global and beyond. *Journal of World Business*, vol. 51, no. 1, pp. 58–73.

[10] Kónya, L. (2006). Exports and growth: Granger causality analysis on OECD countries with a panel data approach. *Economic Modelling*, vol. 23, no. 6, pp. 978–992. d

[11] Kraatz, S. (2014). *The Russian Embargo: Impact on the Economic and Employment Situation in the EU. EMPLOYMENT AND SOCIAL AFFAIRS BRIEFING*. [Online]. Available: http://www.europarl.europa.eu/RegData/etudes/BRIE/2014/536291/IPOL_BRI(2014)536291_EN.pdf

[12] LCCI. (2016). About Latvian Chamber of Commerce and Industry. [Online]. Available: https://www.chamber.lv/en/node/36

[13] Miečinskienė, A., Stasytytė, V. and Kazlauskaitė, J. (2014). Reasoning of Export Market Selection. *Procedia - Social and Behavioral Sciences*, vol. 110, pp. 1166–1175.

[14] Molander, S., Fellesson, M. and Friman, M. (2017). Print. *Journal of Nonprofit and Public Sector Marketing*, pp. 1–21.

[15] Navickė, J. and Lazutka, R. (2017). Distributional Implications of the Economic Development in the Baltics: Reconciling Micro and Macro Perspectives. *Social Indicators Research*.

[16] Statista. (2015). Denmark - most important export partner countries in 2016. [Online]. Available: https://www.statista.com/statistics/318376/most-important-export-partner-countries-for-denmark/

[17] *Team Finland: Strategy Update 2015*. (2014). *Prime Minister's Office Publications*. [Online]. Available: http://vnk.fi/documents/10616/1098657/J0714_Team+Finland+Strategy+2015.pdf/19ff0f61-1f74-4003-8b7b-8b029ba00d8e?version=1.0

[18] The Red Jackets. (2015). Best exporting brands from Latvia, Rising Stars 2015. [Online]. Available: http://www.theredjackets.lv/lv/#!rezultati-2015

[19] The World Bank. (2017). World Development Indicators. [Online]. Available: http://databank.worldbank.org/data/reports.aspx?source=2&series=NE.EXP.GNFS.ZS&country

[20] Utama, W. P., Chan, A. P. C., Gao, R. and Zahoor, H. (2017). Making international expansion decision for construction enterprises with multiple criteria: a literature review approach. *International Journal of Construction Management*.

STRATEGIC FINANCIAL ANALYSIS BASED ON BALANCED SCORECARD IN PRESENT-DAY GLOBAL ECONOMIC ENVIRONMENT

Sergey Krylov[1,a,*], Nina Ilysheva[2,b]

[1]Ural Federal University, Academic Department of Accounting, Analysis and Audit, Mira 19, 620002 Ekaterinburg, Russian Federation

[2]Ural Federal University, Academic Department of Accounting, Analysis and Audit, Mira 19, 620002 Ekaterinburg, Russian Federation

[a]zali6770@yandex.ru, [b]19016708@rambler.ru

*Corresponding author

Abstract. The balanced scorecard (BSC) is one of well-trialled management instruments that are familiar to all market participants in the world. This fact allows for efficient utilization of BSC in conditions of globalization. The paper considers theoretical aspects of the applied strategic financial analysis (ASFA) based on the financial element of BSC to be applied in the research process of the strategic organization financial activity aspects. The methodology of the research is the BSC concept as well as the concept of the applied strategic analysis concept having been developed by one of the authors, and the methodological approach to the target forecast of the organization financial flows resulting from the results of its financial position analysis. ASFA is depicted to encompass comparative assessment, variances diagnostics and indicators forecast of the financial BSC element within the strategic financial goals. It encompasses analysis of the efficient utilization of assets and investments, analysis of the financial risks, analysis of the cash flows, and analysis of the income, expenses and profit. ASFA results in ability to be employed for the long-term, medium and short-term management decisions in the field of the organization financial activity in conditions of the modern world economy. The authors draw a conclusion that ASFA is a sufficiently effective instrument to research strategic aspects of the organization financial activity and to form an analytical support for its strategic financial management in present-day global economic environment.

Keywords: applied strategic financial analysis, balanced scorecard, financial activity, organization

JEL Classification: G30, M19, M41

1. Introduction

In conditions of present-day world economy a primary goal of business is to ensure maximum shareowners' better-off (should a company be a common stock company), i.e. to maximize the company market value expressed by its maximum common stock price. The statement presumes that it is the shareowners' better-off maximum growth that arranges other organization activity' goals in the appropriate order and ensures that it is being invested in the long run. So, being an inherent element of the overall economic organization strategy the financial strategy must be aimed at the attainment of the primary business goal sought.

The problem mentioned requires improving an analytical support of the organization financial management, especially its strategic aspect, its financial activity being a long-term process. In view of the mentioned above the authors of the article seek to consider an applied strategic analysis to be employed as the analytical support of the organization strategic financial management in conditions of moder world economy.

2. Previous Research

To enhance strategic management efficiency in difficult conditions of the present-day market economy we have developed the applied strategic analysis (ASA) to improve its information-analytical support, to evolve theory, methodology and methods of the overall strategic economic activity aspects to the level of the financial analysis being an efficient research instrument of the financial aspects of the organization economic activity based on the financial indicators and described experience.

ASA, as a strategic management function, assumes an overall research of the strategic economic organization activity aspects based on the BSC (Krylov, 2013), (Krylov, 2014).

The balanced scorecard concept as an analytical instrument applied in the field of strategic management was developed by American scientists Robert Kaplan and David Norton (Kaplan & Norton, 1992) at the beginning of the 90s of the XX century, evolving both in their works (Kaplan, 2008), (Kaplan & Norton, 1993, (Kaplan & Norton, 1996), (Kaplan et al., 2010) and those of other scientists studying economics (Friedag & Schmidt, 2002), (Niven, 2014, A), (Niven, 2014, B), (Niven, 2014, C), (Niven, 2014, D), (Niven, 2014, E), (Maisel, 1992), (Olve et al., 2000), (Rampersad, 2008), and was multiply tested. At present BSC is considered to be one of the essential instruments of the organization management system.

Balanced scorecard as a whole is understood as an aggregate of parameters featuring an overall organization performance in up-to-date market economy. It reflects a balance to be brought about between short-term and long-term goals, financial and non-financial indicators, basic and auxiliary parameters, as well as internal and external factors of the organization economic activity (Kaplan & Norton, 1992).

The scores of the balanced system are formed depending on the outlook and strategic goals of any particular organization and have individual features. They represent a balance between external accounting data for the owners (shareholders) and internal characteristics of the most significant business processes, innovations, training and growth that is the balance between the results of the organization performance and future growth. The system comprises a combination of objective quantity estimated data and subjective somewhat arbitrary parameters of future growth (Kaplan & Norton, 1993).

The main goal of the balanced scorecard is to transform a company strategy into specific tangible objectives, indicators and end up with events (Friedag & Schmidt, 2002).

The balanced scorecard is founded on the cause and effect; results attain factors and their interrelation with financial data (Olve et al., 2000).

The balanced scorecard encompasses four basic interrelated elements: finance, a customer, internal business processes ones as well as training and personnel development element. The BSC scores enable to characterize comprehensively an activity of commercial, government and non-for-profit organizations, the scores being relatively few (about 25 scores in average, as a rule) (Kaplan & Norton, 1996).

It should be taken into consideration that basing on the balanced scorecard system special for any particular organization the applied strategic analysis lacks any standard methods. Hence, the ASA methods are special as well for any particular organization (Krylov, 2013).

The goal of the applied strategic analysis implementation is to form analytical support for taking strategic management decisions.

The ASA accomplishment principle, a deduction principle presumes, firstly, an investigation of the general BSC indicators, then specific indicators. The principle defines general sequence of the ASA analysis according to the following leads: analysis of financial indicators, analysis of customer indicators, analysis of internal business-processes (process of after-sales service, operational process and innovative process) indicators, analysis of training and personnel development indicators (Krylov, 2014).

The ASA commences from the comparative evaluation of the financial indicators and is completed by the forecast of training and personnel development.

Discussing the ASA contents as a complex category of economics in their previous works the authors have assumed the applied strategic innovative analysis (ASIA) to be a kind of the applied strategic analysis presuming overall complex research of the strategic aspects of the organization innovative activity based on the innovative balanced scorecard element (Krylov & Ilysheva, 2016, A), (Krylov & Ilysheva, 2016, B). The present paper treats the following kind of ASA – applied strategic financial analysis.

3. Results

3.1 Concept and essence of the applied strategic financial analysis

An applied strategic financial analysis (ASFA), a kind of the applied strategic analysis, assumes a complex, comprehensive research of the strategic financial organization activity aspects basing on the financial element of its balanced scorecard. It can also be considered as a facilitating function of the strategic financial management.

ASFA subject is the financial BSC element indicators and the factors specifying them.

ASFA object is strategic organization financial activity aspects.

The aim of the applied strategic financial analysis is to form an analytical support of taking strategic decisions in the field of financial activity management.

The ASFA objectives are as follows: comparative assessment of the financial BSC element indicators, diagnostics of the financial bsc element indicators variances, forecast of the financial bsc element indicators.

Notice, that all the objectives are closely interrelated as each subsequent objective follows from the previous one. So the diagnostics is effected by the results of the comparative evaluation of the financial BSC element indicators and their forecast considers the diagnostics results.

Comparative assessment of the financial balanced scorecard element implies a comparison of their real and target figures, finding a variance of the real financial balanced scorecard element figures from the target ones and their qualitative variance characteristics. The qualitative characteristics of the financial BSC element real and target figures variance depend on their value (Table 1).

Table 1: Estimation of qualitative variance characteristics of the financial BSC element's real and target figures

Variance value, %	Qualitative variance characteristics
Up to ± 1%	Fairly small
From ± 1% to ± 5%	Essential
From ± 5% to ± 10%	Significant
From ± 10% to ± 20%	Large
± 20% and higher	Very large

Source: (Krylov, 2014)

The diagnostics of the financial balanced scorecard element indicators variance is based on the cause and effect links combining BSC values, the financial element included, into the balanced complex of general indicators and their specifying factors (results attaining factors). While diagnosing the financial BSC element indicators variance found are the results attaining factors, which are mostly impacting on the general or outcome indicators of the financial Balanced Scorecard element, and determined is its value. It should be noted that outcome financial indicators are final, i.e. more general BSC indicators.

The financial BSC element indicators forecast are of the purposeful nature. In case of the objective conditions the values of the financial BSC element indicators forecast is targeted at the primordial determination and/or correction of the target values of the financial BSC element indicators and either determination of the specific ways of their attainment or the development of the events aimed at the elimination of the variance emerged between outcome and target values of the financial BSC element indicators in the future. Notice, that the forecast commences with the general (outcome) indicators, the factoring ones being derived from them.

The ASFA aspects imply proper strategic aspects, tactical aspects and operational aspects. Within a strategic aspect of the applied strategic financial analysis evaluated, diagnosed and forecast are final values of the financial BSC element indicators for the period of the developed strategy in effect, i.e. their strategic values. Within a tactical aspect of the applied strategic financial analysis evaluated, diagnosed and forecast are interim values of the financial BSC element indicators at the year end, i.e. their tactical values. Within an operational aspect of the applied strategic financial analysis evaluated, diagnosed and forecast are interim values of the financial BSC element indicators at the end of each month, i.e. their operational values. All the ASFA aspects mentioned are interrelated and agreed: the results of the analysis of the operational financial BSC element indicators values impact on their tactical values and the results of the tactical value analysis impact on the strategic ones. The instruments of the ASFA methods encompass an aggregate of methods ensuring that the analysis is carried out and its goals are attained.

The basic ASFA method may include methods of absolute, relative and average values, comparison, grouping, graphical and table methods, correlation and regression analysis, cluster analysis, factoring, as well as expert evaluation method.

3.2 Information base of the applied strategic financial analysis

The ASFA information base is the financial BSC element (Table 2), the formation comprising a number of steps: definition of the strategic financial process goal, construction of the strategic financial process map, selection of the financial indicators, definition of the target financial indicators values, development of the strategic financial events.

Table 2: Financial balanced scorecard element of the organization development

Key problem of the financial balanced scorecard element	Strategic financial goal	Financial indicator	Target value	Strategic financial event
What goals do they have to set proceeding from the shareowners' and shareholders' financial expectations?				

Source: the table was developed by the authors

3.3 Sequence of the applied strategic financial analysis implementation

The applied strategic financial analysis as a kind of the applied strategic analysis is carried out in compliance with the principle of deduction encompassing research firstly general indicators of the financial BSC element then specific ones.

The complex elements of the ASFA are the following:

1. Analysis of the efficient utilization of assets and investments.
2. Analysis of the financial risks.
3. Analysis of the cash flows.
4. Analysis of the income, expenses and profit.

The process of the ASFA analysis exercise can be presented by means of considering its main objectives i.e. diagnostics of the variance and the forecast of the financial BSC element (Table 3).

Table 3: Matrix of the ASFA elements

Basic ASFA elements (i)	Major ASFA objectives (j)		
	Comparative assessment of the ASFA financial element indicator BSC (1)	Diagnostics of the financial BSC element indicators variances BSC (2)	Forecast of the innovative BSC element indicators BSC (3)
Analysis of the efficient utilization of assets and investments (1)	Comparative assessment of the efficient utilization of assets and investments indicators	Diagnostics of the efficient utilization of assets and investments indicators variances	Forecast of the efficient utilization of assets and investments indicators
Analysis of the financial risk (2)	Comparative assessment. of the financial risk indicators	Diagnostics of the financial risk indicators variances	Forecast of the. financial risk indicators
Analysis of the cash flows (3)	Comparative assessment of the cash flows indicators	Diagnostics of the cash flows indicators variances	Forecast of the cash flows indicators
Analysis of the income, expenses and profit (4)	Comparative assessment of the income, expenses and profit indicators	Diagnostics of the income, expenses and profit indicators variances	Forecast of the income, expenses and profit indicators

Source: the table was developed by the authors

Examples of the outcome and factoring indicators analyzed per every complex ASFA element are provided in Table 4.

Table 4: Examples of the analyzed outcome and factoring indicators per every complex ASFA element

Basic ASFA elements	Indicators analyzed	
	Outcome	Factoring
1. Analysis of the efficient utilization of assets and investments	Profitability of investment in the current operations against net sales (or net cash flow); Profitability of investment in the intellectual and human capital against net sales (or net cash flow); Profitability of assets against net income (or outcome net cash flow); Profitability of net worth against net income (or outcome net cash flow).	Sales profitability; Net cash flow and sales cash flow ratio; Net income and total income ratio; Outcome net cash flow and total cash inflow ratio; Sales revenues (or cash inflow) and average amount of investment in current operations ratio; Sales revenues (or cash inflow) and average amount of investment in human and intellectual capital ratio; Total income (or outcome cash inflow) and total assets average ratio; Total assets average (or total cash inflow) and average net worth ratio.
2. Analysis of the financial risk	Root-mean-square deviation and net sales (or net cash flow) variance ratio; Root-mean-square deviation and net income (or outcome net cash flow) variance ratio; Operational leverage effect; Financial leverage effect.	Root-mean-square deviation and sales revenues (or cash inflow) variance ratio; Root-mean-square deviation and operational costs (or cash outflow) variance ratio; Root-mean-square deviation and total income (or total cash inflow) variance ratio; Root-mean-square deviation and total expenses (or total cash outflow) variance ratio; Share of fixed costs in cost of goods sold; Share of fixed costs in total costs.
3. Analysis of the cash flows	Outcome net cash flows; Net cash flows of operating. investing and financing activities; Net cash flows from sales of certain products; Net cash flows from sales to certain clients; Net cash flows from sales of new products; Share of net cash flow from sales of new products in net cash flow from operating activity.	Total cash inflow and outflow; Cash inflows and outflows from operating, investing and financing activities; Cash inflows and outflows connected with production and sales of certain products; Cash inflows and outflows connected with production and sales of products to certain clients; Cash inflows and outflows connected with production and sales of new products.
4. Analysis of the income, expenses and profit	Net income; Pretax income; Net sales; Income from certain products sales; Income from sales to certain clients; Income from certain items sales; Income from new products sales; Income from other activities; Net income growth rate and pretax income ratio; Net sales growth rate and pretax income ratio; Sales revenues growth rate and cost of goods sold ratio; Income share from sales of every item in	Total income; Total expenses; Tax expense; Sales revenues; Total cost of goods sold; Sales revenues from certain items; Cost of certain goods sold; Revenues from sales to certain clients; Costs of goods sold to certain clients; Sales price of certain items; Certain items cost; Revenues from sales of new products; Cost of new goods sold; Other income; Other expenses.

	total sales income; Income share from sales of new products in total sales income; Income share from sales to every client in total sales income; Every product sales income growth rate and total sales income ratio; New product sales income growth rate and total sales income ratio; Income form sales to every client and total sales income ratio.	

Source: the table was developed by the authors

4. Conclusion

To complete the treatment of the Applied Strategic Financial Analysis concept we draw the following conclusions:

Applied strategic financial analysis could be considered as a new and sufficiently effective instrument to research strategic aspects of the organization financial activity to form the analytical support of its strategic financial management;

The ASFA methodological basis is balanced scorecard concept and applied strategic analysis, as well as the methodological approach to the target forecast of the organization cash flow coming from its financial position analysis;

ASFA entails comparative assessment, diagnostics of variances and forecast of the organization financial BSC indicators in terms of its strategic financial goals;

ASFA encompasses analysis of the efficient utilization of assets and investments, analysis of the financial risks, analysis of the cash flows, and analysis of the income, expenses and profit.

ASFA analysis commences with comparative evaluation of the outcome indicators characterizing efficient utilization of assets and investments and is finalized with factoring indicators forecast for the income, expenses and profit.

ASFA results in ability to be employed for the long-term, medium and short-term management decisions in the field of the organization financial activity.

References

[1] Friedag, H. R. and Schmidt, W. (2002). *Balanced Scorecard: Mehr als ein Kennzahlensystem,* Berlin: Haufe Mediengruppe.

[2] Kaplan, R. S. (2008). Conceptual foundations of the balanced scorecard, *Handbook of Management Accounting Research,* vol. 3, pp. 1253-1269.

[3] Kaplan, R. S. and Norton, D. P. (1992). The balanced scorecard: Measures that drive performance, *Harvard Business Review,* vol. 70, no. 1, pp. 71-79.

[4] Kaplan, R. S. and Norton, D., P. (1993). Putting the balanced scorecard to work, *Harvard Business Review,* vol. 71, no. 5, pp. 134-142.

[5] Kaplan, R. S. and Norton, D.P. (1996). *The Balanced Scorecard: Translating Strategy into Action,* Boston: Harvard Business School Press.

[6] Kaplan, R. S., Norton D. P. and Rugelsjoen B. (2010). Managing alliances with the balanced scorecard, *Harvard Business Review,* vol. 88, no. 1-2 SI, pp. 114-120.

[7] Krylov, S. (2013). Applied Strategic Analysis as Further Balanced Scorecard Concept Development. *Proceedings of the 11th Eurasia Business and Economics Society (EBES) Conference.* Ekaterinburg, Russia, pp. 35-42.

[8] Krylov, S. I. (2014). Theoretical aspects of economic balanced scorecard analysis, *Asian Journal of Finance & Accounting,* vol. 6, no. 1, pp. 90-109.

[9] Krylov, S. and Ilysheva, N. (2016, A). Innovative Organization Activity Analysis by means of the Balanced Scorecard. *Proceedings of the Conference The 10th International Days of Statistics and Economics*. Prague, Czech Republic, pp. 965-974.

[10] Krylov, S. and Ilysheva, N. (2016, B). Integrated Management Analysis of Innovation Performance in Conditions of Globalization. *Proceedings of the 16th International Scientific Conference "Globalization and Its Socio-Economic Consequences*. Rajecke Teplice, Slovak Republic, pp. 734-740.

[11] Maisel, L. S. (1992). Performance management: The balanced scorecard approach, *Journal of Cost Management,* vol. 6, no. 2, pp. 47-52.

[12] Niven, P.R. (2014, A). *Balanced Scorecard Business Blocks: Mission, Vision, and Strategy,* Hoboken, NJ: John Wiley & Sons Inc., pp. 95-127.

[13] Niven, P.R. (2014, B). *Create a Balanced Scorecard of Robust Measures, Meaningful Targets, and Strategic Initiatives,* Hoboken, NJ: John Wiley & Sons Inc., pp. 221-267.

[14] Niven, P.R. (2014, C). *Integrating Change Management Techniques to Drive Balanced Scorecard Success,* Hoboken, NJ: John Wiley & Sons Inc., pp. 327-339.

[15] Niven, P.R. (2014, D). *Let Everyone Demonstrate Their Contributions by Cascading the Balanced Scorecard,* Hoboken, NJ: John Wiley & Sons Inc., pp. 305-326.

[16] Niven, P.R. (2014, E). *What Exactly is a Balanced Scorecard?* Hoboken, NJ: John Wiley & Sons Inc., pp. 1-28.

[17] Olve, N.-G., Roy, J. and Wetter, V. (2000). *Performance Drivers: A Practical Guide to Using the Balanced Scorecard,* Chichester: John Wiley & Sons, Ltd.

[18] Rampersad, H. K. (2008). The way to a highly engaged and happy workforce based on the personal balanced scorecard, *Total Quality Management & Business Excellence,* vol. 19, no. 1-2, pp. 11-27.

LEVEL OF DIGITAL COMPETENCES AMONG YOUNG ADULTS FROM THE BALTIC COUNTRIES IN AN ERA OF GLOBALIZATION

Ewa Krzyżak-Szymańska[1,a,*], Andrzej Szymański[2,b]

[1]Academy of Physical Education in Katowice, 72a, Mikołowska str., 40-065 Katowice, Poland

[2]Academy of Physical Education in Katowice, 72a, Mikołowska str., 40-065 Katowice, Poland

[a]ewa.krzyzakszymanska@gmail.com, [b]szymanskiandrzej39@wp.pl

* Corresponding author

Abstract. In the age of globalization and continuous changes in the world of new digital technologies, its digital competences are an important element of human functioning. It consists of Internet competences and computer competences. These digital competences impact on the effectiveness of human activity in the online world. In the age of globalization, they also determine how to meet daily needs. Taking into account the above, an international study was carried out in 2015 among young adults in the Baltic countries. It involved students from Poland, Lithuania and Latvia. The aim was to determine the level of digital (Internet and computer) competences of the respondents. In addition to these competences, the level of social competences of the respondents was also examined. The relationships that exist between the digital competences and the social unit were defined too. The study covered 1048 students, including 690 women and 322 men over the age of 18. They were made by the method of diagnostic survey. It uses the online survey technique, and the research was conducted using the portal Ankietka.pl. The project included the Matczak's Social Competences Questionnaire (KKS) and the list of digital competences (Internet and computer) prepared in the framework of EUROSTAT's statistical surveys in Europe. Research has determined that there is a statistically significant difference between the groups representing individual nations (Lithuanian, Polish, Latvian), in terms of digital skills and social competences.

Keywords: digital competences, social competences, Internet, young people

JEL Classification: I20, J80, Q55, O35

1. Introduction

In the days of globalization and dynamic technological advance, acquiring social competences, including the ones connected with the use of digital media, became the necessity and the requirement of modern life. The term of social competences means a set of complex abilities, which determine the effectiveness of performance in various kinds of social situations (Argyle, 1998), (Bobrowska-Jabłońska, 2003), (Elias et al., 1997).

The acquired abilities are the result of the entirety of experiences obtained by the particular person in the process of socialization. They can be developed in many matrices by formal and informal education as well (Miłaszewicz, 2015), (Spitzberg & Cupach, 2002). They are created as a result of social training which takes place during the engagement of a person in social and task situations (Matczak, 2006). The abilities encompass the knowledge about recognition of social rules, the capability of interpersonal aims formulation, solution planning, explaining and predicting the behavior of other people, the selection, coordination and employment of adequate strategies as regards the existing problems (Decoene, 1998), (Gullotta et al., 1993), (Rathjen & Foreyt, 1983), (Schneider et al., 1991). The environment providing new training area to develop competences is at present online setting as well. This space, with its diversity and complexity, ensures many new opportunities to develop but it's a source of a range of threats as well (Guzzetti & Lesley, 2015). Therefore, using the web requires special digital competences apart from the general social competences of a user. The digital competences consist in professional and critical use of social technology (IST) at work, in entertainment, education or in communication (Europen Commission, 2014). They consist of communication and information competences. The former ones encompass searching for the information, understanding and evaluation of its credibility and usefulness. The latter competences concern the ability to use the computer and other electronic appliances, applications and software of various kind and the ability to use the Internet and create digital contents (Fernandez Sanchez et al., 2016), (Machado et al., 2016), (O'Donnell, 2016), (Szymanek, 2013), (Szymanek, 2015). The lack of proper competences may result in digital exclusion or improper (abused) use of the new technologies (Krzyzak-Szymanska et al., 2016), (Kuss & Billieux, 2017), (Sariyska et al., 2016), (Young, 2017).

It results from the European Commission JRC report that in 2015 - 45% of EU population did not possess at all or possessed digital competences with low level (Vuorikari, 2016). In eight countries (PT, PL, HR, CY, IT, EL, BG and RO), including Poland, there were at least 30% of residents without digital abilities. A little better situation could be observed in Latvia (22%) and Lithuania (29%) (Europen Commission, 2016).

The level of digital and social competences of respondents was established during the research, what's more the issue whether any connections between social and digital competences exist was researched as well as the existence of significant differences between competences of Polish, Lithuanian and Latvian students.

2. Presentation of results of own research

2.1 Methodological aspect of research

The research was realized in 2015. It was conducted online with the use of Ankietka.pl portal. The main way of conduct in the project was the diagnostic survey method. Within its framework the author's questionnaire was used and it included the questions concerning digital competences[8] among others and Social Competences Questionnaire (Kwestionariusz Kompetencji Społecznych, KKS) by Anna Matczak.

[8] In the research the list of basic digital competences with the divisison for computer and Internet competences according to Eurostat in 2015 was taken (Szymanek, 2015).

There were cumulatively 1048 students from 3 European countries: Poland- 466 students, Latvia- 268 students and Lithuania- 314 students. The researched students are above 18 years old. In the group of respondents 28% were between 18-20, 29% were 21-23 years old and 43% were 24 or more. There were 2/3 of women and 1/3 of men among the respondents.

2.2 Digital competences of respondents

In the realised project the digital competences (computer and information competences) distinguished by EUROSTAT as the basic ones and the social competences of respondents determined in Matczak's Social Competences Questionnaire (KKS) were researched. In the range of the tested competences, their level was defined as low, medium or high[9].

First, the digital competences of respondents as regards their origin country were researched. The data is presents in Table 1.

Table 1: Digital competences of respondents by nationality

Digital competences		**Country**						**Total**	
		Poland		Latvia		Lithuania			
		N	%	N	%	N	%	N	%
Computer competences	Specialized programming language	176	37.8	77	28.7	143	45.5	396	37.8
	Compressing files	399	72.7	195	72.8	194	61.8	728	69.5
	Connecting and installing new devices	424	91.0	232	86.6	246	78.3	902	86.1
	Using basic mathematical functions in a spreadsheet	435	93.3	222	82.8	254	80.9	911	86.9
	Using tools to copy or cut and paste	455	97.6	260	97.0	273	86.9	988	94.3
	Copy or moving a file or a folder	466	100.0	261	97.4	279	88.9	1006	96.0
Internet competence	Websites developing	259	55.6	94	35.1	95	30.3	448	42.7
	Using the files sharing programs (P2P)	231	49.6	146	54.5	91	29.0	468	44.7
	Chat rooms, discussion forums participating	429	92.1	216	80.6	244	77.7	889	84.8
	Telephoning over the Internet	391	83.9	242	90.3	266	84.7	899	85.8
	The use of the Internet search engine	453	97.2	263	98.1	272	87.6	991	94.6
	E-mails with attachments sending	453	97.2	267	99.6	273	86.9	993	94.8

Source: own study

As it results from Table 1, the computer competences as regards programming in specialist programming language can be found in every third respondent. 2/3 of students possess the

[9] In the range of researched digital competences, their level was defined as regards following scheme: possession of 1-2 competences out of 6 defined- low competency; possession of 3-4 competences out of 6 defined- medium competency; possession of 5-6 competences out of 6 defined- high competency. While in the range of social competences the distinguishing feature of level was based on the number of stens attributed to raw results (1-3 stens - low results, 4-7 stens- medium results, 8-10 stens - high results).

ability to compress the files. They are able to connect and install various appliances to computer. Moreover, the respondents do not have any problem with the use of spreadsheets, copying, cutting or inserting tools or with moving (copying) files or folders. When it comes to Internet abilities, the respondents mastered at the lowest level the creation of websites and using the programs to exchange files (P2P). The lack of those abilities is visible in about 40% of respondents. While such activities as sending emails with attachments and using web browser are commonly carried out by the respondents.

Analyzing the dependencies between the country of origin of the respondent and the researched competences it can be stated that all off the dependencies are statistically significant. In the case of researched competences the respondents differ significantly. The strongest dependencies concern such competences as: creating websites (Cramer's V= 0.178, p=0.001) and sending emails with attachments (Cramer's V= 0.162, p=0.001).

Analyzing the dependencies between the respondents' gender and their computer competences it can be stated that statistically insignificant dependencies occurred only in the following competences: using the basic math functions in a spreadsheet, connection and installation of new appliances, participation in online chats and Internet fora, making phone calls through Internet. In the remaining abilities the respondents differ significantly depending on their gender. The strongest dependencies concern the discovering and solving the problem with computer (Cramer's V= 0.352, p=0.001), using the programs to exchange files (P2P) (Cramer's V =0.300, p=0.001), creating the websites (Cramer's V= 0.202, p=0.001).

It was considered as well how many competences, from the range of those defined in the catalogue, are possessed by the respondents. On the basis of this knowledge (according to model approved by Eurostat), the level of digital competences for particular respondents was calculated (see footnote 10) taking into consideration their nationality.

Table 2: Level of digital competences of respondents with the division for nationality

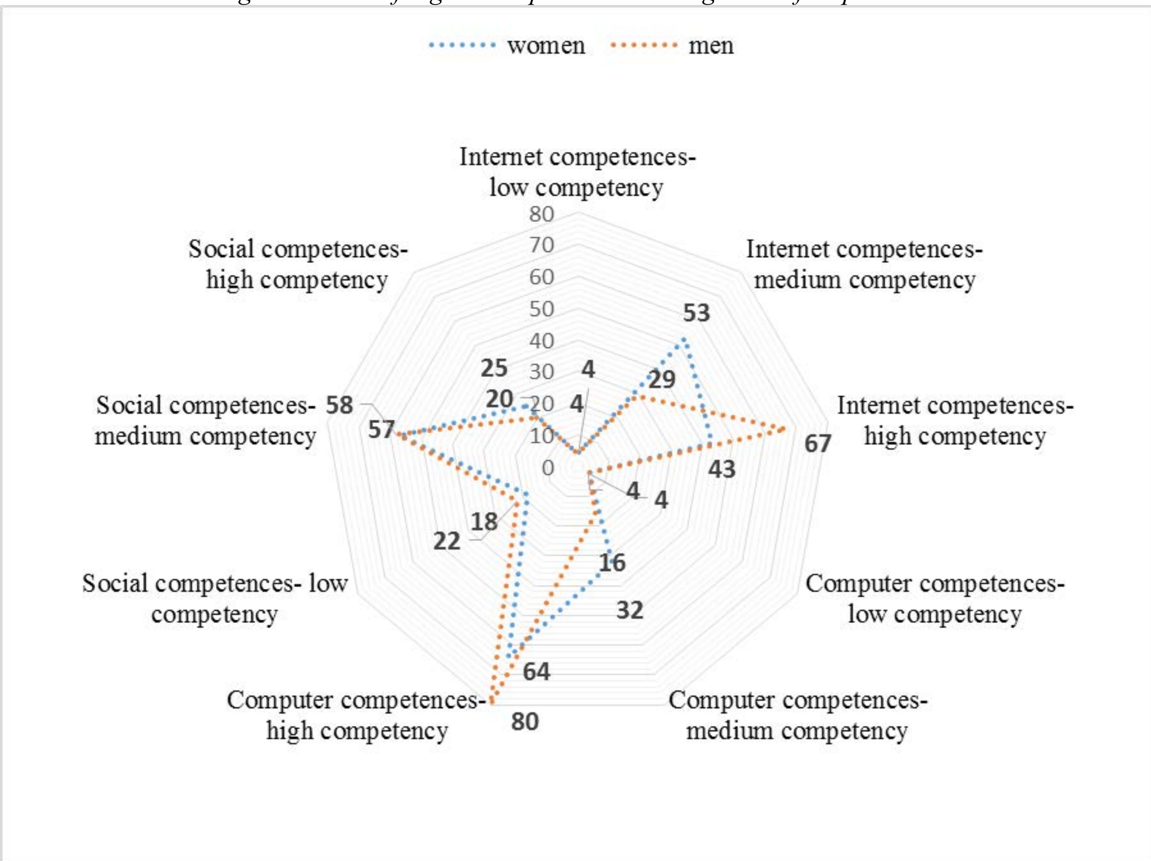
Level of digital competences		**Country**						**Total**	
		Poland		Latvia		Lithuania			
		N	%	N	%	N	%	N	%
computer competences	low	16	2.6	8	3	27	6.8	51	4.9
	medium	109	22.7	86	31.3	98	29	293	28.0
	high	341	74.7	174	65.7	189	64.2	704	67.1
	total	466	100.0	268	100.0	314	100.0	1048	100.0
Internet competences	low	17	3.2	8	2.6	29	5.9	54	5.2
	medium	170	36.7	120	44.9	181	58.3	471	44.9
	high	279	60.0	140	52.4	104	35.8	523	49.9
	total	466	100.0	268	100.0	314	100.0	1048	100.0

Source: own study

As it results from Table 2- 67% of respondents possess high computer competences and 50% possess high Internet competences. The most numerous group of students with high computer competences is from Poland (75% of Polish sample) and the smallest group comes from Lithuania (64% from Lithuanian sample). When it comes to Internet competences, the results are similar to computer competences. The highest number of people representing high level of competences comes from Poland (60% of sample) and the lowest number of people comes from Lithuania (36% of sample).

Further on, there was an examination whether the gender variable significantly differentiates the level of computer and Internet competences of respondents. The distribution of the results is presented in Figure 1.

Figure1: Level of digital competences versus gender of respondents



Source: own study

It was established that the respondents differ significantly at the level of digital competences when it comes to their gender. The level of computer competences of respondents (Cramer's V= 0.149, p=0.001) and the level of Internet competences of respondents (Cramer's V= 0.219, p=0.001) are differentiated by gender significantly, but barely.

Taking into consideration the data concerning the number of respondents' digital competences there was a single-factor analysis of variances for the independent samples in order to verify the hypothesis that the country of origin has the influence on the mean number of possessed digital competences. In this aspect, the statistically significant effect of student's nationality was obtained F (2.1044)=29.566, p<0.001.

The comparisons made post hoc with the use of Games- Howell test revealed significant differences (p<0.001) between all of the groups. The highest mean number of digital competences belongs to respondents from Poland (M=9.67, SD= 2.04), the respondents from

Latvia can be found significantly lower (M=9.24, SD= 1.83) and at the lowest point the respondents from Lithuania (M=8.38, SD= 2.94), p< 0.001.

Additionally to analyze the dependencies between digital competences and social competences, the level of social competences was established in the beginning with the use of Matczak's Social Competences Questionnaire (KKS). The results of the test are presented in Table 3.

Table 3: Types of social competences of respondents

TYPES OF SOCIAL COMPETENCES	THE LEVEL OF COMPUTER COMPETENCES	COUNTRY						TOTAL	
		Poland		Latvia		Lithuania			
		N	%	N	%	N	%		
GENERAL RESULT OF KKS	low	80	17.2	55	20.5	69	22.0	204	19.5
	medium	268	57.5	178	66.4	155	49.4	601	57.3
	high	118	25.3	35	13.1	90	28.7	243	23.2
	total	466	100.0	268	100.0	314	100.0	148	100.0
COMPETENCES IN INTIMATE SITUATIONS	low	47	10.1	45	16.8	54	17.2	146	13.9
	medium	302	64.8	184	68.7	167	53.2	653	62.3
	high	117	25.1	39	14.6	93	29.6	249	23.8
	total	466	100.0	268	100.0	314	100.0	148	100.0
COMPETENCES IN SOCIAL EXPOSITION	low	78	16.7	40	14.9	65	20.7	183	17.5
	medium	259	55.6	173	64.6	166	52.9	598	57.1
	high	129	27.7	55	20.5	83	26.4	267	25.5
	total	466	100.0	268	100.0	314	100.0	148	100.0
COMPETENCES IN SITUATIONS REQUIRING ASSERTIVENESS	low	63	13.5	56	20.9	59	18.8	178	17.0
	medium	274	58.8	175	65.3	162	51.6	611	58.3
	high	129	27.7	37	13.8	93	29.6	259	24.7
	total	466	100.0	268	100.0	314	100.0	148	100.0

Source: own study

Taking into consideration the data concerning the general KKS test result there was a single-factor analysis of variances for the independent samples in order to verify the hypothesis that the origin country of respondents has the influence on the mean level of social competences obtained by them. It was established that there is statistically insignificant influence of students' nationality on the test result obtained by them.

Further on, the existence of statistically significant correlations between the level of social competences and the level of computer and information competences was analyzed. In order to do this, the coefficient of Spearman's correlation rho was used. It was established that statistically significant dependence between the level of computer and information competences exists (r=0.426 the correlation significant on the level of significance 0.05). Additionally, the correlation between the level of social and computer competences (r=0.069 the correlation significant on the level of 0.05) and the level of social and information competences (r=0.055 the correlation significant on the level of 0.05). Those are the positive, statistically significant, but weak correlations.

3. Conclusion

The advancement of the digital competences of Europeans became one of the priorities of European Union, because the lack of such competences or their low level is a threat for the economy growth. The rapidly advancing technological changes lead to automatization of routine tasks, simultaneously contributing to creation of new professions which require more advanced abilities. The significance of digital competences among students is significant especially for those who will realize the professional tasks in the demand for newer and newer competences.

It results from the conducted research that respondent students possess higher level of digital competences than mean European sample taken into consideration in EUROSTAT research from 2015. Almost 2/3 of respondents present high computer competences. The most numerous group of students with high level of computer competences is Polish group of students (75% of Polish sample), and the least numerous group comes from Lithuania (64% of Lithuanian sample). Additionally, more than a half of respondents possess high Internet competences. Similarly to computer competences, the Internet competences are visible the most in Polish group (60% of a sample) and the least in Lithuanian group (36% of Lithuanian sample).

The research indicated that there are statistically significant dependencies between the respondents' country of origin and their gender and the digital competences. It was stated as well that there is statistically significant dependence between the level of computer and information competences (r_s= 0.426 the correlation significant on the level of 0.01) obtained by the respondents.

During the research, the existence of positive, statistically significant, but weak correlations between the researched level of social and computer competences of respondents (r_s= 0,069 the correlation significant on the level of 0.05) and the level of their social and information competences (r = 0.055 the correlation significant on the level of 0.05) was noted.

Acknowledgment

This paper is an output of the science project "Problematic usage of the new digital technologies by student" – project was realized by Katowice School of Economics from Poland, Baltic International Academy from Latvia and Utena University of Applied Sciences from Lithuania.

References

[1] Argyle, M. (1998). Zdolności społeczne. In S. Mosciovici (Eds.), *Psychologia społeczna w relacji ja inni,* pp. 77-104, Warsaw, Poland: WsiP.

[2] Bobrowska-Jabłońska, K. (2003). Znaczenie inteligencji emocjonalnej i kompetencji społecznych w kształceniu w SGH - raport z badań. *E-Mentor*, vol. 2, pp. 22-27.

[3] Decoene, S. (1998). Intelligence and social competence. *Psychologica Belgica*, vol. 38, pp. 52-53.

[4] Elias, M., J., Zins, J., E., Weissberg, R., P. et al. (1997). *Promoting social and emotional learning*. Aleksandria, VA: Association for Supervision and Curriculum Development.

[5] Europen Commission. (June 2017). Measuring Digital Skills across the EU: EU wide indicators of Digital Competence 2014. [Online]. Available: https://ec.europa.eu/digital-single-market/en/news/measuring-digital-skills-across-eu-eu-wide-indicators-digital-competence

[6] Europen Commission. (May 2014). Digital Skills across the EU: EU wide indicators of Digital Competence. [Online]. Available: https://ec.europa.eu/digital-single-market/en/ news/measuring-digital-skills-across-eu-eu-wide-indicators-digital-competence

[7] Europen Commission. (May 2016). Europe's Digital Progress Report. [Online]. Available: https://ec.europa.eu/digital.../europes-digital-progress-report-2016

[8] Fernandez Sanchez, M. R., Sanchez-Oro Sanchez, M. and Ramirez, R. (2016). The evaluation of the digital competence in university teaching: the case of business and economic's undergraduates. *Revista Colombiana de Ciencias Sociales*, vol. 7, pp. 332-348.

[9] Gullotta, T. P., Adams, G. R. and Montemayor, R. (1993). Developing social competence in adolescence. *Journal of social and personal relationship*, vol. 10, pp. 635-636.

[10] Guzzetti, B. and Lesley, M. (2015). *Handbook of Research on the Societal Impact of Digital Media*, 1st ed. Hershey PA, USA: IGI Global.

[11] Krzyzak-Szymanska, E., Szymanski, A., Warzecha, K. (2016). Risk of mobile phone addiction. Presentation of the results of international research conducted among polish, latvian and lithuanian students. *Globalization and its socio-economic consequences, 16th international scientific conference proceedings*, Part III. Zilina, Slovakia, pp. 1093-1100.

[12] Kuss, D. J. and Billieux, J. (2017). Technological addictions: Conceptualisation, measurement, etiology and treatment. *Addictive Behaviors,* vol. 64, pp. 231-233.

[13] Machado, L., Klein, A. Z., Freitas, A. et al. (2016). The Use of Virtual Worlds for Developing Intercultural Competences. *International Journal of Information and Communication Technology Education*, vol. 12, pp. 51-64.

[14] Matczak, A., Jaworowska, A., Ciechanowicz, A. et al. (2006). *Bateria testów APIS-Z: podręcznik*. Warsaw, Poland: PTP.

[15] Miłaszewicz D. (2015). Kompetencje społeczne polskich i litewskich studentów – analiza porównawcza. In J. Sokołowski, G. Węgrzyn, M. Rękas (Eds.), *Ekonomia*, pp. 296-305, Wroclaw, Poland: UE.

[16] O'Donnell, S. (2016). Digital skills: unlocking the information society. *Information Communication & Society*, vol. 19, pp. 1770-1772.

[17] Rathjen, D. P. and Foreyt, J. P. (1983). Social competence. *Journal of Nervous and Mental Disease*, vol. 171, pp. 391-391.

[18] Sariyska, R., Lachmann, B., Reuter, M. et al. (2016). Internet use: Personality and motivation behind using the Internet, and cross-cultural specifics. *Journal of Behavioral Addictions*, vol. 5, pp. 39-39.

[19] Schneider, B. H., Attili, G., Nadel, G. et al. (1991). Social competence in developmental Perspective. *Zeitschrift Fur Psychologie*, vol. 199, pp. 211-211.

[20] Spitzberg, B. H. and Cupach, W. R. (2002). Interpersonal skills. In M.L. Knapp and J.R. Daly (Eds.), *Handbook of interpersonal communication*, 3rd ed, pp. 564-611, Newbury Park, CA: Sage.

[21] Szymanek, V. (2013). *Społeczeństwo informacyjne w liczbach 2013*, Warsaw, Poland: Ministerstwo Administracji i Cyfryzacji.

[22] Szymanek, V. (2015). *Społeczeństwo informacyjne w liczbach 2015.* Warsaw, Poland: Ministerstwo Administracji i Cyfryzacji.

[23] Vuorikari, R., Punie, Y., Carretero, S. et al. (2016). *DigComp 2.0: The Digital Competence Framework for Citizens. Update Phase 1: The Conceptual Reference Model*. Luxembourg, EU: Joint Research Centre.

[24] Young, K. S. (2017). The evolution of Internet addiction. *Addictive Behaviors*, vol. 64, pp. 229-230.

THE PROBLEM OF PERSISTENCE OF FIXED ASSETS ACCOUNTING AND TAX DIFFERENCES WITHIN THE EU IN THE TIME OF GLOBALIZATION AND HARMONIZATION

Ivana Kuchařová[1,a,*], Daniela Pfeiferová[2,b,*] and Anna Sturcová[3,c]

[1]Czech University of Life Sciences Prague, Faculty of Economics and Management, Department of Trade and Finance, Kamýcká 129, Prague, Czech Republic

[2]Czech University of Life Sciences Prague, Faculty of Economics and Management, Department of Trade and Finance, Kamýcká 129, Prague, Czech Republic

[3]Czech University of Life Sciences Prague, Faculty of Economics and Management, Department of Trade and Finance, Kamýcká 129, Prague, Czech Republic

[a]kucharovai@pef.czu.cz, [b]pfeiferova@pef.czu.cz, [c]cerna.ani@gmail.com

*Corresponding author

Abstract. This paper deals with the issue of the unequal position of long-term assets, ie financial assets, for business entities. Long-term assets will be analyzed in the Czech Republic, the Slovak Republic and the Federal Republic of Germany. The inequality remains unchanged, despite efforts to harmonize accounting practices within the European Union, where partial directives are introduced into the legislation of individual sovereign states. Another area that the article will focus on is the area of disagreement in the assessment of long-term assets. There is a different impact of taxes on corporate income here, despite the efforts of establishing a fair tax base for corporations through CCCTB, which is a long-term property one of the components of the allocation formula. Different accounting definitions of long-term assets in individual countries have an impact on the varied depreciation rates applied and hence on the different levels of accounting costs, or on corporate profit. An equally negligible aspect is the different definition of long-term assets for tax purposes, which affects the amount of tax depreciation applied. The different definition of long-term assets for tax purposes then has a different degree of impact on the corporate income tax base. The aim of this paper is to define long-term assets under the laws of individual states, to analyze the collected information and comparison within the definition of the main differences in registration and depreciation of fixed assets among the surveyed countries.

Keywords: accounting, depreciation, European Union, fixed assets, tax

JEL Classification: M40, M41, Q14, M21

1. Introduction

Postupující globalizace je chápána jako dlouhodobý proces, který spojuje státy a kontinenty celého světa v kulturní, politické, ekonomické aj. oblasti a požaduje mimo pohybu zboží a lidí také pohyb informací přesahující jakékoli hranice. Informace, vycházející z účetnictví, jsou zpracovány do podoby účetních výkazů korporací; musí být srovnatelné mezi jednotlivými státy a tím poskytovat relevantní informace především pro potenciální investory.

Účetní definování, oceňování a volba způsobu odpisování fixních aktiv mají vliv na výši vykazovaných aktiv v rozvaze, na výši uplatněných nákladů v běžném období a na celkový výsledek hospodaření (Mykolaitiene et al., 2010). Dle Bartošové (2016) je provedení finanční analýzy nezbytným nástrojem pro posouzení účinnosti využití fixního majetku, kdy tím více roste význam způsobu jeho zachycení ve výkazech, odkud jsou data přebíraná do ukazatelů finanční analýzy. Podle studie Jáčové & Horáka (2015) je zřejmé, že i volba různých způsobů vyřazení dlouhodobých aktiv ovlivňuje podnikatelskou výkonnost společnosti.

2. Literature review

Výzkum, provedený o zaznamenávání odpisování dlouhodobého majetku ve středověké Evropě v období 12. – 13. století s cílem zjistit, zda již v tomto čase bylo uvažováno o znehodnocení aktiv, dokázal, že již v nejstarších zkoumaných archivních účetních případech byly užívány čtyři metody odpisování dlouhodobého majetku, z nichž jedna je stanovena na základě doby jeho použitelnosti (Gurskaya et. al., 2016).

Definování fixních aktiv je nastaveno legislativami jednotlivých států, případně IFRS či US GAAP, což vede k nejednotnosti účetního a daňového globálního vyhodnocování získaných informací z účetních výkazů. Vzhledem k tomu, že se výsledek hospodaření stává základnou pro výpočet daňové povinnosti korporací a kdy stále více korporací řeší přesun svého podnikání do daňově příznivých jurisdikcí, stále více vyvstává otázka co nejrychlejšího zavedení společného konsolidovaného korporátního základu daně z příjmů (CCCTB), dle kterého jsou charakteristiky fixních aktiv, způsoby oceňování a metody odpisování naprosto specifické (Kuchařová & Pfeiferová, 2015).

Specifickou kategorií v rámci fixních aktiv jsou biologická aktiva, kam jsou řazena zvířata, rostliny a lesní porosty, u kterých je komplikované především oceňování v průběhu celého jejich biologického cyklu (Kosovska & Varyova, 2016). Ve srovnávací analýze navrhují Bohušová et al. (2012) metody pro definování biologických aktiv, jejich oceňování a vykazování jako možnou alternativu k IAS 41 – Biologická aktiva. Oceňování zemědělské produkce je řešeno na základě rozboru dat získaných od zemědělských společností také v textu autorek Hinke & Stárová (2014). Rozdílné hodnoty v oceňování zvířat a rostlinné výroby v postupech dle českých účetních standardů a IFRS vedou k odlišným hodnotám v účetních výkazech účetní jednotky, a proto neposkytují spravedlivý pohled na účetnictví a způsobují nesrovnatelnost mezi společnostmi (Dvořáková, 2015). Dle Sedláčka (2010) vychází tato odlišnost v oceňování biologických aktiv ze skutečnosti, že Mezinárodní standardy finančního výkaznictví preferují princip „fair and true“, naproti tomu v ČR je používán princip opatrnosti. Naproti tomu se v Lotyšsku definování, oceňování a účtování biologických aktiv řídí zákonem o ročních účetních závěrkách či požadavky IAS 41, proto Ore (2011) navrhuje ve svém analyzujícím článku možnosti harmonizace obou postupů s cílem co nejmenšího zkreslování výstupních informací. Při srovnávání účetních výkazů sestavených dle IFRS a české legislativy pro posouzení dopadů na rozhodování investorů a majitelů korporací výzkum Sedláčka (2016) ukázal, že i přes značné úsilí o zavádění společných postupů v rámci harmonizace účetnictví existují stále významné rozdíly v obou přístupech, které by měly být při rozhodování zohledněny.

Základ daně společností vykazujících dle IFRS musí vycházet z výsledku hospodaření stanoveného za postupu dle českých účetních předpisů (Stárová & Čermáková 2010). Při komparaci fixních hmotných a nehmotných aktiv dle české legislativy, IAS/IFRS a US GAAP byly v pracích Svobody (2007, 2008) odhaleny významné rozdíly v definicích a způsobech oceňování. Problematikou dlouhodobého majetku se zabývali také Tušan et. al. (2013), kteří provedli komparaci fixních aktiv z pohledu IFRS a slovenských účetních předpisů a určili základní odlišnosti v definování, postupech účtování a ve způsobech stanovení výše odpisů.

V některých korporacích se bohužel stává populárním kreativní účetnictví, které se pohybuje na hraně zákona či morálního vědomí s cílem snížení daňové zátěže či vylepšení hodnot různých ekonomických ukazatelů pro různé účely. Fixní aktiva poskytují dle české legislativy manipulační prostor pro užití kreativních postupů, což důsledné dodržování mezinárodních účetních standardů spíše omezuje (Nývltová 2016).

3. Method and data analysis

Cílem předkládané srovnávací studie je pomocí provedené komparační analýzy zjistit, jakým způsobem je definován dlouhodobý majetek korporací a jaké jsou možnosti jeho odpisování dle české, slovenské a německé účetní a daňové legislativy. Na modelovém příkladu bude demonstrován vliv zvolených postupů na základ korporátní daně.

3.1 Comparative analysis

Česká republika upravuje z účetního hlediska dlouhodobý majetek v zákoně o účetnictví č. 563/1991 Sb., v prováděcí vyhlášce pro podnikatele č. 500/2002 Sb. a v českém účetním standardu č. 013 – Dlouhodobý nehmotný a hmotný majetek, který je zakotven jako příloha dané vyhlášky. Daňová pravidla dlouhodobého majetku jsou obsažena v zákoně o daních z příjmů č. 586/1991 Sb.

Ve Slovenské republice je dlouhodobý majetek podnikatelů a jeho odpisování upraven v zákoně č. 431/2002 Z.z. o účtovníctve, zákonem č. 595/2003 Z.z. o dani z prijmov a dále Opatreniem Ministerstva financí SR č. 23054/2002-92, kterým sa ustanovujú podrobnosti o postupech účtovania a rámcovej účtovej osnove pre podnikateĺov účtujúcich v ústave podvojného účtovníctva.

Spolková republika Německo vymezuje dlouhodobá aktiva zejména v předpisech Handelgesetzbuch (HGB) - obchodní zákoník a v Einkommensteuergesetz (EStG) - zákon o daních z příjmů.

Při analýze právních předpisů upravujících **účetnictví** byly zjištěny následující hodnoty u zvolených parametrů:

Table 1: Komparace definování a možnosti odpisování dlouhodobého majetku – účetní hledisko

Parametr	ČR	SR	SRN
Doba použitelnosti	Delší než 1 rok dle ČÚS- 013	Delší než 1 rok dle § 37 -38 opatření MFSR Dospělá zvířata mají dobu životnosti alespoň 4 roky	**HGB § 247** požaduje dlouhodobé užití v podnikání; Griga&Krauledis (2016) doplňují požadavek na alespoň 1 rok
Výše ocenění	Cenová hranice hmotných a nehmotných aktiv je stanovena účetní jednotkou	Dlouhodobý nehmotný majetek je v ocenění vyšším než 2 400 EUR;	Drobný dlouhodobý majetek do 150 EUR je možné uplatnit přímo do nákladů a

Parametr	ČR	SR	SRN
	na základě hlediska významnosti ceny dle ČÚS-013	Dlouhodobý hmotný majetek (samostatné movité věci) je v ocenění vyšším než 1 700 EUR dle Opatření MFSR	nemusí se vykazovat v dlouhodobém majetku; Dlouhodobý hmotný majetek (samostatné movité věci) je v ocenění vyšším než 410 EUR; Majetek v ceně 150-410 EUR může být odepsán již v prvním roce, ale musí být vykázán v dlouhodobém majetku. Platí daňová pravidla z EStG § 6 odst. 2
Metody účetního odpisování	Lineární, zrychlené, výkonové, komponentní dle § 56-56a vyhlášky	Lineární, zrychlené, výkonové, komponentní dle § 23 Opatření MFSR	Lineární, aritmeticko-degresivní, geometricko-degresivní, výkonové, komponentní dle § 253 odst. 3 HGB
Počátek účetního odpisu	V kompetenci účetní jednotky dle stanovení ve vnitropodnikové směrnici	V kompetenci účetní jednotky dle stanovení ve vnitropodnikové směrnici	Od měsíce zařazení majetku do užívání Griga&Krauledis (2016)
Zaokrouhlování odpisované částky	Na celé Kč nahoru dle ČÚS-013	V kompetenci účetní jednotky dle stanovení ve vnitropodnikové směrnici	Není upraveno
Zákonná evidence dlouhodobého majetku	Ne – pouze doporučená	Ano – karta dlouhodobého majetku dle § 42 Opatření MFSR	Ano – v ročním výkazu dlouhodobého majetku dle § 284 HGB

Source: Vlastní zpracování dle uvedených zdrojů

Při analýze právních předpisů upravujících **daň příjmů korporací** byly zjištěny následující hodnoty u zvolených parametrů:

Table 2: Komparace definování a možnosti odpisování dlouhodobého majetku – daňové hledisko

Parametr	ČR	SR	SRN
Výše ocenění	Cenová hranice hmotných movitých věcí a dospělých zvířat je vyšší než 40 000 Kč dle § 26 ZDP Cenová hranice nehmotných aktiv je vyšší než 60 000 Kč dle § 32a ZDP	Dlouhodobý nehmotný majetek je v ocenění vyšším než 2 400 EUR dle § 22 odst. 7 Zákona o dani z prijmov; Dlouhodobý hmotný majetek (samostatné movité věci) je v ocenění vyšším než 1 700 EUR dle § 22 odst. 2 Zákona o dani z prijmov;	410 EUR je maximální cena dlouhodobého drobného majetku Dlouhodobý nehmotný a hmotný majetek (samostatné movité věci) je v ocenění vyšším než 410 EUR; dle EStG § 6 odst. 2
Metody daňového odpisování	Lineární, zrychlené, dle § 31-32 ZDP	Lineární, zrychlené pouze pro 2. a 3. odpisovou skupinu, dle § 27-28 Zákona o dani z prijmov	Lineární, výkonové, dle § 7-7k EstG
Počátek daňového odpisu	Nehraje roli; v roce zařazení majetku se uplatní plnohodnotný roční odpis	Od měsíce zařazení majetku do užívání dle § 27-28 Zákona o dani z prijmov	Od měsíce zařazení majetku do užívání **Griga&Krauledis (2016)**
Zaokrouhlování	Na celé Kč nahoru dle § 31-	Na celá Eura nahoru dle §	Není upraveno

Parametr	ČR	SR	SRN
odpisované částky	32 ZDP	27-28 Zákona o dani z prijmov	
Počet odpisových skupin a počet let odpisování	6 skupin (3; 5; 10;20;30;50 let) dle přílohy č. 1 a 2 ZDP	6 skupin (4; 6; 8; 12; 20; 40 let) dle § 26 odst1 Zákona o dani z prijmov	Využívají se Afa-Tabelle, kde jsou uvedené doby odpisování podle jednotlivých druhů majetku podle zaměření činnosti dané korporace

Source: Vlastní zpracování dle uvedených zdrojů

3.2 Case study

Na základě provedené komparační analýzy je v následující modelové studii zvolen takový účetní a daňový postup, který je v jednotlivých legislativách zkoumaných států zákonem nařízen.

Porovnání zvolených konkrétních postupů bude doloženo na modelu pořízení fixního aktiva-hmotné movité věci – traktoru, v pořizovací ceně 1 200 000 Kč, což při nastaveném teoretickém kurzu 25 Kč/EUR činí v přepočtu 48 000 EUR. Účetní a daňové předpisy jednotlivých států vyplývající z komparační analýzy (Tab. 1, Tab. 2) jsou použity v Tab. 3.

Table 3: Hmotná movitá věc- parametry studie vycházející z komparace

Parametr	ČR	SR	SRN
Pořizovací cena	1 200 000 Kč (v přepočtu 48 000 EUR)	48 000 EUR	48 000 EUR
Datum pořízení	12. 9. 2016	12. 9. 2016	12. 9. 2016
Účetní odpis	Zrychlený na 15 let (zvolen dle vnitřní směrnice)	Zrychlený na 15 let (zvolen dle vnitřní směrnice)	Geometricko-degresivní na 15 let se zbytkovou hodnotou uvažovanou ve výši 800 EUR (zvolen dle vnitřní směrnice)
Daňový odpis	Zrychlený (zvolen dle vnitřní směrnice)	Povinně rovnoměrný neboť se jedná o majetek v 1. odpisové skupině	Rovnoměrný
Odpisová skupina	Č. 2	Č. 1	Kód AfA Tabelle: 4.2.4
Počet let daňového odpisování	5 let	4 roky	12 let
Začátek daňového odpisování	31. 10. 2016	30. 9. 2016	30. 9. 2016
Začátek účetního odpisování	31. 10. 2016	31. 10. 2016	30. 9. 2016

Source: Vlastní zpracování

Pro výpočet účetního měsíčního geometricky-degresivního odpisu v SRN je nutné nejprve vypočítat odpisové procento:

$$p = \left(1 - \sqrt[15]{\frac{zbytková\ hodnota}{pořizovací\ cena}}\right) \times 100 \tag{1}$$

Odpis v prvním roce odpisování se poté stanoví jako součin vypočteného procenta a vstupní ceny majetku:

$$RO1 = pořizovací\ cena \cdot p \cdot (počet\ měsíců\ odpisu)/12 \tag{2}$$

Odpis pro další roky:

$$ROd = \text{zůstatková cena} \cdot p \cdot (\text{počet měsíců odpisu})/12 \quad (3)$$

Na základě uvedených vzorců a za užití postupů dle paragrafů z Tab. 1 byly vypočteny hodnoty účetních odpisů v Tab. 4 podle stanovených kritérií studie v Tab. 3.

Table 4: Účetní odpisování traktoru v ČR, SR, SRN

Rok	ČR a SR - zychlený odpis				SRN – geom.-degresivní odpis (EUR)	
	odpis (Kč)	odpis (EUR)	ZC (Kč)	ZC (EUR)	odpis	ZC
2016	39 560	1 583	1 160 440	46 417	3 822,40	44 177,60
2017	151 610	6 065	1 008 830	40 352	10 554,03	33 623,57
2018	141 002	5 640	867 828	34 712	8 032,67	25 590,90
2019	130 394	5 216	737 434	29 496	6 113,67	19 477,23
2020	119 786	4 792	617 648	24 704	4 653,11	14 824,12
2021	109 178	4 368	508 470	20 336	3 541,38	11 282,64
2022	98 570	3 943	409 900	16 393	2 695,42	8 587,22
2023	87 962	3 519	321 938	12 874	2 051,49	6 535,73
2024	77 354	3 095	244 584	9 779	1 561,39	4 974,34
2025	66 746	2 670	177 838	7 109	1 188,37	3 785,97
2026	56 138	2 246	121 700	4 863	904,47	2 881,50
2027	45 530	1 822	76 170	3 041	688,39	2 193,11
2028	34 922	1 397	41 248	1 644	523,93	1 669,18
2029	24 314	973	16 934	671	398,77	1 270,41
2030	13 706	549	3 228	122	303,50	969,91
2031	3 228	122	0	0	166,91	800

Source: Vlastní zpracování

Výpočet ročních daňových zrychlených odpisů v ČR je dle § 32 ZDP.V SR je fixní aktivum zařazeno do 1. odpisové skupiny, a proto musí být použity rovnoměrné odpisy, které se vypočítají dle § 27 Zákona o dani z prijmov. SRN upravuje daňové odpisy v EStG v § 7, kde odkazuje na AfA (Absetzung für Abnutzung) Tabelle, vydávané ministerstvem financí, kde lze dohledat konkrétní majetek a přiřadit mu dobu daňového odpisování. Získané hodnoty jsou zachyceny v Tab. 5.

Table 5: Daňové odpisování traktoru v ČR, SR, SRN (v EUR)

Rok	ČR – zrychlený odpis	SR – rovnoměrný odpis	SRN – rovnoměrný odpis
2016	9 600	4 000	1 333,33
2017	15 360	12 000	4 000
2018	11 520	12 000	4 000
2019	7 680	12 000	4 000
2020	3 840	8 000	4 000
2021-2027	0	0	4 000
2028	0	0	2 667

Source: Vlastní zpracování

Ve všech analyzovaných státech snižují základ korporátní daně pouze hodnoty daňových odpisů. Rozdíl mezi uplatněnými účetními odpisy v nákladech a evidenčně vedenými daňovými odpisy pak v jednotlivých letech v konečném dopadu snižuje či zvyšuje (upravený) základ daně. Je-li hodnota účetního odpisu vyšší, než hodnota daňového odpisu, je v tomto zdaňovacím období základ daně upravován o rozdíl směrem nahoru. Tab. 6 uvádí částky rozdílů mezi účetními a daňovými odpisy a konečný vliv na základ daně z příjmů korporací.

Table 6: Rozdíl mezi účetními a daňovými odpisy v ČR, SR, SRN v EUR

	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
ČR	- 8017	-9295	-5880	-2464	952	4368	3943	3519	3095	2670	2246	1822	1397	973	549	122
SR	-2418	-5936	-6360	-6785	-3209	4367	3943	3519	3095	2670	2246	1822	1397	973	549	132
SRN	2489	6554	4033	2114	653	-458	-1305	-1949	-2439	-2812	-3096	-3312	-2142	399	304	167

Source: Vlastní zpracování

Záporné hodnoty v Tab. 6 ukazují, že se v daném roce snižuje účetní výsledek hospodaření pro účely stanovení základu daně a naopak.

4. Conclusion

Z provedené komparační analýzy právních úprav zkoumaných států vyplývá, že i přes snahu o sjednocování účetních a daňových postupů na základě implementace směrnic EU, existují stále značné rozdíly, a to i v tak historicky blízkých ekonomikách jako je ČR a SR. Případová studie dokázala, že shodné fixní aktivum je v různých jurisdikcích posuzováno podle odlišných definic, kdy jsou možné různé způsoby daňového a účetního odpisování, což vede k odlišnému vykazování v rozvaze a výkazu zisků a ztrát a dále působí odlišně na výsledek hospodaření a na výši základu daně z příjmů korporací. Společnosti, které nemají povinnost vykazovat účetní informace dle IFRS tedy stále poskytují uživateli vzájemně neporovnatelné informace.

References

[1] Bartosova, V. (2016). Financial analysis of tangible fixed assets in conditions of current slovak business accounting. *International Journal Of Applied Business And Economic Research*, vol. 14, no. 13, pp. 063-9076.

[2] Bohušová, H., Svoboda, P. and Nerudová, D. (2012). Biological assets reporting: Is the increase in value caused by the biological transformation revenue? *Agricultural Economics,* vol. 58, no. 11, pp. 520-532.

[3] Dvořáková, K. (2015). Shortcomings of accounting legislation to the needs of the agricultural sector due to its specifics. *Proceedings of the 9th International Scientific Conference INPROFORUM 2015.* České Budějovice, Czech republic, pp. 211-216.

[4] Gurskaya, M., Kuter, M., Papakhcian, A.and Musaelyan, A. (2016). Specific Features of Depreciation Accounting at the End of the 12th - Early 13th Centuries. *Proceedings of the 5th International Conference on Accounting, Auditing, and Taxation,* Tallinn. pp. 90-98.

[5] Hinke, J. and Stárová, M. (2014). The Fair Value Model for the Measurement of Biological Assets and Agricultural Produce in the Czech Republic. *Procedia Economics and Finance: 17th International Conference Enterprise and Competitive Environment 2014.* Amsterdam, Netherlands, pp. 213-220.

[6] Jáčová, H. and Horák, J. (2015). The Effect of Tangible Assets Disposal on Business Performance of an Enterprise Pursuant to Czech Accounting Legislation. *Proceedings of the 2th International Multidisciplinary Scientific Conference on Social Sciences and Arts*. Albena, Bulgaria, Book 2, vol. 2.

[7] Kosovska, I. and Varyova, I. (2016). Impact of Globalization to the Specifics of Biological Assets Measurement in SR in the Context of Legal Arrangements of SR and International Legal Arrangements. *Globalization and its Socio-Economic Consequences: 16th International Scientific Conference Proceedings.* Žilina, Slovakia, pp. 996-1004.

[8] Kuchařová, I., Pfeiferová, D. (2015). Komparace fixních aktiv dle české právní normy a dle Směrnice o CCCTB. *Scientia Et Societas*, *11*(2), pp. 146-158.

[9] Mykolaitiene, V., Vecerskiene, G., Jankauskiene, K. and Valanciene, L. (2010). Peculiarities of Tangible Fixed Assets Accounting. *Engineering Economics*, vol. 21, no. 2, pp. 142-150.

[10] Nývltová, K. (2016). Explanatory Power of Financial Healt Assessment in Agriculture. *Globalization and its Socio-Economic Consequences: 16th International Scientific Conference Proceedings.* Žilina, Slovakia, pp. 1558-1596.

[11] Ore, M. (2011). Problematic Aspects of Accounting for Biological Assets. *Proceedings of 12th International Scientific Conference on Economic Science for Rural Development.* Jelgava, Latvia, pp. 204-210.

[12] Sedláček, J. (2010). The methods of valuation in agricultural accounting. *Agricultural Economics,* vol. 56, no. 2, pp. 59-66.

[13] Sedláček, J. (2016). Financial Statements in the Financial Decision Making. *Proceedings of the 13th International Scientific Conference European Financial System 2016,* Brno, Czech Republic, pp. 678-685.

[14] Stárová, M. and Čermáková, H. (2010). Method of Component Depreciation of Fixed Assets and its Comparision with Traditional Methods. *Agris On-Line Papers In Economics And Informatics*, vol. 2, no. 3, pp. 37-46.

[15] Svoboda, P. (2007). Valuation of tangible fixed assets pursuant to the Czech accounting law and international accounting standards. *Agricultural Economics,* vol. 53, no. 10, pp. 466-474.

[16] Svoboda, P. (2008). Balancing of the chosen intangible fixed assets according to the Czech accounting legislation, German accounting systems and international accounting standards. *Agricultural Economics,* vol. 54, no. 7, pp. 314-321.

[17] Tušan, R., Bánociová, A. and Buleca, J. (2013). Comparison of IFRS and Slovak Accounting Regulations in the Area of Accounting and Recognition of Noncurrent Assets. *Proceedings of 6th EuroMed Conference of the EuroMed Academy of Business.* Marseille, France. pp. 2376-2392.

BENCHMARKING OF GLOBALLY ACCESSIBLE MHEALTH APPLICATIONS

Martin Kuchta[1,a,*], Tomáš Ružička[2,b]

[1]University of Economics in Bratislava, Dolnozemská cesta 1, 852 35 Bratislava, Slovak Republic

[2]University of Economics in Bratislava, Dolnozemská cesta 1, 852 35 Bratislava, Slovak Republic

[a]martin.kuchta@euba.sk, [b]ruzicka.tomas7@gmail.com

*Corresponding author

Abstract. Mobile Health (mHealth) is a sub-segment of eHealth and covers medical and public health practice supported by mobile devices. The use of mobile and wireless technologies to support the achievement of health objectives (mHealth) has the potential to transform the face of health service delivery across the globe. mHealth is becoming a popular option in underserved areas where there is a large population and widespread smartphone usage. Globalization, decreasing technical and financial requirements on the technology and facilitated logistic caused massive expansion of smartphone owners and application users along. Every smartphone owner has free or paid access to health applications, which have potential to improve health care through various monitoring functions and daily activities evidence. The main objective of the article is to identify most effective health application due to selected parameters. The authors analyse mHealth applications by using a case study as primary research method. The result of the empirical study is a comparison table containing six mHealth applications rated by selected parameters, where every parameter has a different impact on the final evaluation. Comparison table contains two types of parameters. Objective parameters with quantifiable criteria and subjective parameters which are rated on the basis of human senses (visual appeal, user experience, user interface etc.). The result of research is determination of the most successful application, which might serve as a functional example for application developers in the health area.

Keywords: application, benchmarking, mhealth, smartphone

JEL Classification: M30, M31, F60

1. Introduction

Current society, marked by significant technological advance, implies an increasing number of opportunities, among others also for the segment of consumers who follow a healthy lifestyle. Especially the fact, that particular group of consumers insist on keeping a healthy lifestyle more than ever before, affects the efforts of producers to deliver effective, as well as popular solutions. Increasing globalization, internetisation, disruption of cultural barriers and actual online environment, change the established stereotypes – the way we think, the way we make decisions, how we respond to our surroundings and how we communicate. This is the proof of a digital age (Karaffová & Kusá, 2015). Globally, we are experiencing a significant rise of the population still more dependent on the use of mobile technologies. Technological progress constantly brings new devices. Furthermore, relatively frequent entry of new providers of the mobile devices or new mobile brands to the market is not an exception. (Grešková, 2015). By that very fact, mobile application developers are compelled to react promptly and bring mobile applications that are accessible, clear and exceptionally superior. Moreover, according to the increasing market glut, consumers become more demanding and it is going to be more and more difficult to gain a loyal customer.

The use of mobile and wireless technologies to support the achievement of health objectives (mHealth) has the potential to transform the face of health service delivery across the globe. There is a need to educate about the potential of current mobile possibilities, its' features and issues behind its integration (Chan, 2017). A powerful combination of factors is driving the change. These include rapid advance in mobile technologies and applications, rise in new opportunities for the integration of mobile health into existing eHealth services, and the continued growth in coverage of mobile cellular networks. According to the International Telecommunication Union (ITU), there are now over 5 billion wireless subscribers; over 70% of them reside in low- and middle-income countries. The GSM Association reports commercial wireless signals cover over 85% of the world's population, extending far beyond the reach of the electrical grid (WHO).

2. mHealth and mHealth applications

Mobile health represents a vision which countries, doctors and experts consider to be a great opportunity and a challenge at the same time. The mobile health market could be considered as extremely complex, encountering various constraints or regulations. Thus, this area represents a huge potential for the available technologies to be helpful as much as possible along with delivering effective healthcare solutions. mHealth is one of the eHealth components. It represents a health practice using mobile platforms such as smartphones, tablets, monitoring devices, digital assistants, and other wireless devices. It also includes the use and capitalization of the most beneficial features and features of mobile devices such as SMS, GPRS, 3G and 4G systems or GPS and Bluetooth (Li et al., 2016).

Mobile applications have become a part of everyday life for many people of different age, as they allow us to get more information, to buy, to communicate, to have fun, to educate etc. (Kusá & Zaziková, 2015). Applications are software applications designed to run on smart phones and other mobile devices (Eagle et. al., 2013). mHealth applications are becoming more and more advanced, exhibiting capabilities to deliver innovative health services for improving the individual's comfort, enhancing the quality of life, promoting wellness and healthy lifestyle, or improving the adherence to therapies of remotely monitored patients. (Minutolo et al., 2016). Mobile health applications include both personal features for the individual user (e.g., calorie tracking) and social features, which connect the user to others (Tikkanen & Barhouse, 2017). With increasing access to mobile technology, such as smartphones and smartwatches, the development and use of mobile health applications is rapidly growing (Helbostad, 2017).

3. Methodology of the paper

The research paper is dedicated to comparison of six mHealth applications, which are available for free or paid download on the Android or iOS smartphone operation systems. Authors used case study as primary research method. The research started by identification of six most spread running applications, which dispose with comparable functions. Research stands on two essential pillars: objective and subjective parameters, by which particular applications are evaluated. Every parameter was marked on scale 1 to 5, where 1 represents the worst and 5 the best mark. Each of the selected parameters had different impact on the final evaluation by percentage weight. Weight of each parameter was defined by estimated importance of specific parameter in consumers' decision-making process. The outcome of the research is a comparison table, containing six mHealth applications evaluated by marking system created and described by authors. Conclusion of the paper identifies mHealth application, which could serve for mobile application developers as an example of the most successful mobile application focused on running activities.

4. Benchmarking of selected mHealth applications (Results)

Mobile applications are empowering individuals to contribute to their own well-being and health. They provide an assortment of information, encouragement, alerts and interactive tools, which are enhancing quality of life in a specific area (Birkhoff & Smeltzer, 2017). The main research is conducted on six mHealth applications available in virtual stores within smartphones. Identified applications are focused on tracking and evaluating physical activities, especially running:

- iSmoothRun,
- Nike+ running,
- Runkeeper,
- Starva,
- Endomondo,
- Runstatic.

Promotion and encouragement of mobile applications influences the adoption of these original resources as innovative ways for various physical activities (Briz-Ponce, 2017). Innovations are main source in terms of life quality enhancement. Selected applications dispose tracking systems, which are able to track, evaluate and report physical activities based on GPS location of the user. Continual evaluating of running activities has the potential to optimize future trainings and improve physical and mental condition of the runner despite the gender, age or other circumstances. (Tønnessen et al., 2015)

4.1 Identification of objective parameters

Objective parameters have been selected on basis of information, which is available directly in App store in case of iOS devices or Google Play in case of Android devices. All parameters are quantifiable and available in particular purchase environment as integers.

Table 1 above contains four essential columns:

- *Parameter:* name of the evaluated parameter.
- *Shortcut:* each parameter has its specific shortened naming for clarification in the final benchmarking table.
- *Description:* explanation of the selected parameters. Some of the parameters contain also explanation of the marking system.

- *Weight:* weight of the particular parameters established by importance of parameter in consumers' decision-making process.

Total weight of all objective parameters has 50% share in total evaluation.

Table 1: Objective parameters definition

Parameter	Shortcut	Description	Weight
Operation system	OS	Operation system, in which the particular application is available. Only iOS availability is always marked 3 because of less market share, only Android availability is always marked 4 because of higher market share, availability on both systems is marked 5.	10%
Price	€	Values, defined in financial units, which need to be provided to obtain the application. Marking system is set as followed: • 0€ – mark 5; • 0,01-2€ - mark 4; • 2,01-5€ - mark 3; • 5,01-10€ - mark 2; • more than 10€ - mark 1.	20%
On top costs	On top €	Costs that are needed for full, unlimited version of the application. Marking system is defined as followed: • 0-20€ - mark 5; • 21-30€ - mark 4; • 31-40€ - mark 3; • 41-50€ - mark 2; • more than 50€ - mark 1.	10%
Size	MB	Data space needed for the application download. Marking system is defined as followed: • 0-50 MB – mark 5; • 51-75 MB - mark 4; • 76-100 MB - mark 3; • 101-125 MB - mark 2; • more than 126 MB - mark 1.	10%

Source: Authors' definition

4.2 Identification of subjective parameters

Subjective parameters represent authors' (mainly) visual experience with the application. Evaluation might have different results in case of processing by another author. Subjectivity is factor, which cannot be eliminated in this case.

Table 2: Subjective parameters definition

Parameter	Shortcut	Description	Weight
Rating	R	Rating of the application is defined by users based on practical usage of the application on scale 1-5 where 5 is the best.	20%
Visual attractiveness	VA	Operation system, on which the defined application is available.	10%
Orientation	O	Values, defined in financial units, which need to be provided to obtain the application.	20%

Source: Authors' definition

Construction of the Table 2 and 1 is the same. It also contains 4 essential columns: Parameter, Shortcut, Description and Weight. Total weight of subjective parameters is 50%, same as total weight of objective parameters.

4.3 mHealth application comparison table

Subjective and objective parameters of all mHealth applications were grouped into one table, which contains marks and weight of each parameter and also final marks for particular parameters. Final marks can be considered as gained points, which were counted. Final points are stated in very bottom of the table in the row "Total points". Application with the most points in this case study was rated with the highest marks in categories that were crucial in terms of weight of particular parameters.

Table 3: Final mHealth application benchmarking

			iSmoothRun		Nike+		Runkeeper		Strava		Endomondo		Runstatic	
	Parameter	**Weight**	**M***	**W***	**M***	**W***	**M***	**W***	**M***	**W***	**M***	**W***	**M***	**W***
Objective	OS	10%	3	3,30	5	5,50	5	5,50	5	5,50	5	5,50	5	5,50
	€	20%	1	1,20	5	6,00	5	6,00	5	6,00	5	6,00	5	6,00
	On top €	10%	5	5,50	5	5,50	2	2,20	1	1,10	4	4,40	1	1,10
	MB	10%	5	5,50	2	2,20	3	3,30	3	3,30	3	3,30	2	2,20
Subjective	R	20%	4	4,80	4	4,80	4	4,80	4	4,80	4	4,80	4	4,80
	VA	10%	4	4,40	5	5,50	5	5,50	3	3,30	4	4,40	4	4,40
	O	20%	5	6,00	5	6,00	4	4,80	3	3,60	5	6,00	5	6,00
	Total points		**30,70**		**35,50**		**32,10**		**27,60**		**34,40**		**30,00**	

*Source: Authors' research, *M - mark; W - weighted*

The case study and its rating system has determined Nike+ as the very best mHealth running application. It did not gain best marks only in the following two parameters:

- MB: application requires relatively much space in terms of megabytes as a unit of measurement. This increased requirement is a mystery due to the simplicity of the application. The remaining applications also contain modules for another sports and require much less data space.
- Rating: subjective rating of the application submitted by the users who were or still are using the application was evaluated by the mark 4. It is not relevant to consider the results in this particular case as relevant because all applications gained the same evaluation. It is at least as good as the rest of the applications.

On the other hand, the remaining researched parameters gained the highest marks. The most relevant and valuable features of Nike+ app are as follows:

- availability on both operation systems (iOS and also Android),
- application is free of charge,
- moreover, there are not even any additional fees within the application required to be paid while using the application. Rest of the applications contain some hidden purchases for extended modules available to purchase while using the application,
- simple and visually attractive application environment deserves the highest mark,
- focus strictly on one specific sport and nice, not interruptive design make orientation very easy.

Application Nike+ is the simplest, yet the most effective application. If the user is looking for the application oriented strictly towards sport, this is the application.

5. Conclusion

Barrier free markets, technology expansion and low costs in terms of production of information systems allow developers to produce very effective and helpful smartphone applications. These technologies are highly available, easily accessible, and simple to personalize. (Firouzi et al., 2017) Many of them focus on health segment and are able to improve health and physical condition of an individual. The main objective of the article was to identify the most effective mHealth application according to the selected parameters. As the primary research method, the team of researchers has selected a case study. In the first step of the research, the authors determined the six most spread mHealth applications focused on running activities. In the second step, an evaluation mechanism, standing on two essential pillars: objective and subjective parameters, was developed. Each parameter was rated by mark 1-5 (1 represented the worst, 5 represented the best) and outweighed by percentage weight. As a result, the authors considered final points, which were counted and which have determined the most effective mHealth application. Considering the total number of points, the winner is Nike+. The application was developed and paid by global brand Nike, which has covered financial costs, development, optimization, and operation of the application. Due to massive support of the brand, Nike+ application might be considered as a branded content, or as specific form of a native advertisement. Due to high added value, free download, no additional costs, visual attractiveness, easy orientation and many more features, users do not feel interrupted or interfered by such an advertisement. Application Nike+ might serve as an example of a successful application in mHealth segment. All developers could have this application as an inspiration.

Additional conclusion has been developed. Branded content which is able to help and serve users very well, is accepted by users and is not considered as an interruptive advertisement and users who has recently consumed branded content are more likely to express intent to purchase (Marketing Insights, 2013). Recommendation for other brands and application developers could also be to join with globally successful brand, which is interested in such presentation and is ready to step in to the marketing of the future.

Acknowledgment

This paper is an output of the science project VEGA (S.G.A.) 1/0637/17 Construction of the consumer decision-making model for the segment of mobile health focused on the identification of attributes influenceable by marketing tools.

References

[1] Bitkhiff, S. and Smeltzer, S. (2017). Perceptions of Smartphone User-Centered Mobile Health Tracking Apps Across Various Chronic Illness Populations: An Integrative Review, *Journal of nursing scholarship: an official publication of Sigma Theta Tau International Honor Society of Nursing*, vol. 49, issue. 4. pp. 371-378.

[2] Briz-Ponce, L. et al. (2017). Learning with mobile technologies – Student's behavior, *Computers in human behavior,* vol. 72, pp. 612-620.

[3] Eagle, L. et. al. (2016). Not quite playing the game? Mobile applications for healthier lifestyles. *LOOKING FORWARD, LOOKING BACK: DRAWING ON THE PAST TO SHAPE THE FUTURE OF MARKETING.* pp. 319-329.

[4] Grešková, P. (2015). The impact of digital technologies on consumer behavior of generation Y – RETRO TREND. *Marketing Identity: Digital life, Pt. II.*, pp. 66-79.

[5] Helbostad, J. L., (2017). Mobile Health Applications to Promote Active and Healthy Ageing. *Sensors,* vol. 17.

[6] Kusá, A. and Záziková, Z. (2015). Trends in mobile applications from the perspective of digital consumers, *Marketing Identity: Digital life, Pt. II.*, pp. 126-138.

[7] Karaffova, D. and Kusá, A. (2015). Influence of content marketing on digital consumer. *Marketing Identity: Digital life, Pt. II*., pp. 80-91.

[8] Li, F. H. et al. (2016). Smartphones for sensing. *SCIENCE BULLETIN.* vol. 61, pp. 190-201.

[9] Minutolo, A. et al. (2017). Optimization of rule-based systems in mHealth applications. *ENGINEERING APPLICATIONS OF ARTIFICIAL INTELLIGENCE.* vol. 59, pp. 103-121.

[10] Tikkanen, S. A. (2017). The Effects of Personal and Social Uses of Mobile Health Applications on Healthy Behaviors, *Communication studies.,* vol. 68, pp. 152-172.

[11] WHO. (2011). mHealth: New horizons for health through mobile technologies: second global survey on eHealth. [Online]. Available: http://www.who.int/goe/publications/goe_mhealth_web.pdf

[12] Firouzi, F. et al. (2017). Internet-of-Things and big data for smarter healthcare: From device to architecture, applications and analytics, *Future Generation Computer Systems*, vol. 78, pp. 583-586.

[13] Chan, S. et al. (2017). Review of Use and Integration of Mobile Apps into Psychiatric Treatments, *Current Psychiatry Reports,* vol. 19, pp. 19-96.

[14] Tønnessen, E. et al. (2015). Performance Development in Adolescent Track and Field Athletes According to Age, Sex and Sport Discipline, *PLoS One.,* vol. 6, pp. 1-10.

[15] Marketing Insights (2013). Branded content for the win, *Marketing Insights,* vol. 25, pp. 4-4.

POSITIONING OF SOCIAL ENTREPRENEURSHIP IN PROVISION OF SOCIAL SERVICES: TRENDS OF GLOBALIZATION AND RUSSIAN REALITY

V. YU. Kulkova[1,a], A. M. Belyakin.[2,b,*] and N. V. Mironenko[3,c]

[1]Russian University of Cooperation, Russia

[2] Kazan National Research Technical University named after A.N. Tupolev, Russia

[3]Central Russian Institute of Management, Branch of RANERA, Russia

[a]Kulkova77@mail.ru, [b]anzag73@mail.ru, [c]mironenkonad@mail.ru

*Corresponding author

Abstract. In conditions of globalization, the deterministic task of modernizing the social sphere in Russia is expanding the scale of participation of non-state sector organizations in provision of social services. The trend of globalization is the replication of foreign technologies and international network institutions for development of social entrepreneurship into domestic regional practices. What are the perspectives of non-governmental organizations as providers of social services in conditions of realization of globalization trends, to what extent do Russian organizations in the non-state sector share the convergence of infrastructure support and whether this will lead to increase in quality and accessibility of social services. These issues are acute and controversial, and lead to the goal of the study - identification of socio-economic effects and restrictions in positioning of social entrepreneurship in provision of social services. By method of semi-formalized interviews the expert opinion was received and risks in positioning of social entrepreneurship as producer of social services were identified: differences in non-commercial activities and social entrepreneurship can affect the quality of provision of social services by non-governmental organizations; in motivational orientation of domestic social entrepreneurs the orientation is dominated toward the prospects for generating income in the growing market of social services, rather than creating social value and jobs for target population; blurring of organizational legal status of social entrepreneur and absence of official record of social entrepreneurship; as a consequence of globalization, the contribution of international network development institute to translation and formation of true values of domestic social entrepreneurship is noted.

Keywords: Social Entrepreneurship, Public of Social Services, Globalization.

JEL Classification: L31, H41, F60

1. Introduction

The modern world trend is participation of non-governmental organizations in provision of social services, which works to increase their effectiveness, introduce innovative social technologies in practice and attract additional financial resources. The specific structure of non-governmental organizations is described by non-profit organizations, social entrepreneurship, and private institutions. In foreign practices, social entrepreneurship was born only in 90-s of the 20th century, and acted as a relatively new institution.

Currently, there is a process of introducing foreign practices of social entrepreneurship in production of social services in the Russian Federation, which is the evidence of development of globalization processes. In general, in the context of globalization, deterministic task of modernizing the social sphere in Russia is to expand the scale of participation of non-state sector organizations in provision of social services for population. Being organizations of non-state sector, social entrepreneurship and socially-oriented non-profit organizations are positioned as identical providers of social services, which generate the convergence of their infrastructure support from the state in the Russian Federation.

Replicating both foreign technologies and international network institutions for development of social entrepreneurship in domestic regional practices is considered as a trend of globalization - Impact Hab.

The empirical development of practices of social entrepreneurship in the Russian Federation, despite the fact that it is accompanied by debates and discussions organized in the format of expert sites in various forums, is taking place against the backdrop of incompleteness of theoretical developments in both foreign and domestic science, which creates ambiguity in its interpretations and characteristics. Thus, researchers Roger Martin and Sally Osber (Martin & Osberg, 2007) note that due to the growing popularity, the term "social entrepreneurship" has acquired in recent years such a wide range of meanings that it has been used practically in any context as soon as we speak about socially useful activity. What are the perspectives of non-governmental organizations as providers of social services in the context of globalization trends, to what extent do Russian organizations in the non-state sector share the convergence of infrastructure support and whether this will lead to improved quality and accessibility of social services? These questions are acute and controversial issues that led to the goal of the study - identification of socio-economic effects and constraints in positioning the social entrepreneurship in provision of social services.

1.1 Theoretical basis of the study

In modern theory of public administration, a new methodological substantiation of economy of public sector is being formed - the concept of indirect state management (Salamon, 2001). According to the studies of foreign scientists (Granados et al., 2017), (Salamon & Toepler, 2015), (Bürger, 2014), (Kucheryavaya, 2012), (Douglas et al., 2009), (Teo & Rodwell, 2007), (Carson, 2000), in the last few decades, in foreign practices, design of classical public administration has changed to "new" management or indirect governance (nongovernmental management), based on cooperation of the state and non-governmental organizations, which envisage the positioning of NGO as an actor of public administration .

It is to be noted the fact that if in the foreign practice the activities of such non-governmental organizations as NPOs are not new, then social entrepreneurship has been developing only since 90-s. At the same time, according to experts' assessments in the EU, by 2012, social entrepreneurship occupies 25% of economy (Rimac & Nitulescu, 2014), (Granados et al., 2011). In foreign science, several areas of research on social entrepreneurship can be identified.

The first approach is related to the position of Roger Martin and Sally Osberg (Martin & Osberg, 2007), which is designating the focus of social entrepreneurship on social transformations, which is consistent with Drucker's position, according to which the essence of entrepreneurship was reduced to transformation through innovation in seeking the changes and using the possibilities. Social transformations are aimed at target groups: the least protected and least advantaged segments of population, who do not have financial resources, or political levers to achieve the "resulting from transformation of value" on their own. Ideally, motivation of social transformations is not the realization of entrepreneurial ability, but altruism. This circumstance brings together social entrepreneurship and non-profit organizations, which determines the positioning of social entrepreneurship in the structure of non-state organizations - producers of social services, but different from NPOs in the Russian Federation (Kulkova, 2014).

The second approach is the most cited definition of G. Dees (Dees, 2001), which is given on identifying the factors that determine social entrepreneurship, which are immanent to entrepreneurship in general:

- assuming the mission of creating and maintaining social value (good);
- identification and use of new opportunities for implementation of the selected mission;
- implementation of continuous process of innovation, adaptation and training;
- decisiveness of actions, not limited to available resources;
- high responsibility of entrepreneur for results of his activities - both to direct customers and to community. We designate this factor as socially responsible risk.

The third approach, is translated by the researchers of Russian scientific school (Moskovskaya et al., 2008), is aimed to identify the features of "social entrepreneurship" from "entrepreneurship" in characteristic of "anticipated and produced value" (good). The researchers explain: "In case of ordinary entrepreneurship, this is the market value that can be expressed in income and profit category (which is misleading when comparing the motivation of two types of entrepreneurs). In the case of social entrepreneurship, this is the value expressed in the advantage that a significant part of society or society as a whole gets from the "large-scale transformation" made by social entrepreneur ".

The fourth approach - positioning of social entrepreneurship, highlighting its differences from NPOs. Many scholars position social entrepreneurship as evolutionary form of NPO (Boschee, 1998), (Austin et al., 2003). J. Boschy and J. McClurgh (Boschee & McClurg, 2003) offer to conduct differentiation of social entrepreneurship and NPO by the criterion of earned income, offering the concept of "earned income". In other words, NPOs starting to earn their own income for provision of services, are transformed into social entrepreneurship. Developing this approach, Kim Alter seeks to overcome the dichotomy "commercial - non-commercial" and offers typology of organizations of socio-entrepreneurial spectrum including: traditional NPOs; non-profit organizations with profitable activities; social enterprises; companies to practicing social responsibility; traditional profitable organizations (Alter, 2007). At the same time, Boschee J., McClurg J. consider social entrepreneurship as a form of intersectoral interaction between business, NPOs and the state (Boschee & McClurg, 2003).

Summarizing the approaches to the definition of social entrepreneurship, it should be concluded that the essence of entrepreneurship is revealed in its functions: creation of social value, through involvement of target group in entrepreneurial activities; Innovative; altruism.

At present, there are annual quantitative studies of development of social entrepreneurship in the case of individual countries (Salamon, 2013). In foreign practices, the Impact Hab Institute, which is positioned simultaneously as an innovation laboratory, a business incubator, and a social center for social entrepreneurship, formed as a community, is becoming more widespread within the framework of globalization.

Residents develop their projects through the help of community members (useful contacts, peer review and testing of ideas, etc.) and educational activities. Currently, being located in Amsterdam, Johannesburg, Singapore, San Francisco, in Moscow and Odessa, the Impact Hub has evolved into a rapidly expanding, global network of more than 15,000 people in 80 cities.

Thus, spread of foreign practices of development of social entrepreneurship in provision of services and global network institutions of their support to individual states are observed in the context of globalization. We share the approach in which globalization is positioned as the institutional environment for translation of practices and international network institutions (Erik, 2015), (D'Andrea, 2013), (Pluemper & Troeger, 2011).

1.2 Method of the study

The interview methods revealed social and economic effects and limitations in positioning the social entrepreneurship in provision of social services in the Russian Federation. The need to study the opinion of experts proceeds from the perspective of the main provisions of *implementation research*, according to which the success of social reforms implementation is largely due to perception and support of them by their stakeholders.

On the basis of these questions, a guide interview was developed and a step-by-step sample was identified at the first stage of the study. It covered two groups of informants: leaders of SONKO, social entrepreneurs, taking part in educational programs for social entrepreneurs, from the subjects of the Russian Federation of different districts.
At the second stage, the interviews were collected in two cycles. The first cycle of the interview was conducted in the first half of 2014 (N = 15). Experts were the leaders of SONKO. The second cycle of in-depth interviews (N = 30) was conducted in January-May 2016: 15 respondents interviewed in 2014 were interviewed again; 15 respondents of social entrepreneurs.

At the third stage, transcription and printout of interviews as texts were carried out. For qualitative discourse analysis of texts, the method of translational approximation was used: creation of the structure of assumptions and concepts; their approbation, allowing us to see, how much these assumptions correspond to evidences and reveal characteristics of the data. Coding was carried out: open coding (selection of topics to which codes are assigned, creation of a list of topics and analytical memo); axial coding (organization of a set of primary concepts, review and verification of primary codes, establishment of key concepts of analysis).

2. Positioning of social entrepreneurship: The Russian reality

To implement the deterministic task of modernizing the social sphere at the present stage of development in Russia in the context of scaling up the participation of organizations of non-state sector in provision of social services to the population, the Action Plan "Support for access of non-governmental organizations to provision of services in social sphere " was approved by Order of the Government of the Russian Federation of June 8, 2016 No. 1144-r.

In addition, in conditions of globalization, replicating of foreign technologies for development of social entrepreneurship in domestic regional practices, is taking place. The technologies include:

- accelerating programs aimed at developing projects from idea to running business, using technologies of: training (seminars-trainings), counseling, mentoring, fundraising and promotion. In Russia, accelerating programs for social entrepreneurs are carried out by a number of stakeholders: the Social Investment Fund, the HSE Center (Startup) and startup women, the Centers for Innovations in Social Sphere in the Subjects of the Russian Federation;
- contests of projects of social entrepreneurs, which are carried out by the Foundation "Our Future", "Agency of Strategic Initiatives", etc.

All of the above technologies are reflected information of infrastructure for supporting social entrepreneurship in the constituent entities of the Russian Federation in the form of Centers for Innovation in Social sphere (CISS) in the subjects of the Russian Federation. As it is known, the project of CISS creation in the regions was initiated by the Agency for Strategic Initiatives (ASI) within the framework of development of social entrepreneurship in the subjects of the Russian Federation. According to the developments of ASI, the responsibility listed in Table 1 is assigned on CISS.

Table 1: Tasks of CISS

Task	Description
Popularization and promotion of social projects	Popularization and effective promotion of social projects for small and medium-sized businesses, socially oriented NPOs
Formation of bank of the best social practices	Accumulation on the own site of the best regional socially oriented cases prepared by entrepreneurs and NPOs
Training	Organization and conducting educational programs aimed at preparation of social entrepreneurship projects and formation of sustainable economic business model of social enterprise
Exchange	Exchange of practices in the network of social innovation centers
Support	Consulting, information and analytical support of activities of social entrepreneurs and socially oriented NPOs
Assistance	Assistance in creating and developing tools to support social entrepreneurship, including all types of resource support

Source: (https://asi.ru/docs/ciss_OUT_NEW_RIGHT.pdf)

As it can be seen from the tasks of CISS, the objects of their activity fall along with social entrepreneurs and socially oriented NPO, for which independent support infrastructure was already formed at the expense of budget funds. In other words, at the present stage there is convergence of infrastructural support of social entrepreneurship and NPOs for development of access of non-governmental organizations to provision of services in the social sphere.

The trend of globalization is appearance of international network institutions in the Russian Federation for development of social entrepreneurship, in particular, Impact Hab is a commercial structure, organizational and legal form of LLC (Limited Liability Company), which is a platform for exchange of experience, cooperation and implementation of innovative ideas in various sectors of economy, thereby bringing together professionals in the field of socially-oriented business in Moscow and includes them in international community.

Unfortunately, the lack of information base of statistics on social entrepreneurship in the Russian Federation does not allow us to carry out quantitative description of its positioning.

3. Trends of development of social entrepreneurship through the eyes of stakeholders

Despite the observed trend in convergence of infrastructure support for social entrepreneurship and non-profit organizations, the differences in the assessments of identification of social entrepreneurship and non-profit organizations, as demonstrated by NPO leaders and social entrepreneurs, were expected. NPO leaders and social entrepreneurs are not inclined to synonymy of non-commercial activities and social entrepreneurship.

The majority of social entrepreneurs does not see commonality between themselves and NPOs, determining the field of activity of non-profit organizations in charity, fundraising, volunteering, and do not take NPOs seriously as producers of social services. There were expert opinions on positioning of NPOs as organizational and legal form in which a social entrepreneur can realize the provision of social services and, most importantly, make profit, which indicates the dilution of organizational and legal status of social entrepreneur. The attractiveness of provision of social services by social entrepreneurs is viewed in the context of prospect of earning an income in the growing market of social services, while highlighting the predicative nature of tasks of creating social value and jobs for the target population. Given such motivational attitudes, it is not surprising that most social entrepreneurs position social services as a strategy for segmenting business in the social sphere, saying that it is now very difficult to make money in modern stagnant markets, for example, the social services market for the category of people of silver age will only grow in conditions of the current demographic situation of population aging.

NPO leaders note the difference of social entrepreneurship in the focus on making a profit. Explaining this position, the fact that: a social entrepreneur is an entrepreneur, and any entrepreneur is motivated by profit, although along the way of this movement social problems can be solved. The main motive for the activity of NPO headed is philanthropy *"if I can and I know how, then I want to help my neighbor"*. For the sake of justice, we note that the leaders of "advanced" NPOs, express as a solidarity need: to expand the number of real and potential consumers; in development of marketing technologies in promotion of services and promotion of values, and raise the issue of copyright for social technologies when replicating them in non-profit sector. In other words, the leaders of "advanced" NPOs begin to translate trends (protection of copyright, widening the circle of consumers), characteristic of the commercial sector, moving away from philanthropic motivation.

Leaders of NPOs, social entrepreneurs are different in their attitude to social projects in their activities. Entrepreneurs demonstrate skeptical attitude to social design, are focused on routine, operational activities. NPO leaders position social design as a source of financing for organization's activities and possibility to test innovative ideas and technologies in practice. Solidarity positive assessments of holding and conditions of tenders for the right to receive state support are demonstrated.

Positive nature dominates in assessing the potential for provision of social services by both social entrepreneurs and NPOs. Respondents from NPOs actively demonstrate the practical implementation of production function for provision of social services in the framework of ongoing activities. At the same time, attention is drawn to the fact that social services are provided to consumers on free basis and are financed from projects or other financial sources attracted as the result of fundraising. In production of social services, NPO is distinguished by narrower specialization in vulnerable categories of population.

Social entrepreneurs are focused on provision of standard services: care for elderly, labor rehabilitation of the population category of Homeless (without specific place of residence). If there is the divergence of social entrepreneurship and non-profit organizations in the expert assessments, it is not surprising that the expert community of the third sector of the RT does not support the mechanical transfer of "resource support" to the Center for Innovations in the Social Sphere, whose initial mission was to create infrastructure support for social entrepreneurship.

Social entrepreneurs note the contribution to translation and formation of true values of domestic social entrepreneurship of international network institute of development Impact Hab, which is the consequence of globalization.

4. Conclusion

Despite the fact that, in practice, the trend of convergence of infrastructure support for social entrepreneurship and non-profit organizations is spreading, NPO experts and social entrepreneurs are not inclined to synonymy of non-profit organizations and social entrepreneurship.

The risks in positioning of social entrepreneurship as a producer of social services are identified: the differences between non-commercial activities and social entrepreneurship can affect the quality of provision of social services by non-governmental organizations; in motivational establishments of domestic social entrepreneurs the orientation toward the prospects for generating income in the growing market of social services is dominated , rather than creating social value and jobs for the target population; Blurring of the organizational legal status of social entrepreneur and the lack of official record of social entrepreneurship; Most social entrepreneurs position social services as a strategy for segmenting business in the social sphere; as a consequence of globalization, the contribution to translation and formation of the true values of domestic social entrepreneurship of the global network institute of development Impact Hab is noted.

References

[1] Alter, S. K. (November 2007). Social Enterprise Typology. Virtue Ventures. [Online]. Available:https://www.globalcube.net/clients/philippson/content/medias/download/SE_typology.pdf

[2] Austin, J., Stevenson, H. and Wei-Skillern, J. (2003). *Social entrepreneurship and commercial entrepreneurship: Same, different, or both?* Harvard, USA: Harvard Business School.

[3] Borg, E. (2015). Intellectual Property and the Marketing of Ideas, Developments in Marketing Science: Proceedings of the Academy of Marketing Science, pp. 317-320.

[4] Boschee, J. (1998). Merging mission and money: A board member's guide to social entrepreneurship. [Online]. Available: http://www.socialent.org/pdfs/MergingMission.pdf

[5] Boschee, J. and McClurg, J. (2003). Toward a better understanding of social entrepreneurship: some important distinctions. [Online]. Available: https://www.law.berkeley.edu/php-programs/courses/fileDL.php?fID=7289

[6] Bürger, T. (2014). NGOs: A New History of Transnational Civil Society, *VOLUNTAS: International Journal of Voluntary and Nonprofit Organizations*, vol. 24, pp. 124-138.

[7] Carson, Ed. (2000). Government and Community Partnerships: Policy Shifts and Future Trends, *Australian Journal on Volunteering*, vol. 5, pp. 42-51.

[8] D'Andrea, A. (2013). The Niche Globalization of a Brazilian Parascience: Projectiology, its Cosmology and Internationalization, The Diaspora of Brazilian Religions, pp. 339-362.

[9] Dees, J. (2001). The meaning of social entrepreneurship. Center for the Advancement of Social Entrepreneurship, Duke, USA: University's Fuqua School of Business.

[10] Douglas, J., Carson, Ed and Kerr, L. (2009). Local Government and Local Economic Development in Australia: An Iterative Process, *Just Policy: A Journal of Australian Social Policy,* vol. 50, pp. 54-61.

[11] Granados, M., Hlupic, V. and Coakes, E. (2011). Social enterprise and social entrepreneurship research and theory, *Social Enterprise Journal,* vol. 7 and issue 3, pp. 198-218.

[12] Granados, M. and Rivera, A. (2017). Assessing the value dimensions of social enterprise networks, *International Journal of Entrepreneurial Behaviour & Research*, vol. In press

[13] Kucheryavaya, E. (2012). The Image and the Role of Non-Governmental Organisations in Visegrad Group Countries and Russia in a Period of World Financial Crisis, *Kryzys finansowy: przebieg i skutki społeczno-gospodarcze w Europie Środkowej i Wschodniej,* vol. II, pp. 637-645.

[14] Kulkova, V. (2014). Structure and main characteristics of the non-profit sector in the RF, *Srednerussky Vestnik Social Sciences,* vol. 3, pp 233-241.

[15] Martin, R., Osberg, S. (2007). *Social Entrepreneurship: the Case for Definition*, Stanford, U. K.: Stanford Social Innovation Review

[16] Moskovskaia, A., Batalina, M. and Taradina L. (2008). Review of experience and concepts of social entrepreneurship, taking into account the possibilities of its application in modern Russia, Moscow, RUS: HSE.

[17] Pluemper, T and Troeger, V. (2011). Fixed-Effects Vector Decomposition: Properties, Reliability, and Instruments, *Political Analysis,* vol. 19, issue 2, pp. 147-164 .

[18] Rimac, T. and Nitulescu, G. (2014). *The State of Social Entrepreneurship in Spain,* Barcelona, ESP: Universitat Autonoma de Barcelona.

[19] Salamon, L. (2001). *The New Governance and the Tools of Public Action,* New York, USA: Oxford University Press.

[20] Salamon, L. (2013). *The State of Global Civil Society and Volunteering*, Baltimore, USA: Center for civic society University Johns Hopkins

[21] Salamon, L. and Toepler, S. (2015). Government–Nonprofit Cooperation: Anomaly or Necessity? *Voluntas: International Journal of Voluntary and Nonprofit Organizations*, vol. 26, no 6, pp. 2155–2177.

[22] Teo, S. and Rodwell, J. (2007). To be strategic in the new public sector, HR must remember its operational activities, *Human Resource Management,* vol. 46, issue 2, pp. 265-284.

STATE ECONOMIC POLICY IN THE EPOCH OF GLOBALIZATION: COMPARISON OF RUSSIAN AND WORLD PRACTICE

Artur Kurbanov[1,a], Vladimir Plotnikov[2,b,*] and Yulia Vertakova[3,c]

[1]Department of Regional Economics and Management, South-West State University, 305040, 94, 50 let Oktyabrya str., Kursk, Russia

[2]Department of Regional Economics and Management, South-West State University, 305040, 94, 50 let Oktyabrya str., Kursk, Russia

[3]Department of Regional Economics and Management, South-West State University, 305040, 94, 50 let Oktyabrya str., Kursk, Russia

[a]kurbanov-83@ya.ru, [b]plotnikov_2000@mail.ru, [c]vertakova7@ya.ru

*Corresponding author

Abstract. The state influences economic development through state policy. In the context of globalization, this policy is changing. First of all, the objectives of the policy and the instruments for its implementation should change. There is a problem of balancing national economic interests and global development trends. Therefore, changes in national models of state economic policy are required. It should be comprehensive and cover industry, innovation, investment, taxes, regions and other areas. The goal of the article is to conduct a comparative analysis of the state economic policies of different countries at the present stage of global development. This analysis is carried out to study the similarities and differences of national models of economic policy. The authors compared the world experience with Russian practice. Based on the analysis, the specifics of the formation and implementation of economic policy in Russia in the medium and long term are revealed. It is proved that the state economic policy should be realized using not so much direct as indirect measures of state influence on economic processes. Also, the authors point to the need to expand the composition of economic policy subjects. Business structures and public organizations should be involved in its implementation, in addition to state agencies. In the era of globalization, economic policy should be unified, but not the same in different countries. It should be adapted to the specifics of a particular country, to its institutional conditions.

Keywords: state economic policy, global economic development, comparative analysis, national economic interests

JEL Classification: E61, F68, O11, P51

1. Introduction

The main form of nation's influence on the economy is the state economic policy. In accordance with the generally accepted definition of politics in a broad sense, the state economic policy can be understood as a system of measures implemented by public authorities to have an influence on the national economy, giving it some of the target properties (economic growth, inflation and employment rates, sectoral and territorial structure of industry, etc.). The problem of the state economic policy content is at the center of attention of the world's leading scientists (Bertola & Drazen, 1993), (Blanchard & Perotti, 2002), (Fair, 2012), Keynes, 1936), (Newman, 1983), (Tobin, 1969), (Wheat, 1986) and other. There is a multitude of approaches used by them (these approaches are often differentiated on the basis of the degree of the state intervention in economic processes). All the researchers agree that the integral parts of economic policy can be: industrial, innovation, investment, tax, budgetary, customs, property, financial, regional and other constituents (Vertakova & Plotnikov, 2016), (Kirillovskaya et al., 2016), (Kryzhanovskaya et al., 2016), (Vertakova et al., 2015), (Vertakova et al., 2016), (Babkin et al., 2015), (Plotnikov et al., 2015), (Plotnikov & Volkova, 2014), (Morkovina, 2016).

The transition of the world economy into the stage of globalization leads to changing the models of the state economic policy that are implemented by national governments. On the one hand, there is a tendency to a greater openness of economies and the liberalization of economic policy. The center of economic decision-making is shifting to the supranational level. A clear manifestation of this tendency are the processes of European integration. On the other hand (and this tendency started to gain momentum in recent years), there is a reversal of the state economic policy in the direction of prioritizing national interests. There were a series of events confirming this trend – Brexit, coming of the national-oriented President D. Trump to power in the USA, economic policy of Russia, Turkey, China and other major countries.

The goal of the study is a comparative analysis of the state economic policy implemented by the governments of different countries at the present stage of global development. This analysis has been conducted to identify similarities and differences of national models of the state economic policy. On its basis there will be offered recommendations to improve the state economic policy in Russia taking into account positive international experience in this matter.

The study used official data of national government agencies and statistical offices, data from international organizations (UN, OECD, etc.) that describe the content of the state economic policy of different countries of the world. We also used an array of modern scientific publications on this subject and the results of content analysis of world business media. In addition to the content analysis, we applied the following methods: expert assessment, comparative analysis, retrospective analysis, cognitive modeling.

2. Results

For the state economic policy implementation in the model of liberal country (from the standpoint of economic theory) which has been formed in Russia (as in many other countries, especially developed countries), state authorities are more engaged in forming conditions (institutional framework) stimulating the public and appropriate business behavior than using the methods of governance and subordination. That is, to achieve high efficiency the state economic policy should be comprehensive. This assumes that the state economic policy may have an impact on the rate, the number of produced goods and services using economic levers of control. This is accomplished through local, regional budgets, attracting investments, including foreign ones. However, under certain conditions, the state economic policy may be limited in range of possible measures to be taken. This restriction will be due to the dependence on other countries – suppliers of technologies, equipment, raw materials, semi-finished products and other kinds of resources.

An example illustrating our proposed idea is an important direction of the Russian Federation state economic policy that implies operating a policy of import substitution. They have been saying about the need of production localization in Russia for a long time (Kostin, 2015), (Chargaziya, 2015), (Manturov et al., 2016). In this regard, public authorities are taking sufficiently vigorous measures. However, they are not always effective enough, as it happens, for example, in pharmaceuticals (Balashov, 2016).

Current views on carrying out the state economic policy in Russia show that in the framework of this policy the desirable strategies of behavior should not be realized directly based on exercising the powers of authority. They must be realized indirectly. In particular, the localization of production in Russia shall not be apparently carried out simultaneously. It must be performed in stages. We can distinguish at least three such stages: shifting of the final stage of production to the territory of the country (creation of the so-called "screwdriver" assembly plants); forming the chains of local suppliers from local producers; the creation of predominantly national value chains aimed at the production of end products in the country that will not only substitute import in the domestic market, but will be also export oriented (Kotlyarov, 2016).

With regard to implementing the state economic policy, it is imperative to consider the role of private economic interests. In a broader sense, we need a mechanism of mutual transformation involving the use of economically active business environment in the interests of the state. The interaction of the state and business is carried out in the form of public-private partnership that combines the pursuit of profit making, which is typical of the private sector and implementation of public interests. That is the "partnership" that implies the necessity of harmonization of interests, but not overbearing pressure of the state on business.

As evidenced by the domestic and foreign experience, it is necessary to take into account the following factors while reasoning and implementing the state economic policy, (Solovyova, 2012; Kryzhanovskaya, Vertakova, Plotnikov, Sevriukova, 2016): the existing model of economic system in the country; the government's economic policy concerning state regulation of business; environment of internal and external market; the macro and microeconomic objectives put forward by the ruling party; the degree of a country's dependence on the world's leading powers and the ability to carry out an independent economic policy and others.

Looking at the aspects and directions of the state economic policy implementation in Russia, it is impossible not to refer to the study of world practice in the planning and realization of economic development programs. Socio-economic development strategies implemented in some countries (China, USA, Japan, Germany, France, etc.), as well as economic systems themselves are characterized by considerable diversity and deserve attention and study.

Owing to consistent and gradual reforms, China's economy continues its growth, and it plans to catch up with developed countries by 2050 and overtake the strongest economy in the world – the US economy. A special feature of Chinese economic policy is its focus on the achievement of macroeconomic objectives and increasing the country's competitiveness in the global market. China finances critical structural projects in the economy actively involving both budgetary funds and various forms of savings of citizens being under the responsibility of the state. This approach is widespread in Japan, where the main subscriber to government bonds in the primary market and a major buyer in the secondary market is "Bureau of trust funds" that manages the public pension system and savings and insurance deposits in the postal savings banks.

The funds of the Bureau and government bonds are used to finance large-scale infrastructure development projects in which the private sector has no direct commercial interest. Such financing is carried out through the Program of investments and borrowings adopted annually by Parliament as part of the state budget.

It should not go unmentioned that Japan pays special attention to science and education, which contributes to the development of production-economic sphere and implementation of the state economic policy. The state program of formation of the national system of research and development work contributes to the appearance of Japan's own technical achievements, and complete refusal from import. The country has established special research centers that operate effectively on its own territory. They have become involved in studying and developments in the field of solid state physics, space robots, nuclear energy, advanced structural materials, plasma physics, and others.

Along with China, another country that is increasingly becoming integrated with the global economy, is India. There have been undertaken extensive economic reforms in the last decade. Huge and growing market, developing infrastructure, sophisticated financial sector, flexible regulatory environment, incentives, stable government and good economic prospect make India an attractive investment. Business environment of India favors the achievement of high level and sustained growth. India has benefited from the presence of many educated English-speaking population and become the main exporter of services in the field of information technology and programmers. However, if you approach the issue comprehensively, we can conclude that, on the one hand, India is called the richest country on the planet (from the point of view of natural resources availability), on the other hand, the agro-industrial sector which employs 2/3 of the population is in very poor condition.

With regard to European countries, we can say that their approach to the organization of the state support of the national economy is of primary interest. Finland and Italy, for example, are characterized by active state subsidization of the industry. Moreover, government support in these countries is focused on promoting exports, including direct funding. In Finland considerable attention is paid to attracting foreign capital needed to stimulate growth of the economy (the state provides the necessary support for foreign investors planning to operate in economically less developed regions of Finland).

In their turn, France and Germany focus government economic policy on equalization of regional economic differentiation. Except for sectoral method of cash distribution, these countries use a regional one because it is considered more efficient. In France, the interaction between the state and regions is organized on a contract basis under the national planning system. Each region concludes planned contracts with the state that bind both parties to a certain investment program and shall be included as a priority in the national plan of the state.

In Germany, some new branches are having an increasingly significant impact on the development of the industry. The industry of eastern states of Germany has undergone substantial restructuring due to the fact that their former branches initially focused on Russia and the countries of Central and Eastern Europe (chemical, textile industry, metallurgy, carriage building and shipbuilding) had to be liquidated. Instead of them construction industry, food industry, precision mechanics and optics were put at the center of development. Once the "locomotive of Europe", the German economy is now far behind many countries not only from the standpoint of growth, but also in terms of development. However, the country demonstrates a number of positive features that contribute to the development of the economy: state support programs and the possibility of financing through borrowed capital, a developed system of venture capital firms, and the availability of good infrastructure.

An integral part of national economic policy in Germany is regional policy which aims to ensure equal participation of structurally weak regions in the economic development of the country. In addition, France, Germany as well as Russia pay special attention to providing additional funds to the most problematic regions. This approach sufficiently differs from the views of the leadership of China, where state support is given to regions with high economic and investment potential that are able to act as a "locomotive" for accelerated economic development of the country, and in relation to the depressed regions they follow the so-called policy of "positive discrimination".

The USA, in which the history of economy began with the search for economic benefits by European settlers in the XVI, XVII and XVIII centuries, approaches to the state economic policy implementation are of particular interest. In this work, we cannot cover all aspects of industrial development and further economic growth of the United States. We shall consider the features of the present stage. The present stage is characterized by two groups of trends: one of them is traditional and the other one is shaping a new look of economy.

The first is represented by such directions as government regulation of the economy and state orders (especially military orders) that have significant value for economic development; encouraging of entrepreneurial activity of the population by the society and the state, creating and maintaining a favorable business climate; relatively low share of government in GDP; more limited but at the same time very effective state intervention in the economy than in many other developed countries.

In its turn, the second group of trends to carry out the state economic policy in the US includes: orientation to the flexible, diversified and small-scale production which is able to adapt to the fast changing needs of economy and population; improving knowledge-based economy which is determined by general increase in the cost of research and development, improvement of their structure and staffing; functioning of venture capital funds that are willing to take the risk of promising developments (currently in the U.S. there are more than 900 venture capital firms which invest annually about $40 billion in innovative projects); the orientation of the state budget to address socio-economic issues; maintaining a high level of effective services that have no analogues in the world; the development of a global integrated information infrastructure and its active use in the production and economic sphere.

3. Conclusion

In view of the foregoing, we can single out a number of common features in the organization and implementation of the state economic policy abroad:

- financing the development of the economy on the part of the state is carried out using various techniques, including special-purpose program methods and is distributed to the various sectors of the economy using different types of special state financial institutions, state-owned banks make a significant contribution to the development of sectors of national industry and infrastructure;
- high degree of state regulation at various stages of market economy development, the special role here belongs to the legislative framework ensuring free competition at all levels of the economy and balance between self-regulation and regulation of the economy by institutional structures of power. That is, emphasis is made on indirect methods of the state influence on business.
- the predictability of tariff policy in the sphere of rendering of services by natural monopolies, the establishment of hard budget constraints;
- due to the significant risks, financing of development and adoption of new technologies is carried out using the funds of special investors willing to take high risks. The role of these investors can be performed by venture capital funds being able to take risks for the sake of high potential profit of successful projects compensating poor investment.

We believe that it is advisable to use the international experience of carrying out the state economic policy in Russia after the appropriate adaptation and implementation of its normative elements in the Russian institutional system. It should be noted that the results obtained during the state economic policy implementation determine not only the further vector of socio-economic development of the state, but also directly affect the formation and development of the economic potential of the Russian Federation on the world stage under current conditions.

At the same time, economic policy that is carried out in our country should not be copied from a particular model successfully implemented in one or more nations. It must necessarily be adapted to the Russian specifics. Only in this case we can speak about the efficiency of the state economic policy and achievement of all the goals in the medium and long term.

Acknowledgment

This paper is an output of the science project of the government task of Ministry of education and science of the Russian Federation № 26.3546.2017/PCH "Development fundamentals of analysis and prediction of structural and dynamic parameters of the regional economy are based on the integration of the Russian and world experience of management of territorial development and modern scientific doctrines ".

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, vol. I-VI, pp. 1286-1294.

[2] Bertola, G. and Drazen, A. (1993) Trigger Points and Budget Cuts: Explaining the Effects of Fiscal Austerity, *American Economic Review*, vol. 83, no. 1, pp. 11-26.

[3] Blanchard, O. and Perotti, R. (2002). An Empirical Characterization of the Dynamic Effects of Changes in Government Spending and Taxes on Output, *The Quarterly Journal of Economics*, vol. 117, no. 4, pp. 1329-1368.

[4] Fair, R. C. (2012). Has Macro Progressed?, *Journal of Macroeconomics*, vol. 34, no. 1, pp. 2-10.

[5] Keynes, J. M. (1936). The General Theory of Employment, Interest and Money. London: Macmillan. [Online]. Available: http://gutenberg.net.au/ebooks03/0300071h/printall.html

[6] Kirillovskaya A. A., Pashkus V. Y. and Volkova A. V. (2016). The newest economic policy, government regulation of the economy and economic security, *Globalization and its socio-economic consequences. 16th International Scientific Conference. Proceedings* (Part I), Rajecke Teplice, Slovak Republic, pp. 870-875.

[7] Kryzhanovskaya O., Vertakova Y., Plotnikov V. and Sevriukova L. (2016). The Prospects for the Implementation of Industrial Policy in Countries in The Medium Term, *Proceedings of the 27th International Business Information Management Association Conference – Innovation Management and Education Excellence Vision 2020: from Regional Development Sustainability to Global Economic Growth*, IBIMA 2016; Milan, Italy, pp. 845-856.

[8] Morkovina, S. (2016). Innovative mechanisms to improve business climate in the regions of the Russian Federation as precondition for international business development. *16th International Scientific Conference on Globalization and its Socio-Economic Consequences* Rajecke Teplice, Slovakia, PTS I-V, pp. 1435-1443.

[9] Newman, R. (1983). Industry Migration and Growth in the South, *The Review of Economics and Statistics*, vol. 65, pp. 76-86.

[10] 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.* Conference Proceeding vol. III., no. 1, Bulgaria, pp. 851-858.

[11] 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.

[12] Tobin, J. (1969). A general equilibrium approach to monetary theory, *Journal of Money*, *Credit, and Banking*, vol. 1, pp. 15-29.

[13] Vertakova Y. and Plotnikov V. (2016). Innovative and industrial development: specifics of interconnection, *The Economic Annals-XXI*, vol. 156, no. 1-2, pp. 37-40.

[14] 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) *Conference on Political Sciences Law, Finance Economics & Tourism. Conference Proceeding,* vol. III., no. 1, Bulgaria, pp. 771-778.

[15] Vertakova, Y., Polozhentseva, Y. ands Klevtsova, M. (2016). Sanctions and economic policy in the conditions of globalization. *Globalization and its socio-economic consequences. 16th International Scientific Conference on Globalization and its Socio-Economic Consequences*: Rajecke Teplice, Slovak Republic, pp. 2354-2361.

[16] Wheat, L. (1986). The Determinants of 1963–77 Regional Manufacturing Growth: Why the South and West Grew, *Journal of Regional Science*, vol. 26, pp. 635-659.

INTERREGIONAL MIGRATION AND GLOBALIZATION: THE EMPIRICAL STUDY IN SELECTED COUNTRIES EU

Lucie Kureková[1,a], Pavlína Hejduková[2,b,*]

[1]University of Economics in Prague, Faculty of Economics, Department of Economics, W. Churchill Sg. 1938/4, 130 67, Prague 3, Czech Republic

[2]University of West Bohemia, Faculty of Economics, Department of Finance and Accounting, Univerzitní 8, 306 14 Pilsen, Czech Republic

[a]xkurl06@vse.cz, [b]pahejdu@kfu.zcu.cz

*Corresponding author

Abstract. Globalization has been taking place for centuries and the movements of population are closely related to globalization. Also the economics of migration has received increased attention, because the geographical distribution of the population has undergone major changes in the past decades. Certainly, significant regional differences are very persistent in many countries EU and the spatial distribution of economic activity is far from uniform. There is not just one single theory of migration and economists have attempted various explanations for the existence of regional migration and for its effects on labour markets or on whole economy. Previous scholars have examined the migration flows in relation to a wide range of socio-economic factors. This paper reviews a growing literature on migration and globalization, contributes to existing knowledge by investigating the effects of globalization on regional migration. The aim of this paper is to define and evaluate the relationship between globalization and regional migration in selected countries EU. The econometric analysis uses panel data and examines if the migration flows contribute to convergence or divergence of European regions. The data set contains primarily variables that represent regional migration, unemployment rate and income disparities between selected regions. Our data source is coming from Eurostat Database.

Keywords: globalization, migration, panel data, economic indicators, region

JEL Classification: C1, C2, F2, F6, J6

1. Introduction

The term "globalization" is closely related to migration, because the movement of the labour force is one of the aspects of globalization. International migration has become a sensitive topic in OECD member states and European countries. Over the last years, migration movements have drastically affected the socio-demographic characteristics of the OECD member states. They have influenced the skill structure of the labour force, the age structure of the population, and the geographical distribution of consumers (Aubry et al., 2016).

The link between migration, economic development and globalization has been explored for many years. The relationship between migration and globalization is extremely complex and sensitive to a whole range of factors and it is therefore very difficult to formulate unambiguous conclusions in the direction of both positive and negative benefits (Brázová et al., 2011).

Compared to the past, the causes of current trends in world migration have changed considerably. Globalization trends related to migration lie not just only increasingly resettlement, but countless types of temporary, cyclical migration of different lengths associated with a number of reasons (Poku & Graham, 2000).

Globalization process stimulates migration and vice versa. It is possible to name the development of transport, infrastructure, modern technologies and the sighting of the richer countries' cultural designs etc. – for more see Stojanov et al. (2006), Graham (2000). As stated by Nový (2016), we can see also many changes in international trade in the context of globalization.

Particular theoretical concepts of migration are different in their assumptions and often in the conclusions. Today neoclassical theoretical concept creates mainstream view of the causes and consequences of migration. There exist some models of migration, which are different in definition of consequences of migration to the economic growth in the theories: some of these theories are optimistic and say that the migration supports the economic growth, some are pessimistic and suggest that there are many negative effects of migration in current world (Kureková & Hejduková, 2016).

The paper begins with a brief overview of the selected theoretical concepts of the migration. Then, the methodology and results of the empirical study are presented and discussed. At the end of the paper we mentioned conclusions and some suggestions for future research.

The aim of this paper is to define the relationship between globalization and migration, because in these days we can observe that economics in Europe countries converge and it could be due to migration, which is partly due to globalization. We try to find out how are the migration flows ongoing in The Visegrad Group: the Czech Republic, Hungary, Poland and Slovakia and to find out how the regional migration is contributing to changes in the selected economic indicators in these states.

2. Theoretical concepts of the migration: selected approaches

This part of the paper reviews briefly the existing understanding of the phenomenon "migration" and its selected aspects, especially the consequences of the migration and presents selected research studies from this professional area.

Theories that explain the causes of migration are many in current globalised world and for many of them is characteristic multicultural approach (Stojanov et al., 2006). Massey et al. (1997) categorizes the causes of migration according to individual approaches to migration and more general theories.

Modelling of spatial mobility of the population is probably first described by Ravenstein (1885). There were limited availability of information resources and the lack of computing technology but the studies still had remarkable conclusions.

The most often using model of migration come from logic of Ravenstein, are gravitation models. These models say that migration is directly dependent on push and pull factors and indirectly depends on the distance between the countries concerned – for more Taylor (2003). The advantage of these models is its simplicity; the disadvantage is that they do not take into account the social and cultural aspects of migration. Problems we can see also in the term "distance" – we can meet with physical distance, historical, language, etc. (Pedersen et al., 2004).

According to the neoclassical model of migration should contribute to balancing the migration disparities in individual countries or regions, or a positive contribution to overall economic growth (Kumpikaite & Zickut, 2012). How we can see on the example of Granato et al. (2015) the impact of low- and medium-skilled migration is consistent with traditional neoclassical reasoning, suggesting that labour mobility reduces differences in regional unemployment rates. In contrast, the migration of high-skilled workers tends to reinforce disparities. The neoclassical model of migration is able to justify a large part of the spatial mobility of the population and can be used to a certain extent as a prediction tool. This model leaves out certain aspects of migration - for example, it does not explain irrational migration to areas with lower economic performance or autonomous migration (Ilinitchi-Procházková, 2010).

Another known theory is the theory of cumulative causes. Representatives of this theory of migration may lead to greater deepening disparities between countries or regions, which in the long run may be the problem – we can meet with underutilization of economic potential or talent (brawn drain), underdevelopment etc. – for more see for example Myrdal (1957), de Haas (2010) or Penninx (1982).

The other study which we would like to describe is theory of migration systems. This theory of migration partly draws on theory of cumulative causes. Fawcett (1989) argues that the conceptual framework points to the different connections between countries that are related to migratory flows and counter-flows of people in the migration system. Migration perceives rather than a static phenomenon as a dynamic process. Households and individuals are considered as active units in the system called as active decision-makers who have possibility to migrate or used the other alternatives (Schoorl et al., 2000). This concept Arango (2000) sees as unused and rather sees him as a promise to the future.

There were chosen a few of migration theories and it should be noted that the complex impact of migration on the economy and domestic position is theoretically indeterminate and conclusions of the theoretical models are sensitive to changes in their assumptions. There are many empirical and theoretical studies that have examined the effects of migration on the economy or on the labour market in this research area (see more Dunlevy & Hutchinson, 1999 or Girma & Yu, 2002).

The categorization of migration concepts can be conceived from a different perspective, according to the research method. How mentioned Okkerse (2008) the research studies of migration and global labour market can be divided into two main categories which are classified according chosen research methods: simulation analysis and econometric analysis. The first category of studies is based on deeper theoretical backgrounds and the results are more sensitive to the initial theoretical concept and changes in the chosen assumptions. The second category of studies has already estimated the actual effect of migration and these analyses require quality database.

3. Methodology, research questions and data collection

The purpose of this study was to investigate and compare migration in The Visegrad Group: the Czech Republic, Hungary, Poland and Slovakia. Since the migration and globalization is an important phenomenon in Europe, the descriptive (initial mapping of migration) and explanatory (clarifying differences and causes in migration) research approaches have been chosen.

This study provides an answer to the following central research question: Does the migration contribute to the convergence or divergence of regions in V4? In addition to the central research question, the following specific research question, based on the research results, was formulated: How did the migration develop at NUTS1 and NUTS2 level in V4 countries? Based on the literature review and given the specific research questions, the following data-collection questions, the two hypotheses were formulated:

Hypothesis A: Migration contributes to the convergence or divergence of income in selected regions.

Hypothesis B: Migration contributes to the convergence or divergence of unemployment in selected regions.

For analysis were used statistical indicators from the Eurostat database. Statistical indicators should reflect their theoretical counterparts; we assume that gross domestic product properly represents income developments in individual countries. Data were available for the period from 2010 to 2015 for our analysis. The final panel data set therefore contains a total of 560 observations (NxT; N=35 regions and T=16 years). Descriptive statistics for selected variables are presented in Table 1.

Migration (MIG): given Eurostat the indicator is defined as the ratio of net migration (including statistical adjustment) during the year to the average population in that year. The value is expressed per 1000 persons. The net migration plus adjustment is calculated as the difference between the total change and the natural change of the population.

Income (GDP): this variable represents a statistical indicator, gross domestic product per capita and is expressed in the so-called PPS (i.e. an artificial currency unit used by Eurostat).

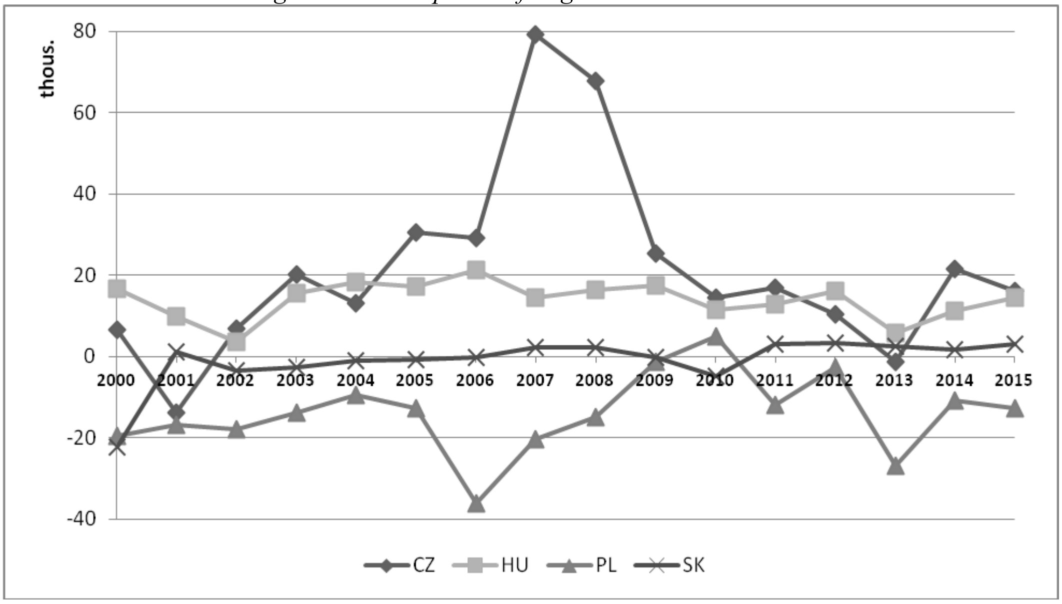
Unemployment rate (UNEMPL): the variable stands for the unemployment rate in the age 15+. This indicator is a specific degree of unemployment, the ratio of certain groups of unemployed in the labour force identically defined percentage.

4. Results and discussion

Question No. 1: How did the migration develop in V4 countries at NUTS1 and NUTS2 level?

To answer research question 1 the migration at national and region levels was depicted in Figure 1. Then basic statistics of regional migration in selected countries were calculated (see Table 1). We can see in Figure 1 the development of migration at nation level over the period 2000 and 2015. The highest volatility of migration was in the Czech Republic; on the contrary, the lowest volatility was recorded in Slovakia.

Figure 1: Development of migration in V4 countries



Source: own based on Eurostat

The results of basic statistics indicate that Czech Republic and Hungary had positive regional migration in average and the Poland and Slovakia had negative one (see Tab. 1). In other words the development of regional migration in CZ and HU shows that inflows of migration were in average higher than outflows and in SK and PL the outflows exceeded inflows.

Table 1: Variables and basic statistics

		Mean	Std. Dev.	Min	Max
CZ	MIG	2678.61	5819.87	-9100	25890
	GDP	19990.63	8984.58	10 900	51 400
	UNEMPL	6.74	2.88	1.9	14.3
HU	MIG	2005.20	8843.08	-9223	33001
	GDP	13550.89	5573.85	6 700	30 400
	UNEMPL	8.18	3.14	3.5	16.3
PL	MIG	-872.15	4641.09	-14132	15612
	GDP	12864.84	4286.05	6 700	31 600
	UNEMPL	13.17	5.24	5.4	26.8
SK	MIG	-258.44	2783.49	-17257	6161
	GDP	19814.06	12771.63	7 500	54 400
	UNEMPL	13.27	5.67	3.3	24.2

Source: own based on Eurostat

Central research question: Does the migration contribute to the convergence or divergence of regions in V4?

According to this main research question we formulated following hypothesis A and B. We tried to find out based on data of regional migration flows in V4 countries.

Hypothesis A: Migration contributes to the convergence or divergence of income in selected regions.

Hypothesis B: Migration contributes to the convergence or divergence of unemployment in selected regions.

The individual observations were treated equally as in the case of so-called Pooled OLS. This assumption allows us to use the Dickey-Fuller test; consequently, this approach also allows us to use a standard form of VAR model and Granger causality test.

In the first step two new variables from GDP and Unemployment were calculated: (i) regional income difference (abs_dinc) and (ii) regional unemployment difference (abs_dunempl). The assumption of the neoclassical economics is that migration reduces the differences between regions. Regional differences were calculated as the difference of regional variables and variables at national level. Then they were expressed in absolute values. If it turns out that migration reduces these absolute differences, it means that migration contributes to the convergence of the regions and vice versa.

In the second step, DF test was used to find out if variables are non-stationary and possesses a unit root. The results showed that all three variables (mig, abs_dinc and abs_dunempl) do not possess unit roots. Therefore, it was not necessary to further modify the variables. There were estimated several VAR models with various settings lag length. Based on the AIC value, the VAR (3) model was selected. Than we applied Granger causality test and the results are presented in Tables 2.

Table 2: Granger causality test

Granger causality Wald tests				
Equation	F	df	df_r	Prob > F
abs_dinc	3.144	3	547	0.0249
abs_dunempl	0.38283	3	547	0.7654

Source: own based on Eurostat

According the results of GC test, migration contributed to the changes of income (P=0.025) and did not contribute to convergence or divergence of unemployment rate (P=0.765) in V4 at regional level. Similar results were obtained for migration and unemployment rate in CZ and SK at national level (see Kureková & Hejduková, 2016).

5. Conclusion

The phenomenon of migration and globalization is very important for economics and plays important role in other society discipline as are the sociology or political science. As stated by authors at the beginning of the paper, the term "globalization" is closely related to migration, because the movement of the labour force is one of the aspects of globalization and the globalization stimulates migration and vice versa.

The aim of this study was to define the relationship between globalization and migration. In recent years we can observe that economics in European countries have converged and it could be due to migration, which is partly caused by globalization.

Two hypotheses were formulated in this paper and the results of our analysis allowed us to conclude that migration at regional level did not contribute to convergence or divergence of unemployment rate between regions of Visegrad group countries. According the results of GC test and VAR (3), migration contributed to divergence of income. Results of our study show interesting information about regional migration in V4 countries and may also provide a useful basis for future research in this area.

Acknowledgment

This is paper has been prepared under financial support of the project SGS-2017-0004 'Finance and Sustainable Development from the Perspective of Theory and Practice' at the University of West Bohemia, Faculty of Economics, which authors gratefully acknowledge.

References

[1] Arango, J. (2000). Explaining migration: a critical view. *International social science journal,* vol. 52, no. 165, pp. 283-296.

[2] Aubry, A., Burzyński, M. and Docquier, F. (2016). The welfare impact of global migration in OECD countries. *Journal of International Economics,* vol. 101, pp. 1-21.

[3] Brázová, V. K. et al. (2011). *Migrace a rozvoj. Rozvojový potenciál mezinárodní migrace.* Praha: Univerzita Karlova v Praze, Fakulta sociálních věd.

[4] De Haas, H. (2010). Migration and development: A theoretical perspective. *International migration review,* vol. 44, no. 1, pp. 227-264.

[5] Dunlevy, J. A. and Hutchinson, W. K. (1999). The Impact of Immigration on American Import Trade in the Late Nineteenth and Early Twentieth Centuries. *Journal of Economic History*, vol. 59, no. 4, pp. 1043-1062.

[6] EUROSTAT. (August 2017). National Accounts, SBS database, Migration and citizenship data. [Online]. Available: http://europa.eu/

[7] Fawcett, J. T. (1989). Networks, linkages, and migration systems. *International Migration Review,* pp. 671-680.

[8] Girma, S. and Yu, Z. (2002). The Link between Immigration and Trade: Evidence from the UK. *Review of World Economics*, vol. 138, no. 1, pp. 115-130.

[9] Graham, D. T. (2000). The people paradox. Human movements and human security in a globalizing world. In: Graham, D. T.; Poku, N. K. (eds): *Migration, Globalisation and Human Security.* London: Routledge.

[10] Granato, N., Haas, A., Hamann, S. and Niebuhr, A. (2015). The Impact of Skill-Specific Migration on Regional Unemployment Disparities in Germany. *Journal of Regional Science,* vol. 55, no. 4, pp. 513-539.

[11] Ilinitchi-Procházková, C. (2010). Vybrané teorie migrace a jejich význam při vytváření migračních politik. *Acta Oeconomica Pragensia,* vol. 6, pp.3-26.

[12] Kumpikaite, V. and Zickute, I. (2012). Synergy of migration theories: theoretical insights. *Engineering Economics,* vol. 23, no. 4, pp. 387-394.

[13] Kureková, L. and Hejduková, P. (2016). Globalization and migration: The empirical study of panel data of the migration in the Czech Republic and Slovak Republic. *Globalization and its socio-economic consequences.* Žilina, Slovak Republic, pp. 1136-1144.

[14] Massey, D. S. et al. (1997). *Causes of migration. In: The Ethnicity Reader. Nationalism, Multiculturalism and Migration.* Malden: Blackwell, pp. 257-268.

[15] Myrdal, G. (1957). *Economic Theory and Under-developed Regions,* Gerald Duckwords, London.

[16] Nový, M. (2016). The influence of globalization on international trade in the context of maximizing consumer surplus and producer surplus. *Globalization and its socio-economic consequences.* Žilina, Slovak Republic, pp. 1563-1570.

[17] Okkerse, L. (2008). How to Measure Labour Market Effects of Immigration: A Review. *Journal of Economic Surveys,* vol. 22, no. 1, pp. 1-30.

[18] Pederson, P. N., Pytlikova, M. and Smith, N. (2004). *IZA – Selection or Network Effects? Migration Flows into 27 OECD Countries, 1990 – 2000.* IZA Discussion Paper No. 1104. IZA: Germany.

[19] Penninx, R. (1982). A critical review of theory and practice: the case of Turkey. *International Migration Review,* vol. 16, no. 4, pp. 781-818.

[20] Poku, N. K. and Graham, D. T. (2000). Population movements and human (in)security. In: Graham, D. T.; Poku, N. K. (eds): *Migration, Globalisation and Human Security.* London: Routledge.

[21] Ravenstein, E. G. (1885). The laws of migration. *Journal of the statistical society of London,* vol. 48, no. 2, pp. 167-235.

[22] Schoorl, J., Heering, L., Esveldt, I., Groenewold, G. and Van der Erf, R. (2000). *Push and pull factors of international migration: a comparative report.* Luxembourg: Office for Official Publications of the European Communities.

[23] Stojanov, R. et al. (2006). Migrace jako globální fenomén. Globalizace a její výzvy. *Mezinárodní politika,* vol. 10, pp. 15-17.

[24] Taylor (2003). Migration. In *Paul Demeny and Geoffrey McNicoll (ed.) Encyclopedia of Population,* vol. 2, New York: Macmillan Reference, pp. 640-644.

ANALYSIS OF THE COMPETITIVE ENVIRONMENT IN THE INSURANCE MARKET IN A GLOBAL ASPECT

Lenka Kusá[1,a,*], Juraj Fabuš[2,b] and Milan Gajdoš[3,c]

[1]University of Zilina, Faculty of Operation and Ekonomics of Transport and Communictions, Department of Communications, Univerzitna 1, 010 26 Zilina, Slovak Republic

[2]University of Zilina, Faculty of Operation and Ekonomics of Transport and Communictions, Department of Communications, Univerzitna 1, 010 26 Zilina, Slovak Republic

[3]University of Zilina, Faculty of Operation and Ekonomics of Transport and Communictions, Department of Communications, Univerzitna 1, 010 26 Zilina, Slovak Republic

[a]lenka.kusa@fpedas.uniza.sk, [b]juraj.fabus@fpedas.uniza.sk, [c]mg.common@gmail.com

*Corresponding author

Abstract. Globalization is nowadays one of the key factors in the development of the world economy. The effects of globalization are reflected in the insurance markets that are parts of the financial markets. Insurance currently becomes more and more a global business. Competition is steadily rising and regulatory barriers between international economies are declining. Every economy has established new rules of competitive struggle and competitive relationships within a given country. Competitive environment and competition are constantly changing and connecting with globalization in several spheres and areas. Over time, the resulting regional differences are shrinking and a certain kind of culture is created that acts as a whole. On an international scale, the competitive environment is characterized by PEST analysis, where it is important to draw attention to the political, economic, social and technological environment. The liberalization of the insurance market of the business sphere brings changes and new conditions for bidders in the insurance market. The article focuses on selected commercial insurance companies and their market shares in the insurance market in the Slovak Republic. Insurance companies within the European Union adopt regulation and the legislative framework of the market environment of the country in which they operate. Globalization in the insurance market opens up new opportunities for commercial insurers and reduces differences in differences on the basis of cooperation and trade through the international market.

Keywords: competitive environment, insurance market, globalization, commercial insurance companies

JEL Classification: G22, F60, G20

1. Introduction

Economic development is in the world and in the European Union characterized by a degree of integration, globalization and also by the economic crisis. Insurance is the sector of the national economies of the developed economy of each country. The insurance market of the Slovak Republic is part of the European Union's unified insurance market from the first of

May 2004. The authorization to conduct business activities in the territory of the Slovak Republic from the first of January 2017 acquired 16 commercial insurance companies. Insurance companies have their registered office in the Slovak Republic and the remaining 21 carry out business activities through a branch.

The business sphere can be characterized in Slovakia as less favorable due to the stagnation of the prescribed insurance and the lack of interest in insurance. In the terms of globalization, the comparable level of people and property insurance in the Slovak Republic is not comparable to advanced European countries. The necessity is to provide the right regulatory environment that the private sector of the insurance industry will support to a certain extent. (Slaspo, 2008)

As a part of the integration of the insurance market into the European Union, it was necessary to adapt the current legislation in the field of the European Union insurance legislation. A law in which the legal acts of all EU Member States are negotiated with the possibility to carry out insurance activity in the territory of the Slovak Republic is Act No. 39/2015 Coll. on Insurance and on Amendments to Certain Laws as amended. The stipulated law gives permission to commercial insurance companies to carry out insurance activity in the territory of the Slovak Republic.

2. Globalization and insurance market

Globalization is currently characterized by growing trends in the development of the current market environment and transparent access to all active interfaces and entities. (Butek & Stofkova, 2016). The internationalization of mutually beneficial changes brings trends and new insights into access to technology, science, research. This multidimensional process affects the social, economic, political and technological environment. In terms of market conditions, the insurance market has been greatly liberalized and international trade opens up space for new entrants who want to acclimate to a selected market space. Growth in the liberalization of financial markets is linked to the growth of new types of securities, financial transactions, instruments and operations. This is how the differences between financial institutions are reduced and there is homogenization. The very development of information technology and telecommunication services aimed at accelerating the implementation of processes forms the basis for global investment. The important role of globalization is to increase the flow of funds across national borders through individual financial markets. Cooperation between these markets removes local differences.

The characteristic of current globalization lies in the definition of several dimensional areas. The first dimensioned area is mobility, whether people, services or capital. Accessible capital movement creates flexibility of availability, it is faster and easier in international perception than ever before. Services are generally at a much higher level and great emphasis is placed on highly professional staffing. (Kovacikova & Stofkova, 2016)

The second dimension is digitization, which has seen in the last decade a broad-spectrum shift in communications and information technologies that have also emerged in the insurance market. (Majernik et al., 2016) The third dimension is liberalization, in the areas of politics, trade, economics and services. The emergence of global standards enables states to operate effectively in relation to global markets. The fourth area is integration, linking companies that are active in international markets to multinational corporations as well as acquisitions. (Krátka, 2007)

2.1 The business environment of the insurance market of the Slovak Republic

Surveillance of commercial insurance companies was carried out by the Financial Market Authority. The task was to manage and oversee the activities of commercial insurers by means of regulations, regulations, laws and standards applicable to the insurance industry. Since 1 January 2006, the National Bank of the Slovak Republic has been performing this activity. The task is to monitor, mitigate and stabilize the systemic risks of the insurance market. A noticeable shift in regulation was recorded in the Insurance Distribution Directive (IDD), preceded by the IMD (Insurance Mediation Directive). Proper and effective setting of regulatory measures is a key to business success for the functioning and smooth running of the insurance market. The free movement of insurance services in the European Union means the possibility to conclude insurance contracts with insurance companies established in one Member State as a service provider, insurance contracts in other Member States without having a permanent organizational unit. (Baranowska-Zajac, 2014)

2.2 PEST analysis in the context of economic growth

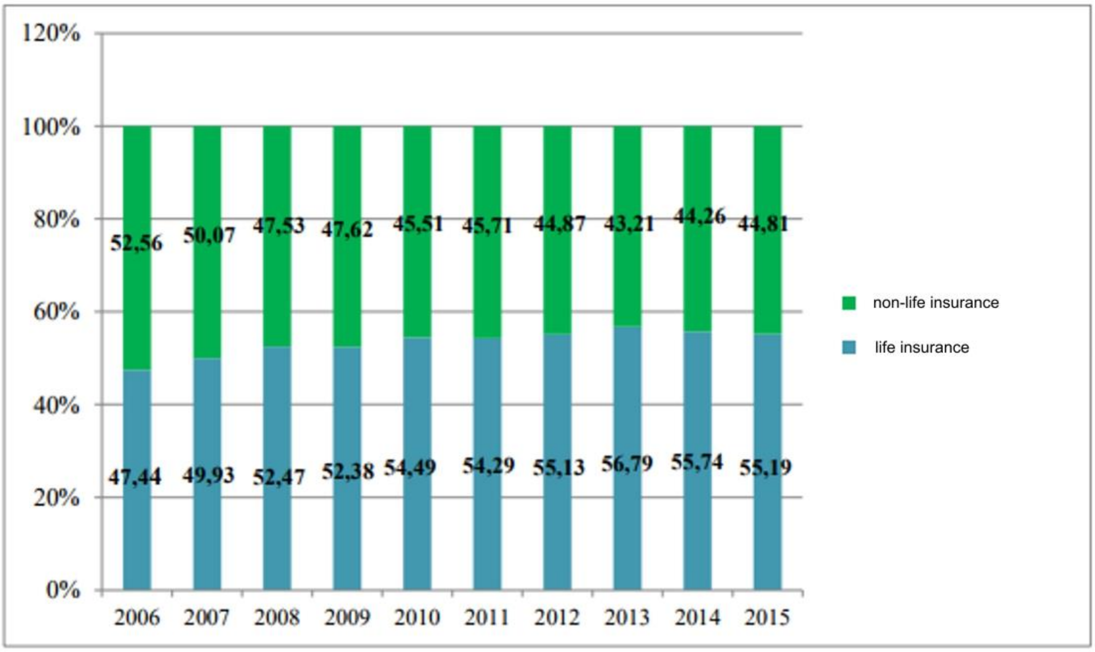
The economic environment of the insurance market is mirrored by the macroeconomic indicators resulting from the insurance market. The economic environment determines the purchasing power of the population, reflecting their current earnings. On an international scale, we can characterize the diversity of countries and their level of purchasing ability of the population. The unfavorable economic environment and the stronger competitive pressure make insurance companies look for reserves to ensure their efficiency. Based on national conditions, the insurance market in the Slovak Republic is stable. However, it is important to look for space for further development and continued growth. The relationship between economic growth and globalization was discussed in the literature (Lee & Chang, 2012) and also (Dreher et al., 2008). Recent studies claim that economic growth is determined by globalization. This claim is determined by a greater amount of evidence for policy makers themselves. The authors argue that there is no widely held view of the cause of causality between economic growth and globalization. We can identify new methods for analyzing the bilateral causes of economic growth and globalization. A recent study came (Dreher, 2006) in which he used a panel data model for discussion. The panel data model deals with relationships as a single globalization dimension that affects economic growth. The results of its research, aimed at 123 countries, have shown that the impact and effects of globalization really support economic growth. (Chang et al., 2013). Also, the continuity in their studies between globalization and economic growth has been defined (Alesina et al., 1994), (Alesina et al., 2000), (Blomstrom et al., 1992), (Chanda, 2001), (Dollar, 1992), (Garrett, 2001).

Over the last two decades, we have witnessed an unjustified growth in the emerging markets. In fact, the functions of the insurance market not only facilitate a certain number of economic transactions by transferring insurance and transferring the risk, but their role is also to promote financial intermediation. (Ward & Zurbruegg, 2002) noted in their work that the activity of the insurance market can greatly contribute to economic growth. They have concluded that insurance indemnity and financial intermediation are focused on effective management of domestic savings and lower financial risk. From the point of view of the competitive environment of the insurance market in the Slovak Republic, the role of commercial insurance companies is to mediate financial services aimed at different types of insurance for the selected customer segment. The goal is also to enable efficient allocation of customer segment savings to individual life and non-life types. According to the author (Kordalsky, 2016), National Competitiveness is one of the most important interests of developing, developed countries and many policy-makers.

The following chart shows the ratio of life and non-life insurance to total premiums in the Slovak Republic. It is obvious that the development in terms of the economic environment in terms of the number of non-life and life insurance is fairly balanced.

In Fig. 1 we can see the ratio of life and non-life insurance to total insurance in%, which were concluded by entrepreneurs and households under the insurance contracts concluded in the Slovak Republic.

Figure 1: Share of life and non-life insurance in total insurance in (%)



Source: Author acording to www.slaspo.sk

Buying life insurance is a major consumer financial decision. According to the authors (Chaonan L. et al., 2017), who draw attention to the National Financial Literacy Research conducted by the Financial Supervision Commission of Taiwan, there is a link between financial literacy and the purchase of life insurance. The Commission collected data on 2472 respondents aged 20 and over. The regression model examines the effects of financial literacy and information resources on the life insurance demand itself. Three main findings were made.

1. People with high financial literacy are likely to have a life insurance
2. Financial literacy components, including savings and money management, financial planning of investments and insurance planning, are significantly and positively related to life insurance and its ownership.
3. The demand for life insurance can be influenced not only by financial advisors, but also by interactions and conversions between family members

2.3 The insurance market in Slovakia and the insurance market risk

Market environment is associated with the development of new changes that are associated with the opportunities of the population. Requirements for creating new jobs, living standards and employment are increasing. Significant factors include the demographic composition of the population, which influences the demand for selected types of insurance market products. The population has the character of small-family and, at the same time, the increase in income results in increased consumption of insurance products. People realize that the inevitable need is to protect their property and health against unexpected events. The current development of the economy, in the sense of "think globally, act locally", is to focus on developments in the financial services sector, such as insurance. If commercial insurance companies want to remain in the market, it is essential that they continue to develop new technologies and try to increase profits and optimize their costs. Still new advanced sophisticated technologies allow them to progress and be better than competitors. It is essential not to look at a customer who is a major subject of their interest.

Author (Aries, 2016) claim that success in a better competitive advantage over others is achieved by combining learning and active self-realization. Insurance development is at a sustainable level with other European insurance companies, which aims to create modern information technologies that facilitate communication in relation to customers. In the last decades, innovations in insurance have evolved in an accelerated pace. In the context of research, German risk managers consider the emerging innovations that are in the deployment phase of the insurance industry as being the biggest problems, as far as problems related to the risks of computer technology failures are concerned. The negative tendencies of globalization are causing problems related to uneven growth in social and economic development and social polarization, the growth of rich and poor strata and the decline of the middle layer. (Kriza eurozóny, 2016)

2.4 Comparison of the insurance market with European countries

According to the author's article (Tomová, 2011), the characteristic feature of the process of globalization is the constant growth of competition. Regulatory barriers between economies are declining, world labor divisions are changing from international to global and competition is gaining a new dimension and intensity. At present, global competition, supported by technology and information transfer, is being promoted.

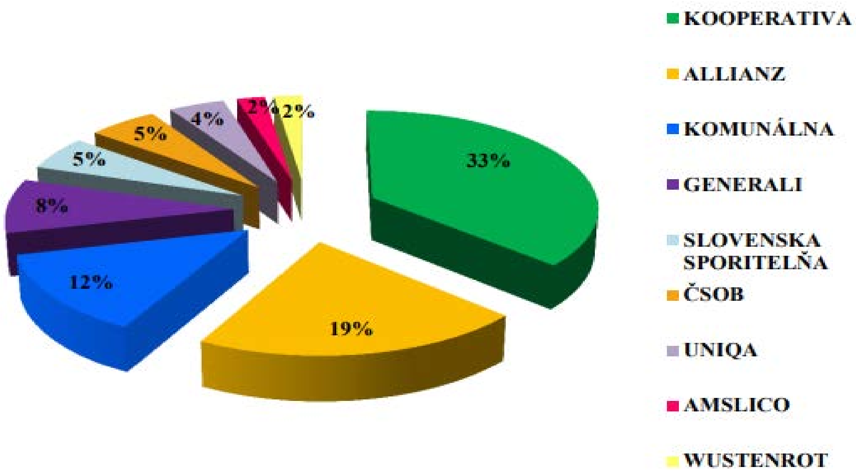
Insurance is an essential part of the economic potential of all developed countries. It also controls more capital in some Western European countries, in Switzerland, Sweden or the UK. Growth of insurance services is very closely linked to the economic performance of individual countries. The largest insurer in the insurance premium is the Allianz German insurance company on the European continent. Other insurance entities include AXA - UAP (FR), Generali (IT), Zurich (CH), Winterthur (CH), Prudential (GB), AGF (FR), and Int. Nederlanden Group. (NL), Commercial Union (GB). On a pan-European scale, the position of life insurance has been strengthened over the last three years. In some countries, we find significant differences, but if there is a higher share of life insurance in the national market, it reflects its maturity.

The insurance markets are influenced not only by global trends but also by the local limitations of the country. Gobalization of insurance itself is influenced by global insurance products. Itself globalization of insurance is increasing by globalization of risk diversification and the sophistication of insurance products.

Markets by the author (Borgdana Firtescu, 2014) are the United Kingdom, France, Germany and Italy, accounting for about 70% of the total lifetime premiums in Europe. In 2011, the European insurance market has a 36% share in the global market, followed by North America (29%) and Asia (28%), indicating the importance of the European insurance market itself.

The market size of the Slovak Republic is relatively small in terms of the insurance market and there are not so many competitors. The leading players with the largest market share include Allianz - Slovenská poisťovňa, and. with 19.23% market share, Kooperativa Insurance Company, and. with. Vienna Insurance Group (VIG) with 35.56% and VIG with a 12.8% stake in the insurance market. On an international scale, compared to other European countries, those Slovak commercial insurers have an unstable and less prosperous position with less than 4% market share. They deal with question to stay and improve their marketing activities or leave and make space a stronger leader. The following Fig. 2 shows the market shares of commercial insurance companies in 2012 in the Slovak Republic.

Figure 2: Market shares of commercial insurance companies in the Slovak Republic in 2012



Source: Author acording to www.slaspo.sk

3. Conclusion

From the point of view of globalization of the insurance market, we can state that the insurance market is sufficiently liberalized to enter the market space. Consistency with the Slovak Republic is not significant, on the contrary, it can keep pace with the international trend. The insurance market opens up new opportunities for entry of competitive commercial enterprises. The strong concern of commercial insurers is to offer highly sophisticated insurance products, not only to maintain but also to attract new customers and improve their current market share. The new product offer increases the profitability of the insurance company and also determines its position in the industry.

Acknowledgment

This paper is an output of the science project VEGA 1/0725/17.

References

[1] Alesina, A., Grilli, V. and Milesi-Ferretti, G.M., 1994. *The political economy of capital controls.*

[2] Aries, P. H. (2016). What Drives International Competitiveness? An Empirical Test in Emerging Indonesian Market. *Journal of Competitiveness,* vol. 8, no. 4, pp. 124-139.

[3] Baranowska-Zajac, W. (2014). Freedom To Provide Insurance Services On The Internal Market Of The European Union In The Light Of Directive 2009/138/ec (Solvency Ii). *SGEM 2014 Scientific SubConference on political sciences, law, finance, economics and tourism*.

[4] Blomstrom, M., Lipsey, R., and Zejan, M. (1992). What Explains Developing Country Growth?

[5] Bożek, S. and Emerling, I. (2016). Protecting the organization against risk and the role of financial audit on the example of the internal audit. *Oeconomia Copernicana,* vol. 7, no. 3, pp. 485.

[6] Butek, M. and Štofkova, Z. (2016). Relocalisation Trends in the Context of Globalization. *ISSGBM-IB 2016,* vol. 61, pp. 33-38.

[7] Cummins, J. D. and Rubio-Misas, M. (2016). Integration and Efficiency Convergence in European Life Insurance Markets. *SSRN Electronic Journal*.

[8] Dollar, D. (1992). Outward-Oriented Developing Economies Really Do Grow More Rapidly: Evidence from 95 LDCs, 1976-1985. *Economic Development and Cultural Change,* vol. 40, no. 3, pp. 523-544.

[9] Dreher, A. (2006). Does globalization affect growth? Evidence from a new index of globalization. *Applied Economics,* vol. 38, no. 10, pp. 1091-1110.

[10] Dreher, A., Gaston, N. and Martens, P. (2008). Consequences of Globalisation Reconsidered: Applying The KOF Index. *Measuring Globalisation,* pp. 75-171.

[11] Firtescu, B. (2014). Influence Factors on European Life Insurance Market during Crises. *Procedia Economics and Finance,* vol. 16, pp. 348-355.

[12] Garrett, G., 2001. *The Distributive Consequences of Globalization*. UCLA, MS.

[13] Chanda, A. (2001). The Influence of Capital Controls on Long Run Growth: Where and How Much? *SSRN Electronic Journal*. doi:10.2139/ssrn.271257

[14] Chang, T., Cheng, S., Pan, G. and Wu, T. (2013). Does globalization affect the insurance markets? Bootstrap panel Granger causality test. *Economic Modelling,* vol. 33, pp. 254-260.

[15] Leiderman, L. and Razin, A. (Eds.), Capital Mobility: the Impact on Consumption, *Investment and Growth*. Cambridge University Press, Cambridge, pp. 289–321

[16] Kordalska, A. K. and Olczyk, M. (2016). Global competitiveness and economic growth: a one-way or two-way relationship? *Equilibrium,* vol. 11, no. 1, pp. 121.

[17] Kovacikova, M. and Stofkova Repkova, K. (2016). Impact of globalization on access to process businesses management. *Globalization and its socio-economic consequences: 16th Int. scientific conference proceedings.* R. Teplice, Slovakia, pp. 1022-1030.

[18] Krátka, Z. (2007). Vplyv globalizácie na poistné trhy. *BIATEC,* no. 7, pp. 24-27. Bratislava: Národná banka Slovenska.

[19] Kríza eurozóny 2012. [Online]. Available: http://www.opoisteni.sk/ rizika/kriza-eurozony-a-globalizacia-su-ve-kymi-rizikami-pre-poistny-trh/

[20] Lee, C. and Chang, C. (2012). Globalisation and Convergence of International Life Insurance Markets. *The Geneva Papers on Risk and Insurance - Issues and Practice,* vol. 37, no. 1, pp. 125-154.

[21] Lin, C., Hsiao, Y. and Yeh, C. (2017). Financial literacy, financial advisors, and information sources on demand for life insurance. *Pacific-Basin Finance Journal,* vol. 43, pp. 218-237.

[22] Majernik, M., Daneshjo, N. & Stofkova, Z. (2016). *Integrované posudzovanie vplyvov rozvojových zámerov a stratégií.* Košice: Typopress, pp. 226.

[23] Majernik, M. et al. (2016). Integrated auditing of enterprise management systems in a globalized environment. *Globalization and its socio-economic consequences: 16th international scientific conference proceedings.* R. Teplice, Slovakia, pp. 1261-1269.

[24] Slaspo 2008. [Online]. Available: https://www.slaspo.sk/13061

[25] Ward, D., & Zurbrueg, R. (2002). Law, Politics and Life Insurance Consumption in Asia. *Geneva Papers on Risk and Insurance - Issues and Practice,* vol. 27, no. 3, pp. 395-412.

[26] Tomova, A. (2011). Public-private partnerships: the definitional problem definition and trends with a focus on EU. *Ekonomicko-manazerske spektrum*, vol. 5, no 2, pp. 70-72.

GLOBAL MARKETING TRENDS IN THE CONTEXT OF THE SELECTED GENERATION

Alena Kusá[1,a], Igor Piatrov[2,b,*]

[1]The Faculty of Mass Media Communication, University of Ss. Cyril and Methodius in Trnava, Nám J. Herdu 2, 917 01 Trnava, Slovakia

[2]TheFaculty of Mass Media Communication, University of Ss. Cyril and Methodius in Trnava, Nám J. Herdu 2, 917 01 Trnava, Slovakia

[a]alena.kusa@ucm.sk, [b]ipiatrov@gmail.com

*Corresponding author

Abstract. A generation approach to consumer marketing segmentation is considered a modern and functional way of selection of consumer segments. Every generation helps generate new global trends and fashions contributing to a new face of marketing strategies. Popularity of the digital lifestyle of our population is making marketing more dynamic and flexible. Consequently brands are following current trends in customer behaviour and decision-making more intensively in order to adapt to a new way of life of individuals. Due to fast-changing global trends marketing and marketing communication is reflecting on specific customer segments. Quality knowledge of all the above mentioned factors represents a considerable competitive advantage or even a necessity. It is important to know that only a brand which knows current trends is able to react flexibly to dynamic changes to consumer behaviour and adapt its marketing activities accordingly. The paper deals with the analysis of the selected generation segment of consumers while describing its consumer behaviour determining the current global trends in generation marketing to be further defined and characterised.

Keywords: marketing, marketing communication, generation y, consumer behaviour

JEL Classification: M30, M31, F60

1. Introduction

The generation can be defined as a group of people who were born in a similar time period, mostly in 30s´. These people can have different hobbies, interests, life philosophy but they share one thing. They were born in almost the same time period, they experienced the same historic events and therefore they have the same thinking and promote the same values. At the time they were growing up, they were influenced by the same environment and they share the same memories from various life events.

A generation approach towards customer segmentation in marketing is often considered an effective way of segmentation. It is based upon segmentation of consumer groups into homogeneous generation cohorts of those consumers who were born in almost the same time period. Such an approach supposes that every generation cohort is influenced by the attributes of that time period its members were growing up, e.g. music, films, politics or important milenstones in the human history. (Kotler & Keller, 2009)

There are three basic generation cohorts that are distinguished in modern marketing:

- „The Baby Boomers“ – the generation cohort consisting of those members who were born after the WWII ended - the population boom from 1946 to 1964;
- Generation X – the baby boom period was followed by a considerable decrease in a birth rate that gave rise to Generation X with the members born from 1965 and 1976;
- „Millenials“ – the generation cohort that is often referred to as Generation Y or the Millenium Generation or Millenials and whose members are born from 1977 to 2000. (Kotler & Armstrong, 2014)
- Generation Z – besides the above mentioned three generation types as defined by Kotler and Keller, we often encounter another term – the youngest generation cohort named Generation Z consisting of the people who were born after 2000 or, as some resources state, the people who were born even after 1995.

The generation approach to customer segmentation has become a kind of a mantra in modern marketing resulting in the genesis of new generation consumer segments. Apart from the generations of Baby Boomers, X, Y or Z, we can also see other segments, e.g. Generation I as Internet or Generation C as Connected Generation or Generation Alpha defined by Richterová: „After the Generation of Baby Boomers there was Generation X followed by Generation Y – the kids of 80s´ and 90s´ of the 20th century and Generation Z – the kids of the old and new millenium and Generation Alpha – the kids born after 2009.“ (Richterová et al., 2015) The topic of generations is widely covered in modern marketing. However, due to fast-changing consumer behaviour through all the consumer segments, there is room for further improvement and new knowledge to be discovered. Because of certain limitations, the paper only deals with the youngest generation cohort and that is Generation Y.

2. Generation Y

2.1 Definition and characteristics of Generation Y

The term of Generation Y was first mentioned in 1993 in the article of the magazine Ad Age. (Ad Age, 1993) This generation is often referred to as Millenials instead of Generation Y. This definition was first mentioned by American sociologists Neil Howe and William Strauss in 1989. (Horovitz, 2012) It is important to note that these terms are synonymic or identical, in other words. The term „Millenials Generation“ is also used by Kotler (2014) with other definitons to be mentioned, e.g. „Digital Generation“. (Kopecký 2013) The age characteristics of Generation Y differs by authors. While Kotler and Keller (2014) define Generation Y as a generation cohort born between 1977 and 2000, Armutat (2011) defines it as the people born between 1980 and 2000.[9] Parment (2013) brings another definition – Generation Y consists of those people who were born between 1984 and 1994.

Donnison (2007) says there are various age definitions of this group as well as there are different names causing a certain ambiguity when describing Generation Y. It is highly probable that there is no strict or accurate characteristics. Morevoer, if a consumer does not belong into Generation Y by his/her date of birth, he/she can still behave as its member, promote the same values and be equally technologically literate. Therefore businesses have to communicate with him/her as if he/she was a member of Generation Y even though he/she falls into Generation X by his/her date of birth. (Parment, 2013) To avoid vague definitions and ambiguities, this consumer segment is often characterised by its psychographic features rather than the age. There has also been Generation C referring to a group of consumers from all the generation cohorts with the same psychographic behaviour, i.e. being permanently connected to the Internet. (Piatrov & Kusá, 2016) Based upon the above mentioned facts, we may assume that Generation Y embraces all the consumers who were born appr. from 1980 to 1995.

2.2 How does Generation Y behave?

Technologies are the basics for Generation Y. Technologies play a key role in their lives. In fact, they do not remember their life without technologies, they are technologically literate and technologies are a part of their everyday life. Windisch and Medman explain the connection of Generation Y with technologies by stating that its members have already sent or received 250,000 e-mails, text messages and mobile app messages in their 20s on average. They have spent more than 10,000 hours on their mobile phones, have played computer games for more than 5,000 hours and have spent 3,500 hours on social networking sites. (Windisch and Medman, 2008) There is no doubt that a close connection with technologies is an identical feature for all the members of Generation Y as defined by Kotler, Vysekalová, Van der Bergh and Behrer. Besides technologies, this generation is mostly influenced by globalisation. The Internet as a global network of billions of interconnected digital devices has enabled this generation to obtain information from all over the world anytime and from any place. Thanks to the Internet, the members have experienced war conflicts and natural disasters in distant countries and they have followed historical events occuring anywhere in the world. They have also come across a false piece of information, i.e. a hoax, which may have reduced their confidence in online information and influenced their consumer behaviour. They can also be defined as a mature generation as its members look more adult in comparison with the members of the previous generation at similar age. Thanks to the social media they are able to meet new people much more easily, they orientate in the online world much better even to such an extent that this virtual reality seems to have a considerable impact on their real life. They are sharing their experience within communities they are creating and thus they are supporting a team spirit, which is another typical feature of Generation Y. They are self-confident, open-minded, they are not afraid of sharing their opinions and they are multi-tasking. We have to say, however, that their negative qualities sometimes prevail the positive ones, e.g. they are lazy, egocentric and job switchers.

Heraclitus of Ephesus said *„there is nothing permanent except change“*. It is necessary to study a changing characteristics of Generation Y in more detail. The changes are happening for two reasons. Firstly, this generation is often a subject of modern research which is providing us with more detailed information hereon. Secondly this generation is changing as fast as modern technologies its members are using and therefore its consumer behaviour, trends and cohorts have to be studied and analysed.

The 2015 study by IMB named „The Real Story Behind Millennials in the Workplace“ provided us with the most updated information on consumer behaviour of Generation Y. The research busts all the myths in relation to characteristics of Millenials. Right at the beginning, the study rejects all generally-accepted principles and definitions of Generation Y as lazy, egocentric and superficial workers. It also challenges the myth of having different working requirements, much more unreal from those of the older generation. The study showed that their demands were exactly the same as those of the older generation, i.e. to have financial security and good and fair working conditions. It is not true either that they have to be permanently acclaimed and praised for their results – they do not expect to be overrated, it is sufficient for them to be treated fair and equal. Moreover, they are not dependent on digital technologies and they are not unable to tell the difference between their private and working life. In contrast to the previous generation, they are less reluctant to use their private accounts on social networking sites for working. They can select which information should be published and who should share it. The study also denies that Millenials are not able to take their own decisions and they have to search for advice – in fact, they do not need help more or less that the generations before. They do not change their jobs more often that Generation X and if they do, they quit for exactly the same reasons as Generation X – the job did not match their expectations or they were offered a more rewarding work position or could work in a more innovative environment. (www.ibm.com, 2015)

The study of the online magazine Elite Daily is bringing brand new findings on a Millenial consumer. It was conducted by the author and researcher Dan Schwabel as Elite Daily Millenial Consumer Study 2015. The study was carried out at the end of 2014 on a sample of 1,300 respondents who were asked broad-spectrum questions. The results helped to define the following eight key findings to describe a consumer as a member of the Generation Y cohort:

1. They do not get too much influencable by advertising. Only 1% of respondents stated that persuasive advertising could increase their loyalty to a particular brand. They are convinced that advertising is not authentic and therefore they are trying to avoid it in different manners, e.g. AdBlock on YouTube or online videos.
2. Prior to purchase, they collect a quantity of information. When buying a product, 33% of respondents are looking for its authentic photos on social networking sites, blogs or the Internet while only 3% are using traditional media such as TV, magazines or books. The older generation, on the contrary, used to rely more on traditional media. The study on purchasing behaviour by Ordun shows that Millenials highly acclaim these factors: price, trendiness, sympathy for a brand, prestige or a brand itself. Advertising was ranked the least important from 13 factors. (Ordun, 2015)
3. They appreciate authenticity which they consider to be more imporant than the content. 43% of Millenials assess credibility of the information as they do not believe in anything that is not reliable enough. They prefer connecting with the people rather than brands and logos.
4. They would like to have an interactive relationship with brands on social networking sites. 62% claim that if brand connects to them in the digital environment, it is much more likely they will become their loyal customers. They expect brands not only to exist on social networking sites, but also to create new relationships and connections.
5. They are interested in co-development of branded products. 42% would like to participate in creation and development of branded products and services they favour.
6. They are using a great deal of devices. 87% of Millenials are using two to three technical devices. 39% expect to buy a tablet in a five years´ time while 30% expect to purchase a traveller technology (e.g. iWatch).
7. They are loyal to brands. 60% state to be quite or very loyal to brand they buy.
8. They expect brands to have a certain added value. Up to 75% of respondents consider fair and important for brands not only to generate profits but also have a certain added

value to bring back into the society, e.g. by supporting the local community. (www.elitedaily.com, 2015)

3. Global marketing trends determining Millenials in 2017

Based upon the above mentioned characteristics and results of the studies, we are stating six fundamental global trends which form a basis for modern marketing of those brands having Generation Y as their target audience.

1. **Mobile first**
   Generation Y is a generation of phone users. Such a trend is gradually spreading to older generations, as well. They have their phone on them all day long as it is not only a means of communication, but also a source of fun or information or a multi-functional device, which can also replace a remote control. Generation Y connects to the Internet mainly via smartphones. Whereas in the past brands used to optimalise their web pages for mobile devices, nowadays they have to consider carefully what their web page will look like on a smartphone rather that a desktop computer or a laptop. A mobile-first rule does not relate exclusively to web pages, but to all digital content produced by a brand – from e-mails through any online content including high-size photos and videos.
2. **User generated content**
   As previously mentioned, Generation Y needs to express themselves. They have no problem sharing both positive and negative experience with a product or a service. At the same time they go interactive with brands. They require brands to communicate mutually and provide room for them to participate in further product or service development. All these requirements can be fulfilled one brands have started using USG or User Generated Content – the content created by customers themselves. Brands provide room on their web page or social networking sites to share their customers´ experience either by a review or by sharing an Instagram photo of a particular brand on a customer´s account.
3. **Authenticity**
   Authenticity is closely linked to the previous trend. We know that Instagram is primarily based on visual content. A fashion account on this social networking site consists mainly of photos and videos of customers wearing a branded product. There is nothing much more authentic for Generation Y that real photos of real people wearing a specific product no matter if it fits or not. Such a profile is very reliable as it is obvious that a brand has nothing to hide in contrast to a brand profile where every contribution consists of an ideal and professional photo with a gorgeous fashion model on. We have also mentioned the way Generation Y makes their buying decisions – they are looking for authentic photos, experience from real customers as authenticity is much more important than the content. Authenticity does not only relate to visual but the whole correspondence and communication of a message, specific values the brand is promoting and their practical implementation. If a brand claims it is giving 2c from every euro of earnings without really doing so, it is losing its credibility immediately. Brands have to match their words with acts. If they say something Generation Y does not believe in, they do not believe in the whole brand.
4. **Influencer marketing**

As previously stated, only 1% of Generation Y is influencable by advertising, which is giving rise to a question – How can this segment be addressed? Influencer marketing is „a buzz word“. Millenials tend to believe publicly-known and influential people rather than advertising. Influencer marketing consists of finding a famous person who matches the target audience of a specific brand having the similar way of life, promoting the same values, having a social influence thanks to a big and an active fanclub. The person is representing a product and using it in an everyday life or has tried it and published his/her experience herewith in order to determine purchasing behaviour of the target audience. Influencer marketing has been implemented not only by various global brands as Nike, Adidas, Red Bull, but also by small and local brands. Of course, such an approach is functional only if its authenticity is preserved. If an influencer took photos only to fulfill certain obligations towards a brand, the target audience would feel immediately that the product is being promoted by force and not by personal belief. Imagine that a sportman who officially endorses Red Bull brand happens to be photographed when consuming a competitor´s energy drink. Two things may happen. Firstly, the brand is going to lose authenticity because its products are being promoted by a person who is not completely identified herewith. Secondly, the influencer is going to lose its credibility because his/her acts do not correspond with his/her communication.

5. **Interactivity and innovation**

We have also metioned that Generation Y consumers want to be in an interactive relationship with their brand. They expect to develop a mutual communication herewith. Users´ engagement has become a global trend and a milestone in the social media environment. Big brands have already understood the need for interaction with Generation Y and their communication strategy is adapted accordingly. A lot of brands are posting and sharing on Facebook and engage other users to vote by emoji. We have also recently had an opportunity to vote for a new flavour the producer of soya and tofu products should launch on the market or what visual should be used on their production lines. Generation Y is setting new global trends and is spreading them through all other generations. As the generation itself is keeping pace with technologies, it requires the same attitude from their favourite brands. Consequently, brands have to follow trends, use them actively and innovatively and implement them into their marketing strategies. We may state another example from practice: the Red Bull global account on Instagram let its fans vote on what other contribution should be published on its company profile.

6. **Social benefits**

Members of Generation Y are socially-conscious. They are not afraid of selecting a brand on the basis of what social values the it is promoting or whether it is contributing into a specific welfare system. They are not afraid of boycotting those brands which are not in line with their moral values. These consumers appreciate if a brand is active in a particular welfare system and it is committed to certain moral well-being. If it is, it is essential to inform the target audience accordingly. We have mentioned that Generation Y is convinced that brands are not only supposed to generate profits, but also to provide an added value in order to improve the whole society.

4. Conclusion

Generation Y or Millenials represents the biggest population share. It consists mainly of a student´s generatio cohorte who is about to prevail in the labour market in a few years´ time. Their importance and influence on our society is considerable. This consumer group is setting current trends and fashions determining what becomes popular and what not. The trends this generation acclaim are easily taken up by other, older generations. We can even say that this generation is leading the market. Brands are facing a tough challenge as understanding this generation is not enough – they have to become its part, enter a social network of every members and build a loyal relationship herewith. This is how their efforts only begin because Generation Y is continuously developing as is the whole society and therefore keeping up with this generation is a great opportunity and a challenge for all the brands.

Based upon the research, the paper outlined basic global trends every brand targeting Generation Y should implement as soon as possible in their marketing strategy.

Acknowledgment

The paper is a part of research project VEGA 1/0283/15 named: Aspects of marketing communication in area of process creation customer´s value on B2C market in context with maximization of market share in retail gravity.

References

[1] Ad Age, (30 August 1993). Generation Y. pp. 16.

[2] Donnison, S. (2007). Unpacking the Millennials, *Austrialian Journal of Teacher Education,* vol. 32, pp. 1 – 13.

[3] Fašiang, T. (2013). Purchase behavior of women generation X and Y. *Marketing Identity: Design that sells.* Trnava, Slovak Republic, pp. 261 – 273.

[4] Kopecký, L., (2013). *Public relations*, Praha: Grada Publishing, pp. 240.

[5] Kotler, P. and Armstrong, G. (2014). *Principles of Marketing,* Essex: Pearson Education Limited, pp. 96 – 100.

[6] Kotler, P. and Keller, K., (2009). *Marketing Management,* Essex: Pearson Education Limited, pp. 259.

[7] Majerova, J., Krizanova A., Zvarikova, K. (2013). Social media marketing and possibilities of quantifying its effectiveness in the process of brand value building and managing. *Financial management of firms and financial institutions*. Ostrava, Czech Republic, pp. 476 – 485.

[8] Majerova, J. (2014). Analysis of Specifics in Buying Behavior of Slovak Customers in Internet Environment, 2nd International Conference on Social Sciences Research, *Advances in Social and Behavioral Sciences*, vol. 5, Hong Kong, Singapore Management and Sports Science Institute, pp. 172 – 178.

[9] Miklenčičová, R., (2015). Internet Purchasing. *Globalization And Its Socio-Economic Consequences.* Rajecké Teplice, Slovak Republic, pp. 427 – 432.

[10] Musová, Z., Musa, H. and Huliaková Z. (2016). Innovative Approaches In A Socially Responsible Marketing In A Global Environment. *Globalization And Its Socio-Economic Consequences.* Rajecké Teplice, Slovak Republic, pp. 1466 – 1473.

[11] Ordun, G. (2015). Millennial (Gen Y) Consumer Behavior, Their Shopping Preferences and Perceptual Maps Associated With Brand Loyalty, *Canadian Social Science*, vol. 11, pp. 40 – 55.

[12] Parment, A. (2013). *Die Generation Y,* Wiesbaden : Springer Fachmedien, pp. 4 – 6.

[13] Piatrov, I. and Kusá A., (2016). Who Is "Generation C" And The Way Banks Communicate With It. *Marketing Identity 2016 – Brands we love.* Trnava, Slovak Republic, pp. 231 – 243

[14] Richterová, K., et al., (2015). *Spotrebiteľské správanie,* Bratislava: Sprint 2, p. 338.

[15] Windisch, E. and Medman, N. (2008). Understanding the digital natives, *Ericsson Business Review,* pp. 36 – 39.

[16] Zaušková, A., Grib, L., (2016). Impact Of Globalisation On Slovak Businesses In Marketing Promotion Of Eco-Innovations. *Globalization And Its Socio-Economic Consequences.* Rajecké Teplice, Slovak Republic, pp. 2465 – 2472.

[17] Armutat, S., (2011). Deutsche Gesellschaft für Personalführung. [Online]. Available: https://static.dgfp.de/assets/publikationen/2011/GenerationY-finden-foerdern-binden.pdf

[18] Elite Daily, (January 2015). Elite Daily Millennial Consumer Study 2015. [Online]. Available: http://elitedaily.com/news/business/elite-daily-millennial-consumer-survey-2015/

[19] Horovitz, B., (2012). After Gen X, Millennials, what should next generation be? [Online]. Available: http://usatoday30.usatoday.com/money/advertising/story/2012-05-03/naming-the-next-generation/54737518/1

[20] IBM Study: The Real Story Behind Millennials in the Worklplace, (February 2015). [Online]. Available: http://www-03.ibm.com/press/us/en/pressrelease/45904.wss

GLOBAL LOYALTY CHALLENGE: GENERATIONAL PERCEPTIONS OF THE INFLUENCE OF PERCEIVED BENEFITS ON SATISFACTION WITH LOYALTY PROGRAMS

Asta Kyguoliene[1,a,*], Kristina Zikiene[2,b] and Asta Kamanduliene[3,c]

[1]Vytautas Magnus University, K. Donelaicio st. 58, LT-44248, Kaunas, Lithuania

[2] Vytautas Magnus University, K. Donelaicio st. 58, LT-44248, Kaunas, Lithuania

[3] Vytautas Magnus University, K. Donelaicio st. 58, LT-44248, Kaunas, Lithuania

[a] asta.kyguoliene@vdu.lt, [b]kristina.zikiene@vdu.lt, [c]asta.kamanduliene@vdu.lt

*Corresponding author

Abstract. Globalization impacts organizations and customers already a few decades. In the context of globalization customers have more purchasing choices than even before, customers buying behaviour changes, the abundance of buying options raises the questions how to keep customers loyal. Customer loyalty becomes a challenge for any organization. Organizations face the challenge to adapt loyalty programs to different needs and deliver desirable value. Generational aspect gets a special importance, because people born in specific time of period imprint a specific and common purchasing, which is common global. This paper examines generational perceptions of the influence of perceived benefits on the satisfaction with loyalty programs for generations X and Y in grocery retailing, having in mind that customers become more loyal if they are satisfied with the rewards obtained from loyalty programs (Demoulin and Zidda, 2009). The research findings indicate that the most important loyalty programs benefits for both generations are monetary savings, social benefits and entertainment. Exploration has the strongest impact for Gen Xers, but having no meaningful impact for Millennials. On the other hand, convenience and recognition benefits are not important for both generations. The study findings indicate directions for loyalty management in grocery retailing which can be adapted globally.

Keywords: perceived benefits, loyalty program, generations, grocery retailing

JEL Classification: M30, M31, L81

1. Introduction

Loyalty programs are popular and ubiquitous marketing instruments. Large variety of companies increasingly uses loyalty programs to establish relationship with customers and manage their customer bases. At the same time millions of customers are members of many resembling loyalty programs. Because of their ubiquity in the marketplace, the effectiveness of loyalty programs becomes questionable. Customers don't recognise significant differences among loyalty programs; sometimes they even don't perceive noticeable benefits of them. Having such a situation, the effectiveness of loyalty programs tends to focus only on the benefits of loyalty programs from a firm perspective (Mimouni-Chaabane & Volle, 2010), leaving open the issue of how members perceive loyalty programs and which advantages they may derive from their participation (Kivetz & Simonson, 2003). Consequently, the essential question stands about the value proposition, which any loyalty program must have (Bolton et al., 2000). Perceived benefits may explain why customers take part in loyalty programs (Bolton et al., 2004), thus the challenge to design loyalty programs and rewards which would help differentiate from competitors is global.

Scholars notice, that customer purchasing and consumption behaviour, their perceptions and attitudes often are influenced by the period they were born (Howe & Strauss, 2000). According to generational differences, different groups of consumers have unique reactions to marketing efforts. Taking part in loyalty programs, the perception of programs' benefits and even satisfaction with the loyalty program can differ among different generations too. It gets essential to identify generational perceptions in order to satisfy different groups of customers.

Generational perceptions of the influence of perceived benefits on the satisfaction with loyalty programs have been chosen as the **object** of this paper. A number of authors have considered perceived values in different research, examining how customer perceive benefits of loyalty programs (Radder et al., 2015), impact of perceived benefits on the satisfaction with loyalty program (Mimouni-Chaabane & Volle, 2010), impact on program loyalty (Kim et al., 2013), generational characteristics' impact on loyalty formation (BrandAmplitude, 2009); generational insights for joining loyalty programs (Crodtwist, 2015). Little research have been done about generational perceptions of perceived benefits in grocery retailing, though research shows that the biggest interest in loyalty programs in retail sector is in the grocery retailing (Ott, 2011).

Research **problem**: what perceived benefits of loyalty programs make the significant influence for generations X and Y on their satisfaction with loyalty program in grocery retailing?

The main **aim** is to measure the impact of perceived benefits on the satisfaction with loyalty programs for generations X and Y in grocery retailing.

Research methods: quantitative research using questionnaire, structural equation modelling using partial least squares path modelling methodology.

2. Perceived benefits of loyalty programs

Perceived benefits of loyalty programs are the benefits customers receive from participating in the loyalty program, they refer to the perceived value customers attach to their experience with the program (Keller, 1993). The most common classification of perceived benefits of loyalty programs is provided by Mimouni-Chaabane and Volle (2010), dividing customer's perceived benefits into 3 categories: utilitarian, hedonic and symbolic benefits.

Utilitarian benefits are the most valued by customers, because of its intangibility, being easy to understand and evaluate (Gable, Fiorito and Topol, 2008) consist of monetary savings and convenience benefits. Monetary savings is the most common benefit, why customers join loyalty program (Allaway, Gooner, Berkowitz and Davis, 2006). According to Leenheer, Van Heerde, Bijmolt and Smidts (2007), the more financial rewards customers perceive from loyalty program, the more they are enrolled in the program. Convenience benefits implies to saving time, enhancing shopping convenience (Radder et al., 2015), reducing consumer search and decision costs through value-added services, involving consumers' getting to know the organisation, its products and services, what facilitates their purchase decision making process (Mimouni-Chaabane &Volle, 2010). Quick payment counters, opportunity to save time through faster service or customer learning can be examples of convenience benefits.

Hedonic benefits are considered as more effective benefits comparing to utilitarian benefits (Kivetz & Simonson, 2002), because they trigger stronger emotional responses. Hedonic benefits cover exploration and entertainment dimensions appealing to pleasure and satisfaction (Mimouni-Chaabane & Volle, 2010). Customers' need to explore can be satisfied through promotional offers, special offers to try new products (Mimouni-Chaabane & Volle, 2010), need for entertainment - through delivering such loyalty program benefits as participating in events, competitions open only to loyalty program members (Radder et al., 2015), collecting and redeeming points (Mimouni-Chaabane & Volle, 2010).

Symbolic benefits, referred to personal expression, self-esteem, social approval (Keller, 1993), cover recognition and social dimensions. According to Mimouni-Chaabane and Volle (2010), basis of recognition benefits lies in treating members of loyalty program better than non-members, providing them special status, supplementing by recognition at individual level, differentiating and discriminating among customers who likely perceive customized offers as a sign of respect or distinctiveness (Gordon et al., 1998). Mimouni-Chaabane and Volle (2010) state that sense of belonging, being a part of an exclusive group, sharing common values reflect social benefits. Through social benefits customer feel privileged, feel the sense of mattering. Social benefits increase emotional engagement with the organization (Szczepanska & Gawron, 2011), allow customer to associate with something desirable, successful.

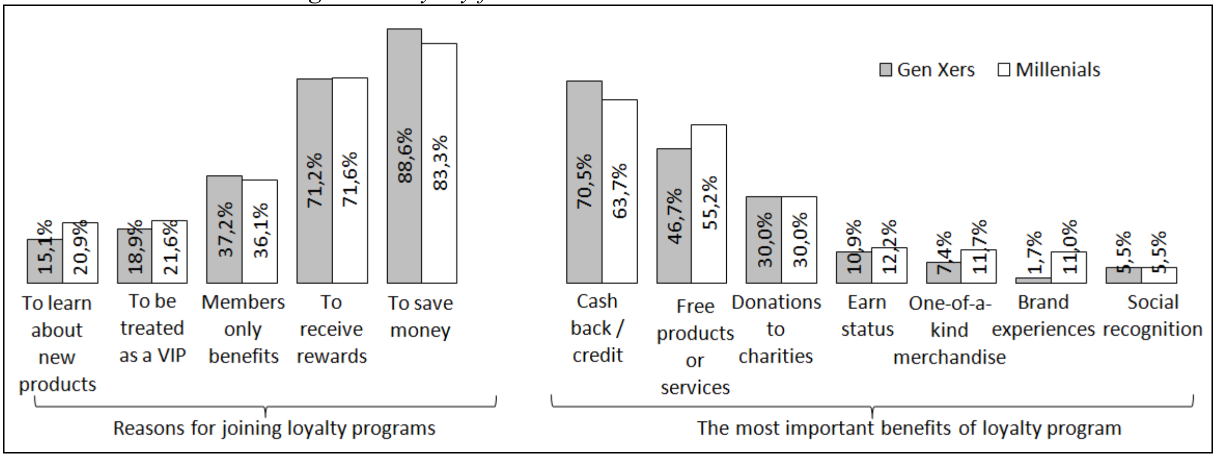
3. X and Y generations and their loyalty peculiarities

Changes in macro environment influence the profile of people born in specific time of period, imprinting a specific and common purchasing and consumption behaviour (Howe & Strauss, 2000). Millenial's behaviour differs from Generation X, they have different values and characteristics (Gurau, 2012), it is not just a chronological age, but a way of looking at the world (Wallace, 2015). In this study Strauss-Howe Generational Theory, defining people born in 1961-1981 as Generation X, 1982-2004 as Generation Y (Millenials), was taken into account.

There is little research done concerning generational aspects of the influence of perceived benefits on satisfaction with loyalty programs. According to Crowdtwist (2015) research, saving money and receiving rewards are still top motivators to join the loyalty program for both generations, though some differences exist (Figure 1). Both Gen Xers and Millennials consider discounts/coupons, cash back and free products or services as the most valuable benefits of loyalty program (Crodtwist, 2015).

Differences of perceived benefits on satisfaction with loyalty programs may exist according to the industry, but in the same industry tendencies of generational perceptions are global. In this paper authors of the article analyse generational perceptions of the influence of perceived benefits on satisfaction with loyalty programs in grocery retailing referring to a global context.

Figure 1: Loyalty features between Gen Xers and Millenials



Source: (Crodtwist, 2015).

4. Research methodology

To determine generational perceptions of the influence of perceived benefits on satisfaction with loyalty programs, quantitative reseach among grocery retailing cardholders was organized, providing the questionnaire. The questionnaire was composed of the part related to the benefits and satisfaction of loyalty programs, and the demographic characteristics part.

In order to analyse the differences between two generations, each of the latent variables (satisfaction, monetary savings, convenience, exploration, entertainment, recognition, social benefits) were measured by their corresponding manifest variables. Each exogenous latent variable contained three manifest variables, while the one endogenous latent variable – four. Considering the fact that all of the manifest variables of the specific construct covariate with each other, reflective measurement model was preferred. 7-point Likert scale was applied for the questionnaire. Structural equation modelling using partial least squares path modelling methodology was applied, using SmartPLS V.3 and XLSTAT 2014 software packages.

The research was provided in Lithuania in March of 2016. 400 questionnaires were distributed via convenience sampling from program members of Lithuanian grocery retailing and 336 were returned (response rate – 84%); 317 of them were identified as suitable for further analysis. According to the data gathered, 136 respondents represented generation Y, 181 – Gen Xers.

5. Research results

The analysis of the results includes the assessment of the model's characteristics: internal consistency and convergent validity (Average Variance Extracted - AVE), indicator reliability (Composite Reliability - CR) and discriminant validity (Fornell – Larcker criterion, Heterotrait-Monotrait ratio of correlations - HTMT).

Indicator reliability is measured with Composite Reliability (CR) test, which assumes that all construct are equally reliable (Table 1). Both X and Y generation model shows that CR is between 0.8 and 0.9 (0.7 is considered to be the lowest level for acceptable composite reliability).

Table 1: Values of Average Variance Extracted (AVE) and Composite Reliability

Variable	Average Variance Extracted (AVE)		Composite Reliability (CR)	
Generation X/Y	X gen	Y gen	X gen	Y gen
Convenience	0.684	0.708	0.867	0.879
Entertainment	**0.743**	**0.723**	0.897	0.887
Exploration	0.604	0.510	0.820	0.749
Monetary savings	**0.832**	**0.747**	0.937	0.899
Recognition	0.607	0.651	0.816	0.845
Satisfaction	**0.748**	**0.718**	0.922	0.910
Social benefits	**0.753**	**0.783**	0.901	0.915

Source: authors

To estimate discriminant validity Fornell – Larcker and Heterotrait-Monotrait Ratio (HTMT) tests are used. Discriminant validity is defined as the dissimilarity in a measurement tool's of different constructs. A necessary condition for discriminant validity is that the shared variance between the latent variable and its indicators should be higher than the variance shared with other latent variables (Hulland and Ivey, 1999). Fornell – Larcker criterion shows whether the latent variable correlations are significantly different from one another and Variance-based structural equation modeling (SEM) determine the discriminant validity of their measures. According to Fornell – Larcker each construct's root value of average variance is larger than its correlation with other latent constructs. It can be stated that both models (estimated for X and Y generation) complies with the requirement of discriminant validity.

HTML (Heterotrait-Monotrait ratio) values for all construct are lower than 0.85 as proposed by Kline (2011) except the constructs of recognition and social benefits (for X generation model). HTML for Y generation model is also high - 0.825, but less than 0.85. It can be concluded that each construct captures the specific characteristics not represented by other constructs. The only exception is not omitted from the model according to recommendations of Gold, Malhotra and Segars (2001), that HTMT could be lower than 0.9. Based on HTML could be stated that both models for X and Y generations are valid.

The values of HTMT criterion are lower than the predefined threshold value of 0.85, substantiating previous criterion revealing that there is no lack of discriminant validity in the reflective measurement model. Hence, it could be stated that each construct of reflective measurement model captures the specific part of the loyalty programs' benefits not represented by other constructs of the model. Reflective measurement model is assessed as reliable and valid.

VIF of all constructors for both models fall into the range 1-2 that is variance inflation factors do not exceed 5 meaning that the model isn't exposed to multicollinearity problem.

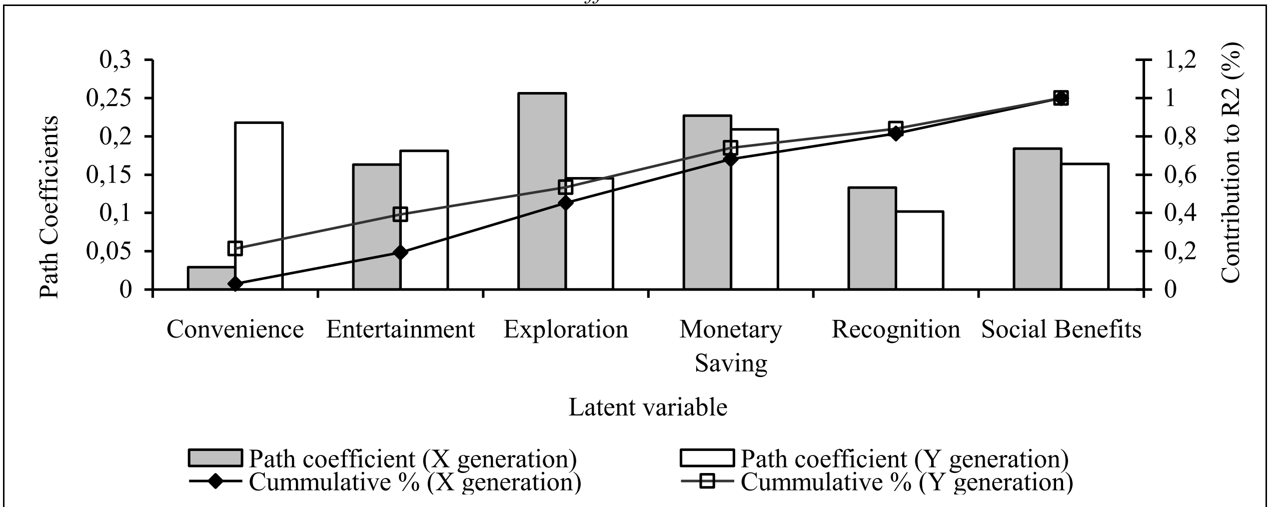
Using SmartPLS the path coefficients for X and Y generations models are represented in Table 2. Path coefficients show direct relationship among models' constructs. In X generation model case two constructs convenience (0.029, $p = 0.700$) and recognition (0.133, $p = 0.087$) are not significant and has no meaningful impact on satisfaction with loyalty programs. Other four constructs: entertainment (0.163, $p = 0.047$), exploration (0.256, $p = 0.001$), monetary savings (0.227, $p = 0.001$), social benefits (0.184, $p = 0.017$). The Y generation model gives the similar results. Exploration construct (0.145, $p = 0.086$) is an exception. For X generation model the results show the exploration has significant impact, while for Y generation has no meaningful impact on the satisfaction with loyalty programs. Lack of exploration importance for Y generation model identifies the difference of the attitudes to perceived benefits of loyalty programs between X and Y generations. The X generation is more likely need to explore through promotional offers, special offers, try a new product. Y generation is an opposite. Besides, construct exploration for X generation model has the highest influence on the satisfaction with loyalty programs (0.256), followed by monetary savings (0.227); for Y generation model - monetary savings (path coefficient is the highest (0.209)), indicating that monetary factors are of great importance in younger age. Figure 2 shows constructs contribution to determination coefficient.

Table 2: Path Coefficients and their statistical significances

Variable	Path Coefficients		Standard Deviation		T Statistics		p Value	
Generation X/Y	X gen	Y gen	X gen	Y gen	X gen	Y gen	X gen	Y gen
Convenience	0.029	0.218	0.075	0.125	0.385	1.744	0.700	0.082
Entertainment	**0.163***	**0.181***	0.082	0.090	1.989	2.016	**0.047**	**0.044**
Exploration	**0.256***	0.145	0.074	0.085	3.458	1.718	**0.001**	0.086
Monetary savings	**0.227***	**0.209***	0.068	0.098	3.346	2.125	**0.001**	**0.034**
Recognition	0.133	0.102	0.077	0.108	1.713	0.945	0.087	0.345
Social benefits	**0.184***	**0.164***	0.077	0.073	2.390	2.244	**0.017**	**0.025**

**Path coefficient is statistical significant if p Value is below 0,05 (p<0,05)*
Source: authors

Figure 2: Path coefficients for Generation models and their accumulated contribution to Determination coefficient



Source: authors

The highest difference between X and Y generation model could be attributed to convenience (both of them has insignificant impact). Very moderate differences are identified among X and Y generation models for entertainment, monetary savings and social benefits. The highest contribution to determination coefficient for X generation model has exploration (12%) and monetary savings (10%), social benefits (8%), for Y generation model - monetary savings (10%), entertainment (8,6%), social benefits (7,8%). Insignificant constructs impact on determinant coefficient is minimal.

6. Conclusions

The benefits customers obtain from joining loyalty programs consist of utilitarian benefits (monetary savings and convenience), hedonic benefits (exploration and entertainment) and symbolic benefits (recognition and social benefits). Perceived benefits have a positive impact on the satisfaction with loyalty programs. Customers' purchasing behaviour, their perceptions and attitudes often is influenced by their generational characteristics, which are global. According to generational differences, consumers have their unique reactions to marketing efforts, generational perceptions differ according to loyalty programs value appreciation.

The analysis of research results leads to the conclusion that for X and Y generations convenience and recognition have no meaningful impact on the satisfaction with loyalty programs. Also, exploration construct for the Y generation gives the similar results. The X generation is more likely to explore through promotional offers, special offers, trying new products. Besides, construct exploration for X generation model has the highest influence on the satisfaction with loyalty programs, followed by monetary savings. For Y generation the biggest impact on the satisfaction with loyalty programs has monetary savings. Construct social benefits has a positive impact on the satisfaction with loyalty programs for both generations, but generation X has stronger need for belonging and being a part of an exclusive group and sharing common values. Construct entertainment has a positive impact on the satisfaction with loyalty programs for both generations too, but Y generation is a little bit more like to be satisfied through entertainment. Recapitulating, it could be stated, that the main benefits which should be managed by grocery retailing companies in order to enhance both generations' satisfaction with loyalty programs are monetary savings, social benefits and entertainment. The most important benefit, in the case of the satisfaction with loyalty program in grocery retailing for Gen Xers is exploration, for Millenials – monetary savings. Convenience and recognition benefits are not important for both generations.

References

[1] Allaway, A. W., Gooner, R. M., Berkowitz, D. and Davis, L. (2006). Deriving and exploring behaviour segments within a retail loyalty card program, *European Journal of Marketing*, vol. 40, pp. 1317–1339.

[2] Bolton, R. N., Kannan, R. K. and Bramlett, M. D. (2000). Implications of loyalty program membership and service experiences for customer retention and value, *Journal of the Academy of Marketing Science*, vol. 28, pp. 95–108.

[3] Bolton, R., Lemon, K. N. and Verhoef, P. C. (2004). The theoretical underpinnings of customer asset management: a framework and propositions for future research, *J Acad Mark Sci*, vol. 32, no. 3, pp. 271–292.

[4] BrandAmplitude (2009). The millennial handbook: a snapshot guide to everything Gen Y. Available: http://www.blankfoundation.org/images/themillennialhandbook.pdf

[5] Crowdtwist (2015). The 2015 Crowdtwist loyalty program report. Capturing loyalty across the generations. Available: www.crowdtwist.com

[6] Demoulin, N. T. M. and Zidda, P. (2009). Drivers of customers' adoption and adoption timing of a new loyalty card in the grocery retail market, *Journal of Retailing*, vol. 85, no. 3, pp. 391–405.

[7] Gable, M., Fiorito, S. S. and Topol, M. T. (2008). An empirical analysis of the components of retailer customer loyalty programs, *International Journal of Retail & Distribution Management*, vol. 36, no. 1, pp. 32-49.

[8] Gold, A. H., Malhotra, A. and Segars, A. H. (2001). Knowledge management: an organizational capabilities perspective, *Journal of Management Information Systems*, vol. 18, no. 1, pp. 185–214.

[9] Gordon, M. E., McKeage, K. and Fox, M. A. (1998). Relationship marketing effectiveness: the role of involvement, *Psychol Mark*, vol. 55, no. 5, pp. 443–459.

[10] Gurau, C. (2012). A life – stage analysis of consumer loyalty profile: comparing Generation X and Millennial consumers, *Journal of Consumer Marketing*, vol. 29, no. 2, pp. 103-113.

[11] Howe, N. and Strauss, W. (2000). *Millennials Rising: the next great generation*, New York: Vintage Books

[12] Hulland, J. and Ivey, R. (1999). Use of partial least squares (PLS) in strategic management research: a review of four recent studies, *Strategic Management Journal*, vol. 20, no. 2, pp. 195-204.

[13] Keller, L. K. (1993). Conceptualizing, measuring and managing customer-based brand equity, *J Mark*, vol. 57, no. 1, pp. 1-22.

[14] Kim, H. Y., Lee, J. Y., Choi, D., Wu, J. and Johnson, K. K. P. (2013). Perceived benefits of retail loyalty programs: their effects on program loyalty and customer loyalty, *Journal of Relationship Marketing*, vol. 12, no. 2, pp. 95-113.

[15] Kivetz, R. and Simonson, I. (2002). Earning the right to indulge: effort as a determinant of customer preferences toward frequency program rewards, *Journal of Marketing Research,* vol. 39, no. 2, pp. 155-170.

[16] Kline, R. B. (2011). Principles and Practice of Structural Equation Modeling, New York: Guilford Press.

[17] Leenheer, J., Van Heerde, H., Bijmolt, T. and Smidts, A. (2007). Do loyalty programs really enhance behavioural loyalty? An empirical analysis accounting for self-selecting members, *International Journal of Research in Marketing*, vol. 24, no. 1, pp. 31-47.

[18] Mimouni-Chaabane, A. and Volle, P. (2010). Perceived benefits of loyalty programs: scale development and implications for relational strategies, *Journal of Business Research*, vol. 63, pp. 32-37.

[19] Ott, B. (2011). Making loyalty programs work. [Online]. Available: http://www.gallup.com/businessjournal/149570/Making-Loyalty-Programs-Work.aspx?version=print

[20] Radder, L., Eyk, van M. and Swiegelarr, C. (2015). Levels of customer loyalty and perceptions of loyalty programme benefits: a South Africa retail example, *The retail and Marketing Review*, vol. 11, no. 1, pp. 92-105.

[21] Szczepanska, K. and Gawron, P. P. (2011). Changes in approach to customer loyalty, *Journal of Contemporary Economics*, vol. 5, no. 1, pp. 60-69.

[22] Wallace, S. (2015). State of retail: 2015. [Online]. Available: http://www.timetrade.com/files/content_resource/TimeTrade_State_of_Retail_Generation_X_Report_final.pdf

GLOBALIZING SOCIO-ECONOMIC REPUTATION IN DIGITAL LABOR MARKETS

George Lăzăroiu[1,a,*], Elvira Nica[2,b] and Gheorghe H. Popescu[3,c]

[1]Faculty of Socio-Human Sciences, Spiru Haret University, Strada Ion Ghica 13, Bucharest 030045, Romania

[2]Faculty of Administration and Public Management, Bucharest University of Economic Studies, Piata Romana 6, Bucharest 010374, Romania

[3]Faculty of Banking and Finance, Dimitrie Cantemir Christian University, Splaiul Unirii 176, Bucharest 030134, Romania

[a]phd_lazaroiu@yahoo.com, [b]elvira.nica.2015@gmail.com, [c]gheorghe.h.popescu@gmail.com

*Corresponding author

Abstract. Following Gandini (2016), this paper strives to prove that knowledge work has altered with the incorporation of digital technologies into operations of production and organization. We aim to address these increasing features by elaborating on the fact that knowledge work has altered as a consequence of the visionary assessment of inventiveness as a slogan for cutting edge and professional development. Influenced by the boost of electronic and social media, a digital and independent knowledge economy focused on a collective, dispersed cultural idea of reputation as usefulness resulted. Imagining reputation as a type of value is the predominant elucidatory pattern of knowledge work in the digital epoch. We plan to determine that reputation becomes a particular type of particularized social capital for knowledge employees. We use meta-analysis to assess evidence proving that because the social buttons managing social undertakings on digital media platforms deal with and preserve an individual's full online activity, determining it with statistics, the reputation of a distinct employee is publicly observable, concrete, obtainable, and possibly quantifiable. We inspected the Web of Science and identified 240 papers covering the impact of reputation on the socio-economic interactions in digital labor markets. We analyzed them carefully and present our conclusions, highlighting that reputation adjusts the professional market of the knowledge economy by functioning as a particular kind of capital or positive feature for people in a setting constituted of networked and recently mediatized social interplay.

Keywords: reputational, capital, digital, labor, market

JEL Classification: G18, H11, I28

1. Introduction

We rely on Gandini (2016, A, B) to prove that knowledge work has altered with the incorporation of digital technologies into operations of production and organization: the circumstances of continuation of current knowledge work have been impacted by the notion of resourcefulness, being entirely assimilated into a regulatory and organizational coherence of knowledge production originated in imaginativeness, generating various procedures that have altered present occupations and kinds of professional activity in diverse settings of the knowledge economy. (Gandini, 2016, A) The concepts of personal and self-branding (Machan, 2016, A) in the knowledge economy designate the mechanisms of marketization (Androniceanu & Drăgulănescu, 2016, A) of the self (Weede, 2016) for the confidence-building and professional accomplishment of the laborer. Social media is a working device that provides the curation (Androniceanu, 2012) of a professional perception and the handling of social connections for goals of professional accomplishment and career advancement. Social media undertaking is constituted of performative routines of sociality that are extant around a mutual concept of reputation (Besciu & Androniceanu, 2017) as the cultural notion of value. Self-branding is a type of digital labor as a financing in social connections with a required return, which indicates the obtainment of a reputation. Self-branding covers the contributing factor for fruitful job search (Androniceanu & Drăgulănescu, 2016, B) and the creation of socialized value throughout the freelance-based labor market (Vitalari, 2016) of the digital knowledge economy. Reputation is the configuration of social capital in digitalized settings, where social interplay frequently appears remotely and with an insignificant degree of co-potentiality and closeness, being a contributory characteristic in guaranteeing recruitment in a freelance-based economy (Bauder, 2016) because it exemplifies the inherent, cultural notion of value distributed by actors in the labor market. (Gandini, 2016, B)

2. Literature review

Knowledge labor has been shaped by the rationales of creative work and has harmonized digital technologies into a diversity of operations, for digital and freelance personnel that configures a multi-functional professional division (Machan, 2016, B) with initial characteristics. The current socio-economic professional arena is contingent on the handling of social connections and the increase of the routes via which they are practiced, preserved, and mediated. The advance of social network sites (Ahmed, 2016) and platforms has considerably interfered within the routines and underlying forces of hiring in the industry. A surplus of websites consecrated to various types of work-related issues and niche job markets multiply on the web, having as their main business the sharing of laborers and the satisfying of various types of supply and demand (Androniceanu, 2014) on diverse job markets. Digital technologies have considerably been incorporated into mechanisms of creation and organization, being instrumental in swiftly and effectively redesigning the operations of valorization (Nagel, 2016) in the knowledge industry in addition to the satisfying of demand and supply. (Gandini, 2016, A) The utilization of social media assists the objective of managing the architecture of a reputation via the employment of personal branding techniques (Madsen and Wu, 2016), allowing novel kinds of managerially driven sociality according to which digital technologies and social media enable reputation to be definite through various indicators, displaying it as the most relevant asset for the separate brand. Reputation economy enables the sharing out of dissimilar informational resources in the differentiated labor market (Mihăilă, 2016, B) by operating as the mediator that converts social connections into value. The digital knowledge economy is made up of diverse types of online interplay that allow advanced routines of sociality contingent on notoriety (Friedman et al., 2016) and affect, which connect branding and value through a collective concept of reputation. Self-branding (Androniceanu, 2017) in the digital knowledge economy facilitates groundbreaking routines of sociality that are not restricted to the branding of the self but serve as marketing labor that associates networking with the handling of social connections. The assimilating of self-branding routine to the shaping of social capital is essential for the grasp of self-marketing (Vasile & Androniceanu, 2016) in the digital knowledge economy. (Gandini, 2016, B)

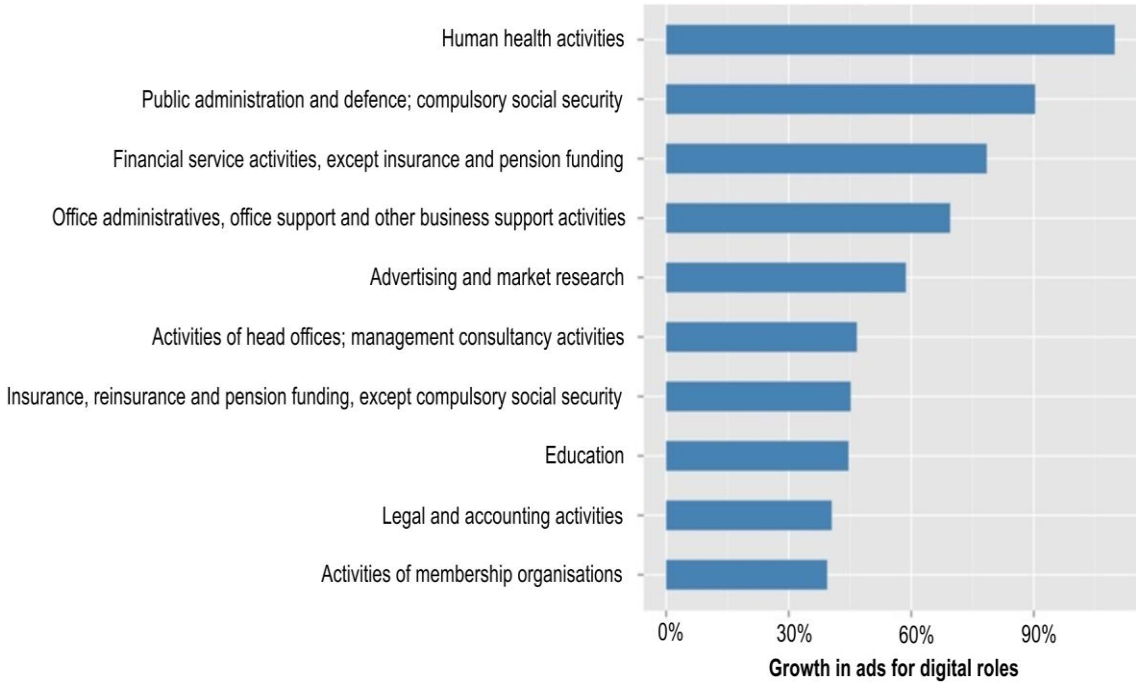
3. Methodology

We use meta-analysis and secondary data to determine that knowledge work has altered as a consequence of the visionary assessment of inventiveness as a slogan for cutting edge and professional development, and, influenced by the boost of electronic and social media, a digital and independent knowledge economy focused on a collective, dispersed cultural idea of reputation as usefulness resulted. Then we inspected the Web of Science and identified 240 papers covering the impact of reputation on the socio-economic interactions in digital labor markets. Imagining reputation as a type of value is the predominant elucidatory pattern of knowledge work in the digital epoch. (Gandini, 2016, A) The achievement of reputational capital is the central aspect for employability, because reputation is the cultural notion of value (Hurd, 2016) indigenously distributed by operators in the professional framework. Reputation links the offline and online spheres, construing self-branding as a mechanism of social capital articulation managerially designed that employs reputation to distribute disproportionate resources. The employability of knowledge professionals in the digital epoch is connected with the obtainment of a reputational capital throughout the personal chain of professional acquaintances. Reputation is progressively definite, noticeable and assessable through the operation of separate individuals on social media platforms. (Gandini, 2016, B)

4. Empirical data and analysis

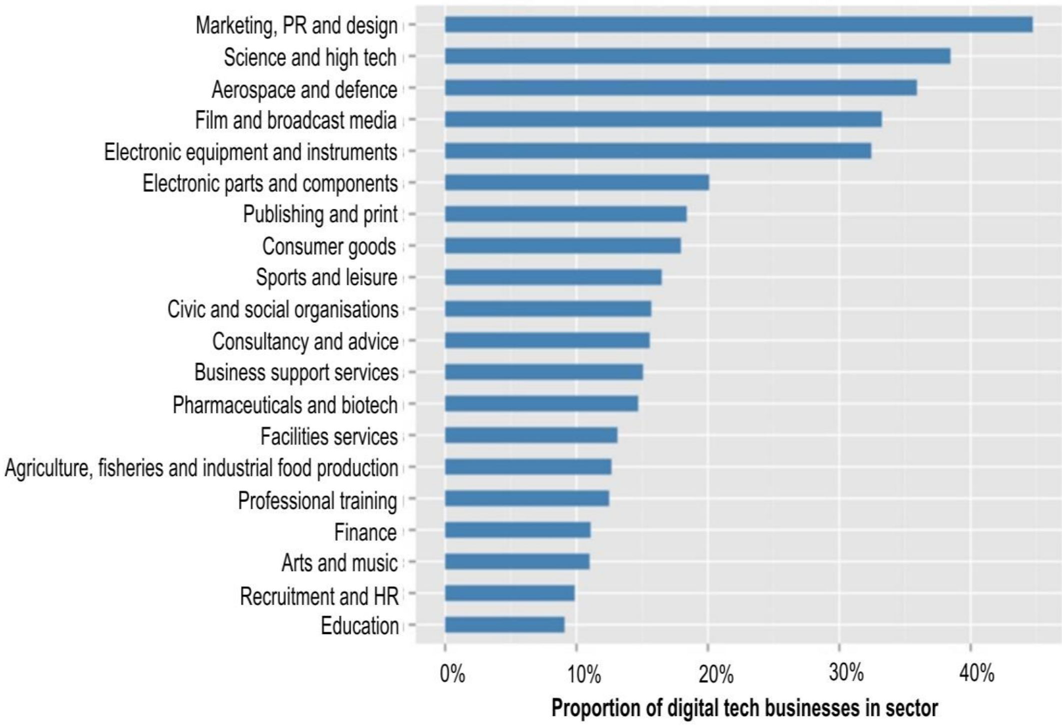
We analyzed and made estimations concerning the most important sectors in digital recruitment growth (increase in ads for digital roles) and as regards digital disruption (proportion of digital tech businesses in sector), and as a consequence the development of self-employment and of temporary employment in Europe, and of agency work (worldwide). Reputation becomes a particular type of particularized social capital for knowledge employees: it is a commodity negotiated by them in a labor market where they perform as autonomous experts managing their own standing as an economic endowment, being an investment in social connections with prospects of economic earnings, and being critical for job obtainment. The function played by an individual's reputation in the knowledge economy may be a recent driver for career advance. Because the social buttons managing social undertakings on digital media platforms deal with and preserve an individual's full online activity, determining it with statistics, the reputation of a distinct employee is publicly observable, concrete, obtainable, and possibly quantifiable. (Gandini, 2016, A) The obtainment of a reputation (Hanappi et al., 2016) in the industry can be achieved through a series of routines of sociality by which the branding of an individual's professional integrity and public representation occur in a social sphere, constituted of a symbiotic link between offline and online mingling. Such periodical routines have a performative character, being expressed by a steady generation of content that assumes a notion of the digital realm as a kind of operation space for the achievement of a branded distinctiveness. Their social public self typifies a striking array of a collocation of professional abilities and personal disposition, entailing an individual's links and networks, resulting the articulation of a reputational capital, bringing about capitalization in relation to job chances and returns throughout an arrangement of social connections, constantly maintained through the utilization of shared marketing techniques, thus indicating the articulation of commitment with the self-brand to activate the constitution of links that may operate as a capital (Siekelova et al., 2017), which can be catalyzed or accessed when required. (Gandini, 2016, B) (Figures 1–4)

Figure 1: Top 10 sectors in digital recruitment growth



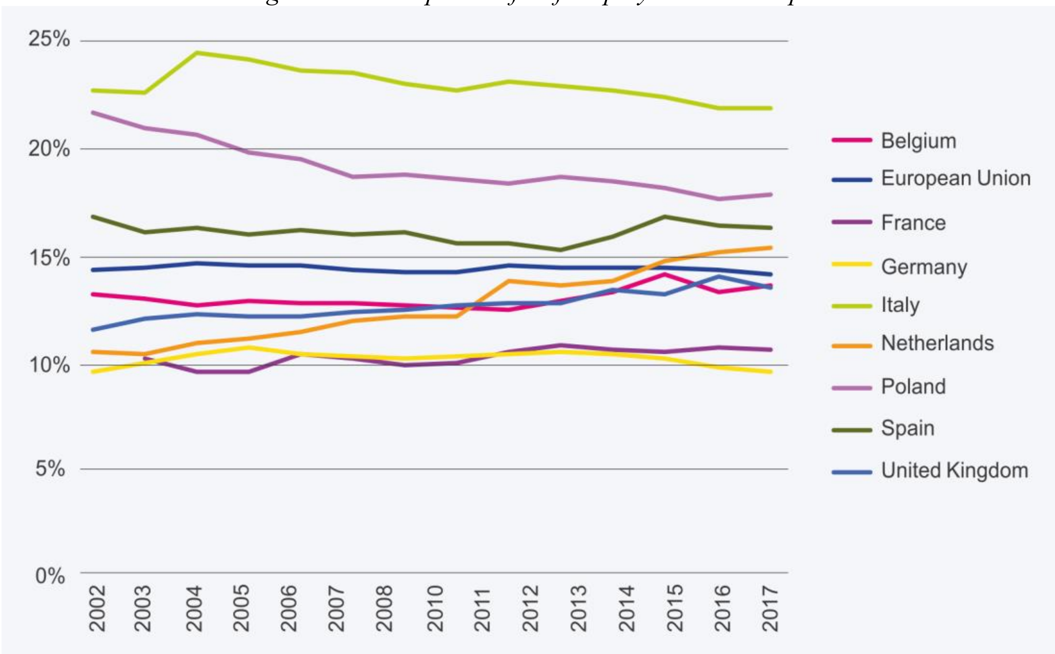
Source: (Burning Glass data and Tech Nation, 2016) and our estimations

Figure 2: Top 20 sectors by digital disruption (excluding digital sectors)



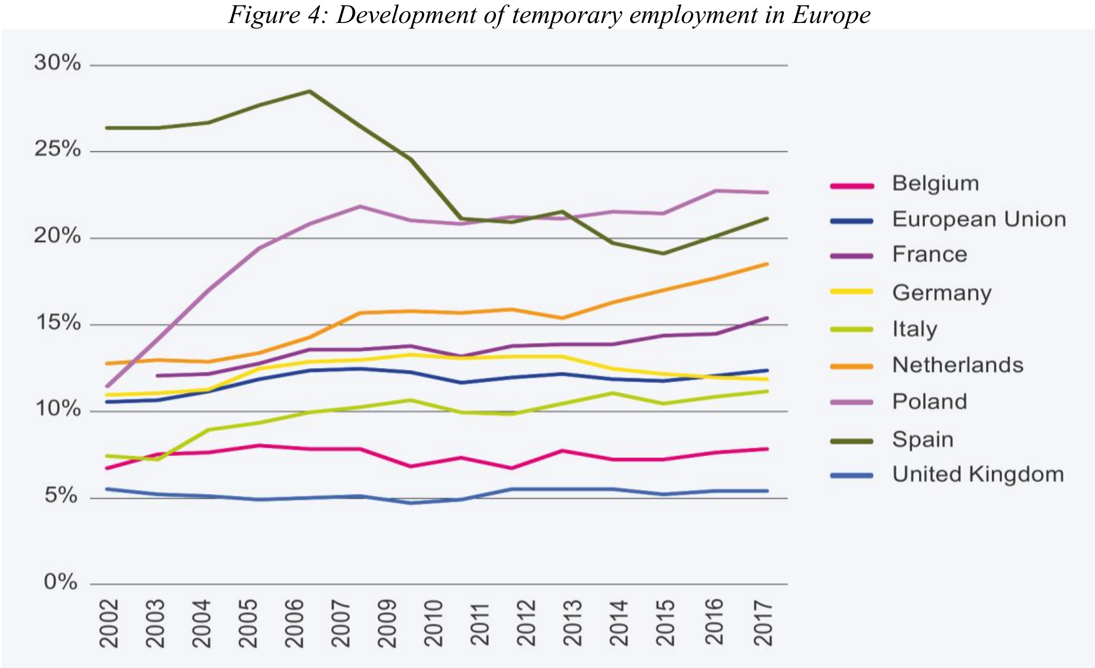
Source: (GrowthIntel and Tech Nation, 2016) and our estimations

Figure 3: Development of self-employment in Europe



Source: (Eurostat, 2016) and our estimations

Figure 4: Development of temporary employment in Europe



Source: (Eurostat, 2016) and our estimations

5. Results and discussion

Using the most relevant additions to the literature, we demonstrate that reputation adjusts the professional market of the knowledge economy by functioning as a particular kind of capital or positive feature for people in a setting constituted of networked and recently mediatized social interplay where participants aim for economic results by improving their social connections, which are accessed and activated by employing an individual's reputational capital. (Gandini, 2016, A) The construction of a consistent public and social self through performative routines of sociality is a branding undertaking unconnected from the setting up of communitarian connections (Williams et al., 2016), regulated through a curatorial rationale which indicates accuracy. The handling of the material posted and the networking operation are fairly crucial features in the marketability of a digital laborer for the achievement of a reputational capital. The undertaking in the online realm is performative, being an operation that characterizes a social distinctiveness that connects into value (Selth, 2016), and should be constant, without important discontinuities, generating conspicuousness and awareness, and linking unswervingly to offline interplay. The awareness of self-branding routine as the mechanism of articulation of social capital (Hellman & Majamäki, 2016) is instrumental to the continuation of a reputation economy, because reputation frequently stands for direct confidence building. (Gandini, 2016, B)

6. Conclusions

The current economy is typified by the dispersal of project-based recruitment and the ascent of freelancing: social interplay inherently links with economic valorization throughout networked settings, being moderated through diverse digital devices. In a digitizing labor market, reputation is the aspect distributed by autonomous professional participants in the knowledge economy (Andrei et al., 2016) as a cultural notion of value that converts social interplay into economic results. The actors of such a digital and freelance (Popescu Ljungholm, 2016) knowledge economy contingent on reputational notions of value constitute a novel type of knowledge and creative laborers, who perform as autonomous professionals (Machan & Chesher, 2016) in such a labor market, employing social media substantially and using their personal links and reputational capital (Mihăilă, 2016, B) to get involved in economic conduct and boost their career, status and positions, having fully internalized the commercial stance (Kantarelis, 2016) of their professional strength as an ideological kind of venture work. (Gandini, 2016, A)

References

[1] Ahmed, M. (2016). Bridging the gap between alternative dispute resolution and robust adverse costs orders, *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 98–126.

[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] 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.

[4] Androniceanu, A. and Drăgulănescu, 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 Drăgulănescu, I. V. (2016, B). Sustainability of the organizational changes in the context of global economic crisis, *Amfiteatru Economic*, vol. 14, pp. 365–379.

[6] 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.

[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] 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.

[11] Gandini, A. (2016, A). Digital work: Self-branding and social capital in the freelance knowledge economy, *Marketing Theory*, vol. 16, pp. 123–141.

[12] Gandini, A. (2016, B). *The Reputation Economy: Understanding Knowledge Work in Digital Society*. London: Palgrave Macmillan.

[13] Hanappi, D., Ryser, V.-A. and Bernardi, L. (2016). The role of attitudes towards maternal employment in the relationship between job quality and fertility intentions, *Journal of Research in Gender Studies*, vol. 6, pp. 192–219.

[14] Hellman, M. and Majamäki, 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] Kantarelis, D. (2016). A measure of net dependency between the economies of the USA and its major trading partners, *Geopolitics, History, and International Relations*, vol. 8, pp. 113–145.

[17] Machan, T. R. and Chesher, J. (2016). Government budget crises, *Geopolitics, History, and International Relations*, vol. 8, pp. 169–176.

[18] Machan, T. R. (2016, A). Rights, values, regulation and health care, *American Journal of Medical Research*, vol. 3, pp. 115–125.

[19] Machan, T. R. (2016, B). The morality of gregarious egoism, *Contemporary Readings in Law and Social Justice*, vol. 8, pp. 7–29.

[20] 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.

[21] Mihăilă, R. (2016, A). 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.

[22] Mihăilă, R. (2016, B). Female labor force participation and gender wage discrimination, *Journal of Research in Gender Studies*, vol. 6, pp. 262–268.

[23] Nagel, M. (2016). Gender and the law, *Journal of Research in Gender Studies*, vol. 6, pp. 107–119.

[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] 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] Selth, A. (2016). The road to Mandalay: Orientalism, 'Burma girls' and Western music, *Journal of Research in Gender Studies*, vol. 6, pp. 159–191.

[27] 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.

[28] Vitalari, N. P. (2016). Prospects for the future of the U.S. healthcare industry: A speculative analysis, *American Journal of Medical Research*, vol. 3, pp. 7–52.

[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 IMPACT OF GLOBALIZATION ON INTERNATIONAL TAXATION IN THE EU

Gizela Lénártová[1,a,*]

[1]University of Economics in Bratislava, Faculty of Business Management, Department of Corporate Finance, Dolnozemská st. 1, Bratislava, Slovakia

[a]gizela.lenartova@gmail.com

*Corresponding author

Abstract. Globalization has a strong influence on international and domestic taxation. At present time the main tendencies in international taxation are adaptation, coordination competition and harmonization. They are a very complex, complicated and controversial processes since tax harmonization and tax competition are in a mutual contradiction. In addition the tax harmonization has been running more than six decades and has accompanied all integration efforts into present European Union with many positive and negative consequences. Up to now harmonization of indirect and direct taxes had supported to create of internal market in EU and its correct functionality. The present problems of tax harmonization in EU lie in an urgent need to enhance efforts in the fight against tax avoidance and aggressive tax planning (Anti-Tax Avoidance Directive – ATAD). It responds to the finalisation of the OECD Project against Base Erosion and Profit Shifting (BEPS). The European Commission will re-launch its proposal for Common Consolidated Corporate Tax Base (CCCTB) as a solution to creating fairer and more efficient taxation of multinational corporations in EU. On the other hand all EU tax directives must be unanimously approved in voting in European Council according to present voting rules. What will the future development of tax harmonization in EU after BREXIT?

Keywords: tax harmonization, ATAD, BEPS, CCCTB, aggressive tax planning

JEL Classification: F 65, F 36, H 25, H 26

1. Introduction

Termín „globalizácia" je v súčasnom období jedným z najčastejšie používaných termínov a označuje permanentný proces zmien vo svetovej ekonomike. V odbornej literatúre nájdeme veľkú rôznorodosť a pestrosť definícií a interpretácií tohto pojmu. Problémami globalizácie v 21.storočí sa zaoberá aj Thomas Piketty (Piketty, 2014) a jeho žiak Gabriel Zucman (Zucmann, 2015). Globalizácia významne ovplyvňuje aj integračné procesy v Európe. *„Integration processes of countries and political cooperation were intensified, especially in Europe"*. (Achimská, 2016). Globalizačné tendencie majú na zdaňovanie pozitívne aj negatívne vplyvy tak pre štát, ako aj podnikateľskú sféru. Pôsobia komplexne, často sa navzájom ovplyvňujú, posilňujú alebo vzájomne kompenzujú. Protichodné tendencie sú v medzinárodnom zdanení sprevádzané procesmi ako sú adaptácia, konkurencia, koordinácia a harmonizácia. Daňová harmonizácia a daňová konkurencia sú vo vzájomnom protirečení. *„Krajiny sa snažia získať zahraničný kapitál sa optimalizujú svoje daňové náklady. Túžba* *prilákať na svoje územie čo najviac kapitálu sa netýka len starších členských štátov, ale aj novších členov Európskej únie"* (Vavrová, 2015).

Cieľom výskumu v tejto oblasti je identifikovať aktuálne problémy zdaňovania v EÚ so zameraním na daňovú harmonizáciu v boji proti vyhýbaniu sa daniam, analyzovať opatrenia prijímané Radou EÚ na základe odporúčaní OECD a zhodnotiť ich dôsledky v podmienkach SR. Ide predovšetkým o Projekt OECD známu pod skratkou BEPS, Balík opatrení EÚ (ATAP), smernica EÚ pod skratkou ATAD a ich implementácia do daňovej legislatívy SR. SR. Základnou metódou výskumu je normatívna metóda analýzy právnej úpravy OECD, právnych aktov EÚ a daňovej legislatívy SR, ďalej analyticko-syntetické metódy, komparatívna analýza rozdielnych a podobných znakov, abstrakciu a induktívne a deduktívne metódy.

2. Súčasný stav a hlavné problémy zdaňovania v EÚ

Právomoc vyberať dane patrí k základným prvkom zvrchovanosti členských štátov EÚ, ktorá bola plne zakomponovaná do procesu prijímania právnych aktov v daňovej oblasti. To znamená, že podľa čl. 112 Zmluvy o fungovaní Európskej únie Rada EÚ jednomyseľne prijíma právne akty pre nepriame dane a podľa čl. 115 pre dane priame. Cieľom daňovej harmonizácie v Európskej únii bolo: vytvoriť jednotný trh a neustále zabezpečovať jeho hladké fungovanie, zabezpečiť vyššiu konkurencieschopnosť nielen EÚ ako celku, ale aj národnú konkurencieschopnosť členských štátov ako cieľ hospodárskej politiky (Čekmeová, 2016), ďalej minimalizovať náklady zdanenia a zefektívniť výber daní. Preto základným cieľom reforiem finančnej správy (daňovej a colnej správy) v členských krajinách EÚ je efektívny výber daní a znižovanie nákladov zdanenia (Vavrová&Bikár, 2016). Napriek úspechom, ktoré sa dosiahli v harmonizácii zdanenia, v súčasnosti pretrvávajú mnohé problémy a naliehavé výzvy predovšetkým v boji proti daňovým únikom a daňovým podvodom. V odbornej literatúre je daňovým únikom, daňovým podvodom venovaná veľká pozornosť, výskumy sú zamerané na skúmanie motívov daňovníkov vedúcich k tomuto typu trestnej činnosti (Špalek&Špačková, 2016). V systéme korporatívnych daní sa doteraz nepodarilo presadiť do daňovej praxe návrhy na uplatnenie CCCTB (Common Consolidated Corporate Tax Base). V súčasnosti je kľúčovou výzvou boj proti vyhýbaniu sa daňovým povinnostiam a agresívnemu daňovému plánovaniu. Spolupráca, koordinácia a transparentnosť medzi členskými štátmi EÚ v oblasti daňovej politiky by pomohli znížiť značné straty daňových výnosov do rozpočtov členských štátov a zabezpečiť väčšiu spravodlivosť v celej EÚ. Nové iniciatívy OECD a Európskej únie sú zamerané na tieto ciele.

3. Boj proti vyhýbaniu sa daňovým povinnostiam – boj proti agresívnemu daňovému plánovaniu v EÚ

Rozdiel medzi daňovými únikmi a vyhýbaniu sa daňovým povinnostiam je veľmi malý. V konkrétnej jurisdikcii terminologické rozlíšenie týchto dvoch pojmov a konkrétnych daňových „praktík" závisí od daňovej legislatívy a trestného zákona. Podľa Kubicovej (Kubicová, 2008) *„Zníženie dane porušením zákona je daňový únik, ktorý je trestným činom. Vyspelé daňové jurisdikcie však považujú za neprijateľný nielen daňový únik, ale i vyhnutie sa dani. K neprijateľnému vyhnutiu sa dani vedie taká séria transakcií, v ktorých sa zneužíva daňová legislatíva"*. Čiže taká transakcia, resp. súbor transakcií, ktoré vedú k zámernému znižovaniu daní až úplnému vyhnutiu sa daniam, možno nazvať agresívne daňové plánovanie. Ide predovšetkým o presun ziskov, resp. majetku do krajín s nižším, resp. nulovým zdanením, presun daňovej rezidencie do zahraničia. V súčasnosti ide o veľmi rozšírený jav prakticky v celom svete. Súčasným stavom, motívmi a dôsledkami zakladania onshore a offshore spoločností slovenskými firmami sa zaoberá štúdia (Krištofík, et al., 2017), popularita zakladania spoločností českými podnikateľmi v daňových rajoch je predmetom skúmania v štúdii (Novotný&Lukáš, 2015). Medzi praktiky agresívneho plánovania patria aj transakcie spôsobujúce eróziu základu dane prostredníctvom platieb úrokov z úverov, využívanie nejednoznačnosti daňových systému, najmä technických detailov, ďalej využívanie rozdielov v medzinárodných zmluvách o zamedzení dvojitého zdanenia (ďalej DTT), využívanie znenia zákona v nesúlade s jeho účelom. Uplatňovaním praktík agresívneho daňového plánovania nadnárodných firiem prichádza Európska únia ročne približne o 190 miliárd eur. Cieľom iniciatívy OECD (BEPS), ako aj smerníc EÚ je eliminovať škodlivé praktiky agresívneho daňového plánovania.

3.1 OECD Projekt BEPS (Base Erosion and Profit Shifting -Boj proti narúšaniu základu dane a presunu ziskov)

OECD je organizácia globálneho vplyvu, ktorá určuje hlavné smery hospodárskej politiky nielen pre svojich členov, ale aj pre ďalšie krajiny vo svete. Význam daňovej politiky a daňového zákonodarstva pre ekonomický rast je zrejmý aj z dokumentu „Tax Policy Reform and Economic Growth" (OECD, 2010). Prostredníctvom daní sa plní nielen fiškálna, distribučná, ale aj stabilizačná funkcia štátu. Preto by mali byť dane ukladané podľa presne stanovených pravidiel, čo vysvetľoval Adam Smith už v roku 1776 (Smith, 2001). Tak nepriamo vyjadril nutnosť právnej istoty v oblasti zdanenia (Machová&Kotlán, 2015). Iniciatívu BEPS vypracovala OECD na základe mandátu G20, cieľom ktorej je medzinárodná koordinácia boja proti agresívnemu daňovému plánovaniu. Na príprave projektu sa zúčastnili všetky členské krajiny OECD vrátane predstaviteľov dvadsiatich najväčších ekonomík sveta (G20) a medzinárodných organizácií (MMF, Svetová banka, OSN). Obsahuje 15 akčných bodov, ktoré sú znázornené v tabuľke 1. V rámci projektu BEPS ide o odporúčania, nie záväzné legislatívne normy, pričom sa predpokladá, že zainteresované krajiny budú opatrenia implementovať. Na projekt BEPS aktívne nadviazala EÚ, ktorá vypracovala tri balíky opatrení úzko prepojené s iniciatívou OECD: Balík opatrení daňovej transparentnosti (Tax Transparency Package), v rámci ktorého bola prijatá revízia smernice o administratívnej spolupráci v oblasti daní – DAC 3, pripravuje sa DAC 4), Balík opatrení proti vyhýbaniu sa daňovým povinnostiam (ATAP), Reformný balík dane z príjmov právnických osôb (Corporate Tax Reform Package-CTRP). Okrem toho OECD implementuje opatrenia BEPS-u do vlastných smerníc v oblasti transferového oceňovania a v oblasti medzinárodných zmlúv o zamedzení dvojitého zdanenia.

Tabuľka 1: Projekt BEPS a jeho prepojenie na legislatívne normy EÚ

Akcia	Názov akcie	Prepojenie na smernice EÚ
1	Riešenie daňových výziev v digitálnej oblasti	
2	Neutralizácia hybridných nesúladov	⇨ Hybridné nesúlady **Smernica Rady 2016/1164 ATAD** ⇨ Reformný balík CTRP a návrh revízie smernice 2016/1164 vo veci hybridných nesúladov
3	Posilnenie pravidiel pre kontrolované zahraničné spoločnosti (CFC)	⇨ Pravidlá pre CFC **Smernica Rady 2016/1164 ATAD**
4	Obmedzenie erózie základu dane prostredníctvom odpočtu úrokových nákladov a iných finančných platieb	⇨ Daňová uznateľnosť úrokových platieb **Smernica Rady 2016/1164 ATAD**
5	Efektívny boj proti škodlivým daňovým praktikám s ohľadom na ich transparentnosť a podstatu (skutočné aktivity)	⇨ Rozšírenie automatickej výmeny informácií o záväzné daňové stanoviská Revízia smernice DAC
6	Zabránenie zneužívaniu zmlúv o zamedzení dvojitého zdanenia Poznámka: MLI OECD	
7	Zabránenie umelému vyhýbaniu sa štatútu stálej prevádzkarne Poznámka: MLI OECD	
8	Zosúladenie výstupov v oblasti transferového oceňovania s tvorbou hodnoty: nehmotný majetok	
9	Zosúladenie výstupov v oblasti transferového oceňovania s tvorbou hodnoty: risk/kapitál	} Revízia a doplnenie smerníc OECD o transferovom oceňovaní
10	Zosúladenie výstupov v oblasti transferového oceňovania s tvorbou hodnoty: ostatné vysoko rizikové transakcie	
11	Zaviesť metodológiu pri meraní a monitorovaní implementácie BEPS	
12	Pravidlá povinného zverejňovania transakcií v súvislosti s agresívnym daňovým plánovaním	
13	Dokumentácia k transferovému oceňovaniu a oznamovanie informácií o podnikoch podľa jednotlivých krajín (Country-by-Country Reporting)	⇨ Rozšírenie automatickej výmeny informácií o záväzné daňové stanoviská Revízia smernice DAC
14	Zefektívnenie mechanizmov pri riešení sporov v daňovej oblasti	⇨ Rozšírenie automatickej výmeny informácií o záväzné daňové stanoviská Revízia smernice DAC
15	Príprava multilaterálneho nástroja na zmenu bilaterálnych daňových dohôd (MLI) Poznámka: MLI bol 7.6. 2017 podpísaný zástupcami 68 jurisdikcií na pôde OECD	

Source: Vlastné spracovanie z legislatívnych noriem: Base Erosion and Profit Shifting Project, Executive Summaries 2015 Final Report. Smernica Rady 2015/2376 z 8. decembra 2015, ktorou sa mení a dopĺňa smernica 2011/16/EÚ pokiaľ ide o povinnú výmenu informácií v oblasti daní. Smernica Rady 2016/1164 z 12. júla 2016 EÚ (Anti Tax Avoidance Directive ATAD).

3.2 Balík ATAP (Anti Tax Avoidance Package - Balík opatrení proti vyhýbaniu sa daňovým povinnostiam)

ATAP obsahuje komplex legislatívnych a nelegislatívnych opatrení na zamedzenie agresívneho plánovania, zvýšenie daňovej transparentnosti medzi členskými štátmi a zabezpečenie rovnakých podmienok na podnikanie v celom priestore EÚ. Opatrenia možno rozdeliť do 4 oblastí, ktoré sú znázornené v tabuľke 2.

Tabuľka 2: Legislatívne a nelegislatívne opatrenia Balíka ATAP

Legislatívne opatrenia	Nelegislatívne opatrenia
Smernica Rady 2016/1164 z 19. júla 2016 EÚ proti vyhýbaniu sa daňovým povinnostiam (ATAD) - 6 opatrení: 3 opatrenia z OECD projektu BEPS: Akcia 2: Hybridné nesúlady (čl. 9 ATAD) Akcia 3: CFC (čl. 7- 8 ATAD) Akcia 4: Uznateľnosť úrokov (čl. 4 ATAD) 3 opatrenia z návrhu smernice CCCTB: 1.Všeobecné pravidlo proti zneužívaniu (General Anti Avoidance Rule – GAAR) (čl. 6 ATAD) 2.Switch-over Clause neskôr zrušené) 3. Exit Tax Rule (daň pri odchode) (čl. 5 ATAD)	Odporúčania na implementáciu opatrení proti zneužívaniu zmlúv o zamedzení dvojitého zdanenia 2 opatrenia z OECD projektu BEPS: Akcia 6: Zneužívanie zmlúv Akcia 7: Vyhýbanie sa štatútu stála prevádzkareň (SP)
Smernica Rady 2015/2376 z 8. decembra 2015, ktorou sa mení a dopĺňa smernica 2011/16/EÚ pokiaľ ide o povinnú výmenu informácií v oblasti daní Opatrenie z BEPS: Akcia 13: CBC Reporting	Oznámenie Komisie Európskemu parlamentu a Rade o externej stratégii: Obsahuje návrh opatrení a odporúčaní na podporu správneho globálneho riadenia daní: jedna z iniciatív je vytvorenie spoločného systému hodnotiacich kritérií na posudzovanie, preverovanie a zaraďovanie tretích krajín do zoznamu nespolupracujúcich krajín v daňovej oblasti.

Source: Vlastné spracovanie z legislatívnych noriem: Base Erosion and Profit Shifting Project, Executive Summaries 2015 Final Report. Smernica Rady 2015/2376 z 8. decembra 2015, ktorou sa mení a dopĺňa smernica 2011/16/EÚ pokiaľ ide o povinnú výmenu informácií v oblasti daní. Smernica Rady 2016/1164 z 12. júla 2016 EÚ (Anti Tax Avoidance Directive ATAD).

3.3 Smernica Rady 2016/1164 proti vyhýbaniu sa daňovým povinnostiam (ATAD)

Smernica ATAD zavádza tzv. povinný minimálny štandard v každom členskom štáte. Avšak členské štáty môžu uplatniť aj prísnejšie pravidlá. Z pôvodných 6 opatrení sa v súčasnosti uplatňuje 5, ktoré nadväzujú na projekt BEPS, Balík ATAP a staršiu iniciatívu CCCTB a tak vytvárajú komplexný súbor opatrení. Objektom smernice sú právnické osoby (PO), ktorých príjem podlieha dani z príjmov právnických osôb v EÚ vrátane stálych prevádzkarní. Opatrenia smernice sa nevzťahujú na fyzické osoby a na komanditnú spoločnosť a verejnú obchodnú spoločnosť. Opatrenia ATAD-u sú tieto:

1. Všeobecné pravidlo proti zneužívaniu zapracované v smernici musí byť implementované v národných legislatívach členských krajín EÚ. GAAR znamená, že štáty nesmú pri výpočte daňovej povinnosti dane z príjmov PO brať do úvahy také schémy a transakcie, ktoré nemajú ekonomické opodstatnenie, lebo cieľom je daňová výhoda. Podstatou pravidla je prevaha obsahu nad formou. GAAR je zakomponovaný v daňovej legislatíve SR v Daňovom poriadku v § 3 ods. 6.

2. Hybridné nesúlady – ide o zavedenie pravidiel v čl. 9 ATAD, podľa ktorých nesmie dochádzať k dvojitému nezdaneniu príjmov (napr. dvojitým uplatnením výdavkov alebo daňovej straty v rôznych krajinách nezahrnutím príjmu v jednej krajine a uplatnením výdavku v inej krajine a pod.). Hybridné nesúlady vznikajú ako výsledok uplatnenia hybridných nástrojov alebo hybridných entít. V medzinárodnej daňovej praxi sa používa veľký počet rôznorodých hybridných nesúladov. Napríklad v jednej krajine sa považuje úver za dlhový nástroj a v druhej krajine za kapitálový vklad. Daňové dôsledky sú, že v jednej krajine sa uplatňujú úrokové náklady, ktoré znižujú základ dane a v druhej krajine môžu byť dividendy oslobodené od dane. V SR hybridné nesúlady čiastočne rieši daňový zákon v § 12, ods. 7 písm.". Pre daňových rezidentov SR (PO a FO) je podľa § 43 ods.1 písm. c) ZDP predmetom zrážkovej dane vo výške 35% dividenda prijatá z daňového raja alebo príjem vyplatený z nezmluvného štátu. Problémom je, že sa dá ťažko zistiť, či a ako bola v krajine zdroja dividenda zdanená, aký je podkladový zisk, prípadne, či vyplatená dividenda v krajine zdroja bola uznaná ako daňový výdavok.
3. Pre laickú a odbornú verejnosť je známe, že mnohé firmy vo svete za účelom vyhnutia sa daňovej povinnosti zakladajú fiktívne spoločnosti v jurisdikciách nízkym alebo žiadnym zdanením. Na zamedzenie týchto praktík sa vo svete doteraz využívali pravidlá pre zahraničné kontrolované spoločnosti (Kubicová, 2008). Ako uvádza OECD vo svojej záverečnej správe (Final Report OECD/G20, 2015), doteraz uplatňované pravidlá dostatočne nereflektovali zmeny v medzinárodnom podnikateľskom prostredí. EÚ zareagovala v smernici ATAD prostredníctvom prísnejších pravidiel, ktorými sú povinné ustanovenia doplnené o dobrovoľné. Predpokladom uplatnenia pravidiel pre CFC je verifikácia dvoch podmienok: 1. podmienkou je zistenie, či materská spoločnosť má rozhodujúcu kontrolu nad dcérskou spoločnosťou a 2. podmienka je posúdenie zdanenia dcérskej spoločnosti v zahraničí. Čiže v súlade so smernicou členský štát materskej spoločnosti považuje dcérsku spoločnosť v inom členskom štáte alebo tretej krajine za CFC, ak 1. materská spoločnosť samostatne alebo spolu so svojimi závislými osobami má viac ako 50%-ný priamy alebo nepriamy podiel na hlasovacích právach, základnom imaní alebo zisku dcérskej spoločnosti a 2. skutočná daň z príjmov právnických osôb, ktorú dcérska spoločnosť zaplatila v zahraničí je menšia ako rozdiel dane dcérskej spoločnosti, ktorú by mala zaplatiť v členskom štáte materskej spoločnosti a skutočnou daňou, ktorú zaplatila. Ďalej sa budú aplikovať presne stanovené pravidlá pre výpočet základu dane CFC podľa čl. 8 ATAD.
4. Erózia základu dane prostredníctvom úrokových platieb je frekventovaný nástroj agresívneho daňového plánovania. Úroky z úverov a pôžičiek sú u veriteľa zdaniteľným príjmom, ktorý zvyšuje základ dane a u dlžníka výdavkom, ktorý základ dane znižuje. Mnohé štáty využívajú pravidlá na obmedzenie daňovej uznateľnosti úrokov u dlžníka, ktoré sa však veľmi líšia. V smernici ATAD sú jednotné pravidlá na obmedzenie daňovej uznateľnosti úrokov u dlžníka vo všetkých členských štátoch prostredníctvom povinných a dobrovoľných ustanovení. Vzťahujú sa na čisté úrokové náklady z úverov a pôžičiek od závislých aj nezávislých osôb. Problémom je, že tieto pravidlá môžu negatívne ovplyvniť podniky, ktoré získajú úver na rozvoj podnikania, resp. na väčšie investičné projekty bez akýchkoľvek znakov agresívneho daňového plánovania. Čiastočne to riešia výnimky a oslobodenia, o implementácii ktorých môže rozhodovať každý štát samostatne. Členský štát môže PO umožniť daňový odpočet

úrokov do výšky, ktorá zodpovedá 30 % ukazovateľa EBITDA. Členské štáty môžu za účelom vyššej ochrany povoliť nižší odpočet úrokov tak, že sa uplatní nižší %-ny pomer alebo pri výpočte príslušného pomeru budú vychádzať zo zisku pred zdanením a úrokmi (EBIT). Okrem povinných pravidiel smernica umožňuje uplatniť výnimky a oslobodenia, napr. prostredníctvom „Safe Harbour“ odpočítať úroky do výšky 3 mil. eur alebo „standalone entity“, tzn. samostatného podniku, ktorá nie je súčasťou skupiny, alebo „grandfathering clause“ – možnosť vylúčiť z rozsahu pôsobnosti ustanovení smernice úroky z tých pôžičiek a úverov, ktoré boli uzavreté pred 17.6.2016 a úroky z pôžičiek použitých na financovanie dlhodobých verejných infraštruktúrnych projektov. V podmienkach SR sú pravidlá nízkej kapitalizácie legislatívne upravené v § 21a ZDP, ktoré sa vzťahujú len na prepojené osoby, limit je stanovený vo výške 25% EBITDA (účtovné údaje), ide o hrubé úrokové náklady a uplatňuje sa výnimka pre finančné spoločnosti.

5. Zdaňovanie pri odchode (Exit Tax) podľa Kubicovej (Kubicová, 2016) je: 1. zdanenie fyzickej alebo právnickej osoby pri zmene daňovej rezidencie z jedného štátu do druhého, 2. ide o opatrenie proti vyhýbaniu sa daňovým povinnostiam. EÚ prijalo v smernici ATAD pravidlo, ktoré umožní členským štátom zdaniť hodnotu majetku vo vlastníctve PO a to v okamihu jeho presunu do iného členského štátu alebo tretej krajiny, ak sa presun uskutoční bez zmeny vlastníctva majetku. V daňovej legislatíve SR dosiaľ nemáme žiadne ustanovenia týkajúce sa zdaňovania pri odchode a do konca roku 2019 ho budeme musieť implementovať.

4. Conclusion

Prijatie analyzovaných iniciatív a smerníc je len jednou z mála oblastí, ktoré je nevyhnutné uviesť do daňovej praxe členských štátov EÚ. Do popredia sa dostáva otázka, ako bude v budúcnosti proces prijímania právnych aktov v daňovej oblasti. Doterajšie jednomyseľné prijímanie daňových smerníc blokuje proces prijatia smernice CCCTB. V súvislosti s BREXITOM sa stále viac diskutuje viacrýchlostná EÚ a vytvorenie „jadra EÚ“. To prináša otázku „Bude jednomyseľné hlasovanie v daňovej oblasti zachované? EÚ vo svojom doterajšom vývoji prekonala niekoľko kríz. Pre lepšie, spravodlivejšie a efektívnejšie fungovanie EÚ je nevyhnutné opätovne definovať víziu, stratégiu, ciele EÚ budúceho vývoja, zásadne skvalitniť štýl riadenia na všetkých úrovniach tak, aby sa vrátila dôvera všetkých občanov v európsky integračný proces.

Acknowledgment

Tento príspevok je výstupom projektu VEGA 1/0184/16 “Eliminácia medzinárodného dvojitého zdanenia podnikateľských subjektov a jej vplyv na rozvoj podnikania a investovania v SR”.

References

[1] Achimská, V. (2016). International comparison of the liberalization of the postal sector, *Proceedings of 16th International Scientific Conference Globalization and Its Socio-Economic Consequences,* Rajecké Teplice, Slovakia, pp. 18.

[2] Čekmeová, P. (2016). Konkurencieschopnosť ako cieľ hospodárskej politiky. *Politická ekonomie,* vol. 64, no 3, 2016, pp. 338-350.

[3] Krištofík, P., Ištok, M. and Nedelová, G. (2017). Motívy zakladania onshore a offshore spoločností slovenskými podnikmi v roku 2014. *Politická ekonomie,* vol. 65, no.2, pp. 198-216.

[4] Kubicová, J. (2008). Komparatívna analýza pravidiel proti medzinárodnému vyhýbaniu sa daniam prostredníctvom kontrolovaných zahraničných spoločností. *Proceedings of 7th International Scientific Conference National and Regional Economics VII.,* Technical University of Košice, The Faculty of Economics, Herľany, Slovakia pp. 456-464.

[5] Kubicová, J. (2016). Exit tax in the world of international migration of companies and individuals. *Proceedings of 16th International Scientific Conference Globalization and Its Socio-Economic Consequences.* Rajecké Teplice, Slovakia, pp. 1101-1109.

[6] Machová, Z. and Kotlán, I. (2015). Právní jistota – Možný problém daňovej politiky vyspělých zemí? *Politická ekonomie,* vol. 63, no 7, pp. 833-846.

[7] Novotný, J. and Kruml, L.(2015). Development of tax havens due to Globalization processes and their Impact on the Czech Republic. *Proceedings of 15th International Scientific Conference Globalization and Its Socio-Economic Consequences.* Rajecké Teplice, Slovakia, pp. 531-538.

[8] Piketty, Th. (2014). *Capital in the Twenty-first Century.* Harvard College, USA.

[9] Smith, A. (2001). *Pojednání o podstatě a původu bohatství národů*. Liberálni institut, Praha. 2001.

[10] Špalek, J. and Špačková, Z. (2016). Daňové úniky v laboratoři: vliv kontextu na ochotu platit daně. *Politická ekonomie,* vol. 64, no 5, pp. 524-540.

[11] Vavrová, K. and Bikár, M. (2016). Effective Tax Administration as a factor affecting the competitiveness of Slovakia at the global level. *Proceedings of 16th International Scientific Conference Globalization and Its Socio-Economic Consequences.* Rajecké Teplice, Slovakia, pp. 2324-2331.

[12] Vavrová, K. (2015). Tax incentives of business entites in selected countries of the EU in the context of globalization. *Proceedings of 15th International Scientific Conference Globalization and Its Socio-Economic Consequences.* Rajecké Teplice, Slovakia, pp. 855-863.

[13] Zucmann, G. (2013*). The Hidden Wealth of Nations. The Scourge of Tax havens.* Chicago. London. The University of Chicago Press. 2013.

[14] Tax Policy Reform and Economic Growth, OECD, 2010.

[15] Base Erosion and Profit Shifting Project, Executive Summaries 2015 Final Report.

[16] Smernica Rady 2015/2376 z 8. decembra 2015, ktorou sa mení a dopĺňa smernica 2011/16/EÚ pokiaľ ide o povinnú výmenu informácií v oblasti daní. Smernica Rady 2016/1164 z 12. júla 2016 EÚ (ATAD).

[17] Daňové zákony SR.

THE INTERNATIONALIZATION MODES OF PRODUCTION FIRMS

Dagmar Lesakova[1,a,*]

[1]University of Economics in Bratislava, Faculty of Commerce, Dolnozemska Road 1, 852 35 Bratislava, Slovakia

[a]lesakova@euba.sk

*Corresponding author

Abstract. The purpose of our paper is to explain the specifics of internationalization processes in small and medium sized companies, which start their international activities even before building a stable domestic position. We will specify various modes of these type of firms, named as Born Globals. Two research questions are explored in the paper: 1) What are the key attributes of Born Globals as international firms and what differentiates them from traditional firms? and 2) Why are Born Globals important in business development? Empirical research is conducted on a sample of firms with an export rate on the total sale of more than 25 %, and export started within three years after their foundation. For practical reasons firms established after 2000 participated in the research. A combination of qualitative and quantitative research methods is used in the survey. Interviews with founders and managers of Born Global firms served as a basis for developing the questionnaire. The purpose of the questionnaire is to explore the mode of standardization and adaptation to the foreign markets in marketing mix elements and to identify a base of competitive advantage. In our research we come to the conclusion that with rapid internationalization of markets, hyper-competition and the change to an information intensive economy, the number of firms categorized as Born Globals will increase. With the international expansion can the home-market advantages disappear, and this is important especially for small countries, like Slovakia.

Keywords: internationalization, Born Globals firms, exporters, foreign markets.

JEL Classification: M30, M31, F60

1. Introduction

The internationalization processes of firms were an important topic of many research studies during the past four decades. The interest in the internationalization research is a response to the fast increasing importance of international trade. Since the mid-80s two distinct streams of research have emerged in Europe (Johanson & Vahlne, 1977), (Johanson & Vahlne, 1990) and in Australia (Cavusgil, 1994). Both research paths present export development as a process taking place in gradual and sequential stages, based on a set of incremental commitment decisions. According to this, the firm is assumed to build a stable domestic position before it starts with international activities.

Experience after 2000 has documented that many firms do not develop their international activities continually in incremental stages (Graham, 1999). Instead, they often start international activities immediately after their foundation / birth and enter very different markets from the very beginning and at once. Such firms have been named International New Ventures (Oviatt & McDougall, 1995), High Technology Start-Ups and Born Globals (McKinsey & Co., 1993), (Knight & Cavusgil, 1996). The development of such a form of internationalization of companies has its roots in global market conditions, in the development of information and communication technologies, and the rising number of people with international experience.

The purpose of this paper is to answer two research questions: what are the key attributes of these new forms of international firms and what differentiates them from traditional firms. We explore also why are such firms important in business development. The second question will be discussed from both a managerial point of view, and from a theoretical point of view. The concept Born Global was first used almost three decades ago in an Australian report (McKinsey, 1993) and it was discussed together with similar concepts, for example International New Ventures (McDougall & Oviatt, 2000), (Oviatt & McDougall, 1997). In next chapter we will evaluate the research carried out in the area and discuss the contributions to the knowledge base of internationalization processes of firms.

2. Born Globals amongst Internationally active firms

The concept "Born Global" was originally used The concept „Born Global" was originally used in a survey for The Australian Manufacturing Council by the consultants McKinsey (McKinsey, 1993). The context of the discovery of this new type of exporters is explained by Tamer Cavusgil in his article about Born Global firms in 1994:

„There is emerging in Australia a new breed of exporting companies, which contribute substantially to the nation´s export capital. The emergence of these exporters though not unique to the Australian economy, reflects two fundamental phenomena of the 1990s: 1. Small is beautiful. 2) Gradual internationalization is dead" (Cavusgil, 1994, p. 18).

The Australian study focused on the analysis of new exporters classified as the small and medium sized firms. It means that the focus was not on new firms in general, but on those firms, that recently have begun to export. Furthermore the focus was on firms with a growing export within the last 5 years before the survey was conducted. The sporadic exporters were excluded from the survey together with firms, which were highly international. Characteristic for this new type of exporters (even the older firms) was that they did not see export and the foreign markets as a necessary burden (Katsikeas & Leonidou, 1996). Instead, they looked upon the world as one large market. The most important result of the survey was, that two types of exporters could be clearly distinguished:

The home market based firms, which are well established in Australia with a solid market share built up over time and with stable financial situation. These firms have established a solid position in the home market with many years of experience, but if they want to expand, exporting is the major choice. The wish for growth is the main motivation driving these firms to export while reduction of costs or competition seldom is seen as the motive for export.

The other group – approximately a quarter of all the explored firms – was labelled the Born Globals. This type of firm typically starts to export less than two years after the foundation of the firm. These were young firms, but they were responsible for approximately 25 % of the total export. Characteristic feature for these firms was, that:

„... these firms view the world as their marketplace from the outset and see the domestic market as a support for their international business“. (McKinsey, 1993, p.9)

Among the Born Global firms in the Australian study were several high-tech firms; the typical firm in this segment uses well-known technology. Characteristic features for the firms was, that they have accounted higher growth rate than the industries in Australia, and a higher growth rate in their export compared to their home-market sales. A major factor in the explanation of the phenomenon Born Global is the management´s commitment to internationalization. Another key factor is the firm´s ability to standardize production, marketing, distribution or communication in a global market niche instead of – as expected traditionally – adapting and developing customized products.

Cavusgil (1994) interprets the McKinsey report with the note that “gradual internationalization is dead”. Any firm - even the smallest firm - can begin to export immediately, right from the birth of a new firm. Similar research on Born Globals behaviour started with the beginning of this millennium in different countries (Knight & Cavusgil, 1996), (Moen & Servais, 2002).

Johanson & Vahlne (1990) described the situation when a firm jumps over stages in the classical gradual stages model and introduced the term “leapfrogging”. The argument contributing to this behaviour was that the export markets become more homogenous and that internationalization is a central part of the firm´s strategy. The question of this discussion was often whether this was true for all firms or just for high-tech firms (Young, 2001).

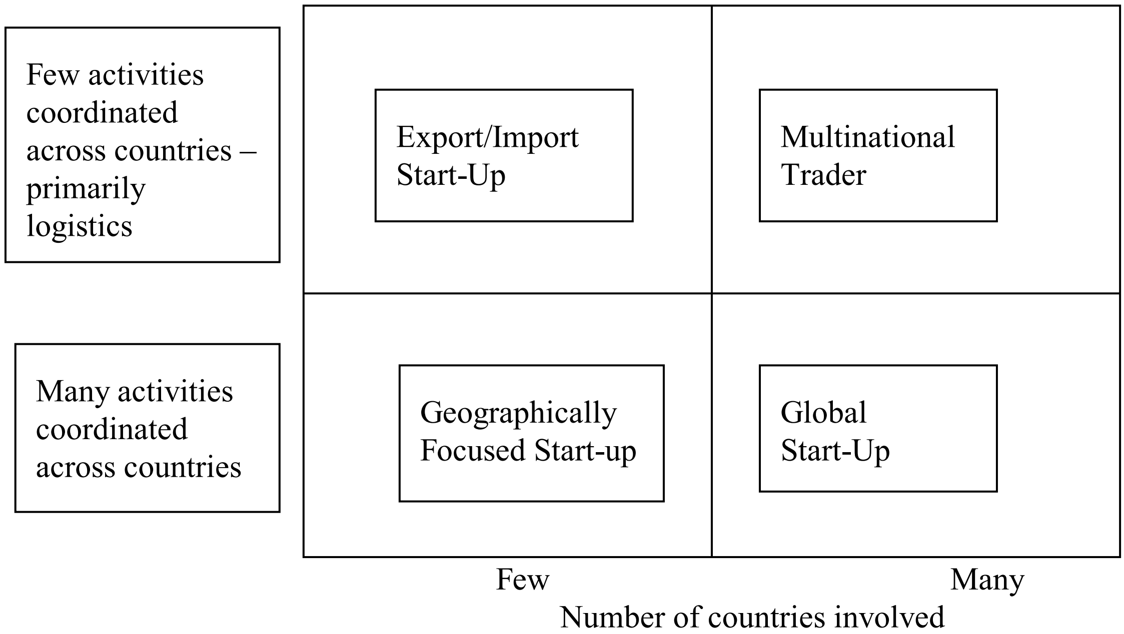
Several studies in various parts of the world document the existence of firms which are internationally oriented right from the birth. (Ganitsky, 1989) calls these firms “innate exporters” as a contradiction to the “adoptive exporters”. The innate exporters are obviously more flexible and have a higher degree of international outlook in the management. On the other hand, they are often limited due to their lack of experience and resources.

Until the mid-1990´s the research of firms with an immediate internationalization was characterized by only a few case studies of primarily high-tech firms. More detailed empirical and theoretical work was missing, especially regarding the nature and types of these firms. This shortcoming was changed with the work of McDougall and Oviatt. They introduced to this type of firms the label “International New Ventures” (INV) (Oviatt & McDougall, 1995); (Oviatt & McDougall, 1997). They defined an INV as a firm that right from its birth seeks a competitive advantage by exploiting resources from several countries and by selling its products in several countries. The purpose of their work was to formulate a theory of international new ventures through the combination of existing theories of entrepreneurship and a large number of case studies. Their definition of an INV is relatively broad, but precise:

“We define an international new venture as a business organization that from its inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries. The distinguishing feature of these start-ups is that their origins are international, as demonstrated by significant commitments of resources (e.g. material, people, financing, time) in more than one nation.” (Oviatt & McDougall, 1995, p. 49).

Oviatt & McDougall (1995) offer a specific elaboration of the concept used in the definition and develop a typology of firms by applying two variables: number of value chain activities and number of countries served (Figure 1).

Figure 1: Types of International New Ventures (INV)



Source: (Oviatt & McDougall, 1995)

The typology of international new ventures in Figure 1 enables to formulate a more unambiguous definition of the different types of firms explored. First, companies positioned in the quadrant "*Export/Import Start-up"* and in the quadrant *"Multinational Trader",* can be labelled as the "*New International Market Makers"*, which are the traditional type of firms operating both as exporters and importers. Their most important competitive advantage is knowledge about logistics and transport. They base their business on exploiting the imbalance in production costs and market prices between countries in order to create new markets. Often they operate through a network of business contacts in a large number of countries – often through the owners´ and managers´ personal contact and relations.

Another type of firm is the "*Geographically Focused Start-Up"*, developing its competitive advantage by servicing few customers with a highly specialized demand in only a few countries and small part of the world. The competitive advantage of these firms typically stems from the coordination of several value chains (Hunt & Morgan, 1995). This coordination is not only socially complex, but also difficult to imitate, because of the tacit nature of the knowledge involved. Furthermore, the networks and relations involved are closed to outsiders and in this way knowledge is protected.

The "*Global Start-Ups"* are the most innovative new international firms. These firms coordinate almost all activities in the firm across national and regional borders. They do not passively respond to possibilities in the global markets, but are enormously active globally to get access to resources and markets. The typology used by Oviatt and McDougall (1995) enables a clear understanding of what can be called as Born Global firm or an International New Venture.

Several other authors have studied the phenomenon of rapid internationalization in the new-born firms. Bell explored small computer-software firms in Finland, Ireland and Norway (Bell, 1995) and found that between 30-50 % did not follow the stages described in the traditional models. The reason was, that the firms had to follow a customer abroad or that the firms were doing business in an extremely narrow, specialized niche or sector. Moen and Servais argue (Moen & Servais, 2002) that the founder´s and the manager´s personal experience and knowledge are crucial for the success of Born Global firms.

In our empirical research on Born Globals in Slovakia describing the Born Globals as firms with an export of 25 % or more within the first 3-6 years.

3. Goals and Methods

In our research of the Born Globals in Slovakia we use the definition of McKinsey & Co. (1993), supplemented by the definition of Knight and Cavusgil (1996). In this context a Born Global is considered to be a firm with an export rate on the total sale of 25 % and more, which has started exporting within three years after the firms´ foundation. For practical reasons only firms with international activities established after 2000 were included in the research. The type of convenience sample was used as a base for our research. Responses were generated from the 168 firms.

From 168 firms in the survey 26 could be characterized as Born Globals (15,5 %). The 12 Born Globals (7,1 %) had a high rate of export – more than half of their sales came from export. The industries represented by Born Globals in our survey were: transportation, building industry, ICT, food-processing, wood-processing.

The principle goal of the research was to identify the main features of companies which can be labelled as Born Globals and to analyse the trends leading to the birth of Born Globals.

In our survey we used a combination of qualitative and quantitative research methods. In the first phase a questionnaire was distributed in a sample. The purpose of the questionnaire was threefold: 1) to identify proportion of export and speed of internationalization; 2) to identify the source of competitive advantage; 3) to adopt the typology of INV according to Oviatt and McDougall. The Born Global firms in our survey have almost no adaptation of product / service and marketing (distribution / communication) to the foreign markets.

Deep interviews were conducted with founders and managers in selected 15 companies labelled as Born Globals in order to learn the crucial factors inevitable for their development and survival.

4. Results and Discussion

Adopting the definition of Born Globals as a firm with an export rate on the total sale of 25 % and more and with starting export within three years after the firms´ foundation, we found 26 firms (15,5 %) in our survey of internationally active firms that fit both the criteria. These companies represented the core segment for our research. Interviews with this segment of companies indicated that the personality of the manager/founder was crucial for the rapid internationalization of these firms. This, however, does not mean that the founder needs to have international experience to develop a Born Global firm, but the founder needs an international outlook – often combined with an international network of contacts. Not all firms demonstrated the presence of an international network from the very beginning, but it was undeniable that all the firms had to develop the networks in order to support access to the international markets.

Nearly all of the firms view their own competitive advantage in delivering higher quality of product and service than their competitors. These results must be viewed together with the fact that a large proportion of the firms produce standardized products, but are operating in a highly specialized niche. As indicated above, the research was not focused on firms producing high-tech products, but included also companies from construction industry, automotive-supplements production, food-processing or wood-processing.

If we use the typology of Oviatt and McDougall (1995) for our sample, 42 of the firms in the sample are "Export/Import Start-Ups" operating in few countries with only few coordinated activities. 52 firms can be labelled as "Multinational Traders" and the rest was divided approximately equally between the two groups "Geographically Focused Start-up" and "Global Start-up".

The interviews with managers/founders revealed also the reasons for the fast growth of Born Globals as a relatively large group of firms, which are highly internationally active right from the beginning of their existence. The reasons can be grouped in two areas. The first area contains changes in the economy (hyper-competition, digitalization, trend towards information based economy) including factors that can be related to special home-market conditions. Second area relates to changes in the firms themselves, especially to the outlook /profile of the managers and founders. There is no doubt that markets are expanding internationally with the consequence that the home-market advantages can quickly disappear, especially in small countries like Slovakia. In case that the competition is very intense, it can even lead to the disappearance of the home-market. On the other hand, if a market is seen as profitable, firms from abroad will be attracted to that market and act on the market within a short time.

Interviews with managers confirm that firms have to be flexible to adapt to changes in the environment and have to be able to work in rapid changing networks and relations with other firms and many other actors. The firms have to develop ability to manage constant change in the organization – and often in an international environment (which is acute especially for firms from small countries like Slovakia). If we again focus at the Born Globals, it is evident that the most international – and active of these firms fit the description of the new firm described above. The "global start-up" from the typology of Oviatt and McDougall (1995) is exactly this type of firm. They are extremely flexible, pro-active on a global scale, coordinating many activities across borders and working in a large number of networks. But in our research they represent a minority of firms (15,5 %). The rest of the firms have a more narrow geographical scope and are typically less flexible, but are active in international networks and relations. This could lead us to the conclusion, that the real representing type of Born Globals is the "global start-up", and the remaining firms are just traditional international firms with a rapid internationalization.

From the theoretical point of view it is however possible, depending on the purpose of the research, use the "Born Globals" as an "umbrella" concept for all types of rapid international new ventures. Then it is possible to have sub-concepts like "Global Start-Ups" indicating a sub-group of firms – in this case the globally and in international networks active new firms.

Anyway, it is evident that the phenomenon of rapid internationalization of new firms has to be studied in a broader context – as a part of changing economy and new development trends in a society (Ghoshal & Bartlett, 1992). It is important to explore how firms are born and how they develop in today´s business environment, which is very international and characterized by high knowledge and information intensity.

For the future research it can be recommended to adopt the concept of International New Ventures (INVs) including their subcategories, namely Export/Import Start-Ups, Geographically Focused Start-Ups, Multinational Traders and Global Start-Ups. The reason for this recommendation is that this conceptualization seems to be useful and practicable in developing appropriate marketing strategies for all four types of ventures.

5. Conclusion

In previous parts of our paper we have discussed the concept of Born Global firms from two points of view. First, the theoretical modalities of the concept in itself and secondly, we have discussed the empirical research on Born Globals. It was documented that there is no clear and all accepted definition of Born Global. Born Global as a concept can either be seen as an umbrella (or a metaphor) under which global start-ups, high-tech international firms, etc. can be studied, or we can use the label as an empirical definition, as it was done in our empirical research. We explained how the Born Global phenomenon is connected to other trends in the international business environment, such as the rapid internationalization of markets, hyper-competition and the trends towards an information intensive economy.

The reasons to study Born Globals (and the internationalization of small and medium sized firms in general) are both practical and theoretical. On the practical side are the managerial problems of internationalization, the need to give advice to managers in cross-cultural problems, market expansion, export mode, etc. On the theoretical side is the exploration of new modes of internationalization, identification of trends in international business environment. Because of the new challenges that the Born Global firms bring – both to managers and to the society – the research of these firms is useful and prospective.

In our research we come to the conclusion that with rapid internationalization of markets, hyper-competition and the change to an information intensive economy, the number of firms categorized as Born Globals will increase. With the speed of internationalization of national economies could the home-market advantages disappear, and this could pose a threat especially for small countries, like Slovakia.

Acknowledgment

This paper is an output of the research project VEGA 1/0224/15 "Consumer behaviour and individual consumption in the periods of unemployment and relative deprivation of the unemployed population".

References

[1] Bell, J. (1995). The Internationalization of Small Computer Software Firms: A Further Challenge to Stage Theories. *European Journal of Marketing*, vol. 29, no. 8, pp. 60-75.

[2] Cavusgil, S. T. (1994). A quiet revolution in Australian exporters. *Marketing News*, vol. 28, no. 11, pp. 18-21.

[3] Ganitsky, J. (1989). Strategies for innate and adoptive exporters. *International Marketing Review,* vol. 6, no. 5, pp. 50-65.

[4] Ghoshal, S. and Bartlett, C. A. (1992). What is a global manager. *Harvard Business Review*, September-October, p. 69-78.

[5] Graham, P. (1999). Small business participation in the global economy. *European Journal of Marketing,* vol. 33, no. 1/2, pp. 88-102.

[6] Hunt, S. D. and Morgan, R. M. (1995). The comparative advantage theory of competition. *Journal of Marketing*, vol. 59, pp. 1-23.

[7] Johanson, J. and Vahlne, J. E. (1977). The internationalization process of the firm: A model of knowledge development and increasing foreign market commitments. *Journal of International Business Studies*, vol. 8, no. 1, pp. 23-32.

[8] Johanson, J. and Vahlne, J. E. (1990). The mechanism of internationalization. *International Marketing Review,* vol. 7, no. 4, pp. 11-24.

[9] Katsikeas, C. S. and Leonidou, L. C. (1996). Export marketing expansion strategy: differences between market concentration and market spreading. *Journal of Marketing Management*, vol. 12, pp. 113-134.

[10] Knight, G. and Cavusgil, S. T. (1996). The Born Global firm: A challenge to traditional internationalization theory. *Advances in International Marketing*, vol. 8, pp. 11-26.

[11] McDougall, P. P. and Oviatt, B. M. (2000). International entrepreneurship: The intersection of two research paths. *Academy of Management Journal*, vol. 43, no. 5, pp. 902-906.

[12] McKinsey (1993). Emerging Exporters. Australia´s High Value-Added Manufacturing Exporters. Melbourne: McKinsey and Company and the Australian Manufacturing Council. *Harvard Business Review*, pp. 37-52.

[13] Moen, O. and Servais, P. (2002). Born Global or Gradual Global? Examining the Export Behaviour of Small and Medium-Sized Enterprises. *Journal of International Marketing,* vol. 10, no. 3, pp. 49-72.

[14] Oviatt, B. M. and McDougall, P. (1995). Global start-ups: Entrepreneurs on a worldwide stage. *The Academy of Management Executive*, vol. 9, no. 2, pp. 30-43.

[15] Oviatt, B. and McDougall, P. P. (1997). Challenges for internationalization process theory: The case of international new ventures. *Management International Review,* vol. 37, no. 2, pp. 85-99.

[16] Slater, S.F. (1997). Developing a customer value based theory of the firm. *Journal of the Academy of Marketing Science,* vol. 25, no. 2, pp. 162-167.

[17] Young, S. (2001). What Do Researchers Know about the Global Business Environment? *International Marketing Review*, vol. 18, no. 2, pp. 120-129.

THE ROLE OF COMMUNICATION IN MANAGING THE CHANGE IN SMALL AND MEDIUM ENTERPRISES IN THE WORLD OF GLOBALIZATION

Ľubica Lesáková[1,a,*]

[1]Faculty of Economics, Matej Bel University, Tajovského 10, 975 90 Banská Bystrica, Slovakia

[a]lubica.lesakova@umb.sk

*Corresponding author

Abstract. Small and medium enterprises (SMEs) are faced with the critical task how to respond to the changes in global business environment. Globalization creates new opportunities, but also new threats. Small and medium enterprises have to react to these changes; the success arises from their ability to react to the changing nature of market opportunities. If they will not be able to adapt to the new condition, they will not survive. The word "change" has become one of the basic terms in the world of globalization and therefore it is no surprise that the present period of modern management development is often called change management, or management in the conditions of continuous and critical changes. One of the most important things that will affect the success of any changes programme in SMEs is communication. The aim of the article will be to present the main changes in the new world of globalization, to present the key drivers of changes in SMEs and the role of communication in the process of managing the change. The stress will be given to the main principles of effective communication in the process of managing the change as well as to the communication channels that will facilitate this process. To fulfil the settled aim several scientific methods of examination, namely the method of analysis, synthesis, induction and deduction will be used.

Keywords: globalization, change, communication, small and medium enterprises.

JEL Classification: L20, M30, F60

1. Introduction

Globalization is a complex phenomenon that affects many aspects of our life. It is a diverse process including economic, political and cultural change, which is deepening the integration of the world economy, strengthening political interdependence between countries and causing values to coverage across countries. Globalization creates new opportunities, but also new threats. Small and medium enterprises (SMEs) have to react to these changes; the success arises from their ability to react to the changing nature of market opportunities. If they will not be able to adapt to the new condition, they will not survive.

Changes that the enterprises of today go through increase dramatically both in number and in scope. Drucker says that managers cannot expect that tomorrow will be an extension of today. On the contrary, they have to be prepared for changes. Changes perceived as opportunities, or changes perceived as threats (Drucker, 1993).

The aim of the article is to present the main changes in the business sector in the new world of globalization, to present the key drivers of changes in SMEs and the role of communication in the process of managing the change. The stress will be given to the main principles of effective communication in the process of managing the change as well as to the communication channels that will facilitate this process. To fulfil the settled aim several scientific methods of examination, namely the method of analysis, synthesis, induction and deduction will be used. Following the aim of the paper we have formulated a set of research questions:

a) What are the main drivers of change in SMEs?
b) What is the role of communication in managing the change in SMEs?
c) What are the basic principles of effective communication and what are the main advantages and disadvantages of using various communication channels?

2. Globalization and main changes in the business sector

The concept of economic globalization is not new. It refers to the increasing integration of economies around the world, particularly through trade and financial flows. The term sometimes also refers to the movement of people (labour) and knowledge (technology) across international borders. It refers to an extension beyond national borders. Markets promote efficiency through competition and division of labour – the specialization allows organizations and economics to focus on what they do best (Grudina et al., 2016). Organizations have access to more capital flows, technology, cheaper imports and larger export markets.

To the most important changes in the business sector belong trade liberalization and movement of financial capital, innovation and technological processes, changes in international division of labour and international trade, a huge concentration of capital connected with qualitative and quantitative changes in the size as well as in character of enterprises (Šikula, 2006).

Trade liberalization opens up the internal markets for foreign competition. High-cost and less-productive producers find themselves no longer able to compete. Globalization rewards firms that are innovative and competitive, regardless of their size and country of origin. As global companies enter local markets, local companies are entering global ones (Kaňovská & Tomášková, 2014). The resulting competition drives up product quality, widens the range of available goods and services, and keeps prices lower (Lee & Carter, 2005).

The liberalization of trade, which promotes the movement of goods and services, needs to be facilitated by the movement of financial capital. The movement or flow of financial capital is central to the process of economic growth because it provides the means by which enterprises make the investments into a variety of projects for financial returns wherever they are located.

As a result of information and communication technologies (ICT) revolution, the global business is changing in fundamental way (Andriopoulos & Dawson, 2010). The ICT eliminates distances between producers and consumers. Thanks to ICT, geographical distance is not significant for the transportation of information. ICT makes the information flow more complete and makes the information more accurate, timely and accessible. Thanks to ICT managers are able to coordinate their global businesses, including procurement, inventory, manufacturing, logistic, distribution, sales and after-sales service, to reduce costs and to achieve high speed in delivering their products and services.

Implementation of information and communication technologies has impact on changes in size of business entities. On the one hand it comes to a huge concentration of capital into transnational corporations; on the other hand, because of outsourcing, reengineering and mass implementation of ICT, it all stimulates creation of SMEs (Lesáková, 2008). Implementation of ICT caused changes in internal structure of enterprises as well as in changes in division of labour (Tomčíková, 2015). It comes to the rise of new, through network created business associations. New forms of business organizations appear on permanent or part time basis. The economy obtains the character of network represented by a number of elastic, flat entities.

Globalization has influence on all business entities. It is evident, that the decisive actors in the process of globalization are transnational corporations. Except transnational corporations the chance to develop is given by many experts also to SMEs (Šikula, 2006).

3. Main drivers of change in SMEs

Change is inevitable. Change is constant and all SMEs have to manage change if they are to stay in business. The term change expressis changing something into something else, difference from the previous state, a replacement of one thing by another (Cameron & Green, 2006). Borovský (2005) understands change as "... such change of a system that substantially changes its output, or the effectiveness of transformation of inputs to output and a useful value of such an output for a following system". Thus, the object of the change to be studied from the management point of view is always limited to something that brings benefit to the involved.

The reasons for some changes in SMEs have a definite cause either within the SMEs or in the environment in which it operates. Whatever is the reason for change, it will need the right approach and to be handled carefully (Nedelko et al., 2015).

There will always be a number of drivers of change impacting on the SMEs. These could include the following (Walmsley, 2009):

New technology – depending on the business, this could be new equipment or machinery becoming available, or ways of doing things that will make the product better or make it more cost effective to produce. And of course, major changes have taken place in recent decades in terms of online businesses.

New communications - this is closely allied to the changes in technology referred to above. The growth in the use of communications technology – such as mobile phones, emails, social networking, websites and the internet – is responsible for many changes. These could affect sales and marketing strategy as well as how to communicate with customers and suppliers and how to produce information for use in the business.

Growing role of innovations – innovations have become not only important determinant of successful development of every firm, but also their necessity. SMEs are forced to make innovations because they are under permanent pressure of competitors at the market. The ability to compete in innovations plays very important role as a factor of their competitiveness.

Changing markets – SMEs are faced more and more with the critical issue of how to respond to the changing markets (changes in the demand as well as changes in the supply). Old competitors will inevitably drop out from the market and new ones will enter. Or it may be a more fundamental change at the market in which the SMEs operate (change in the way how goods are sold – for example growth in online sales – or to the actual goods on offer).

Increasing competition – the need to maintain competitiveness is ever present, so what the competitors do may demand action from SMEs and call for changes necessary in the SME to stay competitive.

Economic factors – during times of economic downturn or recession, demand for an enterprise´s products and services may decrease, so there may be a need to change the business strategy, to cut the costs, to review the product portfolio or to review procedures to ensure that profitability is maintained.

Demographics – an ageing population brings different requirements and this may affect the strategy of SMEs (for example the product offer or how the products are sold).

Environmental factors – there is an increasing emphasis on matters such as climate change and recycling which may require a reaction from any enterprise. For both social benefit and marketing purposes it may be desirable to implement a recycling project in the enterprise.

Identifying these drivers of change that affect the SMEs is essential in order to plan for the improvements that all businesses require to survive and prosper.

4. Communicating reasons for change

The main feeling that people have when they encounter a possible change is one of fear. It is a fear of the unknown and also a reluctance to move from comfortable situation towards one that may not be quite comfortable (Kostečka, 2010). Naturally, refusal of changes by the employees can be connected with the fear of uncertain future, whereas actual reasons of individuals may be very different. There are four main reasons for a negative attitude of employees to changes (Lesáková, 2009):

- fear of losing social security or social status. Employees fight against the change implementation because they fear they will lose something valuable. A major aspect of fear is related to the feeling of threat to lose the social security. It is important to analyse the possible causes of fear at the change preparation stage, as the fear may have a significant influence on the success of the change implementation;
- lack of understanding of the significance and reason of the change. Employees fight against the change in case they do not understand it. They feel that they will lose more than they may gain. This situation may arise in the case where is lack of trust between those that manage the change and those that implement it;
- different opinions about the change contribution. Employees may assess the expected change benefits differently from those who initiate the changes. It is due to the fact that individuals who implement the change have not enough information, or they have

different information from those of change initiators, which may lead to different opinions about the benefits of the change for the enterprise;
- fear of lack of skills and experience. Even when the employees acknowledge that the change is right and necessary for the SME, they may fight against it due to a subjective feeling of inability to adapt to the changed conditions.

The recognition of employees´ attitude to changes is the first precondition of successful change management. Its ignoring may cause serious problems and impede the whole process of change implementation in an SME (Lesáková, 2009).

Depending on the assessment of the signs, causes and estimated consequences of the resistance towards changes the different approaches to overcome the resistance are recommended: communication, participation, persuading, enforcement, education, negotiating (Cameron & Green, 2006). The selection of individual techniques is determined by a concrete situation in an SME and their use can be combined. A basic precondition for overcoming change resistance is the continuous and constructive communication with the employees (Holá & Pikhart, 2014).

The most important action a manager can take is to ensure that all employees fully understand and are behind any change programme that is implemented. If the employees understand reason that is driving change then they are far more likely to accept it and get on with its implementation. There are four main points that must be communicated to staff in the event of any change process (Walmsley, 2009):

1. Why? What will happen if the SME stays as it is?
2. The reason behind the change. The drivers of the change need to be explained clear. This may be for example a changing market that has caused a product change, or a falling profit or a customer survey that highlighted problems in customer service.
3. What? Details of the change and how it will affect employees and their work roles must be communicated. Done properly, communicating this aspect of a change programme may help to overcome the fears that some staff may have.
4. When? The reasons why the change has to be implemented must be communicated so that people do not think that the change is not urgent and that work on it could be delayed if necessary. The manager must be sure that all employees understand the urgency and what will happen if the change is not made without delay.

Obviously, when communicating the need for change it is necessary for a manager to explain the advantages of the change and the disadvantages of not changing. This will need a confident delivery from the manager. A manager should outline the objectives of the change and show to the staff as comprehensively and convincingly as possible, the gains that could be made that will provide advantages for both the employees and the enterprise. The manager should explain exactly how the staff can help. Employees need to understand and accept the role they have to play in the change programme and the work they will have to take on.

After all this information has been communicated, employees should be given the opportunity to ask questions on what they have been told. The manager will then need to check the employee´s understanding and commitment to what is planned and deal with any problems that may arise – whether these are from lack of understanding or lack of motivation. The communication must be led patiently, without confrontation and with a maximum effort to persuade all involved about the rightness of the change. Done well, communicating the reasons for change to the employees can make the chances of success much greater.

5. Principles of effective communication

The most important tool that a manager has in overcoming either operational or behavioural barriers in managing the change is communication and the thing to remember about communication is that it must be two-way; managers should listen to what staff are saying and not just tell them what they want to hear. These are main principles of effective communication (Walmsley, 2009).

Communication must be easy to understand – this is the first rule of communication. It is important to remember to whom the communication is aimed. To use language that is easy to understand by the target audience is essential (Holá, 2012). The message must be clear – if there is any suggestion that there is a hidden message or that the full information has not been given, then this will result in suspicion (Grieves, 2010). People start to wonder and to discuss between themselves – what the communication really meant and what is being hidden from them. This can be avoided by adopting a straightforward tone in meetings, discussions, memos and emails.

Table1: Communication channels

Channel	**Advantage**	**Disadvantage**
Face-to-Face	Two way, can adjust and alter message as needed based on reaction of listeners.	Takes time and costs more than other channels.
Cascaded Face-to-Face (one individual to a group, that group to a large group, that large group to the next group until everyone in the enterprise has been reached)	Gives direct contact with everyone. Shows a chain of communication. Provides a two-way opportunity to allow individuals to ask questions. Gives a sense of inclusion.	Message may get altered as it goes from level to level. Success may depend on the individual delivering the message.
Broadcast Video/Recorded Video (e.g. You Tube)	Can reach a large audience, give them visuals to go with message.	One way, not everyone may have the necessary technology to see.
Social Media (e.g. blog, wiki, community of practice site)	Allow everyone to comment and participate.	May lose control and the purpose of the original message may be altered to take things in a different direction.
E-mail	Quick, cheap, can reach a large audience.	Don´t know how long it will take for the person to open the email. Impersonal, leaves the meaning of the message to the reader and his or her interpretation.
Phone (direct)	Speak to a person directly and can address issues in real time.	Very costly and time-consuming.
Newsletter (paper or electronic)	Can connect with the masses fairly quickly.	One way, and if there are issues with the articles, it takes time to follow up.
Combination of media	Can be effective if the proper mix is selected. Matching the right media with the right audience is key.	Can be ineffective and costly if the mix does not meet the audience´s needs.

Source: own elaboration

Communication must be positive whenever possible – if the tone of the communication is positive then there is a far greater chance that the recipients will accept it. If the communication is negative, then people may simply ignore it, or will be discouraged by it. However, if negative news does have to be conveyed, then it should be kept short, clear and precise.

Communications must be direct – this again is in an attempt to ensure that communications are not viewed with suspicion and produce a negative reaction. The impression, that something is hidden must be avoided and a direct, straightforward approach is the best way to do this.

Communications must be as brief as possible – in recent years they have become shorter (Grieves, 2010). News reports are, in some cases, limited to little more than headlines while letters, memos, emails are dominated by brief points in an effort to convey information as quickly as possible (Kormanová, 2015). With online communications it is generally accepted that people cannot be overloaded to read large text. This all means that communications in our working lives must be concise.

One of the greatest changes in enterprises in recent years has been the explosion of new communication channels. We have moved from the world of face-to-face meetings, telephone and e-mail into one of Skype, twittering, blogs, wikis and video conferencing (Hes & Hesová, 2016). Determining what channels to use can be as important as the message itself. Here are advantages and disadvantages of communication channels.

The channel richness indicates the capacity of a channel to convey information. The richest channels are face to face, next are telephone, video conferences followed by e-mail, written memos and letters. When messages get more complex and open ended, richer channels are necessary to achieve effective communication.

6. Conclusion

Change is in business inevitable and all SMEs have to manage change if they want to stay in business. The reasons for some change could have a various cause. Naturally, an effort to implement changes in SMEs can arouse resistance towards the changes with some employees. Refusal of changes can be connected with the fear of uncertain future. Overcoming a fear of change must be a priority. A basic precondition for overcoming change resistance is the continuous and constructive communication with the employees. Management needs to set up ways of getting the right message out to all employees and also give them the opportunity and encouragement to get their messages, fears and problems back to the management. The communication must be led patiently, without confrontation and with a maximum effort to persuade all involved about the rightness of the change. If the employee understand reason that is driving change then they are far more likely to accept it and to implement it. Communicating the reasons for change to the employees well, it can make the chances of success much greater.

References

[1] Andriopoulos, C. and Dawson, P. (2010). *Managing Change and Innovation*. London: SAGE Publications Ltd.

[2] Borovský, J. (2005). *Manažment zmien – cesta k rastu konkurencieschopnosti.* Bratislava: Vydavateľstvo Eurounion.

[3] Cameron, E. and Green, M. (2006). *Making Sence of Change Management*. London: Kogan Page Limited.

[4] Drucker, P. F. (1993*). Inovace a podnikavost. Praxe a principy*. Praha: Vydavatelství Management Press.

[5] Grieves, J. (2010). *Organizational Change. Themes and Issues.* London: Oxford University Press.

[6] Grudina, S. I. et al. (2016). Modern Global Trends in Enterprise Reengineering Management. *Globalization and its socio-economic consequences, PTS I-V,* pp. 556-562.

[7] Hes, A. and Hesová, I. (2016). Aspects of Global Communication in Post Modern Society. *Globalization and its socio-economic consequences, PTS I - V*, pp. 636-645.

[8] Holá, J. (2012). Internal Communication in the Small and Medium Sized Enterprises. *E+M Economics and Management,* vol. 15, no 3, pp. 32-45.

[9] Holá, J. and Pikhart, M. (2014). The Implementation of Internal Communication System as a Way to Company Efficiency. *E+M Ekonomie a management*, vol. 17, no. 2, pp. 161-169.

[10] Kaňovská, L. and Tomášková, E. (2014). Market Orientation and Strategic Behaviour at High-Tech Companies. *E+M Ekonomie a management*, vol. 17, no. 4, pp. 86-100.

[11] Kormanová, L. (2015). Global Methods of Communication as a Necessary Part of Communication Mix. *Globalization and its socio-economic consequences. PTS I and I*I, pp. 318-324.

[12] Kostečka, J. et al. (2010). Change Management in the Transformation Process of Social Services Institutions. *E+M Economics and Management,* vol. 13, no. 3, pp. 45-61.

[13] Lee, K. and Carter, S. (2005). *Global Marketing Managemen*t. Oxford: Oxford University Press.

[14] Lesáková, Ľ. (2008). Vplyv globalizácie na male a stredné podniky. *Ekonomický časopis/Journal of Economics*, viol. 56, no. 6, pp. 1146-1157.

[15] Lesáková, Ľ. et al. (2009). *Change Management. Innovative Management in the Knowledge-based Economy.* Banská Bystrica: Faculty of Economics MBU.

[16] Nedelko, Z. et al. (2015). Current and Future Use of Management Tools. *E+M Ekonomie a management,* vol. 18, no. 1, pp. 28-45.

[17] Šikula, M. (2006). Konkurencieschopnosť v súradniciach globalizácie. *Ekonomický časopis/Journal of Economics*, vol. 54, no. 10, pp. 965-982.

[18] Tom-číková, Ľ. (2015). Implications arising from processes of globalization and their impact on human resources management. *Globalization and its socio-economic consequences, PTS I and II,* pp. 810-817.

[19] Walmsley, B. (2009). *Managing change. Skills for Success.* London: Chartered Management Institute.

EVALUATION OF CUSTOMER RELATIONSHIP MANAGEMENT FORMATION IN THE RETAIL TRADE ENTERPRISES IN THE BALTIC COUNTRIES

Iveta Linina[1,a,*], Velga Vevere[2,b] and Rosita Zvirgzdina[3,c]

[1]Turiba University, Graudu street 68, Riga, Latvia, LV 1058

[2]University College of Economics and Culture, Lomonosova street 1, Riga, Latvia, LV

[3]Turiba University, Graudu street 68, Riga, Latvia, LV 1058

[a]iveta.linina@turiba.lv, [b]velga.vevere@gmail.com, [c]rosita@turiba.lv

*Corresponding author

Abstract. During the retail process different relations form between enterprise and customer, but both parties can have their specific interests. The enterprise, above all, is interested in increase of turnover and profit, whereas customer can have several interests – to obtain the necessary product in the necessary amount in the convenient place, to receive the needed information, the right attitude and stimuli to purchase. The success is ensured by the identification and analysis of the target market. Formation and maintenance of marketing databases by the retail trade enterprise allow organizing marketing activities and communication with customers more efficiently, that, in its turn creates the competitive advantage. Market globalization more and more affects retail trade enterprises; it makes them look for solutions for ensuring competitiveness and development. To identify factors of competitiveness the authors set the goal to research the use of marketing database information in planning communication and marketing activities in the retail trade sector in the Baltic countries. The authors conclude that knowing the essence of the marketing database use, the enterprise can manage this process and this can be one of the instruments to ensure competitiveness.

Keywords: globalization, customer, retail, marketing databases, target market

JEL Classification: F1, F6, M1, M 3

1. Introduction

Globalization of the market increasingly affects also the retailers, it makes them look for solutions to ensure competitiveness and development. In a more competitive environment, it is becoming increasingly difficult to maintain the competitiveness. The orientation of the retailer to customer satisfaction and loyalty is one of the ways to become competitive. Formation of customer satisfaction and loyalty is based on the targeted communication with those who, in turn, seek the qualitative and comprehensive information. It is very important for the company to create a system not only for collecting information about the buyer and the market but also for its processing, interpretation and use. Such a system can be shaped differently but it has the common goal - to support the development of a competitive and sustainable trading company. The retail companies in the Baltic States do not have full understanding about the management and benefits of consumer relations. The study examines the development and application of retail database marketing databases in the Baltic States in developing relationships with the buyer. In order to identify the factors for ensuring competitiveness in the retail trade, the authors of the study have set out to investigate the ability of retailers in the Baltic States to build relationships with customer, this information would allow retailers in the real life situation to focus on their target audience, to improve their performance and ensure their competitiveness.

To reach the aim of the study the following tasks we posed the following tasks:

1. To analyze the principles and significance of information aggregation in formation of customer satisfaction and loyalty;
2. To characterize the realm and development of the retail trade sphere in the Baltic countries;
3. To determine the level of information that is used for formation of customer satisfaction and loyalty in the Baltic country retail enterprises.

In order to determine the level of information use in formation of the customer satisfaction and loyalty in the Baltic countries and to put forward proposals to improve the customer satisfaction and loyalty, the authors of the present study surveyed the managers of the retail trade enterprises of the Baltic countries. There limitations of the study were the following: the problem was research mainly from the methodological viewpoint, therefore the size and location of the enterprises represented by managers were not taken into account. The research period was from 1 January 2017 until 1 March 2017. The research methods employed in the present study are the logical constructive method to make comparison between theoretical materials with empirical data; the graphic one – to depict visually and to analyze information and survey. The current research is based on the publications (P. De Pelsmacker, J. Eskildsen, K. Kriestensen, M. Jortberg, G. Griffin and others) that give an insight in the latest information on the customer relationship formation process and development

2. Marketing databases and principles of their formation

The main element of the Customer Relationship Management (CRM) system and process functioning is the Marketing Database (MDB). There are no significant differences in the researchers' and specialists' opinions about the MDB concept and its functions (*De Pelsmacker, et. al.*, 2007) The authors of the present study concretize the MDB definition relating it to the CRM planning and implementation: **Marketing database (MDB) is a body of interrelated data on the existing and potential consumers and enterprises used for information gathering, processing and analysis in order to perform the market segmentation, customer attraction and retaining activities.**

There are two types of MDB sources – internal and external. When starting the MDB assembling, enterprises, as a rule utilizes the internal information first – orders, contracts, receipts, etc. It allows collecting some general information about consumers (their place of residence, account number, e-mail address, method of payment et al.). After that, the MDB can be gradually supplemented with the external information about consumers, competitors and also standing orders and official statistics. It is helpful to make use of the available databases, as well, for example, lists of press subscriptions, car owners and so on. The MDB can be supplemented with data on the target audience lifestyle and its conduct in the market environment. The possible structure of the MDB is depicted in the figure 1. As we can see the MDS consists of three main elements (see Figure 1):

1. Market data (separately B2C and B2B).
2. Customer relationship data (separately enterprise activities and consumer activities).
3. Enterprise data.

Of course, it is important not only to create the MDB and gather information, but also to use it rationally, because effectiveness of the MDB directly depends on that. The purpose of using the MDB is to link consumers' needs, products / brands, pricing, product / brand distribution channels and communications into one system. For example, a study by the US Company "Seagram" (liquor producer) found that two thirds of adult Americans had never drunk liquor. The company concluded that in this situation, it was useless to issue funds for mass advertising, but it was useful to create a database of potential consumers and communicate with them. (De Pelsmacker et al., 2007).

Figure 1: Structure of marketing database

Marketing database

Market data	**Customer relationship data**	**Enterprise data**
Consumption market: - geografic data of the target audience; - demographic data of the target audience; - social data of the target audience - economic data of the target audience; - lifestyle of the target audience	**Enterprise activities:** - mass communication (advertising, product sales promotion, public relations, etc.); - personal communication (direct marketing, interactive communication, etc.)	**Development history** Organizational structure Personnel Products Brands Prices Distribution channels
Actual market: - contracts with consumers, intermediaries, partners; - data concerning existing and potential suppliers, intermediaries, their management; - data on competitors	**Cunsumer activities:** - response; - orders; - purchases (amount, frequency, interval and others); - complaints (number, reasons and others)	

Source: (Praude & Šalkovska, 2015)

During the process of formation and maintenance of the MDB, there are problems that every enterprise faces to be taken into account:

- Incompleteness of data or lack of data necessary for use as a result of improperly selected information gathering methods or the use of different sources.
- Obsoleteness of data, which is unavoidable and occurs sooner or later with any information. In order to resolve this problem, the existing data must be continuously monitored and updated.
- Data insecurity and unreliability may result from the use of an unsafe source. For example, fake surnames and addresses may be offered on the Internet. It should be taken into account that the use of unsafe data can result in losses higher than in the absence of information.

- Data contradiction and incompatibility, if information is obtained from different sources that have used different methods of gathering information. For example, the consumer's address may change, but the phone number remains, or vice versa;
- Duplication of data may result from a lack of use and control of various sources. This makes the creation and use of MDB more expensive, because the time it takes to collect information can be used to obtain relevant information.

It would be wrong to associate the essence of CRM with computer software, which is primarily a control function (Krauss, 2002). Other professionals and researchers also criticize this approach. One CRM expert has noted: "CRM is not a technology. You will not increase the quality of consumer relationships; just will install the advanced CRM program on your computer. CRM is an integral part of consumer strategy" (Eskildsen & Kriestensen, 2007). The authors of the research agree to those researchers who associate CRM, first of all, with marketing and management (Krauss, 2002), (Anderson & Kerr, 2002), (De Pelsmacker et al., 2007), (Joertberg, 2001) and offer the a five-stage CRM formation scheme (see Figure 2).

Figure 2. Stages of consumer relationship management in the enterprise

Souce: Authors' compilation

During the first stage, it is necessary to identify the consumer and to form the MDB. Information can be divided in four groups: 1) Basic data; 2) Consumption history; 3) Demographic, social and economic data; 4) Data on personal needs of consumer.

The basic consumer information includes information that is needed to start relationship: name, surname, address, phone number, etc. Service providers, including the retailers would already have this information.

The consumption history includes information about how a specific person has used the company's products / brands. In the case of retail services, this information is likely to be already in the enterprise MDB. The next step is to make it available.

The demographic and other data (age, gender, family status, income, occupation, etc.) is obtained through consumer research. The consumers share this information voluntarily if there is beginning of the business relation. In the retail trade, the best source of information is a customer card.

The consumer's value is a deeper information indicating consumer's behavior in the market. It is obtained in two ways - through in-depth interviews (again, the consumer is most likely willing to share this information if he/she feels that he/she would benefit from it, receiving better service or something else), as well as analyzing demographic data and consumption history.

Consumer differentiation by value and needs is the second stage in building CRM. It is based on the MDB consumer data. The most important consumers for the company are the TOP ones, the active large, medium and small enterprises. The inactive potential consumers, although not yet loyal, are, in principle, desirable for the company. The "others" are consumers who are not currently interesting for the company do not exhibit a particular interest in the company's operations themselves. Of course, in differentiating consumers according to this methodology, companies have to take into account their specific character.

Goal setting and interaction with consumers - the third stage in building CRM - is based on the consumer segments created in the stage 2. Interaction with TOP and large consumers is aimed at preserving and retaining them as consumers. Interactions with small and medium-sized consumers are meant to change the less active consumers into the more active ones. The goal of interacting with inactive potential consumers is to make them loyal over time. It is inefficient to set specific goals for other customers. It is expedient to supplement materials sent by post with electronic messaging. It is less costly and less intrusive as, for example, telephone calls.

In the next stage of building CRM, **the effectiveness of interaction with consumers has to be assessed**. This is necessary to better understand consumer needs and more accurately determine their value. It is important that the MDB information is organized and accessible so that it can answer the following questions:

- Which consumers could switch to competitors? Why?
- Which consumers are potentially the most valuable? Why?
- Which consumers could become even more profitable?
- Which consumers would be most open to specific services? What are their needs?

It has to be taken into account that that consumer needs are evolving as well as new competitors introduce new products. Consumers, especially if they are not completely satisfied with the product and service level, can look for another company with a better deal. The company's task is to monitor carefully the situation and provide a timely product that meets the new needs of the consumer and improve the terms of use of the existing product, for example, to offer discounts, and make special offers to retain consumers. Of course, we must also follow the actions of competitors in order to provide a better deal for consumers at the right time.

The CRM system should be matched to **the consumer's lifecycle**. The basic idea behind this process is the following. First, the consumer experiences a need, identifies the product / brand that can meet this need, and assesses the prospective gains and losses. After comparing alternatives, he chooses and purchases the product/brand and starts using it to satisfy his needs. Over time, these needs change, and the consumption cycle begins again. Businesses have to strive to act, according to the consumer's life cycle stages - informing about products, actively selling products/brands, and ensuring a high level of service.

In essence, the CRM scheme (see Figure 2) meets also the requirements of retailers, of course, taking into account the industry particularities. Having analyzed the publications on the use of CRM in the retail (Jortberg, 2001; Meacci, 2002; Linina & Zvirgzdina, 2016Linina, 2017; Rotovei, 2016, Wang et. al, 2017), the authors of the study have come to the conclusion that when developing a CRM system the following features must be taken into account:

- in order to maintain operation of the system in the long term, the close functional cooperation between the company's marketing and sales departments/services must be ensured;
- the creation, maintenance and improvement of MDB must be based on a client card, its planning, creation and distribution must be justified and targeted;

- one of the most important goals of the CRM is to provide a high quality service at the sales points, including the introduction and maintenance of a product category management (providing product placement on shelves and in catalogs to meet the consumer needs);
- the introduction and maintenance of the MDB in retail requires bigger investments into the computer technology, computer communication, software development, training of personnel than in other sectors. Consequently, when planning a CRM system, it is imperative to evaluate its utility and potential effectiveness for the company;
- it should be taken into account that not all individual consumers who want to buy products at a particular point of sale are loyal and agree to provide extensive information about themselves and to allow the company to use other databases containing their personal data

3. Sector of retail trade in the Baltic countries and its development tendencies

The retail trade as participant of the distribution channel of goods performs such functions (Raman & Naik, 2010), (Linina, 2016), (Domanski & Adamczak, 2016):

- precludes the non-coordination of the demand and offer;
- conducts the inventory management;
- facilitates the efficiency of transportation of products;
- forms an assortment of goods in accordance with the needs of consumers;
- establishes contacts and organizes negotiations with product suppliers;
- attends consumers, selling goods and services to them;
- carry out marketing activities (research, communication, etc.);
- takes the risk that the distribution channels would operate smoothly.

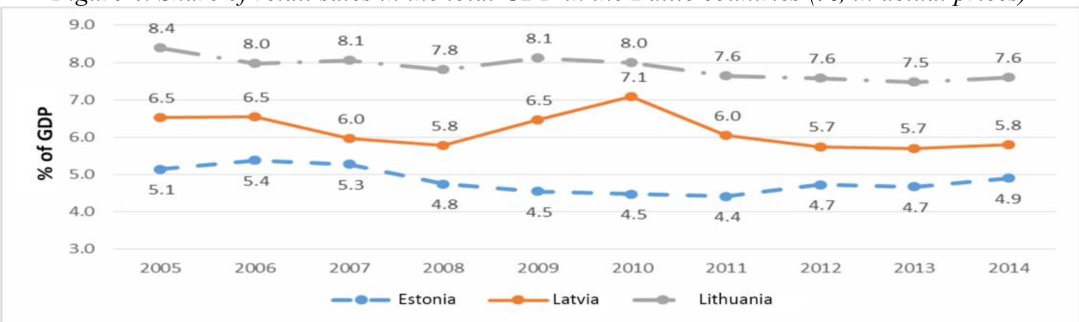
The result of performing these functions is the increase of product and consumption value. The following indicators demonstrate the role of retail trade in the country economy:

- share in gross domestic product (GDP);
- value added products (VAP);
- added value (AV).

The authors of the current study analyze the tendencies according to the GDP indicators between the years of 2005 and 2014. GDP consists of different types of activities, including trade. After the statistical classification of economic activities in the European Community (NACE), Section G of GDP is derived from wholesale, retail and automotive and motorcycle repair activities. According to statistics, it can be concluded that the share of trade in the total GDP is significant, which indicates the great role of trade in the Baltic economies. For example, by 2014, this sector's share of GDP was the highest among all types of activities, and only in 2014 it was surpassed by the manufacturing industry. However, the share of trade in total GDP varies with a downward trend. This does not mean a reduction in the role of the trade, as the sector continues to grow at relatively high growth rates, but reflects a positive trend towards optimizing the structure of GDP and increasing the share of the manufacturing sector. In general, the trade share of total GDP is subject to cyclical economic development.

When analyzing the share of retail trade in GDP in all Baltic countries, it must be noted that the situation is different (see Figure 3). In Estonia, this indicator is on average 4.3%. The fluctuation of this indicator in Estonia is minimal, and it has remained constant for the last two years. In Lithuania, the average indicator is 7.9%, respectively. The highest rate (8.4%) is observed at the beginning of the study period, but it is followed by a decrease. The lowest figure is observed in 2008 - 7.8%, but then the growth rate is around 8% for two years, followed by a drop of 7.6%, which is the same for two years, but again in 2013 it decreases to 7.5 %, but returns to 7.6% in 2014 (see Figure 3). The situation in Latvia is the most inconsistent. On average, the retail sales in Latvia over the years are 6.2% of GDP. A steady period, in 2005 and 2006 is followed by a decline, reaching 5.8% in 2008, which is due to a sharp drop in retail sales. In 2009, it returns to its previous level (6.5%), but in 2010 it reaches a peak – 7.1%. In the beginning of 2012, it is again falling, reaching the lowest level of 5.7% of GDP in 2012 (see Figure 3).

Figure 4. Share of retail sales in the total GDP in the Baltic countries (%, in actual prices)



Source: Authors' compilation on the basis www.eurostat.eu data

As it was mentioned, decline in the retail share of GDP does not mean a decrease in the role of this sphere, but a structural change in the composition of GDP, increasing the share of other sectors. The development of other sectors increases the income of the population and thus – the domestic consumption

4. Levels of information use in forming customer satisfaction and loyalty in retail trade enterprises in the Baltic countries

The experts' survey was carried out to assess the use of information about the target audience in building customer relationships in the retail companies in the Baltic countries. Taking into account the level of experts' knowledge and relevance to issues of interest, 9 experts were selected - the leading experts of all Baltic traders associations, who assessed the situation in their country as a whole, as well as representatives of chain stores, located in all three Baltic countries who assessed the situation in their enterprises.

The respondents were asked assign value to them in 10-point system. The questions were asked with a purpose to evaluate the level of information use in the retail trade enterprises of all Baltic countries. **A**s it can be seen, the evaluation of all four criteria regarding the utilization level of MDB marketing activities is below 5 points (the arithmetic mean accordingly is = 4.78; 4.78; 3.78; 4.78; Me = 4; 5; 3; 3 ; Mo = 4; 6; 3; 6). The lowest mean ratings are assigned to the criterion "Differences in customer segmentation are taken into account in building marketing activities" (= 3,78; Me = 3,0; Mo = 3,0). This is very low indicator, because consumer satisfaction and loyalty to retailers largely depend on taking into account characteristic of the target audiences. Data also demonstrates that retail trade companies do not use enough of the MDB-derived data in building their communication and sales activities (= 4,78; Me = 5, 00; Mo = 6,00; = 4,78; Me = 4, 00; Mo = 4,00), as well as they do not relate the customer loyalty program with MDB (= 4,78; Me = 5, 00; Mo = 6,00). This cannot be explained, because, according to the theory, the loyalty program is the basis for building CRM. In sum, if a company does not conduct research of target audience and does not take into account its specific features (characteristics) and needs, then all CRM formation is a formal, meaningless process.

Table 1: Main indicators of levels of MDB use in formation of marketing activities in retail trade enterprises or in enterprises in general in the Baltic countries according to experts' evaluation

MDB application level	**Mean**	**Standard deviation**	**Median**	**Mode**	**Squared deviations from the mean**	**Dispersion**	**Variation amount**	**Maximal value**	**Sum**
MDB data are used for building sales promotion activities	4.78	0.64	4.00	4.00	1.92	3.69	4.47	8.00	43.00
MDB data is used in communication with customer	4.78	0.57	5.00	6.00	1.72	2.94	3.99	7.00	43.00
Differences in customer segmentation are taken into account in building marketing activities	3.78	0.76	3.00	3.00	2.28	5.19	6.70	8.00	34.00
Marketing activities are directed to promotion of customer relationship and loyalty	4.78	0.60	5.00	6.00	1.79	3.19	4.16	8.00	43.00

Source: Authors' compilation

5. Conclusions

1. The main element of the Customer Relationship Management (CRM) system and process functioning is the Marketing Database (MDB). **Marketing database (MDB) is a body of interrelated data on the existing and potential consumers and enterprises used for information gathering, processing and analysis in order to perform the market segmentation, customer attraction and retaining activities**.
2. Analyzing development of the retail trade sector in the Baltic countries we can conclude that the retail trade does not yet seize all opportunities through the role of intermediary within the product distribution channel and promoting the quality of customer satisfaction.
3. Processing and analysis of the expert survey data by the means of SPSS program allow to conclude that he degree of use of MDBs in retail companies in the Baltic States is insufficient from the point of view of satisfying consumer needs and loyalty, and thus, this system needs to be improved and developed.
4. MDB relation with retail trade enterprise marketing efforts to promote product sales, communication, targeting specifics, etc. is at a low level, which prevents the provision of customer satisfaction and loyalty and the enhancement of competitiveness.
5. Retail companies in the Baltic States must develop a systematic set of activities that would result in the creation of MDB, their data would be used for segmenting customers, building communications, in order to increase their satisfaction and promote loyalty.

References

[1] Anderson, C. and Kerr, C. (2002). *Customer Relationship Management,* McGraw-Hill: New York.

[2] De Pelsmacker, P., Genens, M. & Van den Bergh, J. (2007). *Marketing Communications*, 3rd ed., Upper Saddle River, New Jersey: Prentice Hall.

[3] Domanski, R. and Adamczak, M. (2016). Analysis of the Flow of Goods in New Forms of Multichannel Sales, *Ekonomski Vjesnik*, vol. 29, pp. 91-104.

[4] Eskildsen, J. K. and Kristensen, K. (2007). Customer satisfaction: The role of transparency, *Total Quality Management & Business Excellence*, vol. 18, no. 1-2, pp. 39-47.

[5] Griffin, G. (2002). *Customer Loyalty. How to Earn it How To Keep it*, 2nd ed., Hoboken, NJ: Wiley and Sons.

[6] Jortberg, M. (2001). The customer marketing method: How to implement and profit from customer relationship management, *Journal of PIM,* vol. 5, no. 18, pp. 352-353.

[7] Linina, I. (2016). Customer Satisfaction Management in Retail Trade, *New Dimensions in the Development of Society Marketing and Sustainable Consumption,* vol. 43, pp. 158-166.

[8] Linina, I. (2017). Customer Relationship Formation and Management in Retail Trade Enterprises in the Baltics Countries, *Integrated and Sustainable Regional Development Marketing and Sustainable Consumption*, vol. 45, pp. 300-306.

[9] Linina, I. and Zvirgzdina, R. (2016). The Consumer Loyalty Formation Process and Its Particularities in the Retail Sector, *9th International Scientific Conference "Business and Management 2016",* Vilnius, Lithuania.

[10] *Mazumtirdzniecības īpatsvars kopējā IKP Baltijas valstīs (procentos, faktiskajās cenās).* [Online]. Available: http://appsso.eurostat.ec.europa.eu/nui/show.do

[11] Meacci, S. (2002). Development of the Customer Marketing (TM) Method: an application of analytical CRM, *3rd International Conference on Data Mining*, Bologna, Italy, pp. 665-674.

[12] Praude, V. and Šalkovska, J. (2015). *Integrētā mārketinga komunikācija*, Rīga: Burtene.

[13] Raman, K. and Naik, P. A. (2010). Integrated Marketing Communications in Retailing, *Retailing in the 21st Century: Current and Future Trends,* 2nd ed., Heidelberg Dordrecht London New York: Springer, pp. 429-443.

[14] Rotovei, D. (2016). Multi-Agent Aspect Level Sentiment Analysis in CRM Systems, *Proceedings of 2016 18th International Symposium on Symbolic and Numeric Algorithms for Scientific Computing (Synasc),* Timisoara, Russia, pp. 400-407.

[15] Wang, Q., Mohammed, S., Fiaidhi, J. (2017). Near Field Communication Tag-based System in Retail Marketing, vol. 10, no. 7, pp. 67-76.

COGNITIVE FUNCTIONS IN ADVANCED ANALYTICAL PROCESSES OF FINANCIAL STATEMENTS ABOUT CAPITAL

Tomasz Lis[1,a,*], Izabela Emerling[2,b]

[1]University of Economics in Katowice, Poland

[2]University of Economics in Katowice, Poland

[a]tomasz.lis@ue.katowice.pl, [b]izabela.emerling@ue.katowice.pl

*Corresponding author

Abstract. Financial statements are the primary source of information on equity. However, various accounting standards in the world, including in Poland, allow for significantly different presentation of equity information. It concerns primarily the recognition and measurement of individual components of equity, which in turn determines the quality and usefulness of this information. Equity in accounting is presented in the title report on the statement of changes in equity. In the accounting information system cognitive systems apply.

Keywords: Financial statements, cognitive systems, equity

JEL Classification: M11, F65, M41

1. Introduction

The purpose of this article is to analyse the financial statements on equity for the use of cognitive systems. The category of capital has changed over the years, new concepts have arisen, all of which have led to the emergence of new capitalist thought patterns. Starting from the etymology of this concept, it is necessary to associate this term with the Latin adjective "capital", which corresponds to the caput "captain" or "manager." In this sense, the analogy with the English term "chief", translated as "chief ',' manager ', or French equivalent of' chef. '' (Cannan, 1921). By analysing the different uses of this term, it is considered that the original meaning was used in terms of the amount of money borrowed or the principal amount of debt, as opposed to interest (Latin "capitalist pars debit") or as the sum of money needed to commence commercial activity. In another quoted Latin phrase - "capital dicitur omne quod possidetur" - capital means all possessed goods (Bohm-Bawerk, 1959). In English literature the word "capital", and more often capitali, "was first used in the 16th century in a textbook on how to conduct trade books by the then merchants. S. Skrzypek reviewed the notions of "capital" appearing in literature from antiquity to the first half of XX. (Skrzypek, 1939). Nowadays, modern systems are used up to nowhere. The potential for cognitive technology is being explored by an increasing number of software manufacturers and used to increase the functionality of their products, creating new value for customers. The use of cognitive systems can be observed in the description of notes to the financial statements. In times of uncertainty and crisis, the importance of credibility of financial information increases. A reliable financial statement not only allows a reliable assessment of the company by current and potential investors, but also reduces the asymmetry of information between the management of the company and its external environment. This increases confidence in the company and its managers, which in turn increases the market value of its shares. The Framework for the Preparation and Presentation of Financial Statements specifies that its purpose is to provide information about the financial position, results of operations and changes in the entity that will be useful to investors. Enhanced statistical tools are increasingly used in the analysis of financial statements (Borawska, 2017). Data analysis also allows the auditor to assess the report well. (Data analytics helps auditors gain deep insight, 2015). The scope of cooperation in the auditor is often negotiated, so the scope of the audit varies (Salterio, 2012). In the analysis of financial data alone, the return statement used in the analysis of financial reports is used in the literature (Brief & Lawson, 1992).

2. Expectations from modern accounting systems

Investors who invest in shares of the company are in fact the owners of the company and provide the capital necessary for its day-to-day operation and future development. On the other hand, they are the main recipients of added value developed in the company in the form of dividends or increase in market value of shares. While the stages of disclosure and presentation of information in the financial statements are based on a set set of rules and are subject to scrutiny, accounting and measurement in accounting is often a subject of subjective judgment and the number of factors to be taken into account is difficult. to specified (Surdykowska, 2004). Therefore, when preparing financial statements, the accounting principles should be applied in a way that will truly reflect the actual situation of the company (Niezgoda, 2017). However, accounting principles and legal regulations are not sufficient to achieve this, and ethics is also needed. The range of data is wide and you need to shake the appropriate selection (Schmarzo & Sidaoui, 2017). Addressing this issue to family businesses indicates the productivity of processes (Larraz et al., 2017).

Present and potential investors need reliable and possibly complete information necessary to make investment decisions. This information is largely derived from the entity's accounting and primarily from its financial statements. Show that financial information can be presented in various financial statements. However, this information should always be presented in such a way that they have the most readable, investor-friendly character. Financial reports then become an extremely important source of information for making good investment decisions. Although earnings motives are very different in decision-making (Makhaiel & Sherer, 2017). Ownership decisions for capital, for example, depend on the capital structure of the entities. And it shows many examples from the world (Filipovic & Demirovic, 2016)

The statement of changes in equity is an analytical development of information about the formation of individual components of equity. It contains detailed information on equity, which is presented in the balance sheets of the balance sheet. (Krzywda, 2005). It is a relatively "young" report in Polish economic practice, as it was introduced by the amended Accounting Act and has been in operation since January 1, 2002. In view of the usefulness of the information on the capital structure and the necessity of adapting Polish financial statements to the provisions of the IAS, the scope of the annual financial statements of this statement (Buk, 2005). The statements of changes in own capital provides, in particular, information that shows the reduction or increase of the individual elements of the fund or the entity's equity and defines the title of the change. This statement also includes information on revenue and expense items and profits and losses that are directly attributable to equity or equity excluding the profit and loss account (Nowak, 2008)

3. Information contained in the capital report

The purpose of the statement of changes in the capital (own fund) is to provide its recipient with detailed information including:

- changes in equity (fund) that result in or do not change the net result,
- the level and causes of reductions or increases in the components of own capital,
- forms of coverage of net loss or dividends of net profit,
- the level of equity (fund) at the end of the reporting period as a result of the proposed distribution of profit or loss coverage,
- corrections of fundamental errors committed in previous reporting periods,
- the impact of changes in accounting policies on equity,
- changes in the capital (fund) of the unit that results from the revaluation,
- the net financial result of an entity over a given period,
- conversion of liabilities into shares,
- the difference between the purchase price and the nominal price of the discontinued shares,
- profits resulting from the unconditional release of liabilities as a result of amicable settlement,
- the difference that arises between the lower nominal price of new shares issued and the higher price of their acquisition (Waślicki, 2011).

In the world, when analyzing literature, it can be said that the relationship between capital, risk and efficiency is being studied (Miah & Sharmeen, 2015). The risk in each industry should be related to the assessment of the investment (Repisky & Letko, 2014). The risk of investing in a single company is a reference to the global involvement of equity. This can be seen during the valuation analysis of Eastern European companies (Ferris et al., 1995).

Information that provides a statement of changes in capital (own fund) are particularly interested in the owners of the business unit. The statement of changes in equity has entered the Polish legal order accounting in the last decade due to changes in international financial reporting standards. The decision justified the need to provide more detailed information on the titles of changes that occur in equity items as it is necessary to better assess the financial position of an entity and to understand the determinants of equity. The share capital of a public limited company may increase by:

- raising the nominal value of existing shares,
- issue of new shares (Świderska, 2008),
- allocation of funds from supplementary capital and other reserve capital created from the company's profit, if it can be used for this purpose, ie the increase of the share capital from the company's own funds (Kania, 2003). An increase in the share capital can only take place when the capital is paid for at least nine tenths of the existing share capital and its value is increased when it is entered in the National Court Register. Adoption of a resolution to increase the share capital from the company's own resources if possible, if the approved financial statements from the previous financial year present

profit and the auditor's opinion on the entity's financial position does not contain significant objections.

A joint stock company may be subject to a conditional share capital increase with the purpose of:

- granting bondholders with pre-emptive rights or convertible bonds the right to take up shares,
- granting the right to take up shares of members of the board of directors, the supervisory board or employees in exchange for non-monetary contributions which are their receivables due to the vested interests in the company and its subsidiary (Świderska, 2009). The share capital of a limited liability company may be reduced by: combination of action, decrease in nominal value of shares, redemption of shares when it so foresees company status (Article 359 § 1 k.s.h.), cover loss, in the case of split-divisibility.

4. Cognitive Analysis in Financial Statements on Equity

The analysis of accounting distinguishes different systems of analysis. Sometimes complicated systems of cognitive analysis. Collection of cognitive data analysis systems aims at presenting the distribution of cognitive systems and identifying the areas of their application. Cognitive data analysis systems are further subject to categorization by assigning to the selected classes of decision-making systems labels, meanings and classifiers, on the basis of which it is possible to distinguish between cognitive systems. It is because of this fact that the following classification of cognitive categorization systems has been introduced. Among the systems of cognitive data analysis, the following system classes were distinguished (Tadeusiewicz, 2006).

a) system UBDSS (*Understanding Based Decision Support Systems*),
b) system UBIAS (*Understanding Based Image Analysis Systems*),
c) system UBMSS (*Understanding Based Management Support Systems*),
d) system UBPAS (*Understanding Based Personal Authentication Systems*),
e) system UBSAS (*Understanding Based Signal Analysis Systems*),
f) system UBACS (*Understanding Based Automatic Control Systems*).

Cognitive categorization systems can analyze data in a very detailed manner and show the above classification of this group of systems, irrespective of the type of data that is being analyzed. Data on psychology, medicine, biologie, sociology and statistics are widely used. (Gerontol, 1999). These systems are important for the analysis of 126 companies from the Stock Exchange. Analysis of financial reports gave information that in the case of evaluating notes to financial statements 126 companies presented cognitive analyzes. These systems appear in the notes of the reporting to the equity reports, as shown in Table 1.

Table 1 presents a set of notes with cognitive assessment for the statement of changes in equity.

Table 1: Statement of changes in equity with cognitive systems.

Financial statement - statement of changes in equity						
Application of cognitive systems	31.12.2016 r.	31.12.2015r.	31.12.2014r.	31.12.2013 r.	31.12.2012 r.	31.12.2011 r.
Notes to the financial statements of 126 WSE companies	114	98	47	23	19	8

Source: Own study on the basis of: financial statements of companies listed on the Stock Exchange [as at 31.12.2011 - as at 31.12.2016].

The existing data analysis systems are increasingly being developed and enriched with elements of semantic interpretation of the analyzed data. This type of analysis is possible, inter alia, with the use of cognitive interpretive formulas, which include elements of semantic analysis and linguistic description and semantic inference.

5. Conclusion

Cognitive data analysis systems are based on the prioritization of detected changes and the patterns of data that are being analyzed based on which it is possible to derive deviations from the master data. Determining patterns for all classes of cognitive categorization systems is a process that depends on the type of data being analyzed and the type of interpreted phenomena. The immanent feature of every business is the use of capital. Equity is one of the most important financial information for various stakeholder groups. Financial statements are the primary source of information on equity. However, various accounting standards in the world, including in Poland, allow for significantly different presentation of equity information. It concerns primarily the recognition and measurement of individual components of equity, which in turn determines the quality and usefulness of this information. Equity in accounting is presented in the title report on the statement of changes in equity. In the accounting information system cognitive systems apply. So, more and more often, it comes up with additional ways of creating a date.

References

[1] Bohm-Bawerk E. (1959). *Capital and interest, The controversy over the concept of capital*, Libertarian Press, Sounth Holland, Illinois.

[2] Borawska A. [Online]. Available: https://www.degruyter.com/view/j/foli.../foli-2017-0013.xml

[3] Brief, R. P. and Lawson R. A. (1992). The role of the accounting rate of return in financial statement analysis. *Accounting Review*, vol. 67, no. 2, pp. 411-426.

[4] Buk H. (2005). *Sprawozdawczość i analiza finansowa przedsiębiorstwa*, Wyd. Akademii Ekonomicznej w Katowicach, Katowice.

[5] Cannan E. (1921). Early history o f the term capital. *Quarterly Journal of Economics,* vol. 35, pp. 43.

[6] Data analytics helps auditors gain deep insight. (2015). [Online]. Available: https://www.journalofaccountancy.com/issues/2015/apr/data-analytics-for-auditors.html

[7] Ferris, S. P., Joshi, Y. P. and Makhija, A. K. (1995). Valuing an East European company. *Long Range Planning,* vol. 28, no. 6, pp. 48-60.

[8] Filipovic, A. L. and Demirovic, S. (2016). Financial Structure of Stock Companies in Montenegro in the Function of Profitability. *13th International Scientific Conference on Economic and Social Development (ESD)*, Barcelona, Spain, pp. 408-416.

[9] Kania D. and Dreliszka E. (2003). *Zestawienie zmian w kapitale własnym*, ODDK, Gdańska.

[10] Krzywda D. and Dudek, J. (2005). *Kapitał własny spółek handlowyc*h. SKwP, Warszawa.

[11] Larraz, J. L. G., Gene, J. M. and Pulido, L. S. (2017). Productivity and value added distribution in family-owned businesses. *Intangible Capital*, vol. 13, no. 1, pp. 4-24.

[12] Makhaiel, N. and Sherer, M. (2017). In the name of others: an investigation of earnings management motives in Egypt. *Journal of Accounting in Emerging Economies.* Vol. 7, no. 1, pp. 61-89.

[13] Miah, M. D. and Sharmeen, K. (2015). Relationship between capital, risk and efficiency A comparative study between Islamic and conventional banks of Bangladesh. *International Journal of Islamic and Middle Eastern Finance and Management.* vol. 8, no. 2, pp. 203-221.

[14] Niezgoda, J. [Online]. Available: ttps://www.degruyter.com/view/j/foli.../foli-2017-0010.xml

[15] Nowak, E. (2008). *Analiza sprawozdań finansowych*, PWE, Warszawa.

[16] Repisky, J. and Letko, A. (2015). Evaluation investment of electricity generation and heat with exploitation biomass *9th International Conference on Applied Business Research (ICABR)*, Talca, Chile, pp. 909-918.

[17] Skrzypek S. (1939). *Pojęcie kapitału w literaturze, Archiwum Towarzystwa Naukowego we Lwowie,* Dział II, t. XXVI, z. I, Towarzystwo Naukowe z zasiłkiem Ministerstwa Wyznań Religijnych i Oświecenia Publicznego, Drukarnia „Ekonomia" Lwów.

[18] Salterio, S. E. (2012). Fifteen years in the trenches: Auditor-client negotiations exposed and explored. *Accounting and Finance,* vol. 52, no. 1, pp. 233-286.

[19] Schmarzo, B. and Sidaoui, M. (2017). Applying economic concepts to big data to determine the financial value of the organizations data and analytics, and understandind the ramifications on the organizations financial statements and it operations and business strategies. [Online]. Available: https://blog.dellemc.com/uploads/2017/03/USF-The-Economics-of-Data-and-Analytics- Final2.pdf

[20] Surdykowska S. (2004). *Rachunkowość kreatywna a MSR/MSSF*, Polska Szkoła Rachunkowości, SGH, Warszawa.

[21] Świderska G. and Karwowski, M. (2008). K*apitał (fundusz) własny. Zestawienie zmian w kapitale (funduszu) własnym,* G. K. Świderska, G. Więcław, (red), Sprawozdanie finansowe bez tajemnic, Difin, Warszawa.

[22] Świderska G. and Karwowski, M. (2009). *Kapitał (fundusz) własny. Zestawienie zmian w kapitale (funduszu) własnym*, G.K. Świderska, G. Więcław, (red), Sprawozdanie finansowe według polskich i międzynarodowych standardów rachunkowości, Difin, Warszawa.

[23] Tadeusiewicz, R., Ogiela, L. and Ogiela M. R. (2006). Cognitive Analysis Techniques in Business Planning and Decision Support Systems. *ICAISC 2006,* LNAI 4029, Springer-Verlag Berlin Heidelberg, pp. 1027-1039.

[24] The journals of gerontology. (1995). Series A, Biological sciences and medical sciences, Journal of gerontology. Biological sciences. Washington, DC: published on behalf of the Gerontological Society of America by Oxford University Press.

[25] The Role of Midlife Occupational. [Online]. Available: https://academic.oup.com/.../The-Role-of-Midlife-Occupational-Co

[26] Waślicki T. (2011). *Zestawienie zmian w kapitale (funduszu) własnym,* Biblioteka INFORLEX, Warszawa.

EFFICIENCY OF RUSSIAN ACQUISITION SYSTEM: THE IMPACTS OF INSTITUTIONAL GLOBALIZATION ON PUBLIC PROCUREMENT

Alexander N. Litvinenko[1,a], Nikolay V. Myachin[2,b,*]

[1]St. Petersburg University of the Ministry of Internal Affairs of Russia, let. Pilutova st., 1, Saint-Petersburg, Russia, 198206

[2] St. Petersburg University of the Ministry of Internal Affairs of Russia, let. Pilutova st., 1, Saint-Petersburg, Russia, 198206

[a] lanfk@mail.ru, [b] nmyachin@mail.ru

*Corresponding author

Abstract. The process of institutionalization of global economic development affects the unification of standards of national procedures in public procurement. In 2014, Russia, based on the experience of developed countries, has moved to Acquisition System. This research evaluated the dynamics of qualitative and quantitative indicators of the Russian procurement system from 2012 to 2016 inclusive. Two years before and two years after the introduction of the contract system are covered. Statistics on the volume of placed and concluded contracts, the number of registered participants in the public procurement market, the number of complaints they have filed against customers, and also data on the number of changes made to procurement legislation in Russia over the past five years at the federal level is analyzed. All data are based on open sources. The values of competition indicators, procurement planning, savings, transparency of federal segment customers, losses from purchases at inflated prices, purchases from a single supplier are considered. Based on the methods of cluster, discriminant and correlation analysis, a comprehensive evaluation of the indicators dynamics of the procurement system in Russia was carried out. When the indicators were divided into groups *k*-means clustering and tree clustering were used. The results of the correlation analysis indicate a stable relationship between certain indicators. The ratio of the dynamics of qualitative and quantitative indicators of the procurement system in Russia is singled out. A conclusion carried out by authors shows the impact of the institutionalization of global economic development on the Russian procurement system.

Keywords: institutional globalization, public procurement, efficiency indicators, cluster analysis.

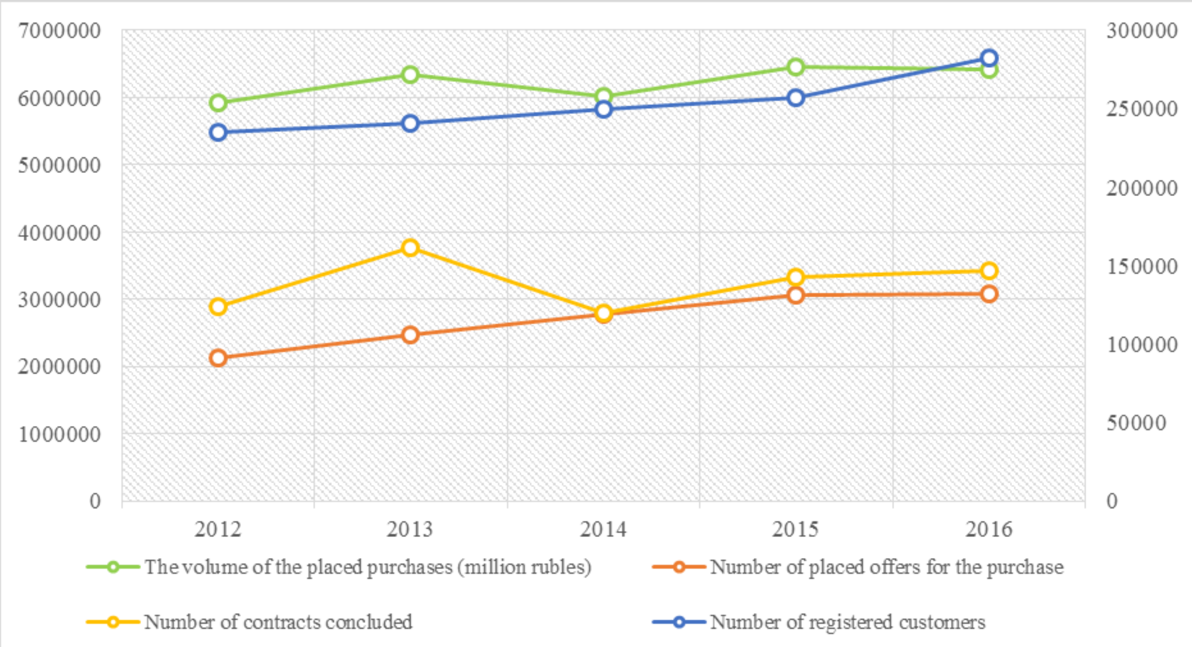
JEL Classification: F62, K12, O11

1. Introduction

In the 21st century - the era of information technology, globalization and integration, the development of international economic relations has already become one of the foundations of world progress. The process of global institutionalizing also touched the unification in the field of public procurement, so, the issue of the effectiveness of the procurement system is now very relevant (Guccio et al., 2014), (Postl, 2013). In 2014, Russia, based on the experience of developed countries, moved to a contract system in the field of public procurement. This system provides for control at all stages of acquisition - from planning to audit. One of the most important features here (Messer et al., 2017) is Unified Information System (UIS), which contains all data about customers and procedures, results of control activities and a library of standard contracts.

The development of the public procurement in Russia pays much attention to the state and the society (Ivanov, 2016), (Melnikov, 2016). In 2016, over 5 trillion rubles were distributed through the procurement sector, which is almost a third of the state expenditures. The overall development's dynamic of the contract system is shown in Fig. 1.

Figure 1: Dynamics of the main indicators of development of public procurement in Russia from 2012 to 2016



Source: (Unified Information System)

According to the intensive development of the acquisition sphere, the issues of ensuring the effectiveness of the contract system and increasing the responsibility for the effectiveness of procurement are sharply raised. So, the Accounts Chamber of the Russian Federation for 9 months of 2016 revealed about 2 thousand facts of violations in the implementation of purchases totaling more than 38 billion rubles. Compared to the same period in 2015, the number of violations has doubled. The number of amendments to the procurement legislation increases every year, while the level of overstating purchase prices remained from 2012 to 2015 at the average level of 5.8%. The number of complaints against the actions of procurement participants in 2016 increased compared to 2015 by 20.7%.

The number of complaints regularly increased from 2014 to 2016, despite the increase in the number of amendments of procurement legislation. At the same time, the introduction of the contract system in 2014 did not reduce the level of overpriced purchasing - in 2015.

2. Indicators of public procurement efficiency

To estimate the effectiveness of the public procurement in Russia six indicators were selected. These indicators are presented in Table 1.

Table 1: Indicators of the effectiveness of the public procurement in Russia

No.	Name of the indicator	2012	2013	2014	2015	2016
1	Average number of participants in the acquisition procedures	3	3,2	2,44	2,72	2,71
2	Average savings on purchases, %	12,2	11,8	8,5	10,4	8,2
3	Guaranteed transparency of the customers of the federal segment, %	4	8	5	11	7
4	Part of purchases from a single supplier, %	21,59	21,12	17,78	22,03	23,95
5	Losses of overpriced purchasing, mil. of rub.	275	265,5	278,2	247,3	180
6	Part of purchases in December, %	9,2	17,3	17	15	14

Source: (*Unified Information System, Project "National rating of transparency of procurement"*)

The level of competition is calculated as the ratio of the average number of participants in the acquisition procedures and is one of the main indicators of the effectiveness of procurement. (Borowiec, 2017). The average savings based on the results of trades was calculated by the authors for all subjects of the Russian Federation on the basis of the data of the. The part of purchases from a single supplier shows the percentage of purchases that were made outside competitive selection (Janke & Packova, 2016); losses from overpriced purchasing characterize the quality of planning and rationing in the field of procurement; the part of purchases in December shows the percentage of purchases made in the last month of the fiscal year (often in order to use budget funds fully); the guaranteed transparency of the customers of the federal segment directly indicates the degree of efficiency of the work of federal bodies in the sphere of procurement (Pavel & Sicakova-Beblava, 2008).

Obviously, the increase in the efficiency of the public procurement is meant by the growth of some indicators and a decrease in others. To assess the effectiveness of the procurement system, its performance indicators were divided into two groups: raised (indicators 1,2,3,) and lowered (indicators 4,5,6). The criterion for assigning a status to a certain indicator is its priority change of direction, which shows an increase in the efficiency of the procurement system. To estimate the effectiveness of the procurement system, authors have used cluster analysis by the k-means method (Bolshakova et al., 2014), (Eren et al., 2015), of two clusters are assigned a priori. The solution of this task was carried out in the software package of statistical analysis STATISTICA 10.

3. Application of methods of cluster analysis

At first, a check to verify the compliance of empirical data with the normal distribution was made. For this, a null hypothesis is proposed about the subordination of sample values to the normal distribution[10]. Since the sample had a small volume (n = 5), the Kolmogorov-Smirnov test was used.

The calculated values of the D_{test} (0.226, 0.225, 0.167, 0.269, 0.281, 0.239) are less than the tabulated value $D_{tab} = 0.624$ for the sample size n = 5 and significance level $\alpha = 0.05$. Consequently, the null hypothesis of the normal distribution does not reject, so we can assume that the empirical distribution does not differ from the normal one.

[10] In this case, authors refer to the normal distribution, since it expresses the regularity that arises from the interaction of a variety of random causes, when none of them has a predominant influence. Comparison with it is important for ascertaining the degree and nature of the deviation from it of the actual distribution.

For cluster analysis standardization of variables was carried out to specify a uniform measurement scale (Eliseeva & Yuzbashev, 2004). This standardization was carried out according to Eq. 1:

$$z = \frac{x - \mu}{\sigma}, \tag{1}$$

where x - observed value of the variable; μ - mean; σ - sample standard deviation.

To study the significance of the difference in the mean values of the indicators an analysis of variance was made. The results of the variance analysis are presented in Table 2.

Table 2: The results of the variance analysis

Variable	Between SS	Within SS	F	signif. p
2012	5,212378	1,787622	17,49490	0,005796
2013	5,562357	1,437643	23,21449	0,002946
2014	5,021008	1,978992	15,22293	0,007969
2015	5,859335	1,140665	30,82064	0,001444
2016	5,434184	1,565816	20,82307	0,003838

Source: The results of research

Analysis of variance showed that clustering was carried out “qualitatively”, the significance level p of Fisher criterion is less than 0.05 for each variable. The smaller the value of Within SS as compared to Between SS, the better the cluster analysis was performed. The indicator with the greatest difference between the Between SS and Within SS variances characterizes the best belonging of the object to the cluster. As can be seen from Table 2, for all variables, this difference is approximately at the same level. The number of degrees of freedom for Between SS dispersion was 1, for Within SS 4. Further, the clustering was carried out. The results are presented in Table 3.

Table 3: The results of clustering

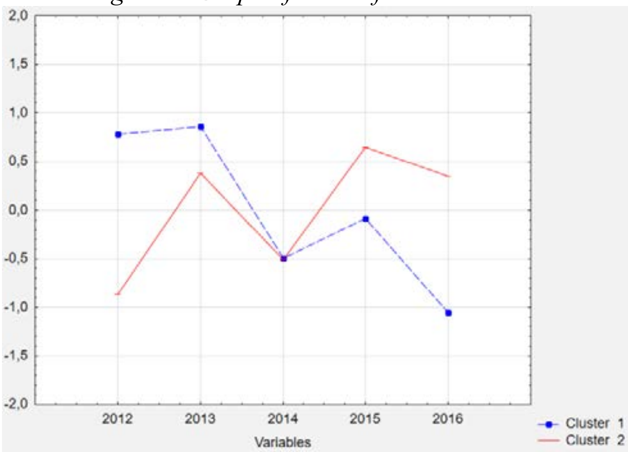
No.	Name of the indicator	Cluster	Distances
1	Average number of participants in the acquisition procedures	1	0,525120
2	Average savings on purchases, %	1	0,330459
3	Guaranteed transparency of the customers of the federal segment, %	2	0,420120
4	Part of purchases from a single supplier, %	2	0,344854
5	Losses of overpriced purchasing, mil. rub.	1	0,396617
6	Part of purchases in December, %	2	0,642597

Source: The results of research

The smaller the distance to the center of the cluster is, the more obvious representative of the cluster is the indicator. The most typical representative of cluster 1 is the indicator “Average savings based on the results of purchasing”, and the most typical representative of cluster 2 is the indicator “Part of purchases from a single supplier”.

Obviously, the ideal option for separating the indicators is the situation in which the first group includes the indicators” Average number of participants in the acquisition procedures”, “Average savings on purchases”, “Guaranteed transparency of the customers of the federal segment”, to the second - “Part of purchases from a single supplier”, “Losses of overpriced purchasing” and “Part of purchases in December”. At the same time, the planned growth of the indicators of the first group and the reduction of the indicators of the second group would represent the efficiency of the acquisition system in Russia. A graphical display of the clustering results is shown in Figure 2.

Figure 2: Graph of means for each cluster

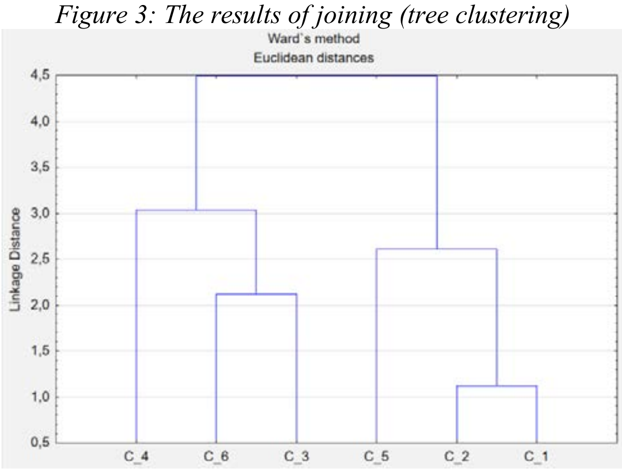


Source: The results of research

The average of all indicators differs from each other, with the exception of data for 2014. This can be explained by the fact that in 2014 the sphere of Russian purchases has undergone radical changes - a contract system has been put in place (Gafurova et al., 2016). As you can see in Fig. 2, the first cluster includes indicators with decreasing values, and in the second - with increasing values in general. At the same time, the smallest difference between cluster 1 and 2 is observed in 2014, the points of their means practically coincide. However, in the context of our research, particular interest is not in the values of variables, but in their dynamics.

To confirm the results of analysis using the k-means method, clustering with the method of joining (tree clustering) was performed (Balsa et al., 2013). In the first step, each indicator was a separate cluster, but as the groups were formed, it was necessary to determine the distance between them. Because of the small sample size and having data of the variance analysis, the Ward's method was used as an amalgamation (linkage) rule. The results of clustering are shown on vertical icicle plot in Figure 3.

Figure 3: The results of joining (tree clustering)



Source: The results of research

4. Results of correlation analysis

To determine the distance between clusters, the Euclidean distance as a distance measure was used (Zhang & Ma, 2017). The application of the Euclidean distance is due to the normal distribution of the sample, performed standardization of values, and also to the fact that indicators are equally important for classification. In first step the indicators "Average number of participants in the acquisition procedures" and "Average savings on purchases "were combined into one cluster, in second - "Guaranteed transparency of the customers of the federal segment" and "Part of purchases in December". The elements C_1, ..., C_6 in the figure correspond to the numbers of indicators from Table 1. The results of joining (tree clustering) were confirmed by the k-means method results - in step 4,5 the indicators were combined in the same way in two clusters.

The results of the cluster analysis carried out by the method joining (tree clustering) not only confirm the data obtained by the k-means method, but also allow to propose the existence of regularities in the dynamics of various indicators. The list of indicators was supplemented by the number of amendments to procurement legislation, to assess the effectiveness of the legislator's work. To determine the nature of the relationship between the indicators, a correlation analysis was performed (Table 4).

Table 4: The results of correlation analysis

No.	Indicator	1	2	3	4	5	6	7
1	Average number of participants in the acquisition procedures	1	0,84	0,06	0,36	0,16	-0,60	-0,22
2	Average savings on purchases	0,84	1	-0,009	0,07	0,47	-0,84	-0,39
3	Guaranteed transparency of the customers of the federal segment	0,06	-0,009	1	0,36	-0,28	0,46	0,44
4	Part of purchases from a single supplier	0,36	0,07	0,36	1	-0,45	0,39	-0,40
5	Losses of overpriced purchasing	0,16	0,47	-0,28	-0,45	1	-0,82	0,03
6	Amendments to procurement legislation	-0,60	-0,84	0,46	0,39	-0,82	1	0,32
7	Part of purchases in December	-0,22	-0,39	0,44	-0,40	0,03	0,32	1

Source: The results of research

The received data confirm the results of joining clustering. Thus, a strong correlation between the indicators that joined the cluster in the first step[11] - "Average number of participants in the acquisition procedures" and "Average savings on purchases" is observed (0.84). In addition, there is a strong correlation between the indicator" Amendments to procurement legislation" and indicators "Average number of participants in the acquisition procedures", "Average savings on purchases".

5. Conclusion

Based on the results of the study, the following conclusions can be made:

1. Dynamics of indicators of competition and savings in the procurement sector is negative, while the values of indicators "Part of purchases from a single supplier" and "Part of purchases in December" have been growing since 2012, which shows an inefficiency of the procurement system over the past five years;
2. Indicator "Guaranteed transparency of customers of the federal segment" was included in the cluster with increasing indicators, which in part shows an increase in transparency of the acquisition system;

[11] The paired correlation coefficient *r* takes values from -1 to 1.

3. Indicator "Losses of overpriced purchasing" was included in the cluster with decreasing indicators, which in part also shows an increase in the efficiency of procurement planning and regulation;
4. There is a strong correlation between "Average number of participants in the acquisition procedures" and "Average savings on purchases", which confirms the need to ensure competition in the procurement sphere;
5. There is a strong negative relationship between "Amendments to procurement legislation" and the indicators of competition (1) and economy (2), which indicates the unsatisfactory work of the legislator on the legal regulation of the procurement sphere.

To date, the contract system has been functioning for more than three years, but the dynamics of its indicators do not allow speaking about improving the efficiency of public procurement in Russia. There is a contradiction between the dynamics of the development of quantitative and qualitative indicators of the acquisition system. The need to resolve this contradiction is Russia's top priority at the moment.

References

[1] Balsa, C., Nunes, A. and Barros, E. (2013). Clustering Techniques Applied on Cross-Sectional Unemployment Data. *Proceedings of International Conference and Advanced School Planet Earth, Dynamics, Games and Science II (DGS II*). Porto, Portugal, pp. 71-88.

[2] Bolshakova, L. V., Primakin, A. I., Yakovleva, N. A. (2014). The use of cluster and discriminant analyzes in the process of interpreting statistical data while ensuring economic and information security of an economic entity, *Journal of St. Petersburg University of the Ministry of Internal Affairs of Russia*, vol. 62, pp. 148-155.

[3] Borowiec, A. (2017). The impact of public procurement system on the development of competition in the economy in the light of empirical research, *Oeconomia Copernicana*, vol. 8, pp. 37-50.

[4] Eliseeva, I. I., Yuzbashev, M. M. (2004). *General Theory of Statistics*, 5th ed. Finance and Statistics, Russia: Moscow.

[5] Eren, B. et al. (2015). A K-Means Algorithm Application on Big Data. *Proceedings of World Congress on Engineering and Computer Science*. San Francisco, USA, pp. 814-818.

[6] Gafurova, G. T., Notfullina, G. N. and Fukina, S. P. (2016). Public Procurement as an Instrument for the Development of Small and Medium-Sized Business in Russia, E*konomika Regiona-Economy of Region*, vol. 12, pp. 1233-1243.

[7] Guccio, C., Pignataro, G. and Rizzo, I. (2014). Evaluating the efficiency of public procurement contracts for cultural heritage conservation works in Italy, *Journal of Cultural Economics*, vol. 38, pp. 43-70.

[8] Ivanov, A. (2016). Organization and system (On the book "Empirical analysis of public procurementsystem in Russia"), *Voprosy Ekonomiki*, vol. 2, pp. 150-158.

[9] Janke, F. ansd Packova, M. (2016). Effect of competition among suppliers on public procurement efficiency, *Economic Annals-XXI*, vol. 159, pp. 38-42.

[10] Melnikov., V. V. (2016). The formation of Russian public procurement system on market principles, *Terra Economicus*, vol. 14, pp. 54-72.

[11] Messer, K. D. et al. (2017). When Does Public Information Undermine the Efficiency of Reverse Auctions for the Purchase of Ecosystem Services?, *Ecological economics,* vol. 134, pp. 212-226.

[12] Pavel, J. and Sicakova-Beblava, E. (2008). Transparency of public procurement market in the Czech Republic and Slovakia, *Ekonomicky Casopis*, vol. 56, pp. 168-181.

[13] Postl, P. (2013). Efficiency versus optimality in procurement, *Economic Theory*, vol. 53, pp. 425-472.

[14] Project "National rating of transparency of procurement" [Online]. Available: http://www.nrpz.ru/ezhednevniki/2016.html#content

[15] The results of the audit of procurement by the Accounts Chamber in 2016. [Online]. Available: http://www.ach.gov.ru/activities/control/29015/

[16] Unified Information System (UIS) official page. [Online]. Available: http://new.zakupki.gov.ru/epz/main/public/home.html

[17] Zhang, T. and Ma, F. (2017). Improved rough k-means clustering algorithm based on weighted distance measure with Gaussian function, *International Journal of Computer Mathematics*, vol. 94, pp. 663-675.

THE WAGE BENEFITS FROM LANGUAGE SKILLS IN A GLOBALIZED LABOUR MARKET

Jacek Liwinski[1,a,*]

[1]University of Warsaw Faculty of Economic Sciences, ul. Dluga 44/50, 00-241 Warszawa, Poland

[a]jacek.liwinski@wp.pl

*Corresponding author

Abstract. The globalization of labor markets makes language skills one of the key competences required by employers nowadays, and especially by multinational companies operating in the global market. Based on the human capital theory we can expect that language skills should have a positive impact on productivity and earnings. This should be the case both for those working domestically and those working aborad. Our purpose is to determine whether language skills have an impact on the earnings of Poles. The Poles seem to be a good case for this type of analysis, because the Polish language is not used for international communication, while as much as 58% of Poles declare to command at least one foreign language and 5% of Poles earn their income abroad. We estimated an extended Mincer wage equation using OLS and the Heckman correction for self-selection to employment. The analysis was based on data from three waves (2012-2014) of the Human Capital Balance survey with a pooled sample of about 35,000 individuals. Analysis shows that the command of foreign languages has a strong, positive impact on earnings. The wage premium from the advanced command of a foreign language amounts to 6% in case of employment in Poland and 22% for those working abroad. Interestingly, those working in Poland earn a much higher wage premium from proficiency in Spanish (29%), Italian (20%) or French (19%) than from proficiency in English (8%). In turn, English is the only foreign language which brings a wage premium to Poles working abroad.

Keywords: foreign language skills, wage premium, wage equation

JEL Classification: I26, J24, F60

1. Introduction

The progressing globalization, accompanied by the growing international trade, foreign direct investments and international labour migrations, cause the demand for language competences grow and according to forecasts, this trend should continue in the future (Antonietti and Loi, 2014), (Isphording, 2015). In the Central and East-European countries, including Poland, these changes intensified after their accession to the European Union. Suffice it to mention that a significant increase in the inflow of foreign direct investments to Poland has been observed since 2004, and ca. 900 000 Poles migrated to the UK and Ireland with the opening of EU labour markets in 2006. Under such circumstances, the command of foreign languages is becoming one of the key competences on the global labour market. Hence, it is not surprising that substantial public and private funds are allocated to language education. Learning two foreign languages at school is obligatory in Poland, similarly as in most European countries. Furthermore, there is a thriving sector of private language schools there. In the European context, language skills are promoted by means of such initiatives like the Erasmus programme, which is financed from public funds, while requiring individual financial contribution too. Since language education involves expenses, it is interesting for an economist to find out, whether it results in any benefits in the labour market, including wage benefits in particular. Another interesting thing is whether these benefits are greater in one's home country, or rather abroad.

Our purpose is to determine whether language skills have an impact on the earnings of Poles. The Poles seem to be a good case for this type of analysis, because the Polish language is not used for international communication, while as much as 58% of Poles declare to command at least one foreign language and 5% of Poles earn their income abroad. We estimated an extended Mincer wage equation using OLS and the Heckman correction for self-selection to employment. The analysis was based on data from three waves (2012-2014) of the Human Capital Balance survey with a pooled sample of about 35,000 individuals.

We contribute to the literature on economic returns to proficiency in foreign languages in the following ways. Firstly, according to our best knowledge, this is the first paper which enables one to compare the wage premium from language skills, earned in one's home country and abroad. Secondly, this is one of a very few studies enabling to identify the wage premium from proficiency in many different languages – not only English (Di Paolo and Tansel, 2015), (Williams, 2011). Thirdly, our study is one of only a few on the Central and East-European countries (Toomet, 2011), (Fabo et al., 2017) and the first one on Poland. Fourthly, owing to the unique nature of the data used, we are controlling for a wide variety of respondents' skills in our wage equation, with the native language skills among them, thereby being able to reduce the bias caused by endogeneity of language education.

The paper is structured into five sections. In the first one, we present an overview of literature on the impact of language competences on wages. The second and the third sections present data and the method of analysis. The fourth section contains descriptive statistics of the sample and the fifth discusses the results of empirical analysis. At the end of the paper the most important findings are summarised.

2. Review of literature

There are several strands of studies on the wage premium from language skills. The first and the most popular one covers the wage premium earned by immigrants in the host country. It is well established in this literature that immigrants with the host country language skills obtain a positive wage premium.

The second stand refers to the wage premium from bilingualism obtained by natives in multilingual labour markets. The results obtained usually show that proficiency in a second language is remunerated in the labour market.

The third strand, to which our paper is most closely related, focuses on the wage premium from the command of foreign languages earned by the natives. Most of these papers are for developed countries (see Grin (2001) for Switzerland; Fry and Lowell (2003), Saiz and Zoido (2005) for the U.S.; Lang and Siniver (2009) for Israel; Ginsburgh and Prieto-Rodriguez (2011), Williams (2011) for a comparative analysis of several Western European countries; Stöhr (2015) for Germany). Furthermore, the focus of many studies is on developing countries (see Levinsohn (2007) and Casale and Posel (2011) for South Africa; Azam et al. (2013) for India; Di Paolo and Tansel (2015) for Turkey; Guo and Sun (2014), Wang et al. (2017) for China). So far, not much research in this strand has been done for the Central and Eastern European countries (CEEC) (see Toomet (2011) for Latvia and Estonia; Fabo et al. (2017) for Czechia, Slovakia and Hungary). In addition, most studies concentrate on the command of English, with only a few analysing premiums from other languages (see Ginsburgh and Prieto-Rodriguez (2011), Williams (2011), Di Paolo and Tansel (2015)). The literature in this stand find a positive wage premium from the command of English, while in some countries – from other foreign languages too.

According to our best knowledge there are no studies for the CEEC on the wage premium from proficiency in any other foreign languages than English. Moreover, none of the existing studies compares wage premiums obtained in the home country and abroad. Our research is intended to fill these gaps in the literature.

3. Data

The analysis is based on the Human Capital Survey for the period of 2012-2014. [12] The survey is a unique source of unit data about human capital resources of Poles and it also provides information about the situation of individuals in the labour market. The sample is representative for the working age population, i.e. women aged 18-59 and men aged 18-64, living in Poland. The sample consists of ca. 17600 individuals in each wave of the survey, i.e. in each year.

For this study it is important that the survey questionnaire contained questions about language skills. Respondents were asked to list all languages they knew and to assess the level of command for the three languages they knew best (using a six-grade scale) in four linguistic competences: reading, writing, speaking and listening comprehension. Although, the measure was a subjective one, it seems that owing to the relatively broad rating scale, the variation of language skills between individuals can be properly identified.

The database used has one additional advantage, namely the fact that is contains information about twelve other skills of respondents, including:

- searching and analysing information, as well as drawing conclusions,
- operating, installing and repairing technical equipment,
- performing calculations,
- operating a computer and using the Internet,
- artistic and creative abilities,
- physical fitness,
- self-organisation of work and showing initiative,
- networking,
- arranging and performing office tasks,
- managerial skills and organising other people's work,
- availability,

[12] The Human Capital Survey was conducted in the years 2010-2014 by the Polish Agency for Enterprise Development (PARP) in co-operation with the Jagiellonian University.

- fluency in spoken and written Polish.

The respondents were asked to assess their skills in the above-listed areas, using a five-grade scale. Hence, we have a map of respondents' skills at our disposal. Certainly, the assessments are subjective and the list of skills is not an exhaustive one. Nevertheless, there are many enough of the skills assessed, they are different enough and the rating scales are broad enough to assume that respondents' abilities and skills are reflected rather well. Importantly, the last skill on the list can be regarded as a measure of linguistic predispositions.

The sample is limited to individuals who were self-employed or employed on a contract and who reported their earnings. Furthermore, in order to use the Heckman correction, the unemployed and economically inactive respondents were included in the sample. Eventually, the sample consisted of 35,579 respondents, of which 14,145 were employed.

4. Method

The potential bias of the wage premium estimator, resulting from endogeneity of language skills, is the basic methodological problem encountered when analysing benefits from linguistic proficiency. If the individuals studying foreign languages are one average more able, skilled or motivated, we may expect that the OLS estimate of the wage premium will be overestimated as we do not control for unobservable abilities and skills. The wage premium estimated in this way will reflect not only benefits from language skills, but also those from other skills and abilities, that were useful when studying foreign languages and are useful at work too.

In order to reduce this bias, we used the unique property of the Human Capital Survey database, namely – the information about respondents' twelve skills. Considering that development of skills – both linguistic and non-linguistic – is determined by abilities and motivation, the inclusion of the map of respondent's skills to the wage equation should reduce the wage premium estimator bias to a certain degree.

Based on the overview of literature, the following wage equation was estimated:

$$\ln(w_i) = (FL_i \times WA_i)\beta_1 + S_i\beta_2 + X_i\beta_3 + \varepsilon_i \tag{1}$$

where dependent variable ($\boldsymbol{w_i}$) represents the hourly net earnings [13], $\boldsymbol{FL_i}$ is a vector of variables representing the foreign language proficiency level, $\boldsymbol{WA_i}$ represents working abroad, $\boldsymbol{S_i}$ covers the map of respondents' skill, and vector $\boldsymbol{X_i}$ – other factors that may have an impact on earnings.

Vector $\boldsymbol{FL_i}$ consists of three binary variables representing the following levels of language proficiency: elementary, intermediate and advanced. In order to create these variables, we computed the average level of language competence ($\boldsymbol{fl_i}$) as an arithmetic mean of the assessments of the four competences: reading, writing, speaking and listening comprehension. Each of them was rated by the respondents from 1 to 6, therefore each individual's average level of language competence fits in this interval too. Then, the following three levels of language skills were defined:

[13] The earnings are expressed in 2014 prices.

- elementary, if $\boldsymbol{fl}_i \in \langle 1;2 \rangle$,
- intermediate, if $\boldsymbol{fl}_i \in (2;4\rangle$,
- advanced, if $\boldsymbol{fl}_i \in (4;6\rangle$.

The map of skills ($\boldsymbol{S}_i$) covers twelve skills listed in the previous chapter. The model includes a separate variable for each skill, taking values from 1 to 5. Furthermore, the model includes also other control variables ($\boldsymbol{X}_i$) that represent respondents' features (sex, age, education level, attendance of training), as well as characteristics of the local labour market (class of the place of residence, region, year of survey).

In order to eliminate outliers, we deleted 0.2% of the upper and lower extreme values from the distribution of the hourly net earnings. The linear regression model was estimated using OLS, by computing heteroscedasticity-resistant variance estimations.

As the wage regression can be estimated for the employed only, our OLS estimates may suffer from a selection to employment bias. To correct for that we apply the approach proposed by Heckman (1979) by using a two-step procedure. In the first step we estimate the probability of a graduate being employed by using a probit regression. On this basis the inverse mills ratio is calculated. In the second step we estimate the Mincerian wage equation including this term as an additional explanatory variable, which allows to correct for sample selection bias. We used three variables as exclusion restrictions: female x having a child aged 0-3 years, marital status, and number of persons in the household.

5. Results

The estimations of the wage equation are presented in Table 1. The first three specifications are estimated using OLS. Estimation (1) is unconditional in the sense that hourly earnings are regressed on the foreign language proficiency ($\boldsymbol{FL}_i$) only, which is interacted with working abroad ($\boldsymbol{WA}_i$). Both advanced and intermediate command of a foreign language are positively correlated with earnings. Yet, these correlations are getting lower as successive explanatory variables are included in the model (specifications 2 and 3). In particular, following the addition of the respondents' skill vector ($\boldsymbol{S}_i$), the wage premium from advanced command of a foreign language falls from 10% to 6% and from intermediate command – from 5% to 3%. This decrease can be interpreted as resulting from a reduction of the bias owing to the inclusion of the map of skills, which reflects respondents' abilities and motivations. This shows that abilities and motivation have impact on both linguistic proficiency and earnings of the individuals working in Poland. What is interesting, an opposite conclusion can be drawn with regard to the individuals working abroad. In this case, the wage premium increases slightly after the map of skills is included in the model (specifications 2 and 3).

The estimation of the full specification shows that the wage premium from language skills is three times higher for individuals working abroad than for those working in their home country. Respondents with the advanced command of a foreign language earn a 6% wage premium in the home country and 22% abroad, while those with the intermediate language skills obtain 3% and 20% respectively (specification 6). The Heckman correction, which eliminates the bias caused by the pre-employment selection, does not change the results. Only the premium from advanced command of a foreign language declared by individuals working in their home country increases slightly – from 6.1% to 6.8% (see specifications 3 and 6).

Table 1: Estimations of the wage equation

Model specification	OLS	OLS	OLS	Heckit	Heckit	Heckit
	(1)	(2)	(3)	(4)	(5)	(6)
Foreign language: elementary	-0.024	-0.044***	-0.042***	-0.018	-0.045***	-0.041***
Foreign language: intermediate	0.122***	0.052***	0.031***	0.129***	0.048***	0.031***
Foreign language: advanced	0.254***	0.099***	0.061***	0.268***	0.099***	0.068***
FL: elementary & working abroad	-0.090	0.003	0.012	-0.097	0.002	0.011
FL: intermediate & working abroad	0.115**	0.171***	0.198***	0.104**	0.171***	0.198***
FL: advanced & working abroad	0.095	0.211***	0.220***	0.091	0.213***	0.222***
Working abroad	0.191***	0.147***	0.129***	0.193***	0.147***	0.130***
Skills (Si)			yes			yes
Other variables (Xi)		yes	yes		yes	yes
Number of observations	14,145	14,145	14,145	35,579	35,579	35,579
R2	0.054	0.208	0.228			
chi2				0	3.74e-08	7.61e-07
Prob > chi2				290.8	30.28	24.45

*Notes: The selection equation includes: female x having a child aged 0-3 years, marital status, number of persons in the household; ***/**/* stand for 1%, 5% and 10% significance respectively.*
Source: Author's own analyses based on the Human Capital Survey data.

Knowing that language skills translate into wage benefits, it is worth finding out, which languages are most beneficial. Table 2 shows estimations of a model with individual specifications representing the command of different foreign languages. The results show that the respondents employed in their home country obtain a premium from the advanced command of almost any of the languages covered by the analysis. The premium is particularly high from the advanced knowledge of Spanish (29%), Italian (20%) and French (19%). The premium from the advanced command of English and German is much lower (8% and 5% respectively).

Table 2: Heckit estimations of the wage equation by languages

Model specification	English	French	German	Russian	Italian	Spanish	Other
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Foreign language: elementary	-0.061***	-0.033	-0.031	-0.033	-0.169	-0.210***	-0.048
Foreign language: intermediate	0.045***	0.071	0.020	0.000	-0.046	0.017	0.039
Foreign language: advanced	0.081***	0.192***	0.057**	-0.027	0.203**	0.292**	-0.093
FL: elementary & working abroad	0.206	0.176	0.018	-0.033	-0.966**	0.295***	-0.195*
FL: intermediate & working abroad	0.002	0.226	0.058	-0.061	-0.286*	0.057	0.287***
FL: advanced & working abroad	0.167***	-0.074	0.104	-0.244**	-0.343*	-0.064	0.234
Working abroad	0.245***	0.287***	0.259***	0.308***	0.301***	0.288***	0.275***
Skills (S_i)	yes	yes	yes	yes	yes	yes	yes
Other variables (X_i)	yes	yes	yes	yes	yes	yes	yes
Number of observations	35,579	35,579	35,579	35,579	35,579	35,579	35,579
chi2	22.55	13.26	14.21	11.76	13.47	12.77	11.62
Prob > chi2	2.05e-06	0.000271	0.000164	0.000606	0.000243	0.000353	0.000654

*Notes: The selection equation includes: female x having a child aged 0-3 years, marital status, and number of persons in the household; ***/**/* stand for 1%, 5% and 10% significance respectively.*
Source: Author's own analyses based on the Human Capital Survey data.

Such a substantial difference may be due to the fact that the command of the first three languages referred to above is very rare among Poles (these languages are declared by 0.4%, 0.8% and 1.7% of the respondents, respectively), while the last two are much more common (34% and 16% respectively). Interestingly, the command of Russian does not bring any wage benefits at all. This is a sad conclusion, as learning Russian had been mandatory in Polish schools until 1990 – from the elementary school level, through secondary school, until university.

Another interesting finding is that English is the only foreign language the command of which has a positive impact on wages earned abroad. Individuals with the advanced command of this language earn 16.7% more when working abroad and 8% more, when working in Poland. Furthermore, English is the only foreign language bringing a wage premium (4.5%) while working in Poland, even if the command is intermediate.

6. Conclusions

The analysis presented above shows that in general, language skills bring wage benefits to Poles. Yet, these benefits are strongly differentiated, depending on the language and on whether one is employed in Poland or abroad. In Poland, a high wage premium can be obtained from the advanced command of Spanish, Italian and French (29%, 20% and 19%, respectively), which is most probably due to the fact that the supply of individuals fluent in these languages is low. There are relatively many individuals fluent in English or German in Poland and presumably, this is why the wage premium is rather low in these cases (8% and 5%, respectively). Fluency in Russian, on the other hand, is not rewarded at all on the Polish labour market – due to the lack of demand, most probably. As far as employment abroad is concerned, only proficiency in English brings wage benefits (16%). These findings can be explained based on the human capital theory. They indicate a strong positive correlation between language skills and earnings, even after a vector of variables representing twelve different skills is included to the model in order to control for abilities and motivation, at least to some extent. These abilities include also fluency in spoken and written Polish, which can be regarded as a measure of predisposition to learning foreign languages. It seems therefore that the command of foreign languages, irrespective of abilities and motivation, increases productivity, thereby translating into higher earnings. Finally, the results of the analysis justify public and private investments in development of language competences. The progressing globalisation and the resultant growth of demand for language competences suggest that investments in learning foreign languages will translate into wage benefits in the future too. In this context, the special role of English is worth stressing. It is the only one of the languages covered by the analysis that, if really mastered, brings wage benefits both in Poland and abroad. Therefore, proficiency in English seems to be one of the key competences on the contemporary labour market.

References

[1] Antonietti R, and Loi M. (2014). The demand for foreign languages in Italian manufacturing, *AlmaLaurea working papers*, no. 5.

[2] Azam, M., Chin, A., and Prakash, N. (2013). The returns to English-language skills in India. *Economic Development and Cultural Change*, vol. 61, pp. 335–367.

[3] Casale, D., and Posel, D. (2011). English language proficiency and earnings in a developing country: The case of South Africa. *The Journal of Socio-Economics*, vol. 40, pp. 385–393.

[4] Di Paolo, A. and Tansel, A. (2015). Returns to foreign language skills in a developing country: The case of Turkey. *Journal of Development Studies*, vol. 51, no. 4, pp. 407–421.

[5] Fabo, B., Beblavy, M. and Lenaerts, K. (2017). The importance of foreign language skills in the labour markets of Central and Eastern Europe: assessment based on data from online job portals, *Empirica*, vol. 44, pp. 487–508.

[6] Fry, R., and Lowell, L. (2003). The value of bilingualism in the U.S. labor market. *Industrial and Labor Relations Review*, vol. 57, no. 1, pp. 128–140.

[7] Ginsburgh, V. A., and Prieto-Rodriguez, J. (2011). Returns to foreign languages of native workers in the EU, *Industrial and Labor Relations Review*, vol. 64, no. 3, pp. 599-617.

[8] Grin, F. (2001). English as economic value: Facts and fallacies. *World Englishes*, vol. 20, no. 1, pp. 65–78.

[9] Guo, Q. and Sun, W. (2014). Economic returns to English proficiency for college graduates in mainland China. *China Economic Review*, vol. 30, pp. 290–300.

[10] Heckman, J. (1979). Sample Selection Bias as a Specification Error, *Econometrica*, no. 1.

[11] Isphording, I. (2015). *Language and labor market success, international encyclopedia of the social and behavioral sciences* (Second Edition), pp. 260–265.

[12] Lang, K., and Siniver, E. (2009). The return to English in a non-English speaking country: Russian immigrants and native Israelis in Israel. *The B.E. Journal of Economic Analysis and Policy*, vol. 9, pp. 1–30.

[13] Levinsohn, J. (2007). Globalization and the returns to speaking English in South Africa. In A. E. Harrison (Ed.), *Globalization and poverty* (pp. 629–646)). Chicago: University of Chicago Press.

[14] Saiz, A., and Zoido, E. (2005). Listening to what the world Says: Bilingualism and earnings in the United States. *The Review of Economics and Statistics*. vol. 87, no. 3, pp. 523-538.

[15] Stohr, T. (2015). The returns to occupational foreign language use: Evidence from Germany. *Labour Economics*, vol. 32, pp. 86–98.

[16] Toomet, O. (2011). Learn English, not the local language! ethnic Russians in the Baltic States. *American Economic Review: Papers and Proceedings*, vol. 101, pp. 526–531.

[17] Wang, H., Smyth, R., and Cheng, Z. (2017). The economic returns to proficiency in English in China, *China Economic Review*, vol. 43, pp. 91–104.

[18] Williams, D. (2011). The economic returns to multiple language usage in Western Europe. *International Journal of Manpower*, vol. 32, pp. 372–393.

OPTIONS FOR REDUCING NEGATIVE CONSEQUENCES OF GLOBALIZATION PROCESSES ON STATIC TRAFFIC IN CITIES

Jan Lizbetin[1,a,*], Ladislav Bartuska[2,b]

[1]Department of Transport and Logistics, Faculty of Technology, The Institute of Technology and Business in Ceske Budejovice, Czech Republic

[2]Department of Transport and Logistics, Faculty of Technology, The Institute of Technology and Business in Ceske Budejovice, Czech Republic

[a]lizbetin@mail.vstecb.cz, [b]bartuska@mail.vstecb.cz

*Corresponding author

Abstract. One of the areas affected by globalization processes in Europe is also the international freight transport. The liberalization of markets has caused an extreme increase in transport performance, which is linked to an increase in static transport in cities as well. In particular, parking areas for heavy freight vehicles in city areas cause problems connected, for example, with insufficient capacity or inadequate equipment. In the Czech Republic the regional concepts for the location of parking lots for trucks have not been developed - rest areas are built mainly on highways. Drivers are forced into other roads to search for alternative parking places and thus jeopardize the safety of the cargo to be transported. Because of the lack of such parking places, drivers are forced to violate the European Agreement Concerning the Work of Crews of Vehicles Engaged in International Road Transport (AETR) or, due to this agreement, to park the truck before the driver's work shift ends, thereby reducing the efficiency of full driver usage. The paper deals with the issue of rest areas location for road freight vehicles in the selected area. The first part of the paper characterizes variant solutions of parking areas in a particular selected area, which were evaluated on the basis of an analysis of the current conditions. The second part of the paper introduces the evaluation of individual variants using the TOPSIS method, which was chosen as the most appropriate method of multicriteria decision making process.

Keywords: road freight transport, freight transport parking areas, TOPSIS, multicriteria analysis

JEL Classification: L92, R42, O18

1. Introduction

One of the areas affected by globalization processes in Europe is also the international freight transport. The liberalization of markets has caused an extreme increase in transport performance, which is linked to an increase in static transport in cities as well (Dolinayova et al., 2016), (Michalikova & Spuchlakova, 2015). In particular, parking areas for heavy freight vehicles in city areas cause problems connected, for example, with insufficient capacity or inadequate equipment. In the Czech Republic the regional concepts for the location of parking lots for trucks have not been developed - rest areas are built mainly on highways. Drivers are forced into other roads to search for alternative parking places and thus jeopardize the safety of the cargo to be transported. Because of the lack of such parking places, drivers are forced to violate the European Agreement Concerning the Work of Crews of Vehicles Engaged in International Road Transport (AETR) or, due to this agreement, to park the truck before the driver's work shift ends, thereby reducing the efficiency of full driver usage (Varjan et al., 2017).

2. Analysis of the current state of parking capacities

The Czech Republic has a theoretical advantage in its geographic location in the center of Europe. At present, the major priority is the completion of Europe-wide highway networks. Within Europe, freight transport growth is projected to increase by 2020 as much as 50% (Llorca & Jamasb, 2017), (Ponisciakova & Sukalova, 2015). This of course raises concerns about network congestion on European highways. Analyses show that a large number of traffic accidents in freight transport are due to non-compliance with mandatory breaks for drivers on long journeys.

2.1 General characteristics of parking capacities within the EU

One of the main reasons why this offense is perpetrated by drivers is a lack of parking spaces. On the question of whether the number of parking spaces for trucks sufficient, there is no clear answer. Statistically, we can say that during the working days within a week the number of parking spaces is sufficient, though reserve is not too large. The problem arises when truck drivers have to stop due to mandatory breaks, state or public holidays. Drivers on long journeys are forced to plan their journey so that they do not violate the law in country they are passing. In most cases, however, they have no means to reach that goal, and planning a new journey is a mere estimate. Because of driver's bad decisions or traffic congestion, drivers are placed in a situation where they have to decide whether to break the law on driving time or to park the vehicle outside the area specified (Kliestik, 2013). The problem with parking places for trucks is not only in the Czech Republic, but most of the EU countries are also dealing with the issue, especially after the opening of national markets and the enlargement of the European Union. Building new truck parks or expanding the capacities of existing truck parks seem to be solution. An important factor is the correct use of information technology. This is closely related to the availability and quality of the information provided (Remisova, 2014), (Kral & Janoskova, 2013).

2.2 Parking capacity in the given area

The authors chose to apply the methodology to the city of Jindrichuv Hradec, because there was a survey of static transport for international road freight transport, which is used as a basis for proposals and solutions.

There is no parking area for trucks in Jindrichuv Hradec, except the parking spaces for light lorries, which would comply with the Czech technical standards CSN 73 6056. Parking places for trucks are usually sought after by drivers who have a permanent residence in Jindrichuv Hradec. Others who search for parking places are vehicles that have their loading or unloading directly in Jindrichuv Hradec and have to park near the city and wait for the next day for load/unload in a specific day period. In this city there are several companies that accept trucks every day.

The analysis in (Vlcek, 2017) provides information on parking areas such as petrol stations or other areas that allow safe parking for trucks and have negative influence on other road traffic. It has been found that from all the surveyed petrol stations in the city only one offers parking space for the semi-trailer or trailer combination. Other petrol stations allow the trucks to be parked at places not intended to this purpose and at driver own responsibility. With this step, petrol stations are often overloaded with freight vehicles, increasing the risk of accidents (for example due to poor visibility) and damage to property. There is no social background at any petrol station.

In addition, (Vlcek, 2017) highlights where trucks are parked in more frequent and regular frequencies. It has been found that trucks are parked on roadsides, roads intended for supply, former car parks for passenger cars, old military roads, urban public transport end stops, and the like.

The main objective of this analysis was to point out that in Jindrichuv Hradec there is no parking lot for trucks that would meet all parameters and requirements for safe parking. Trucks are parked in any place, no matter what this bad parking could have consequences. An example is the fact that vehicle owners are not familiar with the situation that, in the event of theft of a vehicle or cargo (if the vehicle or cargo is insured), the insurance company does not have to pay any compensation for the damage caused due to inappropriate parking at such a places. Another example may be the absence of safety seals or locks at the door of trailers or theft of fuel from fuel tanks.

3. Variant solution proposal of parking lots

Nationwide traffic census in 2010 (Vlcek, 2017) showed that in terms of freight traffic volume prevail vehicles with semitrailers (on average 127 vehicles / hr.), the other in the statistics are heavy trucks of over 10 tones without a trailer (average 54 cars / hr.) and with a trailer (average 27 cars / hr.). These results illustrate the fact that the parking space must have a predominance of parking places for semi-trailer or trailer combination of vehicles. We therefore designate these vehicle combinations as determinant vehicles. By field survey in Jindrichuv Hradec it was found that 19 trucks were parked in the usual working day, 33 trucks were parked at the weekend day and 35 trucks were parked on state holiday. Based on this point, two parking areas are proposed.

3.1 Design of parking area

Based on the required number of parking spaces, 2 proposals were created (Vlcek, 2017). Due to the fact that there is a parking lot for light trucks in Jindrichuv Hradec, the proposals will be created only for trucks with trailers trucks or semitrailers, but the parameters of the truck park will be suitable for heavy freight vehicles over 10 tons as well.

The truck park A has an area of 7030 m^2 and the proposed number of parking spaces is 27. This calculation was determined as the lowest measured value of parking spaces and half the difference between the largest and smallest measured parameters parked vehicles. Due to the full capacity utilization of truck park, the number of parking spaces was increased to 27. Parking spaces are designed at 60° angle and the length of one parking space is 60 m. The advantage of a place length of 60m is that up to three trucks with trailers can stand behind each other. One parking space is divided into three fields, each field having a length of 20 m.

According to standard CSN 73 6056 the minimum parking place length is specified to 18.5 m (at 60 ° arrangement) when the distance between the truck and the door of the semi-trailer must be at least 0.5 m. The width of the parking space is 4 m (average width of the truck is 2.5 m), where the gap between trucks must be at least 1 m. The distance between the edge of the property (fence) and parking space is 11.05 meters, which is sufficient space for handling a long set of vehicles.

The truck park B has an area of 7770 m^2 and the proposed number of parking spaces is 36. This number is derived (Vlcek, 2017) from a traffic survey when, on public holidays, an average of 35 trucks are parked in the whole city. For full use of the area, capacity is increased to 36 parking spaces. Parking spaces are designed at 60 ° and 90 ° angles. The length of the parking space at an angle of 60° is 22 m. Although CSN 73 6056 specifies a minimum length of 18.5 m, the length of 22 m is due to parking the longest possible tandem vehicle set used on Czech roads. The width of the parking space is 4 m (average width of the truck is 2.5 m), where the gap between trucks must be at least 1 m. The length of the parking space at an angle of 90° is 20 m. This type of parking space complies with the conditions stated in CSN 73 6056. The width of the parking space is 3.5 m (average width of the truck is 2.5 m), where the gap between trucks must be at least 1 m. The parking lots are located on the longest sides of the property opposite each other and the distance between them is 35.9 m, which is enough space for handling the vehicles.

3.2 Evaluation and selection of the parking area

The evaluation of both truck park proposals according to various aspects is shown in Table 1.

Table 1: Evaluation of parking areas

Parking areas comparison	Truck park A	Truck park B
Size of area	7030 m^2	7770 m^2
Number of parking places	27	36
Parking system	Difficult	Simple
Security measures	Security + surveillance cameras	Security + surveillance cameras
Parking meter	yes	no
Restaurant	yes	yes
Sanitary facilities	yes	yes
Number of employees	3	3

Source: authors

Both parking areas designs are very similar. The difference is between the size of area, the number of parking spaces and the parking system. The size of the truck parks differs by only 740 m^2, which will have no big effect on the price of the land. To increase safety on adjacent road I/34, a roundabout could be created instead of a crossroad, but this would increase costs. The price of a roundabout can increase the project costs by about five million CZK (Skrucany et al., 2017), (Dolinayova et al., 2009), (Ceniga & Sukalova, 2016).

4. Variant solution selection using TOPSIS method

Verification of results will be achieved using the TOPSIS method, which is one of the multi-criteria decision-making methods (Meszaros et al., 2012). This method selects the option closest to the ideal variation and farthest from the basal variation (the variant with the worst rating) assuming that all criteria have maximizing character. If not, it is necessary to convert all of the criteria.

The g_{ij} elements are normalized according to the formula (Birtus & Kliestik, 2012):

$$r_{ij} = \frac{g_{ij}}{\sum_{i=1}^{m} g_i^2} \tag{1}$$

- Determining matrix with elements w_{ij}:

$$w = v_j * r_{ij} \tag{2}$$

- Determination of the ideal and basal variant (Kubasakova et al., 2015).
- Determining the distance from the ideal variant d^+:

$$d_i^+ = \sqrt{\sum_{d=1}^{m} (w_{ij} - H_j)^2} \tag{3}$$

- Determining the distance from the basal variant d^-:

$$d_i^- = \sqrt{\sum_{d=1}^{m} (w_{ij} - D_j)^2} \tag{4}$$

- Determination of relative distance from basal variation c_i:

$$c_i = \frac{d_i^-}{d_i^+ + d_i^-} \tag{5}$$

- Variants are sorted by decreasing values c_i.

According to this procedure, parking area designs are evaluated in Table 2.

Table 2: Evaluation of parking areas

TOPSIS	*Parking system*	*Charging station*	*Parking meter*	*Number of parking spaces*	*Safety*
Proposal B	5	5	1	5	5
Proposal A	3	1	5	3	4
Significance	**0,4**	**0,15**	**0,05**	**0,1**	**0,3**

Source: authors

Each criterion was rated from 1 (worst) to 5 (best). The significance and the evaluation of the individual criteria were determined in an objective manner (Krizanova &Gajanova, 2016). The complete calculation is the following.

Step 1:

a) $\frac{5}{\sqrt{5^2+3^2}} = 0,857; \frac{5}{\sqrt{5^2+1^2}} = 0,980; \frac{1}{\sqrt{1^2+5^2}} = 0,196; \frac{5}{\sqrt{5^2+3^2}} = 0,857;$
$\frac{5}{\sqrt{5^2+4^2}} = 0,781$

b) $\frac{1}{\sqrt{5^2+3^2}}=0,514; \frac{1}{\sqrt{5^2+1^2}}=0,196; \frac{5}{\sqrt{1^2+5^2}}=0,980; \frac{3}{\sqrt{5^2+3^2}}=0,514;$
$\frac{4}{\sqrt{5^2+4^2}}=0,624$

$$\begin{pmatrix} 0,857;0,980;0,196;0,857;0,781 \\ 0,514;0,196;0,980;0,514;0,624 \end{pmatrix}$$

Step 2:

$$\begin{pmatrix} 0,4*0,857;0,15*0,980;0,05*0,196;0,1*0,857;0,3*0,781 \\ 0,4*0,514;0,15*0,196;0,05*0,980;0,1*0,514;0,3*0,624 \end{pmatrix} \Rightarrow$$

$$\begin{pmatrix} 0,3428;0,147;0,0001;0,0857;0,2343 \\ 0,2056;0,0294;0,049;0,0514;0,1872 \end{pmatrix} \Rightarrow$$

H={0,3428; 0,147; 0,049; 0,0857; 0,2343}; D={0,2056; 0,0294; 0,0001; 0,0514; 0,1872}

Step 3:

$$d_1^+ = \sqrt{(0,3428-0,3428)^2+(0,147-0,147)^2+(0,0001-0,049)^2+(0,0857-0,0857)^2+(0,2343-0,2343)^2} = 0,0489$$
$$d_2^+ = \sqrt{(0,2056-0,3428)^2+(0,0294-0,147)^2+(0,049-0,049)^2+(0,0514-0,0857)^2+(0,1872-0,2343)^2} = 0,1899$$
$$d_1^- = \sqrt{(0,3428-0,2056)^2+(0,147-0,0294)^2+(0,0001-0,0001)^2+(0,0857-0,0514)^2+(0,2343-0,1872)^2} = 0,1899$$
$$d_2^- = \sqrt{(0,2056-0,2056)^2+(0,0294-0,0294)^2+(0,049-0,0001)^2+(0,0514-0,0514)^2+(0,1872-0,1872)^2} = 0,0489$$

Step 4:

$$c_1 = \frac{0,1898}{0,0489+0,1898} = 0,795 \Rightarrow \text{Proposal B}$$

$$c_2 = \frac{0,0489}{0,0489+0,1898} = 0,205 \Rightarrow \text{Proposal A}$$

The main task of the research was to design a complex truck park, which is safe, with catering facilities and social facilities for drivers of trucks with semi-trailers and trailers, and provide conditions for driver regeneration. After analyzing all the positive and negative criteria of the proposals and their evaluation using the TOPSIS method, proposal B will be chosen for realizing in the town of Jindrichuv Hradec. The most important factor in the decision was the criterion of the parking system. The value in proposal B was chosen to be significant because parking is simple here and it is not necessary to be organized by a person or a computer. In proposal A, the parking system is not tested in practice. Another important criterion was the safety - the values differing by just one point value due to parking in the middle of the proposed parking lot at proposal A. The last criterion was the presence of charging station for refrigeration units. This is a novelty that is being tested in Germany and is widely used to reduce the need for diesel as the primary source of the aggregate (Osorio-Tejada et al., 2017). According to surveys conducted in Germany, these charging stations can save several thousand euros a year for the owners of refrigeration semi-trailers.

5. Conclusion

Truck Park proposal B offers drivers comprehensive services such as restaurant, hygiene, secure parking or a supermarket. The truck park is conveniently located on the second most frequented road in Jindrichuv Hradec (significant transport route within CZ), which has already a suitable entrance, which should not create undesirable congestion. In the case of the construction of this complex, it will be necessary to intervene in the form of a decree, where the parking of trucks outside the marked places in the town will be prohibited, thus increasing the demand for parking areas. This restriction information should be placed on telematics devices on every road that heads to the town of Jindrichuv Hradec. If the municipality was considering financing this project, its implementation would be possible with the aid of European subsidies. European subsidies for the 2014-2020 programming period are aimed at linking the Czech Republic regions to strategic transport infrastructure, TEN-T infrastructure development, using intelligent logistics or transport management systems (Galileo system), constructing the transport facilities that are key to infrastructure (Venables, 2017). The most effective financing of this project would be through a private investor where financial resources are more affordable than public resources. To solve a nationwide problem, it would be best the entry of a large investors such as MaxiAutohöfe in Germany (or 24, SVG, EURO RAST-PARK, VEDA) who would be able to create a network of rest places throughout the Czech Republic (Kovacs, 2017), (Skorobogatova & Kuzmina-Merlino, 2016).

References

[1] Birtus, M. and Kliestik, T. (2012). Statistical properties of random variables in modern portfolio theory, *Ekonomicko-manazerske spektrum*, vol. 6, pp. 36-41.

[2] Ceniga, P. and Sukalova, V. (2016). Sustainable Management of Professional Drivers in Context of Social Responsibility, *Proceedings of 17th International Conference on Transport Means*. Kaunas, Lithuania, pp. 540-545.

[3] Dolinayova, A., Camaj, J. and Danis, J. (2016). Evaluation of Investment Efficiency in the new Database Solution for Rail Freight Transport in the Context of globalization. *Proceedings of 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*. Rajecké Teplice, Slovakia, pp. 383-390.

[4] Dolinayova, A., Nedeliakova, E. and Kendra, M. (2009). Regulated prices of access to transport infrastructure as one of the possible means to support sustainable freight transport, *Ekonomicko-manazerske spektrum*, vol. 3, pp. 2-10.

[5] Kliestik, T. (2013). Optimization of Transport Routes Based on Graph Theory as a Part of Intelligent Transport Systems. *Proceedings of 17th International Conference on Transport Means*. Kaunas, Lithuania, pp. 308-311.

[6] Kovacs, G.Y. (2017). Development of Performance Evaluation Software for Road freight Transport Activity, *Polish Journal of Management Studies*, vol. 15, pp. 121-134.

[7] Kral, P. and Janoskova, K. (2013). Public sector comparator (PSC), *Ekonomicko-manazerske spektrum*, vol. 7, pp. 29-33.

[8] Krizanova, A. and Gajanova, L. (2016). The Importance of CSR Implementation. *Proceedings of CBU International Conference on Innovations in Science and Education (CBUIC)*. Prague, Czechia, pp. 515-519.

[9] Kubasakova, I., Kubanova, J. and Poliakova, B. (2015). Modelling of Opened System in the Road Freight Transport and its Impact on the System Characteristics. *Proceedings of 17th International Conference on Transport Means*. Kaunas, Lithuania, pp. 405-409.

[10] Llorca, M. and Jamasb, T. (2017). Energy efficiency and rebound effect in European road freight transport, *Transportation research, Part A – Policy and Practice*, vol. 101, pp. 98-110.

[11] Meszaros, F., Markovits-Somogyi, R. and Bokor, Z. (2012). Modelling and multi-criteria optimization of road traffic flows considering social and economic aspects, *Logi - Scientific Journal on Transport and Logistics*, vol. 3, pp. 70 – 82.

[12] Michalikova, K.F. and Spuchlakova, E. (2015). Optimization of Portfolio selection based on Risk in the condition of globalization. *Proceedings of 15th International Scientific Conference on Globalization and its Socio-Economic Consequences*. Rajecké Teplice, Slovakia, pp. 413-418.

[13] Osorio-Tejada, J.L., Llera-Sastresa, E. and Scarpellini, S. (2017). Liquefied natural gas: Could it be a reliable option for road freight transport in the EU?, *Renewable & Sustainable energy reviews*, vol. 71, pp. 785-795.

[14] Ponisciakova, O. and Sukalova, V. (2015). Economic Management in Road Transport Enterprises, *Procedia Economics and Finance*, vol. 26, pp. 306-310.

[15] Remisova, E. (2014). Methods for assessing the economic efficiency of capital construction projects in the area of road construction, *Ekonomicko-manazerske spektrum*, vol. 8, pp. 55-64.

[16] Skorobogatova, O. and Kuzmina-Merlino, I. (2016). Transport Infrastructure Development Performance, *RELSTAT-2016, Procedia Engineering*, vol. 178, pp. 319-329.

[17] Skrucany, T., Kendra, M., Skorupa, M., Grencik, J. and Figlus, T. (2017). Comparison of chosen environmental aspects in individual road transport and railway passenger transport, *Procedia Engineering*, vol. 192, pp. 806-811.

[18] Varjan, P., Rovnanikova, D. and Gnap, J. (2017). Examining changes in GDP on the demand for road freight transport, *Procedia Engineering*, vol. 192, pp. 911-916.

[19] Venables, A. J. (2017). Expanding Cities and Connecting Cities Appraising the Effects of Transport Improvements, *Journal of Transport Economics and Policy*, vol. 51, pp. 1-19.

[20] Vlcek, J. (2017). *Možnosti řešení nedostatku parkovacích míst pro nákladní vozidla v dané lokalitě,* diplomová práce, Vysoká škola technická a ekonomická v Českých Budějovicích, České Budějovice.

OPEN INNOVATION SYSTEM IN BUSINESS PROCESS IN THE GLOBAL MARKET

Erika Loučanová[1,a], Miriam Olšiaková[2,b,*] and Michal Dzian[3,c]

[1]Technical University in Zvolen, T. G. Masaryka 24, 960 53 Zvolen, Slovak Republic

[2] Technical University in Zvolen, T. G. Masaryka 24, 960 53 Zvolen, Slovak Republic

[3] Technical University in Zvolen, T. G. Masaryka 24, 960 53 Zvolen, Slovak Republic

[a]loucanova@tuzvo.sk, [b]olsiakova@tuzvo.sk, [c]michal.dzain@gmail.com

*Corresponding author

Abstract. Due to increasing globalization, international business development and interconnection of economies the companies are required to be constantly innovative. They need to put more emphasis on innovation creating that are aimed at customer needs within an open innovation system with a link to marketing activities. The open innovation process is a multi-disciplinary tool that concentrates on new products development and their marketing and it is connected to the phase of commercialization and communication with customers as the subjects of the innovation process. The main role of the open innovation system is to obtain information about all stakeholders' needs so it can effectively identify valuable and profitable innovation in business, as well as problems related to management decisions and practices in the innovation process. To get these innovation, open innovation system uses inbound marketing and new innovative forms of marketing communication that are already based on two-way communication within the information distribution among stakeholders. Inbound marketing enables direct connection with customers and its advantage relies in overcoming the borders. Traditional tools of marketing communication are not so effective in influencing customers abroad so if the company wants to become more competitive and successful in the global market it should communicate with customers with the use of inbound marketing tools that involve customers in the communication process and allow them to be an interactive part of this process.

Keywords: marketing, marketing communication, open innovation system

JEL Classification: M31, O31, M10

1. Introduction

The paper deals with selected theoretical and practical aspects of open innovation system in link with marketing in global perception. Enhancing the competitiveness of the economy at national level is based on innovation. The role of innovation is important not only at the national level but also plays an important role in the global context (Loučanová et al., 2015). As Krajňák & Meier (2016) state, at present globalization affects practically the whole economy. The consequence of globalization tendencies is an expanding market space where a business entity can be active.

Processes associated with internal and external business activities are a part of each business. Some definitions of a business process are presented in the professional literature.

Most of them obtain a common idea, especially that a business process consists of mutually linked activities and their output represents a value for the customer. Another approach explains a business process as a sequence of activities performed repeatedly, whereby it has a strictly given beginning and end (Kováčiková & Repková-Štofková, 2016).

It rules globally that the business process and its outputs can lead directly or indirectly to the creation of end value for the customer. The process itself consists of smaller sub-processes, or operations that can be shown on a map of sub - processes. It is also possible to characterize this process as a sequence of partial activities with a mutual objective. The beginning of the whole process results from the start-up signal, and an output for the customer is sequentially created by the defined partial processes with the usage of allocated resources (Štofko et al., 2016).

At present marketing represents a tool of business connection with its environment and customers to meet their needs. In constantly changing market conditions, it is necessary to react to changes and customer requirements as quickly as possible. It can be realized through involving customer needs and demands directly into marketing using the innovative tools that are the part of the open innovation system.

The open innovation system in this case is the ability to share information among various subjects in the network (Schurmann et al., 2014). Snyman et al. (2007) mention that an open innovation system represents an important competitive advantage regarding the restricted access to information within the innovation process, known as closed innovation system. Real-time innovation process performs on five elementary principles, such as courage, openness, realism, influence and sustainability (Royas de Arias at al., 2014). Open innovation system is linked with the phase of commercialization and communication with customers as subjects of the innovation process. It provides innovators with information about customers´ needs as well as about all stakeholders´ needs involved in the innovation process.

According to Wu et al. (2016), the aim of the open innovation process is to effectively recognize valuable and profitable business innovation, as well as problems occurring in management decisions and practices in the innovation process. It provides knowledge about open innovation practices at the project level and an enlarged model of market opportunity analysis for high technology markets.

The open innovation process is supposed to be a multi-disciplinary tool that focuses on new products development and their marketing. The open innovation system applies inbound marketing and new innovative forms of marketing communication. Their characteristic feature is two-way communication with stakeholders that affords the company a quick feedback from customers on innovation or selected marketing campaigns. Another advantage of two-way communication rests in lower costs.

Two-way communication means interactive communication with customers which is actually realized through search engines, social networks and different links. The aim and effort of inbound marketing is to entertain or to educate the customer. Within this kind of communication the customer gets a certain value.

Inbound marketing aims at getting individual attention. This can be achieved by publishing the content that is attractive and interesting for customers. It includes blogging, educational articles publishing, publishing the troubleshooting guidebooks and sharing information in forums. It requires producing the content with a certain value and benefits for the target customers. Moreover, it is available free of charge, which also creates a positive brand link with the customer. It is more presumed that this way involved customer buys the product. Indeed, the whole process is cheaper and has a higher effect (Guadalupe et al., 2015), (Gonzalez-Fernandez-Villavicencio, 2015), (Pirnau, 2015), (Simionescu, 2015).

From the point of view of the company, the prompt feedback that is provided by their usage allows the company to gain an amount of ideas to be applied in the innovation process. Their advantage also lies in their global using, especially in e-business at all its levels. The need to apply innovative communication tools is caused by the fact that common consumers are more demanding, comfortable and resourceful in searching new shopping possibilities. Before realizing shopping decisions they make own research and compare possibilities that are offered in the global market.

Taking into account information mentioned above, it is expected that a significant number of marketing employees are going to increase expenditures on inbound marketing in the near future. Reality shows that the average budget of companies flowing into blogs and social networks doubled during last two years. It has also significantly increased the number of marketing employees who suppose that Facebook is irreplaceable in their business. In the global market 67 % of B2C (business to customer) companies and 41 % of B2B (business to business) companies have got customers by Facebook, and 57 % of all companies have obtained a customer through a corporate blog.

Another reason to use inbound marketing rests in favourable price, respectively costs used to address one potential customer, that is approximately 62 % lower compared to traditional outbound marketing. This is answer to the question why inbound marketing is becoming so important (Loučanová & Olšiaková, 2016).

2. The open innovation system in business process with marketing using in global environment

In general, business reaches a big boom in global market. The notable changes have occurred even in e-business due to the limitless possibilities of the global electronic world, ranging in different business areas such as electronic sales, control, electronic commerce management, logistics, and marketing. E-business process with all its components provides entrepreneurs with various possibilities how to make online business. It can be described by a 4-level maturity model of e-business by Madleňák (2004).

The first level of e-business is named “Broadcast”. It is the essential level of maturity model of e-business. It is characterized by a basic on-line access of chosen information by customer.

The second level is known as “Interact” and it represents an extension to the first level with the possibility of interactive communication through various applications such as Public Relations, respectively on-line forms.

The third maturity level is called “Transact”. It provides customers with the possibility to order, respectively to complete products purchasing through the online shop.

The highest level is the fourth level ”Integrate”, which is based on the involvement of business into virtual business network, respectively electronic shopping centre, also called e-mall (Madleňák, 2004), (Loučanová et al., 2016).

These levels can be developed further taking into account the possibilities of the Internet.

We have to realize that the ability of the entrepreneur to offer products on the internet at different levels of e-business does not insure him the sale of his products. Therefore, it is essential to support the sale through effective marketing.

However, e-business can apply only marketing tools that can be used in electronic form. This fact does not make useless electronic business. On the contrary, it makes entrepreneurs to constantly develop new marketing tools providing further opportunities and that are able to ensure quick feedback and effectiveness of used tools.

E-business does not depend only on the tools of outbound marketing, where we assign traditional marketing communication tools based on one-way communication. They are substituted by inbound marketing tools which are supposed to be more innovative and more effective. Inbound marketing includes Murketing, Content Marketing, Viral Marketing, Game advertising, Astroturfing, Marketing Search Engine, White Paper, E-newsletters and many others). All of them are helpful in a need to modify analytical and advertising subject content and personal communication (Melnyk & Korinchenko, 2015).

As we have mentioned, nowadays marketing is a linking tool of business with its environment and with customers in order to meet their demands and needs in the global environment. In a rapidly changing market conditions, it is necessary to be able to respond to changes and customer requirements as soon as possible. This can be realized through the customers’ engagement in marketing using the innovative tools that are the part of the business open innovation system.

As we have mentioned, the open innovation system in the global market uses innovative communication tools that allow the company the two-way communication with customers (see Figure 1).

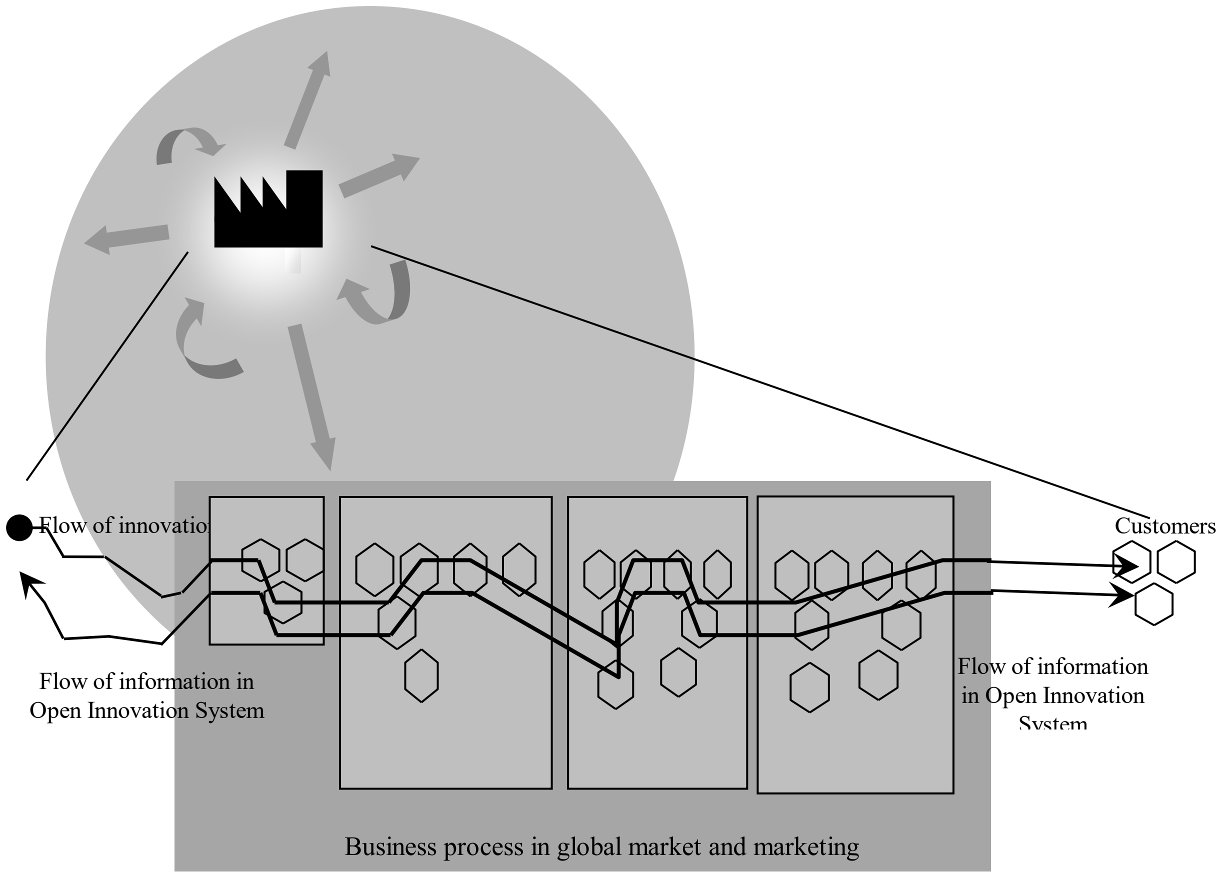
It is assumed that the customer comfort increases business influence on him. It is due to the fact that if the entrepreneur has his e-business at a higher level, then his actual e-mall (e-commerce centre) provides customer with various forms of inbound marketing. The entrepreneur is also provided with these services, so the comfort of his business increases and he also has a feedback from customer (Figure 1).

Then feedback may be used to improve the products and services through their innovation in the context of the innovation process, where its first part “Invention creation” is provided according to specific customer requirements and expectations. They are evaluated by e-shop connected with e-mall or more e-malls (such as electronic business centres) through reports.

The advantage in terms of innovation process is the data (information) gathering within the e-business.

Is also has a significant importance also in the area of timing, because the time of the innovation launching is getting shorter due to accelerated invention gathering and they can be quickly included.

Figure 1: Information flow in the open innovation system in global market



Source: (Loučanová, 2016)

In the meaning of the open innovation system in e-business with inbound marketing using in innovation creation, the communication policy carries out two tasks. The first one is associated with the creation of the innovation value. That means creating the quantitative and qualitative purpose-built changes. The second one focuses on realization of information flows in e-business and innovation process by creating the balance between supply and demand. That means the flows realization between sources and consumers. Finally, companies discover at the right time and on the right place what the market requires. This ability is called FIT (flexibility, innovation and implementing activities at the right time). All outputs of mentioned functions must be in required quantity and quality when managing innovation in business (Straka, 2013), (Loučanová, 2016).

3. Conclusion

Sales statistics indicates that the consumption is constantly increasing. The success in the global market requires marketing employees to search new trends and look for incentives that motivate customers to buy and to consume. The companies may use various tools to reach and influence the customer. They can select and apply traditional tools, but in an effort to gain a competitive advantage they use even less known but more effective forms of marketing communication that are supposed to be more innovative.

Open innovation system rather uses innovative communication tools that bring information directly from customers and ensures two-way communication, where customer is an active part of the communication process.

Actual information and their right elaboration influence the success of the companies in international measurement in the global market.

Acknowledgment

The authors would like to thank the Grant project 1/0756/16 "Identification of consumers' segments according to their affinity for environmental marketing strategies of business entities in Slovakia". The authors therefore would like to thank the Scientific Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic and the Slovak Academy of Sciences, too.

References

[1] González-Fernández-Villavicencio, N. (2015). What does user focus mean? Marketing strategy and tactics. *El profesional de la información,* vol. 24, no. 1, pp. 5-13.

[2] Guadalupe, G. A. (2015). Inbound Marketing en LinkedIn for Brand Management. *Revista ICONO14. Revista científica de Comunicación y Tecnologías emergentes,* vol. 13, no. 1, pp. 105-124.

[3] Kováčiková, M. and Repková-Štofková, K. (2016). Impact of globalization on access to process businesses management. *16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, pp. 1022-1030.

[4] Krajňák M. and Meier, V. (2016): Application of a Selected Method of Multi-criteria Decision when Preparing Financial Statements according to IFRS and Czech Accounting Standards. *Globalization and its socio-economic consequences: 16th international scientific conference: proceedings: part III.* Rajecke Teplice, Slovak Republic, pp. 1046-1052.

[5] Loučanová, E. (2016). *Inovačné analýzy a stratégie: prednášky*. Zvolen: Technická univerzita vo Zvolene.

[6] Loučanová, E. and Olšiaková, M. (2016). Open Innovation System In E-Bussines With Inbound Marketing And Logistic Using. *Acta logistica,* vol. 3, no. 3, pp. 15-19.

[7] Loučanová, E., Olšiaková, M. and Dzian, M. (2016). Využívanie inbound marketingu v elektronickom podnikaní. *Trendy v online marketingu*: *zborník z vedeckej konferencie Make it digital*, 12 pp.

[8] Loučanová, E., Parobek, J., Kalamárová, M., Paluš, H., Maťová, H. and Repková Štofková, K. (2015). Innovation activities in micro and small companies in Slovakia. *Globalization and its socio-economic consequences.* pp. 378-381.

[9] Madleňák, R. (2004). *Elektronický obchod.* Žilina: EDIS, SK.

[10] Melnyk, Y. M. and Korinchenko, D. V. (2015). Analysis of practical use of modern internet technology as a mean of marketing communications in the field of B2B and B2C. *Marketing and Management of Innovations*, vol. 4, pp. 76-86.

[11] Pirnau, M. (2015). Considerations on the functions and importance of a web crawler. *2015 7th International Conference on Electronics, Computers and Artificial Intelligence (ECAI)*, pp. Y -17.

[12] Rojas de Arias, A. R. (2014). Living Labs, Spaces for Open Innovation and Technology Transfer. An Alternative to the Solution of Social Problems in Paraguay. *Social Sciences,* vol. 3, no. 3, pp. 60-69.

[13] Schurmann, D., Baccarne, B., Coorevits, L., Georges, A. and Logghe, S. (2014). Knowledge exchange for innovation development in open innovation systems, *Tijdschrift voor Communicatiewetenschappen*, vol. 42, 35 pp.

[14] Simionescu, S. (2015). Designing a modern user experience for a human resources website Handling both visitor perspectives: Candidates and recruiters. *2015 14th RoEduNet International Conference - Networking in Education and Research (RoEduNet NER),* pp. 163-166.

[15] Snyman, D., Grundling, J. P. and Steynberg, L. (2007). Patent Management in Open Innovation Systems, *Beyond Borders: New Global Management Development Challenges and Opportunities*, vol. 16, pp. 774-780.

[16] Štofko, S., Šoltés, V. and Štofková, Z. (2015). Options of using the integrated management system. *Production Management and Engineering Sciences,* pp. 267-272.

[17] Straka, M. (2013). *Logistika distribúcie, Ako efektívne dostať výrobok na trh*, 1st ed. Bratislava: EPOS.

[18] Wu, A. Y., Little, V. J. and Low, B. (2016). Inbound open innovation for pharmaceutical markets: a case study of an anti-diabetic drug in-licensing decision. Journal of Business & Industrial Marketing, vol. 31, no. 2, pp. 205-218.

THE DEVELOPMENT OF DEMAND SIDE RESPONSE SERVICES APPLIED TO THE EUROPEAN MARKETS OF ELECTRICITY

Zbigniew Łukasik[1,a], Jacek Kozyra[2,b,*], Aldona Kuśmińska-Fijałkowska[3,c] and Sylwia Olszańska[4,d]

[1]Faculty of Transport and Electrical Engineering, University of Technology and Humanities in Radom, Malczewskiego 29, 26-600 Radom, Poland

[2]Faculty of Transport and Electrical Engineering, University of Technology and Humanities in Radom, Malczewskiego 29, 26-600 Radom, Poland

[3]Faculty of Transport and Electrical Engineering, University of Technology and Humanities in Radom, Malczewskiego 29, 26-600 Radom, Poland

[4]Faculty of Transport and Electrical Engineering, University of Technology and Humanities in Radom, Malczewskiego 29, 26-600 Radom, Poland

[a]z.lukasik@uthrad.pl, [b]j.kozyra@uthrad.pl, [c]a.kusminska@uthrad.pl, [d]s.olszanska@uthrad.pl

*Corresponding author

Abstract. Building SmartGRID is a required component of the strategies of energy security in all developed countries. It is already a global trend. It is facilitated by rapid development of renewable sources of energy. Electric intelligence is connected with determination of momentary demand and management of energy consumption, taking distributed generation into consideration. Determining the Demand Side Response (DSR) or Demand Response is associated with intervention management of energy consumption on the side of its recipients and generation of negawatts (unused megawatts), that is, saved power units, when recipients reduces electricity consumption. DSR mechanism is a developed concept of SmartGRID. The developing DSR mechanism is in line with the European Commission's intent. This means that it has a chance to become one of the best international instruments promoting flexibility in Europe and in the world. The authors presented currently applied mechanisms and programs of demand side response. The publication mainly focuses on DSR mechanisms using cooperation of a recipient with management of demand side in passive way, that is, by submitting to remote reduction of energy consumption by an operator on the basis of defined conditions and procedures. Moreover, the authors presented economic potential and efficiency of introduction of DSR mechanisms on the functioning of the markets of electricity. The examples from European and North American market were presented.

Keywords: DSR, Demand Side Response, Negawatts

JEL Classification: D44, D49, D61, F01, Q41

1. Introduction

An intensive debate on energy transformation is taking place in the European Union. The discussions on redevelopment of electrical power system concern mainly the future of the sources of electricity production and its sensible costs. Growing share of renewable sources does not guarantee stable supplies without changes in the functioning of the whole electrical power system (Łukasik et al., 2016), (Łukasik et al., 2017). Therefore, energy market needs to be reformed in order to create economic incentives to balance changeable sources. Improving access to on-line data about energy consumption enables the consumers to quickly react to changes of demand and supply, which will improve flexibility of distribution systems.

Thinking about redevelopment of the system and new production capacities, it must be considered whether these actions are right and whether new sources will be needed. The development of DSR services would be reasonable. Many examples of these services showed that resources of the so-called demand side may be cheaper than new production units and stable, on the condition that stable framework and equal participation in energy market in comparison with production resources will be provided. The analyses and calculations of RAP (Regulatory Assistance Project) showed that potential of Polish DSR exceeds 1,5 GW (Wieczerzak-Krusińska, 2017), (Palensky & Dietrich, 2011). It means that instead of building new units to provide peak energy demand, contracting a service of reduction of demand for power on the side of the consumers supplied from distribution networks is possible. Such solution will have impact on improvement of flexibility, availability, reduction of emissivity and reduction of the costs of functioning of electrical power system.

The participants of energy markets of North America are the leaders within the scope of using DSR. According to FERC (Federal Energy Regulatory Commission), in 2012, 20,3 GW of real reduction of peak load was identified on the market areas, that is, 31% of total use of potentially reported reduction of this load (Federal Energy Regulatory Commission, December 2012). In the analyses for 2013-2014 for NERC market area (North American Electric Reliability Corporation), real reduction of peak load was 27 GW in 2013 and 31,2 GW in 2014. It gives an increase by 15,1% of total use of potentially reported reduction of this load (Federal Energy Regulatory Commission, December 2016).

2. DSR mechanisms

In accordance with definition of DSM (Demand Side Management), it means management or controlling the demand in order to identify, assess and make use of sources (resources) on the demand side for electric energy by its end users. Therefore, it is an instrument of execution of integrated planning of energy resources on the demand side.

DSM is also defined as controlling the demand and concerns final electricity consumers, therefore, it shapes the mechanisms of competition at the level of distribution companies or for potential energy suppliers. Such activities are defined as affecting by a supplier and consumer, the consumption level and the way of using electricity (Molina-Garcia et al., 2011), (Torriti et al., 2010). The basic goals and DSM undertakings include:

- Effective saving and use of energy, that is, reduction of electricity consumption,
- Shaping load curve, through controlling the load, that is, reduction or moving the load to the peak period.

The second of the undertakings mentioned above is also defined as demand side response. The main goals of DSR mechanisms include:

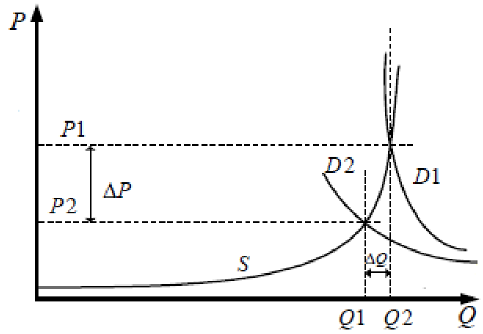
- Reduction of maximum peak loads (a few hours within a year, when relations price/costs are high – unexpected generator failures or excessive demand growth),

- Increasing the load in the periods of bottom level, when the prices of energy are low (in order to improve power factor),
- Moving of the loads between various times of the day or seasons (moving from the period of high prices to the period of low prices, typical moving from afternoon peak to later night period),
- Adjustment of load to actual working conditions of electrical power system.

Controlling the demand is one of the elements of planning the development of electrical power system in accordance with a concept of locally integrated planning of LIRP resources (Local Integrated Resource Planning), which assumes two-stage demand procedure, as well as in accordance with IRP concept (Integrated Resource Planning), which assumes providing electricity for the lowest social costs.

The mechanisms of functioning of DSR make use of daily and seasonal variability of demand for power and electric energy. It has considerable impact on controlling the demand and reduction of negative effects of uneven and repeatable excessive electricity demand. Thanks to efficient energy consumption, it is possible to smooth out the course of load curve and reduce the costs of energy supplies. It is regarded as a result of increased efficiency of production, transmission and distribution of electricity (Martínez Ceseña et al., 2015), (Siano, 2014). Considering the DSR mechanism in short-term time horizon (the measure is hours), demand side response has significant impact on power balance in the system and may be regarded as economic optimization of energy demand. Whereas, in long-term time horizon, it may have impact on energy balance and reduce it. The source of initiating DSR mechanism is price signal, which may come from all markets determining the price for power or energy. Price signal may be based also on the tariffs for electric energy and tariffs for transmission and distribution services. The markets determining the price for energy and electrical power services include: spot market, intraday market, balancing market and system service market. If settlement prices on these markets are higher than prices from DSR resources, this mechanism will be activated. Demand side response to the costs of energy production S is presented on Figure 1 (Albadi & El-Saadany, 2008). Where Q means amount of electricity and P is price for this energy.

Figure 1: Demand side response to prices of electricity market



Source: (Albadi & El-Saadany, 2008)

In case of inflexible demand for energy (demand curve D1), the lack of demand side response due to high costs of production S, which will result in high price P1 and may lead to system imbalance. Much lower price P2 will be determined for flexible demand thanks to activation of the programs of demand side (demand curve D2) and thanks to reduction of energy demand by ΔQ on the market.

3. DSR programs

DSR programs according to (Albadi & El-Saadany, 2008), (Federal Energy Regulatory Commission, December 2008), (Rahimi & Ipakchi 2010) can be divided into the following programs:

IBP (Incentive - Based Programs) include:

- DLC (Direct Load Control), remote switching off in a short time, in a specific device cycle of consumer.
- ICR (Interruptible/ Curtailable Rates) - in this program, there is a clause in an agreement with a customer and consumer accepts total or partial power cut or agrees to reduce power take-off at the request of a supplier.
- DBP (Demand Bidding Programs) encourages big consumers to offer reduction of load for the price that they can make reduction.
- EDRP (Emergency Demand Response Programs) predicts financial incentives for the consumers to reduce their loads during events threatening reliability of supplies, however, reduction of load is voluntary.
- CMP (Capacity Market Programs), in which consumers oblige to reduce load in previously defined amount in case of occurrence of specific working conditions of a system.
- ASMP (Ancillaty Services Market Programs) enables consumers to make (bidding) offers of load reduction, on the market regulating services, which increases the range of available operational reserve.

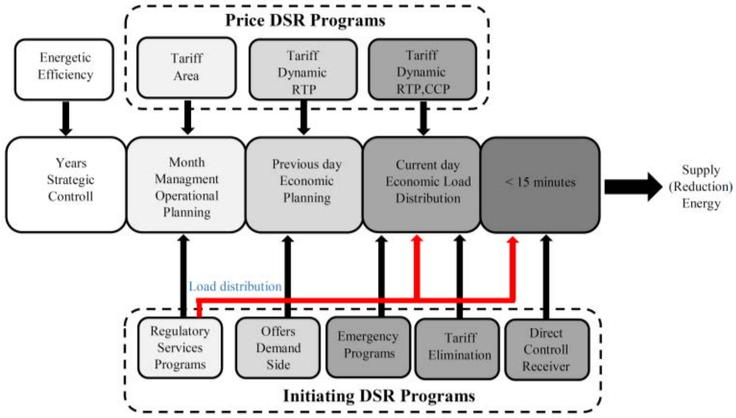
PBP (Price - Based Programs) include:

- Multi-zone tariffs TOU (Time Of Use), where energy charges change in daily, weekly (working days/weekends) and seasonal (summer/winter) cycle (Conejo et al., 2007), (Warren, 2014).
- Tariffs with CPP (Critical Peak Pricing) applied in order to closely connect the rates in multi-zone tariff with current working conditions of electrical power system.
- RTP (Real Time Pricing) is a tariff, in which variability of prices for electricity is predicted.

4. DSR in controlling the electrical power system

The forms of management of demand in an electrical power system may be applied both in normal (load compensation) and emergency states (selective unplugging of receivers). Demand side response may control the electrical power system as a tool supporting the management of power in various time horizons (from years to minutes or seconds). Due to the type of control with reference to DSR programs, active and passive programs and with the use of time tariffs (tariff controlling) may be distinguished. Active DSR programs are the ones, in which operator (supplier) initiates actions aiming at reduction of consumer's load power. Passive DSR programs include the programs, which require from a consumer to make a decision about reduction of demand value (electricity consumption) on the basis of price incentives offered by an operator or supplier in peak periods (Samarakoon et al., 2013). The estimated values of reduction of load as a result of reduction of demand side in % from available DSR resources depending on the type DSR program may amount to: Direct controlling of take-off 70 ÷ 90 %, incentive programs 40%, price programs 30%. The impact of particular DSR programs on planning and controlling the electrical power system was presented on Figure 2.

Figure 2: DSR in planning and controlling the electrical power system



Source: authors

5. Economic potential

DSR gives the following benefits:

Reduction of costs

DSR may reduce the costs of maintaining stable energy supplies to the consumers. International experience shows that DSR often makes offers for much lower prices than traditional resources, which means that negawatts from DSR are cheaper than megawatts of produced energy (Cappers, 2010). Cheaper resources from the system let consumers to save money, which lowers final price paid to all producers on the market. It lowers the price for all energy consumers.

An example of reduction of the costs by using DSR resources and Energy efficiency on the power market is the activity of US operator acting on the PJM area (Pennsylvania - New Jersey - Maryland)

Table 1 shows savings resulting from participation of DSR in 3 auctions of power market with service supply in the years 2015 – 2018 (Monitoring Analytics Analysis of the 2015/2016), (Monitoring Analytics Analysis of the 2016/2017), (Monitoring Analytics Analysis of the 2017/2018). Stable period without significant regulating changes was chosen for an analysis. The auctions are conducted three years before an obligation of providing power.

Table 1: Savings from DSR programs

	Auction income mld $ (USD)	Consumers savings using DSR mld $ (USD)	Cost reduction for customers %
2015/2016	9,7	13,7	59
2016/2017	5,5	10,1	65
2017/2018	7,5	9,35	55,4

Source: authors, based on Monitoring Analytics Analysis of the 2016/2017, Monitoring Analytics Analysis of the 2017/2018.

Without DSR, total cost of power market would be higher by 59%, 65%, and 55,4%. The values present total income of all resources, who won auctions..

Reliability

One of the concerns connected with management of demand side is that it may not be as reliable as peak load power plant (hydroelectric or gas power plant). The impact of demand response and production on the market in New England on particular price zones was presented in Table 2 (Hueley et al., 2013).

Table 2: Power generation capacity and DSR in New England (USA)

Efficiency of power resources				
Area	DSR (Real time demand response)		Power generation (real time emergency generation)	
	MW	Efficiency %	MW	Efficiency %
Main	278	100	25	100
New Hampshire	45	93	33	98
Vermont	33	100	13	98
Connecticut	261	72	254	86
Rhode Island	40	90	56	88
South Western Massachusetts	136	78	37	86
West/Central Massachusetts	132	97	577	94
North East Massachusetts	198	80	78	89
Total	1124	86	553	90
Medium efficiency of power generations	94,5%			
Planned efficiency level of power generations	80%			

Source: (Hueley et al., 2013)

Therefore, it may not be applied to balance the system. However, the proofs show that, with appropriate organization, demand response may be more fault-free resource. The determination of DSR potential is not easy, because its part is revealed only when barriers are removed and markets are opened to demand response. Potential depends mainly on the costs, operating time and activation method.

Demand response and emergency energy production in real time exceeded assumed 80% of availability level, where demand response was 86% and of the producers was 90% (Hueley et al., 2013). Therefore, demand response may be reliable resource for many energy markets and power market. However, appropriate design of mechanism and selection of advanced DSR programs is the key issue.

6. The assessment of efficiency of introduction of DSR mechanisms on energy markets

The leader within the scope of application of DSR mechanisms is the United States. The operators of US electrical power systems effectively use a mechanism of making demand flexible to balance their systems. DSR service was introduced by PJM operator, which has 15 GW of power, which satisfies more than 9% of peak load in that system. In case of ISO-New England, DSR potential is 8%. This mechanism is also growing rapidly in Europe. The market is rapidly developing in Great Britain, England (3,6%) and France (1,2%).

In Europe and all over the world, many studies and analyses concerning estimation of demand response capabilities have been conducted in recent years. One of them is a study with the use of „top-down" method in order to determine technical potential of demand response in 28 EU countries (Gils, 2014). In this study, potential of demand response was divided into industrial, commercial and council ones. Final resources and theoretical potential technical with adaptive capabilities or which is characterized by flexibility (steel mills, production and industrial facilities, heating and air-conditioning systems in the buildings) was determined for all sectors. Technical potential of demand response as participation of DSR in reduction of peak load is presented in Table 3 (Bayer & Rączka, 2017).

Table 3: Technical potential of DSR demand response

Country	DSR potential (GW)	Peak demand (GW)	DSR share peak demand (%)
France	11,6	102	11
Poland	3,6	25	14
Great Britain	8,0	56	14

Source: (Bayer & Rączka, 2017)

In the European countries, there are many examples confirming the development and growing activity of DSR. Contracted DSR in selected EU countries is presented in Table 4. (Bayer & Rączka, 2017).

Table 4: Contracted DSR in selected EU countries

Country	Peak demand 2015 (MW)	Contracted DSR(MW)		% of peak demand (2015)
		2015	2016	
France	91610 (February)	1800	1689	1,96
Spain	38666 (February)	2000	2083	5,17
Italy	59353 (July)	4061	4131	6,84
Geramny	84000 (December)	894	860	1,06
Slovenia	2000 (January)	20	21	1,00
Poland	25101(January)	210 (winter) 185 (summer)	228	0,8

Source: (Bayer & Rączka, 2017)

Five entities declaring possible reduction by 361 MW signed up for current program for 2017. The plans of DSR contracting for current year by PSE reached even 500 MW. Although these plans were not fully executed, DSR increased by 133 MW, that is, by 63 % in comparison with 2016.

7. Conclusion

DSR services are becoming increasingly important on the global electricity markets. The operators, introducing new mechanisms controlling the electrical power system, have come to a conclusion that expensive investments in new production sources are unnecessary. Building new units in order to cover peak load is pointless, because it takes place only several dozen hours a year. The potential of DSR resources may be estimated at the level between 5% and 9% of peak power of a given system. The main benefits of implementation of DSR mechanisms include: improvement of reliability and system security, financial benefits for the participants of demand side programs, reduction of costs connected with obtaining expensive peak sources, improvement of management of price and quantitative risk on the energy market.

DSR programs are particularly attractive for the operators, because their impact on the system may be used while planning and managing the electrical power system. The operators are looking for their own solutions for particular DSR programs, adjusted to specificity of a given system and available demand side resources. In case of introduction of mechanisms of demand side response by transmission system operator, introducing original solutions, which may combine the features of various DSR programs should be considered.

Further development of DSR should include energy efficiency and broadly defined integration of European markets. This integration will require better coordination between countries on the issue of solving a problem of unplanned flows, expansion of transmission infrastructure. The discussion on adjustment of time zones will be necessary.

References

[1] Albadi, M. H. and El-Saadany, E. F. (2008). A summary of demend response in electricity markets", *Electric Power Systems Research*, vol. 78, pp. 1989-1996.

[2] Bayer, E. and Rączka J. (2017). Jak rozwinąć potencjał DSR w Polsce i obniżyć koszty funkcjonowania systemu elektroenergetycznego. Regulatory Assistance Project. Marzec 2017. [Online]. Available: http:/www. forum-energii.eu

[3] Cappers P., Goldman Ch. and Kathan D. (2010). Demand response in U.S. electricity markets: Empirical evidence, *Energy*, vol. 35, no. 4, pp.1526-1535 .

[4] Conejo A., Morales J. and Baringo L. (2010). Real-Time Demand Response Model, *IEEE Transactions on Smart Grid*, vol.1, no. 3, pp. 236 – 242.

[5] Federal Energy Regulatory Commission: Assessment of Demond Response and Advanced Meterning 2012, Staff Report. (December 2012). Federal Energy Regulatory Commission. [Online]. Available: http:/www.ferc.gov

[6] Federal Energy Regulatory Commission: Assessment of Demond Response and Advanced Meterning 2016, Staff Report. (December 2016) Federal Energy Regulatory Commission. [Online]. Available: http:/www.ferc.gov

[7] Federal Energy Regulatory Commission: Assessment of Demand Response and Advance Metering. Staff Report. (December 2008). Federal Energy Regulatory Commission. [Online]. Available: http://www.ferc.gov/

[8] Gils, H.Ch. (2014). Assessment of the theoretical demand response potential in Europe, *Energy*, vol. 67, pp. 1-18.

[9] Hueley, D. and all (2013). Demand Response as a Power Systems Resource, RAP, 2013. [Online]. Available: http://www.raponline.org/document/download/id/6597

[10] Łukasik Z., Kozyra J., Kuśmińska-Fijałkowska A. and Warchoł, R. (2016). Guaranteed power supply for the purpose of automated technological line of powder coating. *Electrical Engineering,* December 2016, pp. 1-9.

[11] Łukasik Z., Kuśmińska-Fijałkowska A., Kozyra J., Putynkowski G. and Woźny K. (2017). The problem of power supply for station with industrial robot in an automated welding process, *Electrical Engineering,* June 2017, pp. 1-13.

[12] Martínez Ceseña E., Good N., Mancarella P. (2015). Electrical network capacity support from demand side response: Techno-economic assessment of potential business cases for small commercial and residential end-users, *Energy Policy*, vol. 82, pp. 222-232.

[13] Molina-Garcia A., Bouffard F., Kirschen D. (2011). Decentralized Demand-Side Contribution to Primary Frequency Control. *IEEE Transactions on Power Systems*, vol. 26, no. 1, pp.411 – 419.

[14] Monitoring Analytics Analysis of the 2015/2016 RPM Base Residual Auction, 24.09.2013

[15] Monitoring Analytics Analysis of the 2016/2017 RPM Base Residual Auction, 18.04.2014

[16] Monitoring Analytics Analysis of the 2017/2018 RPM Base Residual Auction, 06.10.2014

[17] Palensky P. and Dietrich D. (2011). Demand Side Management: Demand Response, Intelligent Energy Systems, and Smart Loads. *IEEE Transactions on Industrial Informatics*, vol.7, no 3, pp. 381 – 388.

[18] Rahimi F. and Ipakchi A. (2010). Demand Response as a Market Resource Under the Smart Grid Paradigm, IEEE Transactions on Smart Grid, vol.1, no. 1, pp.82 - 88

[19] Samarakoon K., Ekanayake J. and Jenkins N. (2013). Reporting Available Demand Response, *IEEE Transactions on Smart Grid*, vol. 4, no. 4, pp.1842 - 1851,

[20] Siano P. (2014.) Demand response and smart grids—A survey, *Renewable and Sustainable Energy Reviews*, vol. 30, pp. 461-478.

[21] Torriti J., Hassan M. and Leach M. (2010). Demand response experience in Europe: Policies, programmes and implementation, *Energy*, vol. 35, no. 4 pp. 1575-1583.

[22] Warren P. (2014). A review of demand-side management policy in the UK, *Renewable and Sustainable Energy Reviews*, vol. 29, pp. 941-951.

[23] Wieczerzak-Krusińska, A. (2017). Przedsiębiorcy zarobią na obniżce zużycia prądu*, Rzeczypospolita.* Nr. 118.

ANALYSIS OF REVENUES AND COSTS OF A TRANSPORT COMPANY OPERATING IN THE EUROPEAN UNION

Zbigniew Łukasik[1,a], Aldona Kuśmińska-Fijałkowska[2,b,*], Jacek Kozyra[3,c] and Sylwia Olszańska[4,d]

[1]Faculty of Transport and Electrical Engineering, University of Technology and Humanities in Radom, Malczewskiego 29, 26-600 Radom, Poland

[2]Faculty of Transport and Electrical Engineering, University of Technology and Humanities in Radom, Malczewskiego 29, 26-600 Radom, Poland

[3]Faculty of Transport and Electrical Engineering, University of Technology and Humanities in Radom, Malczewskiego 29, 26-600 Radom, Poland

[4]Faculty of Transport and Electrical Engineering, University of Technology and Humanities in Radom, Malczewskiego 29, 26-600 Radom, Poland

[a]z.lukasik@uthrad.pl, [b]a.kusminska@uthrad.pl, [c]j.kozyra@uthrad.pl, [d]s.olszanska@uthrad.pl

*Corresponding author

Abstract. Optimization of costs in the European enterprise is one of the key elements of doing business. The changing economic conditions, as well as the effects of competition, impose on transport companies both the search for new forms of operation and the optimization of operating costs. Due to the above, the undertaking of certain projects should be linked to a strategic business plan that will take achieving satisfactory profit. Due to this, running a business is not so easy. It is connected with continuing global market turbulence and also forces entrepreneurs to constantly seek and acquire valuable information that influences the company's development. These actions translate directly into savings and allow to develop schemes that in the long run will allow to rationalize costs and avoid their unjustified occurrence, which will translate into increased business value on the EU market. Doing business in the examined European dimension requires proper cash management - so owning, acquiring, i.e. disposing of capital is crucial to your business. Thus, the quintessence of long-term operation of the company on the European market results primarily from the maximization of benefits, which is synonymous with increasing the value of the enterprise. In the article, the authors have presented an analysis of the costs of the transport company. The methodology of the study was performed on the financial statements for 2014-2015, which enabled the presentation of the basis of the financial result through a general and detailed analysis of the costs.

Keywords: analysis, costs, transport

JEL Classification: L91, R40, R49, D61

1. Introduction

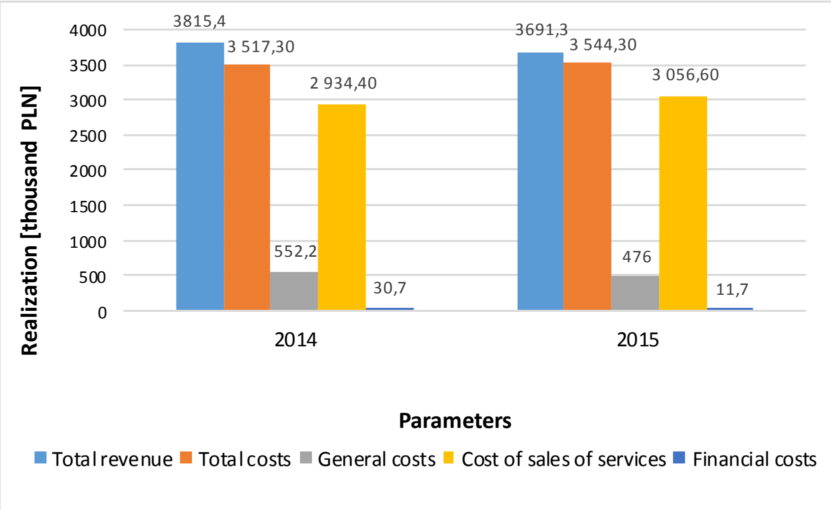
Transport enterprises in the SME sector (Small Medium Enterprises) are a particularly important component of the national economy, since basically the whole of the EU economy depends on them (Łukasik et al., 2017), (Grad et al., 2012), (Łukasik et al., 2013). That is why the adaptability of these companies is particularly important that changing economic conditions, innovation in performance and strengthening competitiveness (Krysiuk et al., 2014), (Kuśmińska-Fijałkowska, et al., 2017), (Łukasik et al., 2016) (Jacyna & Pyza, 2015).

Doing business in the examined European dimension requires proper cash management - so owning, acquiring, i.e. disposing of capital is crucial to your business. (Greene et al., 1997), (Bąk, 2009), (Bień, 2002). Thus, the problem of transport costs in leading a transport enterprise is a very important element (Koźlak, 2008), (Twaróg, 2003), (Łukasik & Olszańska 2016), (Maibach et al., 2008). From this it follows that the constant pursuit of broadening the profile and scope of business, as well as seeking optimal sources of development enabling it to expand, is for managers of transport companies an inherent development factor of an enterprise. (Hensher & Button, 2005), (Ozceylan, 2010), (Nowakowski W et al., 2016), (Kibzun et al., 2016). Authors of this publication have performed research and analysis of the costs of the transport company operating on the area of the European Union. The have paid particular attention to general analysis and performed a thorough assessment of the functioning costs of the company.

2. Overall costs analysis of the examined transport enterprise

In figure 1 the basic source data was placed regarding costs and basic indicators of their initial analysis, i.e. absolute change and dynamics index.

Figure 1: Source data for cost analysis of the examined transport company



Source: own elaboration

Indicators of costs analysis are: (Figure 2)

For total costs:
- absolute deviation (1):

$$\Delta K_{total} = K_1 - K_0 = 3\,544{,}3 - 3\,517{,}3 = 27{,}0\ [thousand\ PLN] \quad (1)$$

- dynamics indicator (2):

$$W_{Ktotal} = \frac{K_1}{K_0} \cdot 100\ \% = \frac{3\,544{,}3\ [thousand\ PLN]}{3\,517{,}3\ [thousand\ PLN]} \cdot 100\ \% = 100{,}8\ \% \tag{2}$$

For general costs:
- absolute deviation (3):

$$\Delta K_{og} = K_{1og} - K_{0og} = 552{,}2\ - 476{,}0 = -76{,}2\ [thousand\ PLN] \tag{3}$$

- dynamics indicator (4):

$$W_{Ktotal} = \frac{K_{1og}}{K_{0og}} \cdot 100\ \% = \frac{476{,}0\ [thousand\ PLN]}{552{,}2\ [thousand\ PLN]} \cdot 100\ \% = 86{,}2\ \% \tag{4}$$

For sales costs:
- absolute deviation (5):

$$\Delta K_{og} = K_{1og} - K_{0og} = 3\,056{,}6\ - 2\,934{,}6\ = +122{,}2\ [thousand\ PLN] \tag{5}$$

- dynamics indicator (6):

$$W_{Ktotal} = \frac{K_{1og}}{K_{0og}} \cdot 100\ \% = \frac{3\,056{,}6\ [thousand\ PLN]}{2\,934{,}6\ [thousand\ PLN]} \cdot 100\ \% = 104{,}2\ \% \tag{6}$$

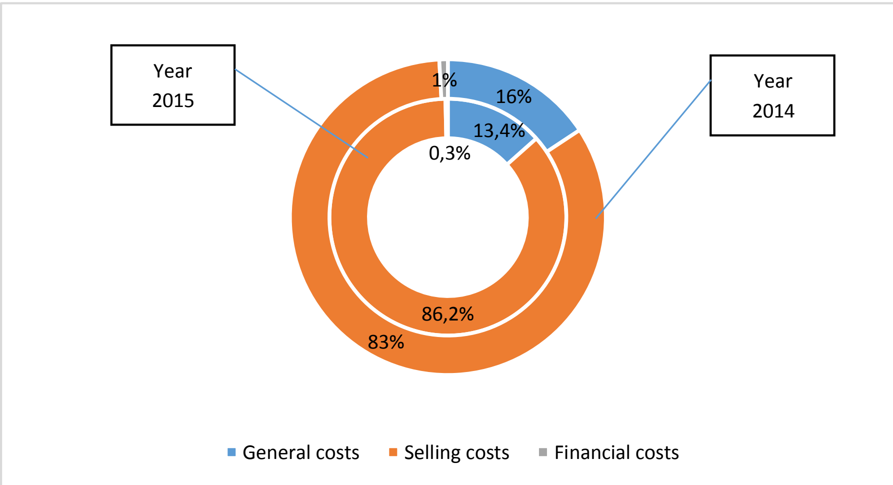
For financial costs:
- absolute deviation (7):

$$\Delta K_{og} = K_{1fin} - K_{0fin} = 11{,}7\ - 30{,}7\ = -19{,}0\ [thousand\ PLN] \tag{7}$$

- dynamics indicator (8):

$$W_{Ktotal} = \frac{K_{1fin}}{K_{0fin}} \cdot 100\ \% = \frac{11{,}7\ [thousand\ PLN]}{30{,}7\ [thousand\ PLN]} \cdot 100\ \% = 38{,}1\ \% \tag{8}$$

Figure 2: Percentage structure of the costs of the surveyed transport company



Source: own elaboration

Important additional information will be provided by indicators of relative deviation that amount to:

a) in terms of total costs (thousand PLN) (9):

$$\Delta K_{tc} = 3544{,}1\ [thousand\ PLN] - 3517{,}3\ [thousand\ PLN] \cdot \frac{3691{,}3\ [thousand\ PLN]}{3815{,}4\ [thousand\ PLN]} = 141{,}4\ [thousand\ PLN] \tag{9}$$

b) in relation to the cost of selling services (10):

$$\Delta K_{css} = 2934{,}4\ [thousand\ PLN] - 3056{,}6\ [thousand\ PLN] \cdot \frac{3691{,}3\ [thousand\ PLN]}{3815{,}4\ [thousand\ PLN]} = 217{,}6\ [thousand\ PLN] \quad (10)$$

c) in relation to general costs (11):

$$\Delta K_{gc} = 475{,}9\ [thousand\ PLN] - 552{,}2\ [thousand\ PLN] \cdot \frac{3691{,}3\ [thousand\ PLN]}{3815{,}4\ [thousand\ PLN]} = -58{,}2\ [thousand\ PLN] \quad (11)$$

d) in relation to financial costs (12):

$$\Delta K_{fc} = 11{,}7\ [thousand\ PLN] - 30{,}7\ [thousand\ PLN] \cdot \frac{3691{,}3\ [thousand\ PLN]}{3815{,}4\ [thousand\ PLN]} = -18{,}0\ [thousand\ PLN] \quad (12)$$

3. Detailed analysis of the costs of the examined transport company

Detailed costs analysis should be linked to the costs classification used in the company (Bachmann et al., 2016), (Yanxuan et al., 2016), (Umberto, 2015). (Table 1)

Table 1: Source data for detailed analysis of the costs of the surveyed transport company in a generic arrangement

			YEAR [thousand PLN]		Total costs structure [%]		Cost structure in categories [%]	
			2014	2015	2014	2015	2014	2015
TOTAL COSTS			**3 517,4**	**3 544,3**	**100**	**100**	-	-
1		**Basic operating costs**	**2 934,4**	**3 056,6**	**83,4**	**86,2**	**100**	**100**
	a	Purchase of fuel	1 867,7	1 950,0	53,1	55	63,6	63,8
	b	Remuneration	328,0	370,2	9,3	10,4	11,2	12,1
	c	Phone costs	16,	12,6	0,5	0,4	0,5	0,4
	d	Purchase of spare parts, oils	160,0	180,0	4,5	5,1	5,5	5,9
	e	Vehicle insurance	90,6	89,5	2,6	2,5	3,1	2,9
	f	Tax on transport means	33,2	35,4	0,9	1,0	1,1	1,2
	g	Tolls	147,2	128,0	4,2	3,6	5,0	4,2
	h	Leasing costs	291,7	290,9	8,3	8,2	9,9	9,5
2		**Other operating costs**	**552,3**	**476,0**	**15,7**	**13,4**	**100**	**100**
	a	Workshop costs	162,7	149,6	4,6	4,2	29,5	31,4
	b	Correspondence costs	8,3	5,2	0,2	0,1	1,5	1,1
	c	Office costs	54,0	40,6	1,5	1,1	9,8	8,5
	d	Energy costs	24,0	25,7	0,7	0,7	4,3	5,4
	e	Purchase of tires	250,0	200,0	7,1	5,6	45,3	42,0
	f	Technical research of vehicles	3,6	3,3	0,1	0,1	0,7	0,7
	g	Telephone costs	12,0	11,9	0,3	0,3	2,2	2,5
	h	Property tax	13,7	14,2	0,4	0,4	2,5	3,0
	i	Delegation costs	24,0	25,5	0,7	0,7	4,3	5,4
3		**Financial costs**	**30,7**	**11,7**	**0,9**	**0,3**	**100**	**100**
	a	Bank charges	30,7	11,7	0,9	0,3	100	100
4		**Extraordinary costs**	**0**	**0**	**-**	**-**	**-**	**-**
	a	Extraordinary costs	0	0	-	-	-	-

Source: own elaboration

Most often, in enterprises, and especially in industry ones, the following costs sections are used:

1. Generic, which allows to distinguish basic types of costs; consumption of materials, fuels and energy, foreign services, depreciation of fixed assets and others.
2. Calculation that divides direct costs connected with the product and indirect ones that are shaped by the size of the potential and the overall size of the business.
3. Division of variable and fixed costs from the point of view of responding to changes in production size (or other activity).
4. By source of costs. (Leszczyński & Skowronek-Mielczarek 2001)

Based on the above data, the absolute deviations and the dynamics of the most important costs components were calculated. (Table 2)

Operating costs of core business:
- absolute deviation (13):

$$\Delta K_{basic\ operational} = K_{basic\ operational(2015)} - K_{basic\ operational\ (2014)} = 3\,056{,}6\ [thousand\ PLN] - 2\,934{,}4\ [thousand\ PLN] = 122{,}2\ [thousand\ PLN] \quad (13)$$

- dynamics indicator (14):

$$W_{Kfuel} = \frac{K_{basic\ operational(2015)}}{K_{basic\ operational\ (2014)}} \cdot 100\ \% = \frac{3\,056{,}6\ [thousand\ PLN]}{2\,934{,}4\ [thousand\ PLN]} \cdot 100\ \% = 104{,}2\% \quad (14)$$

In the operating area of the core business:

Fuel purchase costs:
- absolute deviation (15):

$$\Delta K_{fuel} = K_{fuel(2015)} - K_{fuel(2014)} = 1\,950{,}0\ 1\,867{,}7 = 82{,}3\ [thousand\ PLN] \quad (15)$$

- dynamics indicator (16):

$$W_{Kfuel} = \frac{K_{fuel(2015)}}{K_{fuel(2014)}} \cdot 100\ \% = \frac{1\,950{,}0\ [thousand\ PLN]}{1\,867{,}7\ [thousand\ PLN]} \cdot 100\ \% = 104{,}4\% \quad (16)$$

Salary costs:
- absolute deviation (17):

$$\Delta K_{salary} = K_{salary(2015)} - K_{salary\ (2014)} = 370{,}2 - 328{,}0 = 42{,}2[thousand\ PLN] \quad (17)$$

- dynamics indicator (18):

$$W_{Kfuel} = \frac{K_{salary\ (2015)}}{K_{salary\ (2014)}} \cdot 100\ \% = \frac{370{,}0\ [thousand\ PLN]}{328{,}0\ [thousand\ PLN]} \cdot 100\ \% = 112{,}9\% \quad (18)$$

Leasing costs:
- absolute deviation (19):

$$\Delta K_{leasing} = K_{leasing(2015)} - K_{leasing\ (2014)} = 290{,}9 - 291{,}7 = -0{,}8[thousand\ PLN] \quad (19)$$

- dynamics indicator (20):

$$W_{Kleasing} = \frac{K_{leasing\ (2015)}}{K_{leasing\ (2014)}} \cdot 100\ \% = \frac{290{,}9\ [thousand\ PLN]}{291{,}7\ [thousand\ PLN]} \cdot 100\ \% = -0{,}8\% \quad (20)$$

Costs of buying spare parts and oils:
- absolute deviation (21):

$$\Delta K_{spare\ parts} = K_{spare\ parts(2015)} - K_{spare\ parts(2014)} = 180{,}0\ [thousand\ PLN] - 160{,}0\ [thousand\ PLN] = 20{,}0\ [thousand\ PLN] \tag{21}$$

- dynamics indicator (22):

$$W_{Kspare\ parts} = \frac{K_{spare\ parts\,(2015)}}{K_{spare\ parts\,(2014)}} \cdot 100\ \% = \frac{180{,}0\ [thousand\ PLN]}{160{,}0\ [thousand\ PLN]} \cdot 100\ \% = 112{,}5\% \tag{22}$$

Road toll charges:
- absolute deviation (23):

$$\Delta K_{road\ toll} = K_{road\ toll(2015)} - K_{road\ toll\,(2014)} = 128{,}0\ [thousand\ PLN] - 147{,}2\ [thousand\ PLN] = -19{,}2\ [thousand\ PLN] \tag{23}$$

- dynamics indicator (24):

$$W_{road\ toll} = \frac{K_{road\ toll(2015)}}{K_{road\ toll(2014)}} \cdot 100\ \% = \frac{128{,}0\ [thousand\ PLN]}{147{,}2\ [thousand\ PLN]} \cdot 100\ \% = 87{,}0\% \tag{24}$$

Operating costs of other activities
- absolute deviation (25):

$$\Delta K_{other\ operating} = K_{other\ operating(2015)} - K_{other\ operating\ (2014)} = 476{,}0\ [thousand\ PLN] - 552{,}3\ [thousand\ PLN] = -76{,}3\ [thousand\ PLN] \tag{25}$$

- dynamics indicator (26):

$$W_{Kother\ operating} = \frac{K_{other\ operating\,(2015)}}{K_{other\ operating\,.(2014)}} \cdot 100\ \% = \frac{476{,}0\ [thousand\ PLN]}{523{,}3\ [thousand\ PLN]} \cdot 100\ \% = 86{,}2\% \tag{26}$$

In the area of operating costs of the remaining business:
- tire purchase costs: - absolute deviation (27):

$$\Delta K_{tires} = K_{tires(2015)} - K_{tires\,(2014)} = 200{,}0 - 250{,}0 = -50{,}0\ [thousand\ PLN] \tag{27}$$

- dynamics indicator (28):

$$W_{Ktires} = \frac{K_{tires(2015)}}{K_{tires(2014)}} \cdot 100\ \% = \frac{200{,}0\ [thousand\ PLN]}{250{,}0\ [thousand\ PLN]} \cdot 100\ \% = 80{,}0\% \tag{28}$$

Workshop costs:
- absolute deviation (29):

$$\Delta K_{workshop} = K_{workshop(2015)} - K_{workshop\,(2014)} = 149{,}6\ [thousand\ PLN] - 162{,}7\ [thousand\ PLN] = -13{,}7\ [thousand\ PLN \tag{29}$$

- dynamics indicator (30):

$$W_{Kfuel} = \frac{K_{workshop\,(2015)}}{K_{workshop\,(2014)}} \cdot 100\ \% = \frac{149{,}6\ [thousand\ PLN]}{162{,}7\ [thousand\ PLN]} \cdot 100\ \% = 91{,}9\% \tag{30}$$

As for financial costs:
- absolute deviation (31):

$$\Delta K_{financial} = K_{financial\,(2015)} - K_{financial\,(2014)} = 11{,}7\ [thousand\ PLN] - 30{,}7\ [thousand\ PLN] = -19{,}0\ [thousand\ PLN] \tag{31}$$

- dynamics indicator (32):

$$W_{K financial\ of\ fuel} = \frac{K_{financial\,(2015)}}{K_{financial\,(2014)}} \cdot 100\ \% = \frac{11{,}7\ [thousand\ PLN]}{30{,}7\ [thousand\ PLN]} \cdot 100\ \% = 38{,}1\% \tag{32}$$

Table 2: A summary of the results of the detailed analysis of the examined transport company

			YEAR [thousand PLN]		Absolute deviation [tys. zł]	Dynamics indicator [%]
			2014	2015	2015 - 2014	2015/2014
TOTAL COSTS			**3 517,4**	**3 544,3**	**26,9**	**100,76477**
1	**Basic operating costs**		**2 934,4**	**3 056,6**	**122,2**	**104,2**
	a	Purchase of fuel	1 867,7	1 950,0	82,3	104,4
	b	Remuneration	328,0	370,2	42,2	112,9
	c	Phone costs	16,0	12,6	-3,4	78,8
	d	Purchase of spare parts, oils	160,0	180,0	20,0	112,5
	e	Vehicle insurance	90,6	89,5	-1,1	98,8
	f	Tax on transport means	33,2	35,4	2,2	106,6
	g	Tolls	147,2	128,0	-19,2	87,0
	h	Leasing costs	291,7	290,9	-0,8	99,7
2	**Other operating costs**		**552,3**	**476,0**	**-76,3**	**86,2**
	a	Workshop costs	162,7	149,6	**-13,1**	91,9
	b	Correspondence costs	8,3	5,2	**-3,1**	62,7
	c	Office costs	54,0	40,6	**-13,4**	75,2
	d	Energy costs	24,0	25,7	**1,7**	107,1
	e	Purchase of tires	250,0	200,0	**-50,0**	80,0
	f	Technical research of vehicles	3,6	3,3	**-0,3**	91,7
	g	Telephone costs	12,0	11,9	**-0,1**	99,2
	h	Property tax	13,7	14,2	**0,5**	103,6
	i	Delegation costs	24,0	25,5	**1,5**	106,3
3	**Financial costs**		**30,7**	**11,7**	**-19,0**	**38,1**
	a	Bank charges	30,7	11,7	**-19,0**	38,1
4	**Extraordinary costs**		**0,0**	**0,0**	**0,0**	**-**
	a	Extraordinary costs	0,0	0,0	**0,0**	**-**

Source: own elaboration

4. Conclusion

The research conducted by the authors regarding revenue and costs analysis lead to the unequivocal conclusion that running a business as a transport company is not easy, as it is constantly changing and also forces entrepreneurs to be flexible, creative and devoted to valuable information influencing business development. The fact is that the key to success is taking proper decisions by those managing in the company with regard to capital management. Thus, the quintessence of long-term operation of the company on the European market results primarily from the maximization of benefits, which is synonymous with increasing the value of the enterprise. The effect of such activities is the permanent pursuit to extending the profile of activity, sales markets as well as searching for new development opportunities. In order to succeed, it is necessary to determine the capital needed to finance the investment while maintaining the continuity of ongoing economic processes. It results that investment and financing are interrelated in both the planning and strategic decision making processes of a transport company.

References

[1] Bąk, M. (2009). Koszty i opłaty w transporcie. *Wyd. Uniwersytetu Gdańskiego*, Gdańsk.

[2] Bień, W. (2002). Zarządzanie finansami przedsiębiorstwa, *Difin*. Warszawa.

[3] Bachmann, Ch., Roorda, M. J. and Kennedy, Ch. (2016). Global Trade Creation, Trade Diversion, and Economic Impacts from Changing Global Transport Costs. *Transportation Research Record*, no. 2598, pp. 46-57.

[4] Greene, D. L., Jones, D. W. & Delucchi, M.A. (1997). The full costs and Benefits of Transportation. *Springer Verleg*, Berlin-Heidelberg.

[5] Grad, B., Ferensztajn-Grad, E. and Krajewska, R. (2012). Aspekty efektywności ekologicznej systemów transportowych Unii Europejskiej. *Drogi: budownictwo infrastrukturalne*, pp. 42-51.

[6] Hensher, D. and Button, K. (red.), (2005). *Handbook of Transport Modelling*. Handbooks in Transport. Pergamon-Elsevier Science, Amsterdam.

[7] Jacyna M. and Pyza D. (2015). Rola intermodalnych terminali przeładunkowych w przewozach kolejowo-drogowych. *Problemy Kolejnictwa*, Zeszyt, vol. 169, pp. 15-27.

[8] Koźlak, A. (2008). Ekonomika transportu. Teoria i praktyka gospodarcza, *Wyd. Uniwersytetu Gdańskiego*, Gdańsk.

[9] Krysiuk, C., Brdulak, J. & Zakrzewski, B. (2014). Bezpieczna infrastruktura w transporcie drogowym. *Logistyka*, vol. 4.

[10] Kuśmińska-Fijałkowska, A., Łukasik, Z. and Kozyra, J. (2017). Noise in Road Transport as a Problem in European Dimension. In Safety of Sea Transportation: *Proceedings of the 12th International Conference on Marine Navigation and Safety of Sea Transportation (TransNav 2017)*, Gdynia, Poland, pp. 141–148.

[11] Kibzun, A. I. and Khromova, O. M. (2016). Mathematical modeling of a transport system with minimal maintenance costs. *Bulletin of the South Ural State University*, Series: Mathematical Modeling Programming & Computer Software, vol. 9, no. 3, pp. 41-54.

[12] Leszczyński, Z., Skowronek-Mielczarek, A. (2001). Analiza ekonomiczno-finansowa firmy, *Difin*, Warszawa.

[13] Łukasik, Z. and Olszańska, S. (2016). Kształtowanie kosztów międzynarodowej obsługi transportowej w systemie Just-In-Time, *Autobusy*, vol. 6, pp. 643-646.

[14] Łukasik, Z., Kuśmińska-Fijałkowska, A. and Kozyra, J. (2017) Transport of dangerous goods by road from a European aspect. *Scientific Journal of Silesian University of Technology.* Series Transport, vol. 95

[15] Łukasik, Z., Bril, J. and Bril, D. (2013). Zagrożenia związane z transportem drogowym. *Autobusy: technika, eksploatacja, systemy transportowe*, vol. 14, pp. 45-57.

[16] Maibach, M., Schreyer, C., Sutter, D. et al. (2008). *Handbook on estimation of external costs in the transport sector*. CE Delft.

[17] Nowakowski W., Łukasik Z. and Bojarczak, P. (2006) Technical safety in the process of globalization. *Proceedings of the 16th International Scientific Conference Globalization and Its Socio-Economic Consequences*, vol. 4, pp.1571-1578.

[18] Ozceylan, E. (2010). A Decision Support System to Compare the Transportation Modes in Logistics, *International Journal of Lean Thinking*, vol. 1, no. 1.

[19] Twaróg, J. (2003). *Koszty logistyczne przedsiębiorstw,* ILiM, Poznań.

[20] Umberto, P. (2015). Assessment of external costs for transport project evaluation: Guidelines in some European countries. *Environmental impact assessment review*, vol. 54, pp. 61-71.

[21] Yanxuan, L. and Wayuparb, A. (2016). Impacts of Backhauls on Freight Transport Cost. A Review of Literature. *3rd International Conference on Management Innovation and Business Innovation (ICMIBI 2016)*. Manila, Philippines, Book Series: Lecture Notes in Management Science, vol. 58, pp. 249-259.

TYPOLOGY OF INNOVATIVENESS OF FOOD INDUSTRY WITHIN EU COUNTRIES IN TERMS OF GLOBALIZATION

Katarzyna Łukiewska[1,a,*], Małgorzata Juchniewicz[2,b]

[1]University of Warmia and Mazury in Olsztyn, Faculty of Economic Sciences, Poland

[2] University of Warmia and Mazury in Olsztyn, Faculty of Economic Sciences, Poland

[a]katarzyna.lukiewska@uwm.edu.pl, [b]malgorzata.juchniewicz@uwm.edu.pl

*Corresponding author

Abstract. At present times, the process of globalization lead to liberalization of countries policy connected with trade exchange, flow of the production factors and intensification of competitiveness. Accompanying to that, scientific and technical progress allow fast changes of the environment, operating conditions of enterprises and needs of the society. Such phenomenon causes, situation on which per the traditional factors of competitiveness of economic operators such as: productivity, quality and production costs, the new are appearing, related to the knowledge and new solutions. The need for adaptation to the changing surroundings forces on the enterprises, the actions which will eventually allow them to implement innovations, independently of branch or level of technique they represent. Food industry is within the branch of low technique, characterized by relatively low level of innovativeness. It does not change the fact that proposing of the unique products allow to stand out on the field of homogeneous offers, and in consequence get the competitive advantage. In conducted research, by usage of Ward's method the typology of EU countries was made. They were chosen by the selected indicators describing the innovativeness of enterprises (percentage of enterprises that have introduced an innovation, percentage of enterprises that received any public funding, percentage of enterprises engaged continuously in in-house R&D activities, percentage of enterprises that introduced new or significantly improved products that were new to the market). Based on the conducted research the information about level of innovativeness of food industry in EU countries and factors associated with it, was gathered.

Keywords: innovativeness, food industry, Ward's method

JEL Classification: O31, O32, L66

1. Introduction

Changes which are now present at the realm of world economy have multi-faceted character. The common processes of integration of nations and people and liberalization of trade policy are connected with abolishment in goods, services, assets or knowledge flow. The globalization processes are accompanied with the accelerating pace of growth of foreign direct investment, increase in the volume of intra-firm trade and the establishment of global multinational companies (Kazanskaya & Palkina, 2016). Such phenomenon are cause to the changes of terms in which enterprises are functioning, as well as the factors allowing them to compete in effective way. Paliderova, Hraskova (2016) point out that effectiveness was replaces witch creativity, and success depends from abilities to introduce breakthrough solutions and innovations. Along with productivity, quality or production cost, innovativeness has become one of the major factors of long-term growth (Kundríková et all., 2016) and competitiveness of enterprises (Juchniewicz, 2015), (Toth & Ferto, 2017). According to Sander & Janovsky (2015) processes of globalization favors the creativity and innovativeness by facilitated access to international know-how, cross-fertilization of intercultural teams or better perspectives for the commercialization of new products.

In literature of the subject there are many interpretations of concepts of innovativeness and innovations (Abdullah et all., 2014). None of them however, was commonly accepted (Lesinskis & Mavlutova, 2016). In this elaboration, the definition proposed by OECD was used, in accordance stating that innovation is the implementation of new or significantly improved product (article or service) or process, new method of marketing or new method of organization in business practice, organization of the workplace or relations with the environment (Oslo Manual, 2005). From such definition there are direct few types of innovations, which can be included product innovations (introduction of article of service which are new or significantly improved in spite of its features or application), process innovations (implementation of new or significantly improved method of production or delivery), organization innovations (implementation of new organization method in the rules adopted by the company, in the organization of the workplace or in relations with the environment) and marketing innovations (implementation of new marketing method involving significant changes in the design/construction of the product or in the packaging, distribution, promotion or pricing strategy).

Necessity of adaptation to vast changing of the surroundings and therefore taking the actions, which are leading to implementation of innovations concerns all enterprises which are functioning on free market, independently of branch of level of technique which they are representing.one of the most important and dynamic evolving branches in Europe is food industry (Juchniewicz & Łukiewska 2014), (Tell et all., 2016). It consists about 289 thousand enterprises in which there are almost 4,5 million people. Added value made by the branch is 13% of added value made by whole production sector and almost 1,8% of GDP (Data&Trends..., 2016). Enterprises of food industry operation within Single European market in conditions of intense competition and gradual saturation of the food market, must look for methods of production and organization, enlarge the assortment, and create new ways of getting to the recipients with offers of products, to come into being in their consciousness and to preserve there. For this reason, the aim of conducted research was to evaluate the diversity of innovativeness of food industry of member states, and creation of typology of EU countries according to the chosen categories that describe that phenomenon.

2. Methods

In the first stage of research on the basis of substantive and available statistical data the features of innovativeness of food industry were chosen. It was specified on the basis of four following indicators:

- percentage of enterprises that have introduced an innovation (all types),
- percentage of enterprises that received any public funding,

- percentage of enterprises, engaged continuously in in-house R&D activities,
- percentage of enterprises, that have introduced new or significantly improved products that were new to the market.

Source of innovativeness data were results of surveys conducted within the research project named Community Innovation Survey (CIS), initialized by European Commission and realized by the coordination of Statistical office of European Union, Eurostat. The most actual, available data during the writing of this article was used, which came out for the round of CIS-2014 and involved information from 2012-2014. Afterwards on the basis of chosen indicators, the classification of chosen EU countries[14], because of innovativeness of food industry by the usage of Ward method was made (Lee & Willcox, 2014), (Murtagh & Legendre, 2014). This method belongs to a group of hierarchical agglomeration methods of cluster analysis. Its essence depends on extraction from the set of objects (EU countries), homogenous subsets to be as similar as possible in a range of a group, and objects belonging to different classes were as different as possible. As a measurement of distance between examined objects the Euclidean distance was accepted, which shows the real geometric distance in multidimensional space (Suchecki & Lewandowska-Gwarda, 2010):

$$d_{ij} = \left[\sum_{k=1}^{m}(z_{ik} - z_{jk})^2\right]^{1/2} \tag{1}$$

where:

d_{ij} - distance between two considered objects,

z_{ik}, z_{jk} - values of normalized kth variable for objects i and j.

The groups of objects in accordance to Ward method were connected in a way to minimize the sum of squares of deviation of those two groups from the middle of heaviness of the new group, which emerged from their connection (Panek &Zwierzchowski, 2013).

3. Results and discussion

Conducted assays showed that between various countries there are significant disparities within the analyzed features of innovativeness of food industry. The highest percentage of food industry enterprises who was introducing the innovations of any type was Belgium (70,0%) (Table 1.). Relatively high results were obtained also by Finland, Portugal, Italy, Greece, France and Germany, in which more than a half of food industry enterprises introduced innovation during analyzed period. Definitely the lowest percentage of innovative enterprises of food industry was noted in Poland and it was only 15,5%. Unfavorable results in such area, was identified also in Hungary, Latvia and Spain. The difference between the highest and lowest value was different 4-5 times. Diversity of innovativeness of food industry in countries resulted from many factors. In literature, there are external and internal conditions. As to external conditions, it is possible to point out the economic, social, law and policy, cultural, technological, natural, equity and market factors (Motyka, 2013). Results from previous surveys (Juchniewicz & Łukiewska, 2017), showed that there is clear dependence between percentage of enterprises which are innovatively active in food industry and the level of economic development measured by GDP per capita. Internal factors are

[14] In the analysys the countries withou full data were omitted.

material and intangible resources of enterprise. Zastempowski (2016) indicates that in such context the actions within own R+D area are important, which can be: own cells or sections and laboratories as well as construction and technology departments. Considering the analyzed EU countries, it is possible to show that the relatively highest number of food industry enterprises were involved in own, internal R+D activity, which are Finland (39,6%), France (38,3%), Belgium (31,6%) and Spain (30,6%). The least favorable situation was in Croatia which had only 7% of internal activity of R+D, which is 5,7 times lower than in Finland.

Table 1: Chosen indicator describing innovativeness of food industry in EU countries

Country	Enterprises that have introduced an innovation (all types) [%]	Enterprises that received any public funding [%]	Enterprises, engaged continuously in in-house R&D activities [%]	Enterprises that have introduced new or significantly improved products that were new to the market [%]
Belgium	70,0	30,2	31,6	65,9
Czech Republic	45,7	37,5	14,4	47,7
Germany	51,3	7,8	24,8	38,0
Greece	52,0	24,8	13,0	65,9
Spain	35,1	35,0	30,6	48,7
France	51,9	22,2	38,3	61,8
Croatia	43,0	22,4	7,0	38,5
Italy	54,5	39,2	18,5	62,7
Cyprus	43,3	18,7	14,0	60,0
Latvia	33,8	39,6	25,1	71,1
Hungary	22,2	34,3	14,6	55,6
Malta	45,8	15,8	10,5	41,7
Poland	15,5	8,3	11,9	48,7
Portugal	55,3	22,0	18,2	50,5
Slovakia	38,7	8,9	17,9	73,3
Finland	56,1	21,3	39,6	58,0

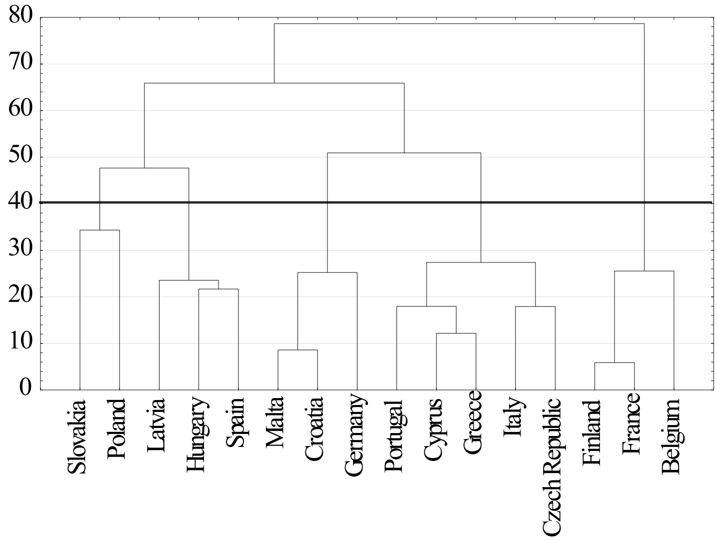
Source: Prepared by authors based on Eurostat.

Another major category connected with innovativeness in this branch is funding. Due to the high costs of implementation of innovations, own capital of enterprises is not sufficient in many times. In such situation assets are trying to get funding from external institutions (i, 2015). One of the basic form of external funding are resources obtained from public grants. From such way of aid, at least used was by assets producing food in Germany (7,8%), Poland (8,3%) and Slovakia (8,9%).

The last of analyzed elements connected with innovativeness of food industry is uniqueness of implemented innovations. When considering new solutions from the perspective of this criteria we may distinguish creative innovations (pioneering) which are result of not used, original solutions, and innovations which are imitating (adaptable) (Sikora & Uziębło 2013). In that matter, the best results were in Slovakia and Latvia, in which percentage of assets implementing brand new or improved products, which were novelty was more than 70% (73,3% and 71,1%). The least favorable results were noted in Germany (38,0%) and in countries in which relatively less frequent the R+D activities were conducted, such as Malta (41,7%) or in Croatia (38,5%).

Next the EU countries were grouped in view of similarities of features of innovativeness of food industry. The effect of the grouping was to create a hierarchical tree, called a dendrogram (fig. 1). Based on the analysis of dendrogram the five groups were extracted which are internally homogeneous in spite of examined features of food industry innovativeness. First cluster was made by Finland, France and Belgium. These countries had high, in comparison to other countries percentage of enterprises implementing innovations. It related to the highest share in conducting internal R+D activity. Above all in all of these 3 countries have been noted as above the average share of companies that have introduced a new or significantly improved product that was new to the market. At the same time the relative low in Finland and France, and average in Belgium, the number of enterprises producing food got any of public funding of investment activity. It is possible to accept that food industry of countries of such category is the most innovative in comparison to the rest of the groups.

Figure 1: Typology of countries by innovativeness of food industry



Source: Prepared by authors based on Eurostat.

Second category, most numerous, had Portugal, Cyprus, Greece, Italy and Czech Republic. These countries were characterized by average or less than average (Cyprus) share of food industry enterprises, which in analyzed period of 2012-2014 have implemented product, process, organization or marketing innovations. In a difference to previous group, this one had low percentage of assets conduction internal R+D activity. Countries of this group were characterized by almost average percentage of enterprises which had introduced new or significantly improved product, which was novelty on the market. In terms of public funding of innovations, the group was rather diverse.

Third group was Malta, Croatia and Germany. In this group, the share of assets producing food, which implemented any type of innovations was above average within Malta and Germany, and lower than average in spite of Croatia. The average class value was almost like the average value of all analyzed countries. Other features were on the less beneficial level. Food industry enterprises located in Malta, Croatia and Germany relatively rarely used public funding of innovations, and seldom implemented new product which were novelty on market. In share of assets involved in internal R+D activity, countries were rater diverse but in any of them the percentage was bigger than the average level of all analyzed countries.

Fourth group was made by Latvia, Hungary and Spain. In these countries, relative low number of food industry enterprises implemented during 2012-2014 any type of innovation. It is worth to mention that these countries did not get good results of innovativeness, despite getting over average public funding for that goal. In spite of commitment in conduction of internal R+D activity and implementation novelties on the market, countries of fourth group were diversified.

Table 2: Average of groups characterizing typological classes of countries by innovativeness of food industry

Group	Countries in group	Average level of indicator			
		Enterprises that have introduced an innovation (all types) [%]	Enterprises that received any public funding [%]	Enterprises, engaged continuously in in-house R&D activities [%]	Enterprises that have introduced new or significantly improved products that were new to the market [%]
I	Finland, France, Belgium	59,3	24,6	36,5	61,9
II	Portugal, Cyprus, Greece, Italy, Czech Republic	50,2	28,4	15,6	57,4
III	Malta, Croatia, Germany	46,7	15,3	14,1	39,4
IV	Latvia, Hungary, Spain	30,4	36,3	23,4	58,5
V	Slovakia, Poland	27,1	8,6	14,9	61,0
Altogether		44,6	24,3	20,6	55,5

Source: Authors' calculations based on Eurostat.

The last, 5th group was made by Slovakia and Poland which were characterized by the lowest among all analyzed countries types of innovativeness of food industry. In both countries share of enterprises, which implemented any type of innovation was low. Slovakia got 12 position and Poland the last 16 position, among all the analyzed countries. Above all these countries had relatively small number of enterprises (on the level of 11,9%-17,9%) which were conducting R+D activity and very low number of enterprises (on the level of 8,3%-8,9%) which got any type of public funding. Significant differences between Slovak and polish food industry were noted in spite of implementing innovations which were novelty on the market. In Slovakia 73,3% of enterprises did such thing and in Poland only 48,7% of assets did implement such type of innovations.

4. Conclusion

In conditions of present processes of globalization and connected with them, political, economic, social, technological changes, the ability to implement innovations is becoming the major factor of enterprise success in many branches, including food industry sector. In EU countries level of innovativeness jest clearly diversified. On the basis of made typology it is possible to assume that the most favorable situation during 2012-2014 was in Finland, France and Belgium. These countries were characterized by the highest percentage of food industry enterprise, implementing at least one innovation. Relatively high number of branch assets were constantly conducting R+D activity and implemented products were relatively often novelty on the market. The lest favorable situation was noted in Poland and Slovakia in which enterprises were relatively rare conducting constant R+D activity, getting public funds and rarely implementing innovations. It seems though that, if it is important to compete effectively on international markets, food making enterprises will be forced to implement new solutions, both of technological and nontechnological character.

References

[1] Abdullah, H., Shamsuddin, A., Wahab, E. and Hamid, A. A. (2014). The Relationship between Organizational Culture and Product Innovativeness, *Procedia - Social and Behavioral Sciences*, vol. 129, pp. 140-147.

[2] Data & Trends of the European Food and Drink Industry (2016). FoodDrinkEurope, [Online]. Available: http://www.fooddrinkeurope.eu.

[3] Eurostat statistical data. (2017). [Online]. Available: http://ec.europa.eu/eurostat/web/science-technology-innovation/data/database

[4] Chęciński, S. (2015). Źródła finansowania inwestycji w polskich przedsiębiorstwach, *Zeszyty Naukowe Uniwersytetu Szczecińskiego Finanse, Rynki Fiansowe, Ubezpieczenia,* vol. 855, no. 74, pp. 397-408.

[5] Juchniewicz, M. and Łukiewska, K. (2017). Economic development of the country and innovativeness in the food industry companies – selected issues, *Journal of Agribusiness and Rural Development,* vol. 1, no. 43, pp. 87-94.

[6] Juchniewicz, M. and Łukiewska K. (2014). International Competitiveness of the Food Industry in European Union Member States. *European Journal of Social Science Education and Research*, vol. 1, no. 3, pp. 253-264.

[7] Juchniewicz M. (2015). The level and diversity of innovativeness in food industry of European Union countries, *Proceedings of MAC-EMM 2015 in Prague*, pp. 1-7.

[8] Kazanskaya, L. F. and Palkina, E. S. (2016). Innovative imperatives for competitiveness of national transport systems in conditions of globalization. *Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Part 2. Zilina, Slovakia, pp. 839-846.

[9] Kundríková, J., Siantová, E. and Latka, M. (2016). Innovation process management within cooperation of companies. *Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Part 3. Zilina, Slovakia, pp. 1128-1135.

[10] Lee, A. and Willcox, B. (2014). Minkowski Generalizations ofWard's Method in Hierarchical Clustering, *Journal of Classification*, vol. 31, no. 2, pp. 194-218.

[11] Lesinskis, K. and Mavlutova, I. (2016). The role of innovations for starting business in Latvia. *Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Part 3. Zilina, Slovakia, pp. 1187-1194.

[12] Motyka S. (2013). *Model kreowania systemu innowacji w przedsiębiorstwie, Innowacje w zarządzaniu i inżynierii produkcji,* Opole: Polskie Towarzystwo Zarządzania Produkcją.

[13] Murtagh, F., Legendre, P. (2014). Ward's Hierarchical Agglomerative Clustering Method: Which Algorithms Implement Ward's Criterion?, *Journal of Classification*, vol. 31, vol. 3, pp. 274–295.

[14] Oslo Manual: Guidelines for Collecting and Interpreting Innovation Data, 3rd Edition. 2005. OECD/Eurostat, [Online]. Available: http://www.oecd.org/science/inno/2367580.pdf

[15] Paliderova, M. and Hraskova, D. (2016). Dimension of innovation in enterprises. *Proceedings of the 16th International Scientific Conference on Globalization and its Socio-Economic Consequences*, Part 4. Zilina, Slovakia, pp. 1613-1619.

[16] Panek, T. and Zwierzchowski, J. (2013). *Statystyczne metody wielowymiarowej analizy porównawczej. Teoria i zastosowanie*, Warszawa: Oficyna Wydawnicza.

[17] Sander, F.S. and Janovsky, J. (2015). Globalization as a risk factor for creativity and innovativeness, *Ekonomski Vjesnik/Econviews – Review of Contemporary Business, Entrepreneurship and Economic Issues*, vol. 29, no. 1, pp. 177-192.

[18] Sikora J. and Uziębło A. (2013). Innowacja w przedsiębiorstwie — próba zdefiniowania*, Zarządzanie i finanse*, vol. 2, no. 2, pp. 351-376.

[19] Suchecki, B. &Lewandowska-Gwarda K. (2010). *Ekonometria przestrzenna. Metody i modele analizy danych przestrzennych,* Warszawa C.H. Beck.

[20] Tell, J. et al. (2016). Business model innovation in the agri-food sector: a literature review. *British Food Journal*, vol. 118, no. 6, pp. 1462-1476.

[21] Toth, J. and Ferto, M. (2017). Innovation in the Hungarian food economy, *Agric. Econ. – Czech,* vol. 63, no. 1, pp. 43–51.

[22] Zastempowski, M. (2016). Źródła informacji dla działalności innowacyjnej polskich małych i średnich przedsiębiorstw, *Nauki o zarządzaniu*, vol. 1, no. 26, pp. 183-193.

THE CONSEQUENCES OF DISCRIMINATORY MEASURES FOR THE NATIONAL ECONOMY IN THE GLOBAL MARKET

Alexander N. Lyakin[1,a], Mikhail I. Rogov[2,b,*]

[1]Saint Petersburg University, Faculty of Economics, Department of Economics and Economic Policy, Tchaikovskogo str. 62, office 310, Saint Petersburg, 191194, Russia.

[2]Saint Petersburg University, Graduate School of Management, Department of Operations Management, Volkhovskiy pereulok 3, Saint Petersburg, 199004, Russia

[a]a.lyakin@spbu.ru, [b]mikhail.i.rogov@gmail.com

*Corresponding author

Abstract. The paper considers trade and finance flow limitation measures of countries that are involved in the global economy. Authors clarify the terminology, particularly, they argue that discriminatory measures against Russia as well as Russian responding measures can't be called sanctions. Only supranational unions, which have particular authority to implement sanctions toward its members, can use this instrument. Embargo and boycott are regarded as extreme forms of competitive struggle between national economies. The efficiency of limitation measures on goods and capital movement is estimated by matching benefits and losses from these measures for the national economy, not by matching the losses of contractors. In the short run boycott is more effective than embargo, because it leads to the growth of industries that are protected by the trade barrier. The embargo, in turn, is less effective, due to the variety of trade links in the global economy. The analysis of Russian protectionist trade measures for agricultural industry shows that there was rapid sectoral growth of domestic production and displace of agricultural import with short-term recoupment. In capital-intensive sectors, there has been a change in sales geography. It is expected that in the long run boycott will lead to loss in effectiveness and competitiveness, and embargo will restrain economic growth by preventing effective industry development.

Keywords: global economy, embargo, boycott, efficiency of protectionist policy

JEL Classification: F51, F52, F62

1. Introduction

Globalization is an undulating process and it's common that the periods of liberalization of economic processes sometimes turns to strengthening of protectionist policy. Current conflict between Russia and the majority of developed countries has a political implication, but realizes in economic domain. The point at issue of this article is ongoing and forecasting consequences of restrictions of commodity and finance flows for the development of different sectors of Russian economy and its growth rate. Peculiarity of the applied method is the estimation of gains and losses of Russian economy from the discriminatory measures. Due to a short period of observations it's impossible to use econometric modelling, therefore the authors implement the method of comparative analyses that include a graphic visualization and generalization.

2. Globalization and protectionism. Nontariff barriers, sanctions, embargo, boycott

The material basis of globalization is the formation of a market embracing all countries and functioning according to common rules established by similar institutions. On the one hand, this market assumes homogeneity of consumer preferences, consumer behavior stereotypes and the formation of global brands (Cleveland et al., 2015); on the other hand, unified market competitive mechanisms ensure the freedom of expansion of large corporations (Podrug et al., 2016), (Harumova, 2015). The process of shaping the global economy in the modern understanding of this term was accelerated due to the collapse of the Soviet bloc and information technologies that radically reduce the transformation costs (Kuritsky, 2003).

At the same time, the gains from globalization are distributed unevenly: usually, the advantages are belonged to the countries that determine the rules of the game, whose brands set the stereotypes of consumer behavior around the world. The maintenance of the rules requires regulation of the economic (and not only economic) behavior of participants by transnational organizations such as the WTO, the IMF, etc. Violation of existing norms in ideological, political, and any other spheres increases uncertainty and creates a threat to the stability of the current world order.

Liberalism becomes the economic ideology of globalization, which meets the interests of countries with the highest level of economic development. The relative economic advantages of the leading countries are concentrated on the most significant (from the point of view of long-term growth) industries that produce the highest added value and ensure the preservation of the productivity gap (Williamson, 2011). The countries of catching-up development, on the contrary, specialize in industries with low added value. The liberalization of markets fixes the existing specialization, not giving them the opportunity to develop and make competitive knowledge-intensive industries with high added value (Reinert, 2007).

Developed economies use non-tariff protective barriers, the application of which is difficult for developing countries, in order to restrict the competition from countries of catching-up development. As such, there may be special requirements for the quality of products, quality certificates, voluntary supply restrictions, environmental requirements, etc. Control over norms, rules, standards becomes an important competitive advantage in all markets.

Competition for the application of capital leads to the movement of industry in countries that have cheaper production conditions. The difference in costs and returns creates huge incentives for the movement of production that non-tariff forms of competition restriction do not cope with the task of maintaining the existing division of labor. As a result, economies that loose leadership positions are giving up free trade in favor of protectionism. In particular, the economic program of D. Trump is built on the rejection of the freedom of trade in favor of various forms of protectionism, which, as a result of the long evolution of the mainstream of economic science, seemed finally rejected by economic theory (Veeman, 2017).

Violation of the standards of behavior set by globalization creates a threat to the emerging world order and developed countries, as the main beneficiaries of the globalization processes, take various kinds of economic pressure to restore the current world order. As instruments, it can be anti-dumping procedures within the WTO framework, litigations in the context of claims for infringement of intellectual property rights, antimonopoly legislation, etc. The extreme form of economic pressure can be various kinds of non-economic actions in the economic sphere, which become a specific form of non-market competition.

In the twentieth century, international economic sanctions became an element of international law: supranational organizations arose that had the right to impose sanctions on behalf of the international community (for example, the UN). In total in the 20th century, sanctions were applied 174 times (Hufbauer, 2007), which indicates that they become the main element of political, economic and social pressure on the country-violator of international norms or that pursue a contradictory policy to the interests of the "great powers". For Russia, this topic has become particularly relevant after the introduction of discriminatory economic measures against it in 2014 year.

The term "international economic sanctions" is borrowed from the field of law and does not have a universally recognized definition. One of the controversial issues is the question of the subject of international sanctions - who introduces them: the state or an international organization? There are at least two points of view: some researchers understand by sanctions any aggressive measures of non-military influence on the country that can be implemented by both individual states and international organizations (e.g. Hafbauer, 2007), (Han, 2012), (Hart, 2000), (Oja, 2015); Others understand sanctions as restrictive actions applied by a supranational organization in relation to its members, but actions of one state in relation to another designate as countermeasures (Calamita, 2009), (Kozheurov, 2015), (Lieflaender, 2012), (Vitzthum, 2013). In particular, the International Law Commission of UN adheres to the second point of view: according to the annual report of the Commission for 1991, international sanctions are limited to coercive measures taken by international organizations representing the international community and having the authority to apply these measures - first of all, such an organization is the UN itself.

Unilateral coercive measures, therefore, do not have legitimacy and are unreasonably called sanctions - the principle of sovereign equality of states excludes the possibility of a lawful application by one state of sanctions against another state or group of states unilaterally and, therefore, such individual actions apply the term "countermeasures".

Thus, countermeasures characterize the situation when the subject of international law reacts to the previous violation of his rights and independently takes measures to protect and realize them (Vitzthum, 2013), while the main goal of sanctions is the maintenance of law and order at the global level. It follows that UN sanctions may include economic discrimination with a view to achieving the rule of law, they are introduced and implemented solely on the basis of the consensus of the members of the UN Security Council in response to an international offense committed by a specific state. Countermeasures are, on the contrary, a notion based on the private economic interest of the state, introducing them and one of the key objectives is to cause the greatest damage to the economy in respect of which they are introduced and to obtain the greatest benefit, direct or indirect, for the economy of the country that introduces them (for example, the US ban on any economic relations with Cuba).

Despite the fact that these phenomena have a fundamentally different nature (sanctions - a legal concept, countermeasures - a concept based on economic interest), they are expressed in the same form, as a rule these are trade restrictions (embargo - refusal to sell certain goods, boycott - refusal to buy certain goods, economic blockade - the termination of any trade relations), financial restrictions (for example, a ban on borrowing abroad) and freezing of assets.

Since sanctions and countermeasures as a specific type of external influence on the country have recently become used as an alternative to military action more and more often, certain approaches have been developed to analyze the effectiveness of these instruments. Let us single out three main approaches: the econometric analysis of panel data (e.g. Hafbauer, 2007; Shin, 2016), game-theoretic modeling (e.g. Han, 2012), and the case study methodology (Hafbauer, 2007), (Giumelli, 2015). These approaches usually highlight the economic and political consequences of external discriminatory measures. Considering the particular cases of using countermeasures and sanctions, it is possible to use more specific methods of analysis - for example, when analyzing the impact of countermeasures introduced in 2014 on Russia, Russian authors use the modeling of the dynamics of individual components of capital inflows (Gurvich, 2016), the method of allocation and evaluation of risks (Mirkin, 2015) and some others (e.g. Fedorova, 2016). As a rule, in these types of analysis only macroeconomic consequences are investigated.

3. The impact of "sanctions and counter-sanctions" on the structure of economic growth

After the Ukrainian events in regard to the Russian Federation an embargo was introduced that extended to three areas related either to sectors that create competitive threats in foreign markets (arms production, dual-use products and technologies, Arctic and shelf sea hydrocarbon production, production technologies of tight oil), or to the financial sphere. Restrictions on the access of the largest Russian banks and financial corporations to the world financial market deprived them of the source of cheap loans and, as a result, slowed down the investment process.

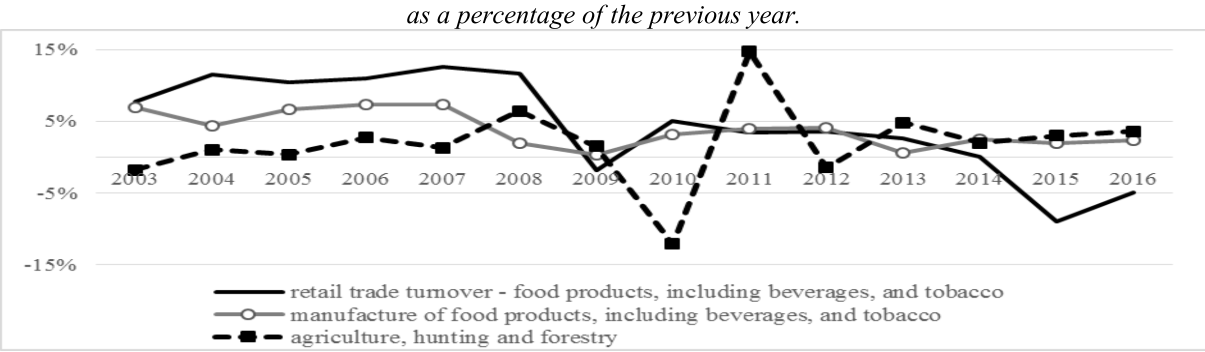
The sectors selected for the restrictive measures meet two characteristics: the embargo against them has a minimal negative impact on the economies of the initiating countries, and in the long run it restrains the most competitive sectors of the Russian economy (MIC and power industry) and also reduces the potential for economic development. Accordingly, the measures taken are becoming a specific form of non-tariff restrictions on economic growth.

Russia took an asymmetric retaliation - boycotting food supplies from countries that supported the embargo, closing the domestic food market for them. Import opportunities from other countries have been preserved, but these products on the Russian market were less competitive and therefore poorly represented. The purpose of these measures was not so much the loss of counterparties, but rather the creation of advantages for domestic producers. In particular, this is shown by the choice of commodity groups for a boycott. Obviously, it was possible to choose more painful restraints for the EU economies, but the damage to the counterpart would not create benefits for the Russian economy. The reduction in food imports has led to a break in the usual ties and opened the way to the supermarket counters for Russian small and medium-sized enterprises, despite the problems of unsustainable quality, stability of supplies, etc. Hence, when assessing the effectiveness of the boycott, it is necessary to take into account not the losses of countries whose products were not allowed to enter the market, but the growth of industries covered by a protectionist barrier.

The difficulty in assessing the consequences of discriminatory measures for the Russian economy lies in the fact that the moment of introducing of mutual restrictions coincided with the fall in world prices for hydrocarbon raw materials, the deep devaluation of the ruble and the restructuring of the balance of payments. The restriction of food imports initially led to an acceleration in the growth of prices for it, however, the subsequent devaluation of the ruble made a comparison of domestic prices with pre-crisis less obvious. The statement has become popular that the boycott of the food products in developed countries made the least well-off strata of the population pay the agricultural growth, since they have the largest share of food in expenditures. This statement is partly true. The rate of agro-inflation in Russia exceeded the overall increase in consumer prices throughout almost the entire 2000s, and after the introduction of the Russian boycott, this advance became significant. If in 2012-2013 the excess of the growth rates of food prices on CPI for all goods and services was 1-2%, then in August 2014 - 2.8%, and by February it reached 6.8%[15]. However, the expansion of domestic output of agricultural products has led to a consistent reduction in the rate of food inflation already in 2016, from which the rate of growth in food prices is steadily below the CPI. At the same time, the increase in domestic output made prices more resilient to fluctuations in the exchange rate.

Protection of the domestic market ensured the growth of a number of industries despite the decline in the economy in whole. The peculiarity of the past crisis was that with a general economic decline, a number of industries maintained their growth or even accelerated it. The mining industry (2.6%), which faced a decline in world prices, retained production volumes due to the incentives generated by the devaluation; for the chemical industry (11.9%), the situation was extremely favorable, the growth of the rate contributed to both an increase in exports and an increase in production to the domestic market. Agriculture (7.1%) and food production (4.4%) grew steadily due to the protection of the domestic market.

Figure 1: Growth index of turnover of retail trade in food, manufacture of food products and agricultural goods, as a percentage of the previous year.



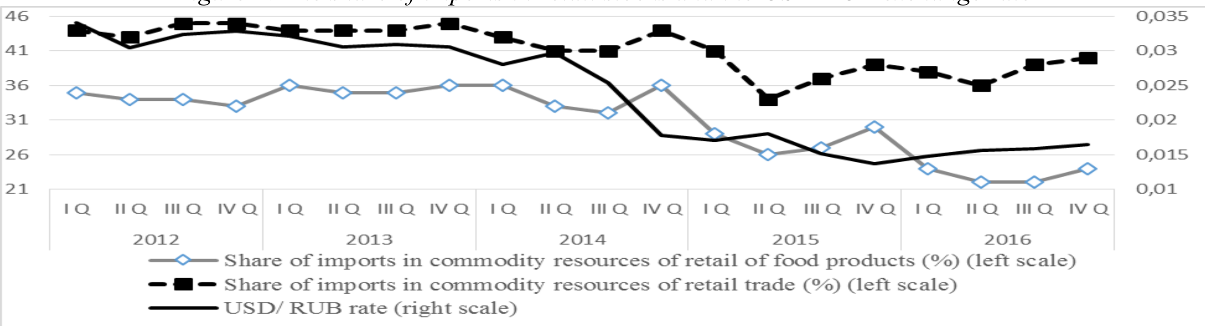
Source: (FSSS, http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/importexchange/#)

As can be seen from the graph (Figure 1), the dynamics of retail trade turnover, production of agricultural products and food products in 2014-2016 is seriously different from previous periods. The decline in trade turnover is accompanied by a stable growth in production and processing of agricultural products. During this period, poultry farming and pig farming are actively growing, investments in which were made before the crisis, and the opportunities for expansion were previously limited to the competition that became aggravated after the WTO accession. At present, the main problem for these sub-sectors is the demand deficit.

[15] FSSS http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/tariffs/#

The fact that the changes in the domestic issue of the considered sectors are due not to exchange rate fluctuations, but to the administrative barriers introduced, confirms the dynamics of the share of imports in commodity retail stocks (Figure 2).

Figure 2: The share of imports in retail stocks and the USD-RUB exchange rate



Source: (FSSS, http://www.gks.ru/wps/wcm/connect/rosstat_main/rosstat/ru/statistics/importexchange/#)

Assessing the inhibitory effect of the embargo imposed on the Russian economy, it must be considered in the general context of the Russian crisis caused by a deep fall in oil prices. While mutual restrictions are rather short in time, macro-statistics illustrates only the most serious consequences. Certainly, restrictions on the access of Russian banks and corporations of the real sector to capital markets contributed to the outflow of capital (Table 1) and, accordingly, to the sharp and deep devaluation of the ruble. The export of capital went in two main directions: a reduction in the external debt of the Russian business and the purchase of currency by the population. The external debt of the Russian economy as of July 1, 2014 reached its maximum and amounted to 732.8 billion USD, as of January 1, 2017, it decreased to 513.5 billion USD, while capital export amounted to 152.1 billion USD in 2014, in 2015 - 52.8, in 2016 - 19.1 billion USD.

The most sensitive losses in the two years of the crisis from 2015 to 2016 concerned industries involved in the investment cycle (metallurgical production -8.7%, machinery and equipment production -7.7%, production of electricity, electronic and optical equipment -8.8%, production of vehicles and equipment -11.2%). Among the economic sectors, the deepest decline was in trade -11.7%, construction -6.1% and the financial sector -5.2%. All of them depend on changes in interest rates and availability of credit resources. Changes in financing conditions for the Russian economy are presented in Table 1.

Table 1: Change in conditions for investment financing in the Russian Federation (2012-2016)

	2012	2013	2014	2015	2016
Increase (+) / decrease (-) of Russia's external debt (billion USD)	97,54	92,44	-128,96	-80,8	-5,62
Spread between interest rates on loans and deposits	…	2,93%	4,40%	6,06%	5,33%
The ratio of loans to the non-financial sector to GDP	2,44	2,61	2,57	2,19	2,20
Investments in fixed assets as % of GDP	18,8%	18,9%	17,6%	16,7%	17,0%
FDI (billions of USD)	50,59	69,22	22,03	6,85	32,98

Source: (Federal State Statistics Service, http://www.gks.ru/; The Central Bank of the Russian Federation http://cbr.ru/statistics/?PrtId=svs)

The outflow of capital due to the decrease in the external debt of Russian corporations and the impossibility of refinancing debts, the reduction of foreign direct investment, the general decrease in lending to the non-financial sector – all of that lead to a reduction in investment. During the same period, the share of processing industry in the volume of issued loans has increased from 13.8% on average for 2011-2013 up to 21.8% on average for 2014-2016.

Industries that lose credit resources are trade and construction. Such a redistribution of resources indicates a change in the demand for loans in connection with the crisis that has begun, the incidence of income of the population and changes in its consumer behaviour. It is not possible to separate the effect of the embargo from the effect of devaluation and the crisis. Obviously, the sanctions helped deepen the negative processes that started around the same time and have a different nature.

The second line of sectoral sanctions imposed on Russia is an embargo on the supply of oil-producing equipment, the transfer of technology in some form, participation in joint projects for the development of deep-water areas, Arctic fields and hydraulic fracturing technologies. In the long term, this can be a rather painful measure for the Russian economy, which in any case will remain highly sensitive to the development of the oil and gas industry.

The most obvious negative impact on the growth of the Russian economy in the short term was to put restrictions on the import of equipment, components, element base, etc. that have a dual purpose. These measures affected the products of the defense-industrial complex and its competitiveness in world markets, and influenced civil engineering. At the same time, these restrictions have not yet caused a noticeable macroeconomic effect. Analysis of customs statistics on imports of investment goods showed that the share of imports of these goods from the group of countries that supported the embargo does not have a clear tendency to decline; also there is no movement of demand in favor of countries that did not support the embargo.

The degree of impact of the sanctions regime is determined not so much by formal measures, as by uncertainty and increasing risks for investments and joint projects.

4. Conclusion

The initiators of discriminatory measures aim not so much at the competitor damage as their own benefits, and the measures themselves are a certain form of protectionism. The global economy makes it possible to avoid them due to the diversity of international economic ties. The Russian boycott allowed to stimulate the growth of a number of industries covered by a protectionist barrier and to prepare conditions for trades to abolish the boycott in exchange for the removal of restrictions that are sensitive to the Russian economy.

The boycott is more effective than the embargo in the short term, because it creates conditions for the growth of certain protected sectors, and embargoing for a large open economy is difficult. In the long run, the boycott limits the competitiveness of the protected sectors. Introduced sectoral sanctions proved to be of little significance in the short run, with less damage from them than from falling oil prices, but they become a problem for the long-term growth of the Russian economy and, above all, for the investment recovery.

References

[1] Cleveland, M., Laroche, M. and Papadopoulos, N. (2015) You are what you speak? Globalization, multilingualism, consumer dispositions and consumption. *Journal of business research,* Vol. 68, no. 3, pp. 192-198.

[2] Harumova, A. (2015) Multinationals as a part of globalization. *Proceedings of the 15th International Scientific Conference on Globalization and its Socio-Economic Consequences.* Zilina, Slovakia, pp. 382-392.

[3] Kuritsky A B. (2003) Globalization and Internet, *Problems of modern economics,* vol. 3-4. pp. 70-73.

[4] Podrug, N., Filipovic, D. and Kuvezdic, M. (2016) Multinational corporations: the changing strategic orientation in the twenty-first century. *Neostrategic management: an international perspective on trends and challenges*, pp. 139-158.

[5] Reinert, E. (2007) *How Rich Countries Got Rich... and Why Poor Countries Stay Poor*. London: Constable and Robinson Ltd.

[6] Veeman, M. (2017) North American Trade Policy for Agriculture and Forestry: Can Economics Trump Politics? *Canadian journal of agricultural economics-revue,* vol. 65, no. 1, pp. 43-68.

[7] Williamson, J. G. (2011) *Trade and Poverty: When the Third World Fell Behind*. Cambridge, MA: MIT Press.

[8] Fedorova, E., Fedotova, M. and Nikolaev, A. (2016). Assessing the impact of sanctions on the Russian companies performance. *Voprosy Ekonomiki*, vol. 3, pp. 34-45.

[9] Giumelli F. (2012), Understanding United Nations targeted sanctions: an empirical analysis. *International Affairs*, vol. 91, no. 6, pp. 1351-1368.

[10] Gurvich E., Prilepskiy I. (2016). The impact of financial sanctions of the Russian economy. *Voprosy Ekonomiki*, vol. 1, pp. 5-35.

[11] Han B. (2012). *A Theory of Economic Sanctions.* KIEP Working Paper 12-03. Seoul.

[12] Hufbauer, G., Schott, J. and Elliott, K. (2007). *Economic sanctions reconsidered*. Third edition. Peterson Institute for International Economics. Washington, DC.

[13] Hart A. (2000). Democracy and the successful use of economic sanctions. *Political Research Quarterly*. vol. 53, no. 2, pp. 267-284.

[14] Kozheurov, Ya. (2015). The war of «sanctions» and the law of international responsibility. *Russian Juridical Journal / Rossijskij Juridiceskij Zurnal*, vol. 101, no. 2, pp.179-182.

[15] Mirkin, J. (2015). Effect of sanctions on financial risks of the Russian economy. *Banking services*, vol. 8, pp. 17-24.

[16] Oja, K. (2015). No milk for the bear: the impact on the Baltic states of Russia's counter-sanctions. *Baltic Journal of Economics*, vol. 15, no. 1, pp. 38–49.

[17] Lieflaender T. (2012), Disobeying the Security Council: Countermeasures Against Wrongful Sanctions. *Leiden journal of international law,* vol. 25, no. 2, pp. 564-570.

[18] Vitzthum, W. G., Proelss, A. and Bothe, M. (2013). *Völkerrecht*. Walter De Gruyter Incorporated, Berlin.

THE GLOBAL TENDENCIES OF TRANSPORT SYSTEMS DEVELOPMENT IN AGGLOMERATIONS

Maria Lyakina[1,a,*], Elena Volkova[2,b] and Vladimir Tretyak[3,c]

[1]Emperor Alexander I St.Petersburg State Transport University, Faculty of Economics & Managment, Department of Transport Economics. 9, Moscovskiy pr., Saint-Petersburg, Russia, 190031

[2]Emperor Alexander I St.Petersburg State Transport University, Faculty of Economics & Managment, Department of Transport Economics. 9, Moscovskiy pr., Saint-Petersburg, Russia, 190031

[3]Razumovsky Moscow State University Technology & Managment, Marketing & Foresight Department. 73, ul. Zemljanoj Val, Moskow, Russia, 109004

[a]malyakina@mail.ru, [b]moonlight34@ya.ru, [c]v_tretyak@inbox.ru

*Corresponding author

Abstract. The world-wide urbanization process leads to the new resettlement schemes such as agglomeration and conurbation of megapolis. The agglomeration development depends on the city transport system efficiency. This system must satisfy such a new quality demands like high speed, comfort and reasonable price. It is important to highlight that the main goal of city transport system control is to satisfy the aforesaid demands and minimize the total public costs at the same time. It is important to take into accordance all the public effects and all the total public costs with all the externalities if we want to estimate the transport system efficiency. Public effects include the estimation of trip time reduction, the population mobility and economic activity grow, rate of agglomeration economic grow. There are some research that confirms the relation between staff turnover with real estate price and the agglomeration transport system development level. (Faulk & Hicks, 2016) Obviously, we need to design the common way of such effects estimation and we need to use it in agglomeration development strategic planning. City-logistics is the scientific direction which works on this problem. City-logistics is the complex optimization of city transport system in market conditions that include such a courses like: preferential use of public transport, high-performance transport preference, multimodal transport development (Lyakina ert al., 2016), transport-logistic infrastructure specialization, congested city parts access limitation, transport hubs development. These tendencies of agglomerations transport systems development have already become global trends. It is important to adopt them to solve transport problems in the biggest cities all over the world.

Keywords: multimodal transportation, agglomeration development, urban transport system

JEL Classification: R12, R48, R58

1. Introduction

The issues of cooperation among means of transport within urban transport systems have gained a special relevance in the second half of the XXth century in the course of an increasing pace of urbanization and population growth in large cities. Latest research on world's urban transport systems is dedicated to such issues as planning and a detailed analysis of passenger's travel time in order to reveal the reserves to reduce it, arranging transport hubs (Bolkovska & Petuhova, 2016), minimizing environmental impact of public transport and green logistics in terms of passenger transportation (Hsu & Wang, 2016), (Sierpinski et al., 2014), (SteadieSeifi et al., 2014), directions and ways of prioritizing public transport. Applying the methods of mathematical and simulation modelling, the simulation of processes (Diaz et al., 2016) which are underway in individual transport systems scholars have gained results that ensure their efficiency growth. The intensive development of information systems and technologies stipulates their broad usage for addressing these issues. (Castelli et al., 2004) Passengers all over the world plan their trips themselves through mobile applications and the task of urban transport system management is to support and develop cooperation among different means of private and public transport (Stanley & Levinson, 2016), (Svabova & Durica, 2016), (Jappinen ert al., 2013), (Eisele et al., 2001).

In the age of planned economy cooperation among means of transport in urban transport systems in our country was performed centrally and the activity of transport companies was determined by state-set tasks. So in 1967 the decree issued by the USSR Council of Ministers confirmed the obligation of Executive Committees in large cities (with population of more than 250 thousand people) to develop comprehensive transport schemes on the development of all means of public transport. Scholars and transport experts performed the methodology of developing unified transport systems of different levels. they state that there is a lack of a single method for developing a comprehensive transport scheme for urban agglomerations and she suggests an approach to it.

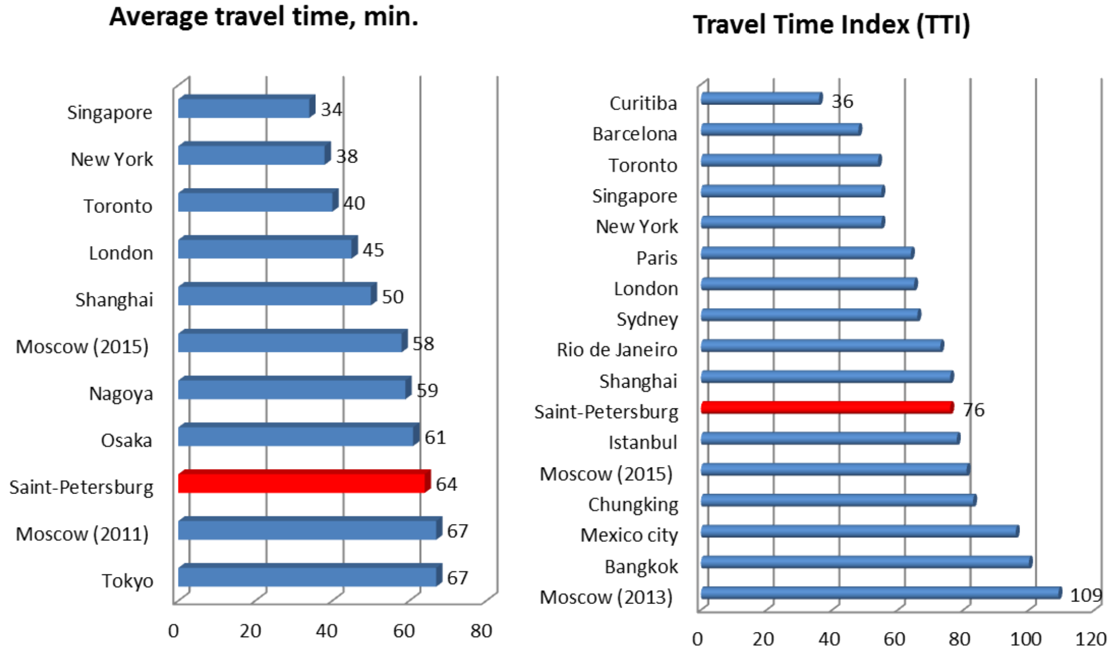
Due to the shift towards market relations connections among transport companies in terms of urban and suburban transportation have been lost in many ways. Planning routes for urban passenger transport is performed based on the exisitng route network and developing competition for the route presupposes the procedure of choosing a transporter through tendering procedure organized by the regional executive authorities. Distinguishing railway suburban transportation as a separate business has aggravated financial problems of suburban passenger companies and their relations with the subjects of the Russian Federation.

Despite the significant number of publications and papers related to the problems of suburban passenger transportation, not enough attention is paid to cooperation among means of transport, the integration of high-performance means of transport into urban transport systems. This leads to the decreasing intensivity of using public transport and effeciency of urban transport systems especially in agglomerations.

This is confirmed by the results of the comparative analysis of transport systems functioning indexes in world's largest cities.

As shown in Figure 1, an average travel time in Moscow and St. Petersburg is higher than in Shanghai, London and New York, and TTI, which is a relative efficiency index for urban transport systems, is higher than in Singapore and Rio de Janeiro. This allows us to draw a conclusion on the low efficiency of transport systems in Russian agglomerates mainly determined by the insufficient development of mixed transportation.

Figure 1: The results of the comparative analysis of urban transport systems functioning indexes



Source: (The concept of transport system development in St. Petersburg 2017-2038)

2. The organization problems of mixed passenger transportation in Russia

The term mixed transportation is defined in the draft of the Federal law On the direct mixed (combined) transportation as a transportation of loads, passengers, luggage by various means of transport based on a single transport document issued for the whole trip. The document does not distinguish such notions as inter-, multimodal, combined, segmented, mixed in relation to passenger transportation. These categories are mainly applied to describe the process of organizing load transportation. Many authors provides a detailed description of differences among these types according to the method UNCTAD (United Nation Conference on Trade and Development).

The lack of common understanding on the content of the listed categories in passenger transportation stipulates the existence of multiple authors' definitions. Wherein distinguishing inter- and multimodal passenger transportation is based on the number of transport companies, a way of their interaction and responsibility distribution, existence or lack of a single travel document. The general characteristics of all types of mixed transportation is using several means of transport. For example, intermodal passenger transportation means transportation implemented by operators of two or more means of transport with the use of single travel documents (ticket or receipt for excess luggage) for the whole transportation route.

For long distance, suburban and urban connection various intermodal transportation schemes are applied. The sphere of applying each of them is mainly determined by the efficiency of combining means of transport. It should be noted that intermodal transport schemes also include personal vehicles with its constantly rising importance.

The effeciency of intermodal passenger transportation in many ways depends on the existence of relevant transport infrastructure. Recently the transport hubs construction is developing, which promotes fast and comfortable distribution of passenger flows within means of transport. Park-and-ride facilities are constructed in large cities near subway stations and large railway stations. Some of them are free of charge. Such measures are aimed at redistribution of passenger flows in favour of public transport in order to increase the intensivity of its use and to reduce the passengers' travel time.

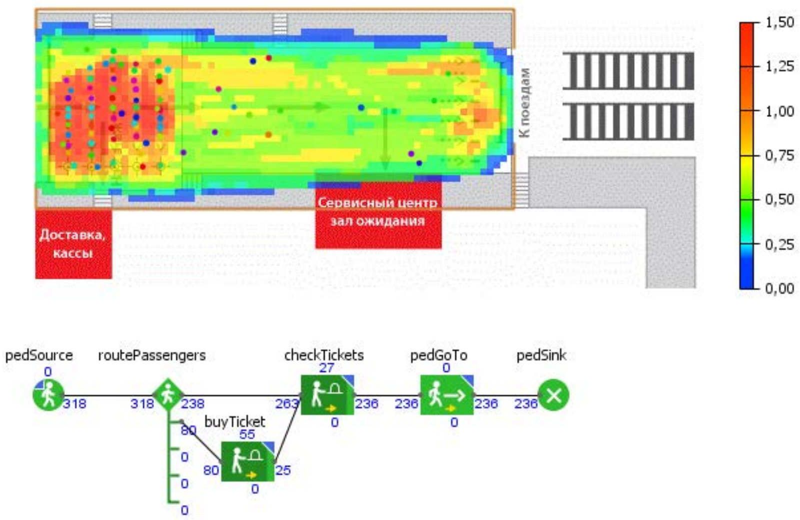
3. Calculations of the effects from using single electronic media for selling suburban train tickets

Developing mobile applications for trip planning and also using single tickets for several means of transport are an important reserve of reducing time spent on passenger handling. It is crucial to stimulate market participants to develop cooperation in urban public transport systems, therefore the example of estimating the economic effect from applying a single sales system will be shown below.

A single ticket allows to integrate electric trains into an urban transport system. The technology of a single transport ticket for all means of urban and suburban transport has been already implemented in Moscow. *North-Western Suburban Passenger Company* that functions in St. Petersburg is also going to join electronic sales with the use of contactless smart-card *Podorozhnik*.

The benefit from integration into the sales system for urban transport tickets is obvious not only for passengers (earlier *NW SPC* offered season tickets only based on its own contactless smart-cards) but also for the company itself. This can be confirmed by the results of the experiment on simulating passenger handling during rush hours in the railway station hall which accomodates 5 suburban ticket counters. The experiment was carried out with the use of simulation tools in the *AnyLogic* environment.

Figure 2: The results of modelling passengers handling in suburban ticket counters with the existing sales system



Source: authors

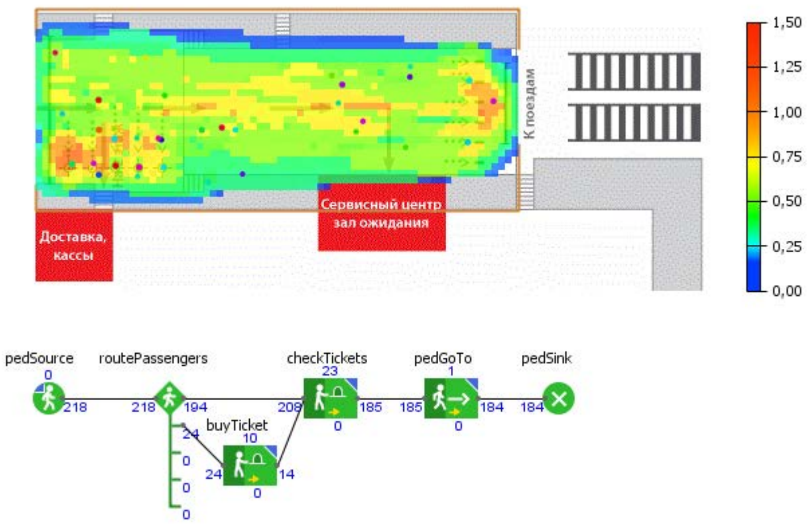
Figure 2 presents the model of passenger handling with the existing sales system. The model is characterised with the following parameters: the intensivity of passengers arrival — 1000 passengers per hour, while 70% of them go to trains (having season tickets), 30% buy tickets in one of 5 suburban ticket counters (service time amounts to 1-2 minutes). The map of passenger flows density shows that there are long queues in the ticket counter area and the density of passenger flows approaches the critical point (the area is highlighted in red).

Thus, ticket counters are overloaded during rush hours which impedes the principle of their effective work. Moreover, time spend queueing significantly increases passenger's travel time costs and contributes to developing «transport fatigue».

Let us suppose that the company switched to the use of single season tickets based on non-contact cards *Podorozhnik.* The share of passengers with this popular electronic media is quite large, therefore let us assume that now the share of passengers who use suburban ticket counters during rush hours will reduce up to 10%. Other model parameters will stay the same. The modelling results are presented in Figure 3.

Figure 3 shows that passenger flow density in ticket counter area is much lower than in Figure 1 as well as the length of queues.

Figure 3: The results of modelling passenger handling in sububrban ticket counters with the new sales system (integration into CSC Podorozhnik)



Source: authors

Economical effect from the company's integration into sales based on CSC *Podorozhnik* (E, rub.) can be estimated as follows:

$$Э = \sum_{i=1}^{n}\left(Т_{0i}^{обсл} - Т_{1i}^{обсл}\right) \cdot С^{обсл} + \sum_{i=1}^{n}\left(Т_{0i}^{пасс} - Т_{1i}^{пасс}\right) \cdot С^{пасс} \cdot N_i \qquad (1)$$

n being a number of ticket sales pavilions;

$Т_{0i}^{обсл}$ – labour costs of passenger handling in i pavilion with the existing ticket sales technology, man-hour;

$T_{1i}^{обсл}$ – same with the new ticket sales technology, man-hour;

$C^{обсл}$ – the specific cost-price of passenger handling, ruble/man-hour;

$T_{0i}^{пасс}$ – average passenger queueing time during rush hours based on i pavilion, hour;

$T_{1i}^{пасс}$ – the same with the new ticket sales technology, hour;

$C^{пасс}$ – the cost of one man-hour, rubles;

N_i – a number of passengers handled in i pavilion in rush hours.

Thus, applying CSC *Podorozhnik* in suburban transport connection allows passengers both to reduce time spent on ticket purchase and in some cases to reduce the number of working suburban ticket counters, which directly depends on the labour costs of connection passenger handling.

4. Conclusion

Agglomerations development is accompanied with the population mobility growth and makes particular conditions for city public transport development (Percoco, 2016). This happens because the agglomerations have a high population density and the lack of recourses, natural first of all (ecological problems). (Holl, 2016) It is important to take into accordance all the variety of effects and costs of modern transport system development. (Mulley & Weisbrod, 2015), (Laird & Venables, 2017) Modern technologies allow us to have flexible combinations of different transport types, that leads to the changes of costs for transporting passengers, more effective recourse usage and minimize travel time.

The calculation of smart-card "Podorozhnik" cost-effectiveness, contained in this article, make it possible to count not only service provider cost savings but also positive effect for customers.

References

[1] Bolkovska, A. and Petuhova, J. (2017). Simulation-based Public Transport Multi-modal Hub Analysis and Planning. *Procedia Computer Science,* vol. 104, pp. 530-538.

[2] Castelli, L, Pesenti, R. and Ukovich, W. (2004). Scheduling multimodal transportation systems. *European Journal of Operational Research,* vol. 155, no. 3, pp. 603-615.

[3] Diaz, R., Behr, J. G. and Ng, Man. (2016). Quantifying the economic and demographic impact of transportation infrastructure investments: A simulation study. *Simulation,* vol. 92, no. 4, pp. 377-393.

[4] Eisele, W. L. et al. (2001). Using intelligent transportation systems travel-time data for multimodal analyses and system monitoring. *Transportation Data and Information Technology: Planning and Administration,* no. 1768, pp. 148-156.

[5] Faulk, D. and Hicks, M. J. (2015). The impact of bus transit on employee turnover: Evidence from quasi-experimental samples. *Urban Studies,* vol. 53, no. 9, pp. 1836-1852.

[6] Holl, A. (2016). Highways and productivity in manufacturing firms. *Journal of Urban Economics,* vol. 93, pp. 131-151.

[7] Hsu, C. and Wang, H. (2016). Strategies for Green Transportation while Preserving Mobility and Accessibility: A Case Study of Taipei City. *Journal of Urban Planning and Development,* vol. 142, no. 1.

[8] Jäppinen, S., Toivonen, T. and Salonen, M. (2013). Modelling the potential effect of shared bicycles on public transport travel times in Greater Helsinki: An open data approach. *Applied Geography,* vol. 43, pp. 13-24.

[9] Laird, J. J. and Venables, A. J. (2017). Transport investment and economic performance: A framework for project appraisal. *Transport Policy,* vol. 56, pp. 1-11.

[10] Lyakina, M., Volkova, E. and Tretyak, V. (2016). Multimodal passenger transportation as a global trend of agglomeration transport systems development. *Proceedings of 16th International Scientific Conference on Globalization and its Socio-Economic Consequences.* Rajecke Teplice, Slovakia, pp. 1228-1234.

[11] Mulley, C. and Weisbrod, G. (2016). Workshop 8 report: The wider economic, social and environmental impacts of public transport investment. *Research in Transportation Economics,* vol. 59, pp. 397-400.

[12] Percoco, M. (2015). Highways, local economic structure and urban development. *Journal of Economic Geography,* vol. 16, no. 5, pp. 1035-1054.

[13] Staniek, M. and Sierpiński, G. (2016). Environmental Education By Shaping Freight Transport In Supply Chains – Methodological Remarks Under S-Mile Project. *ICERI2016 Proceedings*.

[14] Stanley, J. and Levinson, D. (2016). Workshop 3 report: Sustainable funding sources and related cost benefit measurements. *Research in Transportation Economics,* vol. 59, pp. 143-150.

[15] SteadieSeifi, M. et al. (2014). Multimodal freight transportation planning: A literature review. *European Journal of Operational Research,* vol. 233, no. 1, pp. 1-15.

[16] Svabova, L. and Durica, M. (2016). Correlation analysis of predictors used in bankruptcy prediction models in Slovakia, *Ekonomicko-manazerske spektrum*, vol. 10, no. 1, pp. 2-11.

PROBLEMS OF DEVELOPMENT OF INDUSTRY AND AGRICULTURE IN RUSSIA IN CONDITIONS OF THE GLOBALIZATION OF ECONOMY

Ekaterina Alexandrovna Lysenko[1,a,*], Maria Nikolaevna Mechikova[2,b] and Olga Vladimirovna Grischenko[3,c]

[1]A. P. Chekhov Taganrog Institute (branch) of «RSEU (RIPE)», faculty of economics and law, department of economics and entrepreneurship, Russia

[2]A. P. Chekhov Taganrog Institute (branch) of «RSEU (RIPE)», faculty of economics and law, department of economics and entrepreneurship, Russia

[3]A. P. Chekhov Taganrog Institute (branch) of «RSEU (RIPE)», faculty of economics and law, department of economics and entrepreneurship, Russia

[a]katrin30122009@yandex.ru, [b]mashanovi@yandex.ru, [c]o.grishhenko@gmail.com

*Corresponding author

Abstract. Modern development of Russia requires the formation of conditions whereby the food and industrial safety on the background of integration processes in the foreign economy will be formed. The article considers main tendencies of development of industry and agriculture and world food trade, the principles of the game in world agricultural and industrial markets, their problems and perspectives. Analyzed the current state of the industrial and agrarian sector of the Russian Federation, the conditions of globalization processes in the world economy, defines the strategic directions of development of domestic industrial and agricultural sector. Identified and analyzed key issues related to the imposition of sanctions by the European Union; the ways of their solution. Factors that restrict economic development of Russia agriculture and industry are determined. They are insufficient rates of technical and technological renovation, the widespread obsolescence of fixed assets, low rate of return of agricultural and industry producers, price disparity. The authors analyzed the theoretical and methodological basis, principles and approaches to the study of the development of industry and agriculture in the context of the globalization of the country's economy, the preconditions for the formation of a new social paradigm for the sustainable development of industrial and rural areas. Based on the research suggests the main directions to improve the competitiveness of industrial and agricultural sectors in Russia.

Keywords: globalization, agriculture, industry, sanctions, import substitution.

JEL Classification: Q1, O12, O18, L52

1. Introduction

The development of modern society is directly related to the processes of globalization. The globalization of the economy is a significant element in the development of international economic relations.Globalization is the highest stage of internationalization process of world economic life, which is a combination of processes such as a huge increase in world trade and cross-border flows of capital, technology, information and workforce in an open, integrated economy, resulting in the creation of global production and global markets for goods, services, capital and labour. The globalization of international relations is the increasing interdependence and interaction of various spheres of public life and activities in the field of international relations. It affects virtually all spheres of public life, including the economy, politics, ideology, social sphere, culture, ecology, safety, lifestyle, and also the very conditions of human existence. Professionals are ambivalent about the phenomenon. Rather, it is due to the presence of different opinions on this issue, and also with different assumptions on the consequences in which can be considered the threat imposed on the economic system of the world. Other experts, conversely, consider such a phenomenon as a means to achieve growth. However, in Russia, simultaneously with the globalization processes are inverse processes related to the sanctions of the West and politics import substitution, which can not affect the development of industry and agriculture. All of the above determines the relevance of the chosen research topic devoted to the problems of development of industry and agriculture in Russia in the period of globalization of the economy.

Achieving this goal requires the following tasks, namely:

- consideration of the main world tendencies of development of industry and agriculture;
- identify problems and prospects of development of industry and of agriculture of the Russian Federation;
- research questions the impact of Western sanctions and the policy of import substitution on the Russian economy;
- development of proposals to improve the competitiveness of the agricultural and industrial sectors of Russia.

2. Body of paper

Consideration of features of development of separate branches is not possible without research on general trends in the development of the world economy and flowing from the bottom of the regularities of development of the Russian economy. The fundamental law of economic growth in the country is the excess of exports over imports. However, Russia for the last 20 years has shaped the economy of raw type: increased exports of mineral products and metals (75.5% in 2000, to 81.1% in 2014, total exports), imported all more essential goods. For the period 2000-2015, the volume of imported products increased 8.4 times.

The high rate of imports increased in the following categories: food and consumer goods; agricultural machinery, machines and equipment; cars, passenger and transport aircraft; medication; new technologies; products for the defence industry. As a result, Russia fell into a short-sighted dependence on exporting countries and their policies. The security of the country was jeopardized: food, social, economic, financial, military. As for the features of development of separate industries of economy of Russia, in particular, studied agriculture and industry, the analysis is given next. In the Russian Federation in the process of reforming the agricultural sector has set the objective of creating farms of optimal size. It is important to note that in many countries, farm sizes are not the optimum answer, but they function effectively with the involvement of rational ways of organizing the use of technology (various cooperatives, rental equipment, etc.). Thus, the problem is actually, the organization of efficient production, mainly due to leases or creation of cooperatives for shared use of equipment and maintenance strategies and identifying options for technical equipment of farms and last but not least – due to the lease and purchase of land by farmers.

In a complex and globalized market environment for farmers and owners of land shares in Russia created by different information systems (web servers, portals, resource centres, etc.) that support the processes of preparation for market of land, protection of land rights for the rural population and farmers. However, in developed countries there are information and analytical system, organizationally, legally, technologically and financially accompanying the activity of farms, in result, increases their effectiveness and in the first place – productivity. In an unstructured domestic environment began rapid development of agro-holdings, which due to the high cost of unreasonable rent levels consume not only farmers, but also large agricultural enterprises. Due to the lack of guidance on the most effective directions of state support of farms has decreased the effectiveness of this measure, which forced the government in recent years to abandon the European model of General well-being and focus on the support of several thousand large farms.

In developed countries, the widespread mediation of different agreements, the system of agricultural cooperatives and other vertical integration of farm structures as a measure to achieve the scale of production without increasing the size of farms. As a result, in France and Germany, where the developed cooperatives for shared use of the means of production in agriculture, 80 % of farm enterprises united into cooperatives. The most prevalent cooperatives in the procurement, processing and sales (retail and wholesale) agricultural products. For example, in Japan, Iceland, the Netherlands, Finland, Denmark, cooperatives processed 90-100 % of the marketable milk in the Nordic countries – 80% of the sold milk and meat in domestic and foreign markets for agricultural products. Another group of cooperatives provides farmers with the resources of production (in Sweden and Finland, 60% of technology, France and Germany – 50 % fertilizer and feed in France – two thirds of grain seeds in the Netherlands – 33% of fertilizer and 55% of feed), or to manufacture and sell certain types of agricultural products such as potatoes, grain, seeds of various crops, breeding cattle, etc. Not less common and cooperative societies (credit institutions, cash agricultural cooperatives and cooperative building societies) to provide individual producers with short - and long-term loans secured by land (in Finland, 58% in loans granted to agricultural producers), and the mortgage companies are engaged in the organization of the rolling stations of agricultural machinery for farmers.

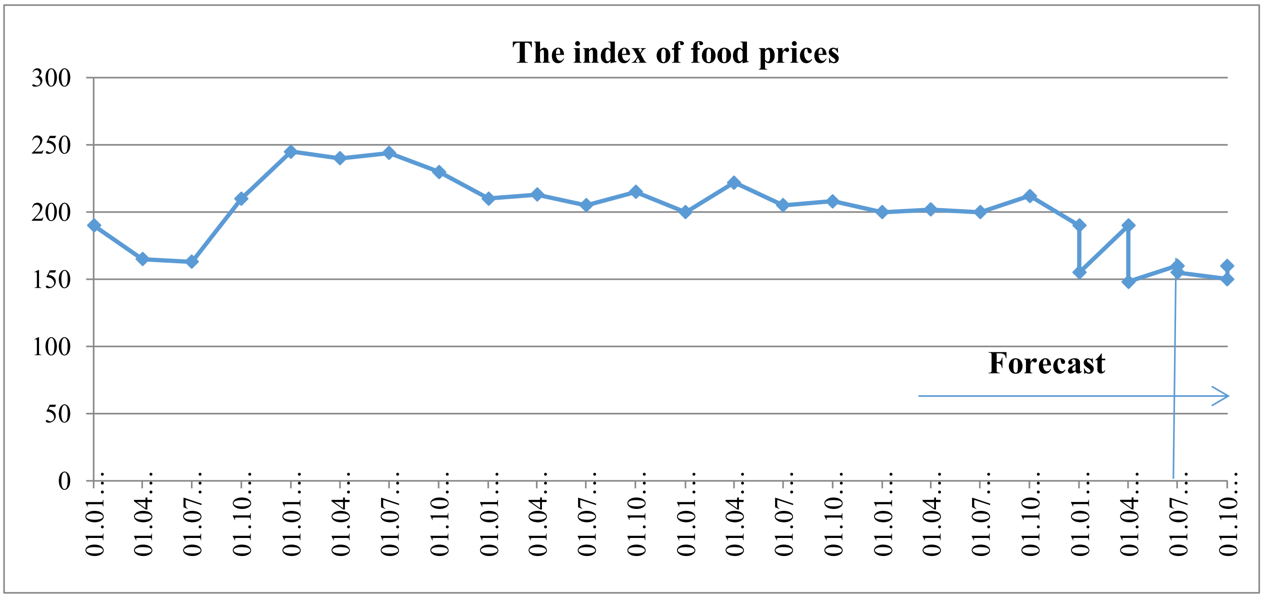
Cooperatives for production and maintenance of farms in a high degree developed in Western countries and Japan (for example, in France about 10 thousand cooperatives serve 25 % of the agricultural enterprises, where 4 % of the total number of tractors, 30% grain and 35% forage harvesters). In Germany, the farmers who created the machinery companies and machine rings (2 – 5 farmers) jointly use or provide equipment for hire for a fee. As a General line of development of farmers cooperatives EU, USA, Canada should be called wide consulting and information activity on the basis of the use of an extensive network of research institutions and services through the application of science in practice (in the Netherlands there are even cooperative institutes, studying and implementing modern methods, such as feeding livestock and poultry, etc.).

By the end of 2016 in the Russian Federation, agriculture became the leading sector in the growth rate of output – the index rose by 3.5% compared to 3.7 % recorded at the end of

2015. Significant growth of production volumes in agriculture has reduced the cost of buying food abroad is almost 2 times up to 23 billion dollars. Russian farmers harvested a record harvest of basic agricultural crops. Gross harvest of grain and leguminous crops in 2016 amounted to 104.3 million tons of grain in clean weight, including the 61.8 million tons of wheat (in 2015 and 59.7 million tons). In addition, the region received a record gross yield in several crops: corn for grain is harvested 12.7 million tons, soybeans – 2.6 million tons, rice – 1.11 million tons, flax – more than 500 thousand tons. Also 37.6 million tons of sugar beet were collected, 9.2 million tons of sunflower seeds were harvested. Increased production of potatoes and vegetables. In all categories of farms gross crop totaled 33.6 million tons, 15.9 % more than the average level over the past five years (in 2015 and 31.5 million tons). Record harvest of vegetables and 16.1 million tons (in 2015 – 15.5 million tons), which is 12.3% above average for the last five years. At the end of the year the production of livestock and poultry for slaughter in live weight in farms of all categories totaled 13.4 million tons, which is 4,2 % or 539 thousand tons more than in 2015 (Ministry of agriculture of the Russian Federation). For the year in the agricultural organizations, the production of livestock and poultry for slaughter in live weight increased by 7.2 %, in the peasant (farm) – on 4,6 %, and in households production decreased by 3.4 %. Agriculture was one of the few industries where lending volumes have not demonstrated a sharp fall, despite a significant compression of the credit market under conditions of monetary policy tightening. Central Bank data show that banks in the past year significantly increased their portfolios of loans to companies of agriculture from 1.7% to 2.1 %. In our view, positive dynamics in agriculture will occur at the end of this year, however, there is a tendency to slowdown.

The main reason for the slowdown in production volumes at the moment is the fall in food prices on the world market. Dynamics of the index of food prices is shown in figure 1.

Figure 1: Dynamics of prices for food in Russia

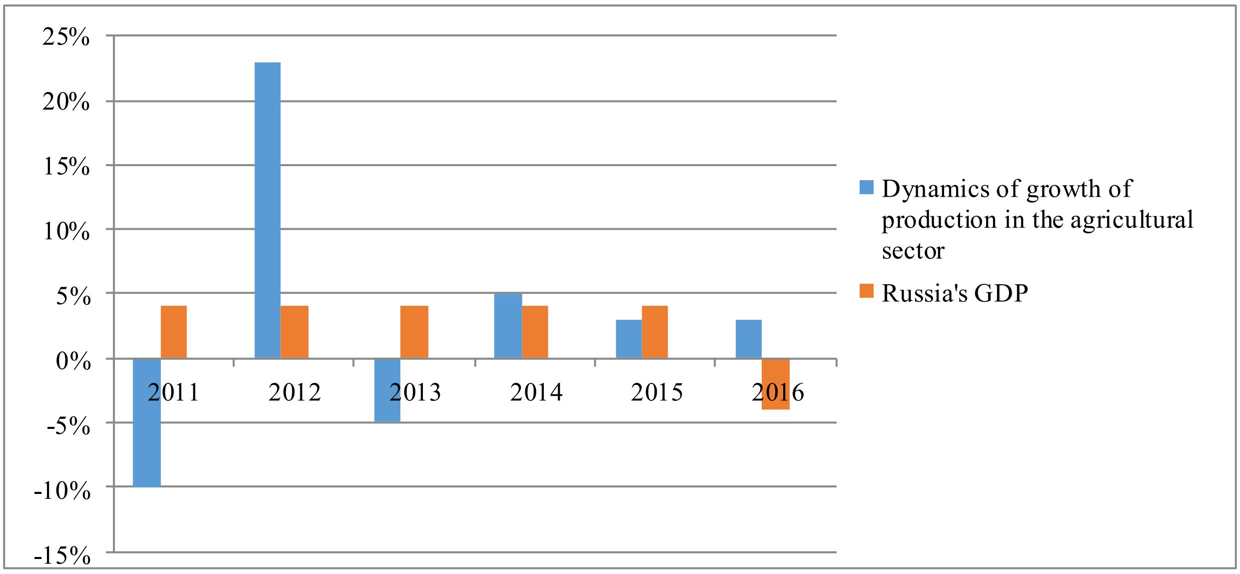


Source: studied by the authors

The implementation of a number of state programs of development of agriculture has brought certain results. However, the decline in world trade, a sharp deterioration in economic conditions negated the results of the measures of state support. Thus, despite the recovery of GDP growth of Russia in the current year to 0 - 0.5% in 2016 and up to 1.0 –

1.5% in 2017 (figure 2), the growth rate of production in the agricultural sector will continue to decline.

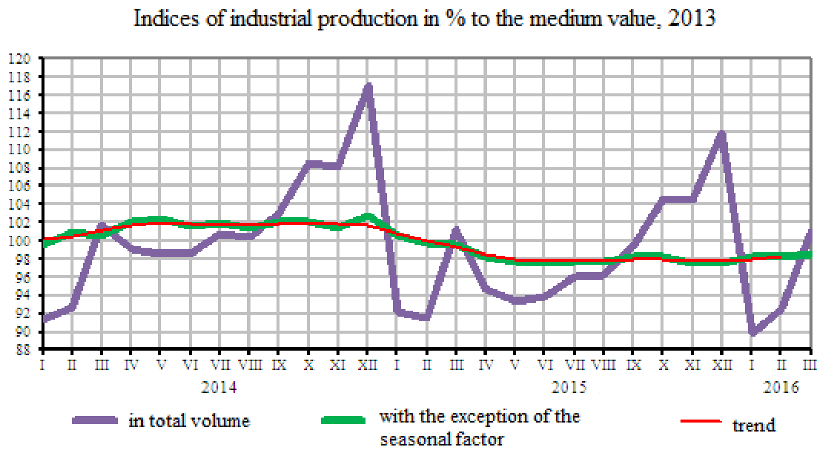
Figure 2: Dynamics of growth of production of agricultural products



Source: studied by the authors

By next year, the growth rate of gross value added will not exceed the growth rate of output and the share of gross value added of agriculture in total gross added value will start to shrink, it all, given the slowdown in production growth, is the "red signal". This situation suggests that in agriculture will stagnate, threatening to turn into recession. In the event that next year will not be implemented new large-scale program of support of agriculture, which will involve gaining access to cheap liquidity and the reduction of tax pressure on the enterprise sector, by 2018, the situation of 2012 could be repeated. As for the industrial sector, despite public support, attempts to overcome the widespread depreciation of fixed assets, a number of issues remain unresolved. Due to the economic crisis of the early 90-ies the state of the industry in Russia deteriorated. Domestically produced products among the population were associated with poor-quality products, they more and more were interested in imported goods. 1999 - 2005 are characterized by extensive development, which ensured serious investment. As a result, the goods market had a variety of part manufacturers, and the population became less trusting of foreign brands. The most developed to date in Russia are industry-chemical and pulp and paper production, and the production and distribution of water, gas and electricity. High growth rates are observed in the construction. Due to significant reserves of natural resources, the country occupies the first place on volume of oil produced and its exports. In the area of investment in 2012 was dominated by the commodity sector and companies engaged in the extraction of peat and iron ore. The current state of industry in Russia has a number of features that are not compatible with a modern economy. First and foremost is the fact that the enterprises in most cases not oriented to mass production, and to meet individual needs. Also recruitment is mainly by the principles of affinity and friendship, not professionalism. As a result, there is no one who can solve challenging and creative problems. Important role in the development of state industries in Russia is the training of qualified personnel, but most young professionals do not meet the requirements of production and after graduation can't start to perform quality work, which was arranged during the study. Experts of Institute of a name of Gaidar reported that due to a shortage of about 30% of companies last year had not fulfilled its plan of production. Difficulties in recruitment of businesses face regularly. Problem is the branch of the automotive industry, despite the costs, the products are not able to compete with Western samples. This primarily happens due to lack of engineering and technical personnel and the existing personnel needs additional training because the technology used is updated regularly. The low level of wages also prevent to attract new employees. The main consequence of staff shortages is the reduction in quality of the goods. This situation is observed in 42% of organizations. Due to the problems the state of industry in Russia has deteriorated since a lot of factories, with orders that can't increase output. Most of all it reflected in the light industry and mechanical engineering. For three years this influence has been noted in 20% of enterprises. Overcoming dependence on imports in Russia, run "top" on each turn a series of crises. The reason is simple – the reduced purchasing power of the ruble, the country is not able to import in previous volumes what does not and what is needed. The latest world economic hole burdened with anti-Russian sanctions. It has stepped up the government, forcing him to move from words to strategy development – creating programs of import substitution in Russia until 2020.

Figure 3: Dynamics of indices of industrial production for 3 years



Source: studied by the authors

The share of Russian imports for different sectors of the economy today is extremely high. For example, a country imports components for heavy engineering – 70%, civil aviation – 80%. In the oil and gas industry uses 60% of the equipment of foreign manufacture, energy – 50%. The government of Russia in 2014 it embarked on import substitution. The main method of its implementation was chosen as the stimulation of domestic manufacturers. The necessity of import substitution in the domestic economy is long overdue. The Russian economy has for a long time exclusively raw orientation, which led to import dependence of industry, commerce and other industries. According to the rating of the Government of the Russian Federation, the share of imports in industry for machine tools is 90%, machine building – 70%, oil and gas equipment – 60%, for the energy industry equipment – 50%, agricultural machinery from 50 to 90% (depending on product category). In the pharmaceutical industry, the share of imports reaches 90%.

The impetus for the development of the program of import substitution was Western sanctions against Russia. In the beginning of 2014 was prepared by the state program "Development of industry and increasing its competitiveness," the period of implementation which will last until 2020. The government has begun to support investment projects in the framework of import substitution. Financing is done by 2 ways: directly, through subsidies, grants and preferences; indirectly — through the increase in the volume of commercial loans that banks provide to companies on favorable terms. The main economic sectors that received state support within the framework of the import substitution program are: agriculture, industry, communication and telecommunications.

The issues of substitution of imported goods in the domestic agricultural sector rise from 2010, when there were sanctions and counter-sanctions. The main problem in the development of this sector is attracting investment. The Russian government defines the agricultural sector as a major in the program of import substitution, as it helps to ensure food security of the state. According to the program, by 2020 more than 90% of products of agricultural production should be domestic. To attract funding, the industry should have a high degree of investment attractiveness. However, the Russian agricultural sector is not engaged in the formation attractiveness for investors.

Russian industry today could not meet the domestic demand both in quantitative and qualitative terms. One reason for this is the decline in the market of domestic industry in the last twenty years. To overcome the dependence on imports is possible if the domestic manufacturers are able to produce competitive products of comparable price and quality to foreign analogues. For realization of import substitution in the Russian industry there are two ways: full capacity utilization and expansion; technological renewal of the production process. The government has developed 20 separate import substitution programme, which include over two thousand of enterprises, including: pharmaceutical manufacturing; chemical manufacturing; automotive industry; machine tool and other areas. For each industry identified the companies that will participate in the implementation of the program, and they developed stimulus measures, which take into account their specifics. To monitor activities for implementation of these programs created working groups, which interim quarterly results, and also help to build links between producer and buyer. According to the results of 2016, an increase of production in the following areas (in comparison with the similar period of last year): steam boilers, nuclear reactors +17%; machinery +10%; drug +11.8 per cent; iron and steel pipe +6.9 per cent.).

Table 1: The loss of individual EU countries because of sanctions and countersanctions against Russia

Country	Financial losses, euro billion	The loss of jobs, thousand
Austria	2,8	45
Bulgaria	0,4	62
Britain	9	141
Czech Republic	2,8	98
Estonia	1,6	76
Hungary	1,1	55
Germany	29,9	500
Italy	16,3	300
Netherlands	2,9	42
Poland	5,4	302
Portugal	1,1	65
Romania	1,3	119
Slovakia	1	43
Spain	8,5	206
France	11,1	162

Source: studied by the authors

EU sanctions against Russia and import substitution policy had a negative impact on the economy of Western countries. The study is given in table 1.

Europe sanctions and counter-sanctions Russia, of course, lead to the processes of antiglobalization economy and reducing the impact on the Russian economy from the outside, the raw orientation of the Russian economy is reduced.

However, to improve the competitiveness of agriculture and industry of Russia on the world stage:

- the rationality of the development of the domestic economy;
- improving innovation and investment climate to the levels of the country, and at the level of each economic entity, encouraging private, public and foreign investment;
- reforming the tax system;
- formation of legislative conditions;
- the development of industry and agriculture in accordance with accepted social standards.

3. Conclusion

The modern condition of agrarian sector of economy and industry in Russia requires rethinking of fundamental and practical foundations of a sustainable, efficient and competitive production. This determines our scientific agro-economic and industrial community - challenges for the coming years. The first is the formation of modern industrial and agricultural economic theory. The development of the principles for the development of industry and agriculture, taking into account their multifunctionality and the multiplicative in the context of globalization and integration processes in the world economy. The second is the formation of a new social paradigm of sustainable development of rural and industrial areas. And finally, the third - carrying out complex research of problems of transformation of land relations and land management in agriculture. The aforementioned issues are very complicated and multi-layered. They raise a lot of questions and few answers. They require complex and timely solutions.

Acknowledgment

This article is the result of a research project "Evaluation of the effectiveness of management of the industry and agrarian complex of the region in the context of globalization".

References

[1] Alvarez, I. and Marin, R. (2013). FDI and Technology as Levering Factors of Competitiveness in Developing Countries. *Journal of International Management,* vol. 19, no. 3, pp. 232-246.

[2] Archbugi, D. and Miche, J. (1995). The globalization of technology–a new taxonomy. *Cambridge Journal of Economics*, vol.19, no. 1, pp.121-140.

[3] Arkhipov, A. (2013) Investment and Innovation State Support of Agriculture in Russia as a Condition of WTO, *China-USA Business Review*. vol. 12, no. 7. pp. 637-645.

[4] Arkhipov, A. (2013) Economic theory in implementing the tasks of contemporary socio-economic development of Russia, Institutional Economics: development, teaching, applications, pp. 19-22.

[5] Arkhipov, A. (2012) Foreign economic vector of the modern modernization of the South of Russia, *News of Higher educational institutions. The North Caucasus region. Social science,* vol. 168, no. 2, pp. 47-51.

[6] Bridge, G. (2015). Grounding Globalization, *Economic Geography*, vol. 78, pp. 361-386.

[7] Brzezinski, Z. (2004). *Volba: globální nadvláda nebo globální vedení*. 1st ed. Praha, C.R.: Mladá fronta.

[8] Cazcarro, I. (2016) Modelling regional policy scenarios in the agri-food sector: a case study of a Spanish region, *Applied Economics*, vol. 48, no. 16, pp. 1463-1480.

[9] Cheng, E. (2008). Job performance dimensions for improving final project outcomes, *Journal of construction engineering and management*, vol. 133, no. 8, pp. 592-599.

[10] Dholakia, N. (2004). Mobility and markets: emerging outlines of m-commerce, *Journal of Business research,* vol. 57, no. 12, pp. 1391-1396.

[11] Domonkos, F. and Ostrihoň, F. (2015). Inclusive Growth in Selected Central European Countries. *Ekonomický časopis*, vol.63, no. 9, pp. 881–905.

[12] Duwendag, D. (2006). *Globalisierung im Kreuzfeuer der Kritik*, 1st ed., Baden-Baden, Germany.

[13] Fisher, S. (2003). Globalization and its challenges. *American Economic Review*, vol.93, no. 2, pp. 1-30.

[14] Fischer, T. C. (2009). *What's wrong with "globalization"?* Durham, North Carolina.

[15] Lysenko, K., Mechikova M. and Lemanova P. (2017) Development of Marketing Strategy and Use of Human Capital Assets for Effective Management in Agricultural Sector (AS) *Enterprise Activities, Journal of Advanced Research in Law and Economics,* vol. 26, no. 4.

[16] Marginean, S. (2015). Economic Globalization: from microeconomic foundation to national determinants. *Procedia Economics and Finance*, vol.27, pp. 731-735.

[17] Pasko, O. (2015) Global convergence of financial reporting standards, *Accounting and Finance of AIC*, pp. 45-50.

[18] Zawojska, A. (2013) Agri-food system and its linkages with global, international and domestic economies.

[19] Zawojska, A. (2013) Determinants of farmers' trust in government agricultural agencies in Poland, *Agricultural Economics-Zemedelska Ekonomika*, vol. 56, no. 6, pp. 266-283.

[20] Zeleny, M. (2012). High technology and barriers to innovation: from globalization to relocalozation. *International journal of information trechnology & decision making*, vol. 11, no. 2, pp-441-456.

IMPORTANCE OF ENTERPRISE SOCIAL NETWORKING TO PROMOTE INTERNATIONAL BUSINESS

Radovan Madleňák[1,a*], Lucia Madleňáková[2,b,] and Paweł Droździel[3,c]

[1] University of Zilina, Faculty of Operation and Economics of Transport and Communications, Department of Communications, Univerzitna 1, 01026 Zilina, Slovak Republic

[2] University of Zilina, Faculty of Operation and Economics of Transport and Communications, Department of Communications, Univerzitna 1, 01026 Zilina, Slovak Republic

[3] Lublin university of Technology, Mechanical Engineering Faculty, 36 Nadbystrzycka str., 20-618 Lublin, Poland

[a]radovan.madlenak@fpedas.uniza.sk, [b]lucia.madlenakova@fpedas.uniza.sk, [c]p.drozdziel@pollub.pl

*Corresponding author

Abstract. The term social network is now well known. Social networks can be characterized as usage of Internet-based social media programs to create new contacts and connect with friends, classmates, customers or clients (whether existing or potential). These networks can be used for various reasons, but most often, they are social and business reasons. The social networks are associated with concepts of engagement or interaction now, so social networks are the target area of marketers trying to capture potential customers and to take care existing customers. The main objective of this article is to point out the importance of social networking by companies to acquire new and maintain existing customers in a specific environment of a company doing business in Portugal. The company has an international network of customers and its social networking activity is key to its financial health. In the analytical part of article the various types of social networks (blogs, Facebook, Pinterest, Instagram) are analysed as a typical platform for communication of the Internet community in Portugal. Based on the correlation analysis methods, the importance of using Facebook's social network to generate traffic on websites and, consequently business leads will be highlighted. Finally, the model of engagement of this type of enterprise on social networks will be outlined.

Keywords: social networking, international business, engagement model, customers

JEL Classification: M30, M31, F23

1. Introduction

In today's era of high-paced modern technology developments, is almost impossible to be surprised by the depth of internet penetration in households not only worldwide but also in Slovakia. Consumers spend more and more time in the virtual space, shopping, communicating, or even solving various administrative acts of public administration using ICT technology (Online marketing, 2017). Besides the households, the business sector also uses the internet to support or carry out their business activities.

Implementation and usage of the Internet in business processes have proven to make a positive impact with enhancing the enterprise efficiency (Madlenak, Madlenakova, 2016). From a macroeconomic point of view it is even possible to observe the direct correlation between the Internet adaptation and the economic growth. Not only in terms of B2C, but first and foremost, the B2B market where the internet is largely used. Both of these markets require a different form of communication. The B2B market is on a certain level more conservative than the B2C market where customers, respectively, the prospects use mostly electronic form of communication (Corejova et al., 2016). B2B market is characterized by a markedly lower occurrence of online advertises and relying rather on the personal contact and catalogues. Nevertheless, most businesses use digital services (especially with online financial services). The migration of business processes to the virtual space has become a common approach of the companies (Hudak et al., 2017). However, it represents an appropriate integration of offline and online tools that ensure them a better place on the market. In this direction, an extremely important area is marketing (Online marketing, 2017). A well-thought implementation of marketing tools in the Internet environment represents a strategic competitive advantage and is one of the essential points of the strategic planning within the enterprise, characterizing the modern marketing (Kolarovszki et al., 2016). Business entities tending to be successfully placed on the market have already understood and accept the fact, that their presence on Internet (through web pages) is a matter of course (Kang et al., 2016). The internet itself, and ICT offer a wide range of opportunities and virtually unlimited space for spreading and exchange of information and knowledge. The biggest contributor to that are the social media. According to the ISCC, social media can be defined as a grouped internet- based applications, created on the ideological and technologic postulates of Web 2.0, that provide creation and exchange of user- generated content (Musa et al., 2016). The authors of The Social Media Bible (Safko & Brake, 2010) have described the social media as a phrase, formation of two words – social and media. The meaning of the word social is probably clear to everybody, because we are indeed social beings relying on our mutual abilities to interact or influence each other, even more important, to communicate with others in order to survive. Thus, this part of the phrase is standing for something good, meant to be beneficial. The word media, interpreted in the most traditional way is standing for newspapers, magazines or television. In a conveyed sense, it can be perceived and defined as an instrument with a huge impact making potential on the society as a whole (Krings, 2016). When thinking about the word media, many of us think of newspapers or news, but generally, it is a form of handing an information to the people – print, audio, video, photos, or more modern tools such as blogs or social networks (Maslowska et al., 2016).

According to the author of the book 36-Hour Course: Online marketing (Thomas, 2011), in addition the social media can be perceived as an aggregate of tools used as:

- low-cost marketing tools with proved practices,
- favourite platforms used to gain competitive advantage on the market,
- tools that can be persuasive and influence with having a strong voice,
- promotion of brands thanks to the high quality and convincing content, engagement and ways to quantify social media as marketing support force.

Beside these definitions, the term social also refers to activities and behaviours between communities of people who freely and without limitations contribute, create, share information, knowledge and opinions using conversational media that are available thanks to the internet based applications, enabling communication with easy transfer of content in form of text, images, video or audio recordings.

2. Analysis of current situation

Nowadays, it is not even necessary to particularly present and explain the term social networks, everyone is familiar with them. Thus, social networks can be defined as the way of using internet-based social media applications to create and connect with friends, acquaintances, classmates, customers and clients (existing or potential) (Barger et al., 2016). The reasons of using these networks can be a lot, but mostly they are from social or business nature, or both, e.g. Facebook, Twitter, LinkedIn, classmates.com etc. (Social Networking, 2017). However, social networks are currently mostly associated with engagement or interaction, making them a major target area of interest for the marketers trying to engage with users and finding prospects (Chahal & Rani, 2017). Most of the social networks were created just after 2000. In 2002, Friendster emerged as the first social network - said in a modern sense. Friendster allowed users to find new friends, providing them a safe virtual meeting space (Kukhnavets, 2017). In 2003 LinkedIn and Hi5 entered the market. LinkedIn emerged as one of the major social network dedicated to business and legal entities, enterprises. The network provides a space for businesses and generally people to communicate and establish new contacts at a professional level. This network presented the professional form of the social networking.

The biggest breakthrough in the social media development is the birth of Facebook. Facebook allows the users free sharing of multimedia content or text, different links or customize their profiles. The development of Facebook included many changes to its design and features (Luarn et al., 2015). Users have been able to edit some of the properties (such as privacy), add or block people, edit their timeline or create Fan pages. The fan page they create is easy manageable, is possible to add different media content, share links and information anytime and anywhere. Going through all of the developments, Facebook became one of the strongest marketing tools, where is possible to track, share and promote brands or businesses (Assimakopoulos et al., 2017). The creation and emerging of YouTube in 2006 was a breakthrough due to the reason, that Youtube was the first web portal providing video hosting, sharing videos and other multimedia content. Users of Youtube are able to upload videos, embed them on their personal site (by linking directly to the source), and share them on their personal sites or any social network. Nowadays, Youtube represents one of the largest video database in the World (Madlenak et al., 2015). In 2006 microblogging social network Twitter was created. Communication system on this network is established on sending short text messages up to 140 characters displayed on the user's profile. The message must be brief, concise and with an intention to attract people's attention to the subject. Usually they content links from other web pages, where the reader can find more information related to the message. Instagram is nowdays one of the most popular social networks for photo sharing. Is well known thanks to, and in the same time, by the „#" – hashtag symbol usage. The princip of working is easy and simple. User creates an account that can be linked with Facebook and share photos simultaneously on Instagram and Facebook. In one of the latests updates an option to send direct messages to other users was introduced. Thus, the communication channel was opened here also (Kujur & Singh, 2017). Social network Pintrest is working as a bookmaring image system. Searcing is possible with using tags or keywords that are processed by the network and results are displayed accordingly. Posts that are added to this social network can be „liked", or „like it", or save it as a bookmark form. These posts are referred as „pins" and will be saved on the favourites list. Created by Google, Google + social network has been created as a possible competitor to Facebook. The idea standing behind Google + is really similar to the all other social networks, differing with the transparent control of the shared content within the network. The integration with of google.com with almost all other social networking environments is also one big advantage (Yang et al., 2016). Altough the idea of google + at the beginning looked promising, now its clear that it will not be possible to compete with Facecbook.

Every country of the World has certain specificities due to the availability to the Internet and their users habits. These differnces are reflected in preferences in the use of Internet services or in the popularity of different social network (Steinmann et al., 2015). The focus in this article was put on the use of social networks in the environment of the Portuquese company DelightFULL, which carries out its business activites on a global scale. According to the statistics from 2017, 59% of the population in Portugal are using social networks, with 51% of them accessing social network from mobile devices. The most commonly used networks are Facebook and Youtube, followed by Instagram and Google+ (Socialbakers, 2017). If we compare the statistics from Portugal with the statistics in Slovakia, 46% of the population uses social networks and 37% of the population is accessed from mobile devices. The most common accessed social network in Slovakia is Facebook, followed by the Slovak network pokec.sk and the third is Linkedin (Socialbakers, 2017). There is thus a certain degree of differentiation in the use of social networks / media in the world.

3. Objective and Methodology

Aim of the article is to explore the importance of using social networks in the conditions of a Portuguese company providing services in a global context in order to maintain existing and allocate new customers. We are going to examine how social networking affects on the website traffic of the company DelightFULL. We assume that sharing information on the majority of social networks has a positive impact on the company's website visiting and hence the revenue and sales of the business. The company does business in Portugal, but with its social network activity, it affects the global market, as a major social network, we will choose Facebook. Based on statistical methods of correlation analysis, we will determinate the impact of Facebook activities on website traffic. As a primary data sources were used statistics from Google Analytics and Facebook Insights.

4. Results

The company DelightFULL operates in online marketing on many platforms and uses various online and offline tools. These tools include online advertising, social networks, blogs, as well as visits to various events and fairs around the world, but especially in London, Paris, New York, Cologne and other cities. As a part of offline and online product promotion, it provides not only product demonstrations in showrooms at fairs, but newsletters, 3D models, and other documents available on request and sent to a given customer. In order to prevent plagiarism, intellectual property protection and production know-how or product design, these documents are not freely available on the website. Sales department after receiving a request for shipment properly contacts the potential customer. It can be said that the goal of these online marketing tools as well as blogs, social networks and other social media is to increase requests for information, to achieve higher views of the company's website and, ultimately, to sell products. The company uses social networks primarily to create Info & Leads. The Info & Leads term in an enterprise environment is the number of users who request the enterprise to perform one of the actions, product catalogue (description, dimensions, price, etc.), contact, or have a direct interest in buying the product. An analysis on the impact of social activity on the business website traffic was realized in two different weeks (from 10th to 16th 10. 2016 and from 7th to 13th 11. 2016) within a calendar year. The data we analysed were information about the contributions that the company added on the most used social networks, such as Facebook, Instagram, Pinterest, LinkedIn and Twitter. Based on the data analysis, it can be said that the company is active on social networks and has a relatively high number of viewers and fans. The company posts a daily average of 3-5 posts on social network. Due to its global reach and popularity with DelightFULL customers, Facebook network can be considered as a dominant tool of communication, and therefore activity data on the company's FB profile will be correlated with traffic on the company's website.

To compare activity data on FB and company's website views, it is necessary to modify the views data of the company's website. We have found the traffic of the company's website in the review period from the data available in google analytics. Because website views may come from a variety of sources (organic, direct or referral), we need to filter views coming from the social network FB from the rest types of visits. Based on the results of the analytics software evaluating website traffic, we reached 6.15% in the week from 10th-16th October 2016 and 6.98% for the period from 7th-13th November 2016. This means that approximately 7 percent of website views comes from Facebook social network. We will compare this data with the FB profile activity data we obtained from Facebook Insights analytic program.

4.1 10-16th October 2016 period

Based on data presented in Table 1, it is possible to see an increase in activity on the company's website that culminated 13th 10.2016. It is possible to assume that the increase on Facebook and other social networks was due to the Equip Hotel Paris event, which took place in first half of October at the Paris Expo Porte de Versailles and is regularly attended by the company. During this period, social networking company shared and added a lot of contributions related to this topic. The increase could also have been reached by the end of the campaign at one of Maison et Objet 2016's biggest design shows in Paris. During the month of October, the company also launched a new season campaign and introduce special prizes for its selected products. They posted about all these actions on social media. It is clear from the above that the increase of the number of visitors have been triggered by many factors which have the same characteristics - they were posted on social networks.

Although social activity doesn't reach elevated level, correlation analysis has found a high dependency between FB social network activity and website traffic. From the data in Table.1 we calculated the value of the correlation coefficient, which is 0.7513. Closer the coefficient is to 1, the dependence is higher.

Table 1: Activity on FB profile and number of visitors during the period 10th – 16th 10. 2016

Date	FB profile activity	Modified number of website visitors
10.10.2016	33	114
11.10.2016	24	142
12.10.2016	56	118
13.10.2016	30	154
14.10.2016	81	108
15.10.2016	48	71
16.10.2016	30	79

Source: author

Based on Cohen's correlation coefficient classification and interpretation, it is possible to state that there is a very large correlation between the data groups examined, so the dependence between activity on the company's FB profile and the visits of its website over the analysed period is very strong.

4.2 7-13th November 2016 period

For comparison, we analysed in the same way other period from 7th to 13th November 2016. Website traffic and activity on the FB profile in this period are declining. FB profile activity is stagnant and the most significant impact on FB profile has been release of promotional videos on 7th and 13th 11.

Table 2: Activity on FB profile and number of visitors during the period 7th – 13th 11. 2016

Date	FB profile activity	Modified number of website visitors
07.11.2016	174	103
08.11.2016	108	110
09.11.2016	111	91
10.11.2016	90	96
11.11.2016	82	87
12.11.2016	40	66
13.11.2016	104	68

Source: author

If we compare different periods, the activity on FB profile in November is several times higher than in October and on the other hand the company's website traffic is lower in November than in the previous period. To interpret the tightness of the correlation between two data groups, was re-used the correlation coefficient, which was 0.6239. Based on the Cohen scale for interpreting correlation coefficients, it can be concluded that there is a strong dependence on activity on the company's FB profile and the traffic of its website during the analysed period.

5. Conclusions

If the business wants to make full use of the potential of social media and social networks, especially in the global environment, its action in this must not be accidental but must be effectively managed. Therefore, tools for regulation have been developed to manage social engagement on social networks. Engagement can be evaluated from a variety of perspectives. It is possible to say that engagement is an interaction between people and brands on social networks. For example, Facebook engagement includes options, such as "likes," comments, or sharing different multimedia content. Presented research results present the need of manage corporate social responsibility in particular in case of its international operations. In our case, it was a local company based in Portugal. Based on a business analysis of a selected social network activity over a 2-week period, a significant dependence was found between social activity and website traffic. Thus, it can be said that an enterprise can manage website traffic through its social network activity, which also leads to an increase Info & Leads and consequently to an increase in conversions, an increase in sales.

It is important to remember that engaging takes time, that is, time is needed and requires considerable confidence. Engagement effects are visible after a certain time, because it is a function of trust and knowledge. Therefore, it is important for businesses to be as tough as possible in the expectations of their social network activity. Businesses management should also understand that they need to create valuable content, they need an experience to build up this engagement. Customers, resp. potential customers will join the company's social network if there is some content that could help or interest them. Businesses need to provide valuable content to their customers, be useful, personal, but also authentic. After a certain amount of time, it can bring a reward in terms of building and gaining confidence, and it also demonstrates the expertise and professionalism of the business.

Acknowledgment

This work was supported by project VEGA 1/0515/15 Endogenous factors of the IPR intensive Industries in the regional enterprise environment in Slovak Republic

References

[1] Assimakopoulos, C., Antoniadis, I., Kayas, O. G. and Dvizac, D. (2017). Effective social media marketing strategy: Facebook as an opportunity for universities. *International Journal of Retail & Distribution Management,* vol. 45, no. 5, pp. 532-549.

[2] Barger, V., Peltier, J. W. and Schultz, D. E. (2016). Social media and consumer engagement: a review and research agenda. *Journal of Research in Interactive Marketing,* vol. 10, no. 4, pp. 268-287.

[3] Corejova, T., Rovnanova, A., Genzorova, T. and Valica, M. (2016). Digital transformation and its impact on brand. *Marketing Identity: Brands We Love,* pp. 54-65.

[4] Hudak, M., Kianickova, E., and Madlenak, R. (2017). The importance of e-mail marketing in e-commerce. In: *12th International Scientific Conference of Young Scientists on Sustainable, Modern and Safe Transport*, vol. 192, pp. 342-347.

[5] Chahal, H. and Rani, A. (2017). How trust moderates social media engagement and brand equity. *Journal of Research in Interactive Marketing,* vol. 11, no. 3, pp.312-335.

[6] Kang, M., Shin, D. H. and Gong, T. (2016). The role of personalization, engagement, and trust in online communities. *Information Technology & People,* vol. 29, no. 3, pp. 580-596.

[7] Kolarovszki, P., Tengler, J. and Majercakova, M. (2016). The new model of customer segmentation in postal enterprises. In: *3rd International Conference on New Challenges in Management and Business: Organization and Leadership,* vol. 230, pp. 121-127.

[8] Krings, W. (2016). *Social Media Engagement in B2B-Business Development.* Paper presented at the 3rd European Conference on Social Media (ECSM), Ecole Management Normandie, Caen, FRANCE.

[9] Kujur, F. and Singh, S. (2017). Engaging customers through online participation in social networking sites. *Asia Pacific Management Review,* vol. 22, no. 1, pp. 16-24.

[10] Kukhnavets, P. (2017). All You Should Know About the History of Social Media. [Online]. Available: https://blog.kuku.io/what-is-the-history-of-social-media/

[11] Luarn, P., Lin, Y. F. and Chiu, Y. P. (2015). Influence of Facebook brand-page posts on online engagement. *Online Information Review,* vol. 39, no. 4, pp.505-519.

[12] Madlenak, R. and Madlenakova, L. (2016). The global impact of e-marketing strategies on sme in the segment of touristic services. In: *16th International Scientific Conference on Globalization and its Socio-Economic Consequence*, Rajecke Teplice, Slovakia, pp. 1235-1243

[13] Madlenak, R., Madlenakova, L., Svadlenka, L. and Salava, D. (2015). Analysis of Website Traffic Dependence on Use of Selected Internet Marketing Tools. *2nd Global Conference on Business, Economics, Management and Tourism*, vol. 23, pp. 123-128.

[14] Maslowska, E., Malthouse, E. C., & Collinger, T. (2016). The customer engagement ecosystem. *Journal of Marketing Management,* vol. 32, no. 5-6, pp. 469-501.

[15] Musa, H., Azmi, F. R., Ab Rahim, N., Shibghatullah, A. S. and Othman, N. A. (2016). *Analyzing the Effectiveness of Social Media Marketing.* Paper presented at the 1st International Soft Science Conference (ISSC), Malaysia.

[16] Online marketing. (2017). [Online]. Available: http://www.marketingonline.sk/online-marketing/

[17] Safko, L., & Brake, D. K. (2010). *The social media bible: tactics, tools, and strategies for business success*. Hoboken, NJ: John Wiley & Sons.

[18] Socialbakers (2017). Social Marketing Reports. [Online]. Available: https://www.socialbakers.com/resources/reports/page-1-5/

[19] Social Networking. (2017). [Online]. Available: http://www.investopedia.com/terms/s/social-networking.asp

[20] Steinmann, S., Schramm-Klein, H., & Mau, G. (2015). Engagement and Evaluation in Social Online Networks - A Marketing Perspective. *Lili-Zeitschrift Fur Literaturwissenschaft Und Linguistik,* vol. 45, no. 177, pp. 125-140.

[21] Thomas, L. (2011). *The McGraw-Hill 36-hour course: online marketing*. New York: McGraw-Hill.

[22] Yang, S., Lin, S., Carlson, J. R. and Ross, W. T. (2016). Brand engagement on social media: will firms' social media efforts influence search engine advertising effectiveness? *Journal of Marketing Management*, vol. 32, no. 5-6, pp.526-557.

THE IMPACT OF GLOBALISATION ON OPEN-SOURCE INNOVATIONS OF MARKETING COMMUNICATION USING HACKATHONS

Adam Madleňák[1,a], Anna Zaušková[2,b,*]

[1]Faculty of Mass Media Communication, University of SS. Cyril and Methodius in Trnava, Slovak Republic

[2]Faculty of Mass Media Communication, University of SS. Cyril and Methodius in Trnava, Slovak Republic

[a]adam.madlenak@ucm.sk, [b]anna.zauskova@ucm.sk

*Corresponding author

Abstract. More and more businesses have been recently looking for and implementing new models of creating values for their customers. Experts suggest that companies´ ability to embrace relevant knowledge from the external environment in order to make products or provide services meeting market needs is a key tool for their continuous growth. A particular subject represents only a fragment of the research capacity within a specific field. Therefore we can see an obvious interest of entities in identifying potential partners in order to integrate external resources of knowledge into their structures. In general open source refers to any kind of information available to the public in the global environment. Free data flow is its basic feature. Thanks to globalisation, their popularity is growing in all the three sectors – public, private or even non-profit – as they accelerate an innovation process. In order to generate new ideas for R&D and problem-solving, it is worth attending so-called hackathon events. They serve as a starting point for further cooperation in innovations. A variety of interesting stimuli can create a basis for an open-source project which would focus on elimination of a continuous inability to develop new technologies and products in an autonomous way. On a regular basis, building mutually beneficial relationships among innovative partners bears certain common features and therefore the authors of the paper have tried to summarise and generalise businesses´ tendencies when it comes to evolution of the knowledge society.

Keywords: innovation process, open innovation, open source, hackathon, marketing

JEL Classification: M13, M31, O31, O32

1. Introduction

EU member states are bound to reinfornce their innovation efforts in order to reflect on specific requirements of the single European market as well as globalisation processes. Due to their continuous indebtness the EU member states are not able to ensure sufficient support and promotion of science or basic and applied research. Therefore representatives of the business sector have to be more effective when dealing with their resources for development of prospective business opportunities. Long-term ignorance of social challenges and customers´ needs or stagnation of management thinking result in a loss of their market position in the highly competitive environment. Businesses´ ability to innovate is a basic criterium of their competitiveness. Innovations are considered as one of the key factors for socio-economic development of the modern society. They tend to improve technological and production processes, increase the volume and quality of production or make the marketing methods more effective (Dúbravská et al., 2015).

The latest development of information and communication technologies has enabled faster and more effective implementation of outcomes from the research activities of business entities. Immediate processing of data in the virtual environment, their imminent distribution and a possibility to get swift feedback from the target audience are changing the previous way of communication. Mutual exchange of ideas within the society and acquisition of new knowledge is not limited to a personal contact (Hajdu et al., 2014). Technological changes provide businesses with an opportunity for generating new knowledge and experience and help initiate mutually beneficial cooperation among subjects. The principle of „open source“ is being currently applied in order to maximalise values being created in both the internal and external environment of a business subject. The formal framework of an organisation is becoming a virtual border in the flow of knowledge among institutions and their surrounding environment. New possibilities are being opened for both small and medium-sized entreprises to help them to become market leaders and gain a competitive advantage.

2. Use of an open-source principle in innovation processes

Thanks to implementation of an open-source principle, innovation processes are becoming more interactive thanks to involvement of a larger group of participants with different knowledge and experience. Dynamicity and complexity of the whole process brings about complementarity of the outcomes of the research depending upon the characteristics and features of partial needs and available problem solving (Appleyard & Chesbrough, 2017). We may assume that there are various terms defining open source of innovation activities. They are differentiated by the form as well as rate of sharing of particular knowledge with other subjects (Dong & Netten, 2017). Based upon these efforts, project owners can select the most appropriate model of searching for an adequate innovative solution.

In general only one entity represents a recipient of all the potential solutions of a given task as well as its main outcomes, i.e. an open-source innovation. The applicant is the main initiator for an implemented innovation project. The entity is in the centre of attention of the overall cooperation. The main task lies in the applicant´s appropriate informability on problem solving, adequate motivation and specific requirements the solution shall include in order to be generally accepted (Carayannis & Meissner, 2017). Even though the concept of open-source innovations supposes mutual sharing of information among different entities, it is worth noting that open source only relates to the parties involved. New knowledge does not need to be necessarily made accessible to all the parties, but only to those subjects directly involved in the innovation process. Open source is often limited by confidentiality among business partners with regard to the outcomes of the research in order to maintain a competitive advantage and maximalise the company profit (Svec & Valentova, 2016). Implementation of open-source innovations usually represents fast, accurate and rather inexpensive management of an innovation proces generating a positive change in either production or final product commercialisation. Business relationships among the subjects as participants in an open-source innovation are usually set forth in a contract. All the conditions and approaches herein are limited by a business model of the project owner. Existence of a business model is deemed a basic condition as well as a motivation factor for participation of various business entities in a foreign innovation process. Payment of licence fees for the right of use of a final innovation method or refund of the costs incurred in purchase of the patent do not represent any exclusion herefrom.

The proposed exchange of information by way of licence agreements within a circle of potential business partners is deemed unacceptable due to another type of cooperation, i.e. an open-source concept. When applying such a concept the project owners are willing to waive centralised management as well as control over the innovation process being implemented (Stanko & Henard, 2017). It is necessary to define how a specific object or a technological approach should be correctly innovated. Based upon the public licence any complementary regulations and interventions into possible effectivity of coordination of amendments from the part of the project owner are considered irrelevant. Particularities of an open-source concept and their specific application into practice are to be discussed in the following chapter.

3. Open-source as a precondition for global cooperation of subjects in innovations

An open-source approach is seen as a marginal example of openess in the process of creation and diffusion of an innovation. Open source represents a specific form of sharing knowledge primarily in the framework of technological development. It consists of the compilation of regulations and approaches (codes) for a new product to be developed and furthermore distributed while the source code is publicly available (Lee et al., 2017). It can refer to any kind of information available to the wide public on condition that the possibility of its free distribution is preserved. The source is deemed open once all the prospective interested parties may have an unlimited access hereto without a specific consent to be granted, or the requirements for access to its content are not extremely difficult to comply with or they are not primarily discriminatory (they do not create unequal treatment). A permit allowing access to a source code shall be issued on a neutral basis regardless of the applicant´s character and intentions.

Within an open-source concept end users are allowed to use freely the information they obtained, modify it by their needs or distribute it further. The right to pack and sell a final product as an output of an open-source principle is subject to obligatory publication of the work method to have been implemented.[16] Any modification of the source code and its consequent distribution requires application of the open-source concept in its future trading. All the rights and obligations of every end user of open source are governed by a corresponding public licence. By matching a specific open-source licence with a code the author is able not only restrict but also determine strict conditions of use (GPL, LGPL licence, etc.). It is also possible to waive any control over how the code is being distributed or used (BSD, MIT licence). Open-source licences can include other restrictive conditions for users of the source code, e.g. the name of the author or copyright or a copyright waiver (Sims & Seidel, 2017). Licences represent an important determiner of practical use of the source code within open source. If the source cope is made available to the public with a rather restrictive

[16] Terms and conditions are stipulated in a specific licence agreement.

capacity, developers will not be able to use it for their needs in their own projects and therefore will opt for a more convenient provider. If the source code is made available through a free licence, competitors can modify and use it in their commercial products without an express consent of the original author (no profitability from the source code).

We may say that an open-source project does not determine any specific rules to divide tasks in order to reach a particular goal. A simultaneous independent approach of the authors of an innovation process results in regular duplicity of such an activity. Therefore the quality of the published outcomes can differ considerably. In ideal conditions we may avoid a duplicit research activity thanks to natural contacts among organisations involved in the innovation process so as they could get acquainted with open-source solutions in more detail.

The open-source approach has been long considered an alternative to patent solutions mainly in the field of computer software applications. Knowing succession of the commands which are necessary for developing a computer software enables programmers to execute requested modifications quickly and flexibly in order to provide compatibility with other software components. Simultaneously they are allowed to research into the software in order to eliminate possible mistakes and ensure higher data security to prevent from accidental or intentional abuse. Security updates and new functions also contribute to sophisticated computer programmes (Guo et al., 2017). The computer sytem Linux, Internet search engine Mozilla Firefox or the package of office applications OpenOffice.org are the most reliable open-source solutions.[17]

Recent changes to social communication and growing globalisation have paved the way for further opportunities for effective implementation of open source. A lot of open-source projects implemented abroad have become textbook examples of successful innovative efforts in the field of service provision or product development. The online encyclopedia Wikipedia ranks among the most famous prototypes of an open-source approach. It is based upon the idea of common sharing of information in the open spectre of knowledge of its contributors. Mutual regulation of reliability of its content ensures distribution of knowledge in different languages in the highest quality possible. Despite the fact that open source contributes to Wikipedia popularity, it can also be the main reason for its non-acceptance as an unreliable information source.

Producers in the food industry have recently discovered the potential of open-source solutions. So-called OpenCola has become the first non-alcoholic drink the repice of which has been officially made public. Firstly its recipe was published on the web page of the producer. Later the producer changed the marketing strategy due to repetitive breach of open-source principles from the part of end users. At present it is possible to get the original recipe by way of an online application of a potential user (Svec et al., 2015). In principle, anyone can produce, distribute or freely modify Open Cola´s recipe when meeting the conditions of availability of every variation. The main idea is to reach identical taste as the Coca-Cola products. Although OpenCola does not represent a relevant danger for any market leaders producing non-alcoholic beverages, it has raised some questions on application of open-source ideas in the field of innovation processes within businesses.

---

[17] A complete alternative to Microsoft Office including Microsoft Word, Microsoft Excel, Microsoft PowerPoint, Microsoft Outlook, etc.

4. Hackathon as a source of implementation of open-source projects

A lot of company managers do not have any current information or relevant knowledge of use of an open-source principle out of the field of development of computer programmes. It is likely that their point of view of open-source solutions will be rather sceptic. There are various obstacles influencing effectivity of the whole process of creation of new ideas. When promoting open-source ideas the majority of businesses have tendancy to protect strictly their trade secret to maintain their competitive advantage in the market. An insufficient HR structure or distrust from the part of managers towards users within the same industry may represent another difficulties (Vlacsekova & Mura, 2017). At the time of fast innovation trends an open-source concept can be seen as an ineffective solution because of its long-lasting implementation. Most of the businesses are engaged only on a voluntary basis in the given innovation process. On the other hand, we have to say that it is a natural way of obtaining an unlimited number of ideas the human society can use when developing new approaches. We allege that motivation for promotion of the above mentioned model of an open-source innovation depends on a specific business entity. It is essential to consider all the possible consequences of availability of methodics or a production process for the wide public. Will these ideas be attractive enough to be naturally distributed? Can we expect the participants to get interested in developing similar products based upon the available information? Will the others get inspired and be capable of sharing the method or results of their work?

Businesses may organise hackathon events in order to answer the above mentioned queries. These are meetings of various programmers, designers, graphic designers, sellers or other stakeholders who are trying to bring about a completely new view of the problem solving or use of information at a brainstorming meeting in a very short time period, i.e. a few days or a week (Vinals et al., 2017). Hackathons are mainly organised by the company management to eliminate so-called „author´s blindness“. In other words, specialists suffer from professional deformation as they are trying to solve the given problem as amateurs. Absence of the view of an ordinary customer results in ineffectivity of the measures targeting the majority of prospective audience for the product (Krajčovič, 2015). It is worth analysing partial outcomes of our production process in more detail with regard to specific functions and the purpose of a final invention by way of external auditors (stakeholders) having at their disposal publicly available data or the part hereof.

A stakeholder refers to any person, a group or an organisation actively involved in a certain activity and whose interests can be positively or negatively influenced by such an activity. Every business has an unlimited ability to appoint its own stakeholders. They are naturally identified immediately after start or continuation of the given activity (Felin et al., 2017). Even those who do not have any obvious connection herewith may happen to become actively involved. Businesses operating in various industries differ not only in the number of their employees or stakeholders but also their relationship structure. A heterogenous character of all the participants requires a more detailed specification of those groups who exercise considerable influence as well as have higher requirements on functionality. Managers have to understand reasons for motivation as well as stakeholers´ involvement in a production process and their viewpoint in order to plan an adequate communication strategy for problem-solving (Mendelová & Zaušková, 2015). Communication with stakeholders represents a valuable tool for identification of possible dangers as well as opportunities for market development, adaptation to conflict management strategies or implementation of modern worldwide trends. It depends on the whole society to what extent it can evaluate originality and similarity of stakeholders´ proposals and determine approximate costs and benefits.

Positive feedback and acceptance of the outcomes of the work groups participating in a hackathon event can generate a positive change of thinking of the company management in the framework of a future scientific and research activity. A hackathon is a basis for an innovation process to be continued in an open innovation (e.g. outsourcing) or in an implemented open-source project (Dong et al., 2017). On the contrary, every participant has a unique opportunity to be one of the first to try up-to-date technologies, deal with company information, liaise with new subjects, discuss or exchange the latest experience.

At present there is no unified open-source model to guarantee success. However, we have to agree that it is very difficult to change the company culture in those businesses who have been executing production, distribution or sale in a traditional way for a couple of years.[18] Newly-created businesses are allowed to introduce an open-source principle into their company structures much more easily and gain advantages the new concept is offering. Young scientists understand the term of an open source application. The principles such as transparency, mutual cooperation and sharing of relevant information have become a household name thanks to the latest technologies (Lacko & Meyer, 2016). The Internet and new communication trends are undermining social interactions among the young but at the same time provide us with an opportunity to understand the basis of public information sharing as a fundamental approach of an open-source principle.

5. Conclusion

The growing complexity of production processes and their permanent evolution prevent a single business entity from managing an innovation process autonomously. There is an urgent need for searching a suitable partner for cooperation and increase effectivity of the specific industry. Management of the business entity can organise a hackathon and invite external professionals and experts from the field. The main purpose of this creative event is to find new connections in the structure of publicly available knowledge related to a specific innovation process and to point out to its prospective implementation in the market environment. Even though sharing knowledge among organisations can be firstly considered as rather restrictive for a company, appropriate legal statutes may provide effective implementation of rights and obligations so as the outcomes of the research could be adequately used.

As conclusion, we may assume that the combination of internal as well as external source of knowledge provides organisations with completely new innovation opportunities. When defining their different features, the fundamental principle lies in implementation of intercompany (or interpersonal) relationships in the framework of a continual innovation process. There is a certain loss of control over the implemented activities in order to ensure more active participation possible and search for an optimal problem solving method.

[18] When a business with a long-lasting tradition decides to apply an open-source principle, it is mostly used only to complement its main subject matter of business activities having no considerable influence on its business strategy.

Acknowledgment

The paper has been elaborated in the framework of the project of the Scientific Grant Agency of the Ministry of Education, Science, Research and Sport of the Slovak Republic and the Slovak Academy of Sciences (VEGA, № 1/0640/15) named *"Phygital concept and its use in sustainable integrated environmental management of businesses"*.

References

[1] Appleyard, M, M. and Chesbrough, H. (2017). The Dynamics of Open Strategy: From Adoption to Reversion. *Long Range Planning*, vol. 50, no. 3, pp. 310-321.

[2] Carayannis, EG. and Meissner, D. (2017). Glocal Targeted Open Innovation: Challenges, Opportunities and Implications for Theory, Policy and Practice. *Journal of Technology Transfer*, vol. 42, no. 2, pp. 236-252.

[3] Dong, J. Q. and Netten, J. (2017). Information Technology and External Search in the Open Innovation Age: New Findings from Germany. *Technological Forecasting and Social Change*, vol. 120, pp. 223-231.

[4] Dong, T. C., Liang, C. X. and He, X. (2017). Social Media and Internet Public Events. *Telematics and Informatics*, vol. 34, no. 3, pp. 726-739.

[5] Dúbravská, M. et al. (2015). Internationalization of Entrepreneurship – Motivating Factors: Case Study of the Slovak Republic. *Acta Polytechnica Hungarica*, vol. 12, no. 5, pp. 121-133.

[6] Felin, T., Lakhani, KR. & Tushman, ML. (2017). Firms, Crowds and Innovation. *Strategic Organization*, vol. 15, no. 2, pp. 119-140.

[7] Guo, W. et al. (2017). User Roles and Contributions during the New Product Development Process in Collaborative Innovation Communities. *Applied Ergonomics*, vol. 63, no. 1, pp. 106-114.

[8] Hajdu, Z., Andrejkovic, M. & Mura, L. (2014). Utilizing Experiments Designed Results during Error Identification and Improvement of Business Processes. *Acta Polytechnica Hungarica*, vol. 11, no. 2, pp. 149-166.

[9] Krajčovič, P. (2015). Strategies in Media Planning. *Communication Today*, vol. 6, no. 2, pp. 21-30.

[10] Lacko, I. and Meyer, H. (2016). On Technology Innovations, Digitalisation and Social Security in the 21st Century. *Communication Today*, vol. 7, no. 2, pp. 108-114.

[11] Lee, S., Baek, H. and Jahng, J. (2017). Governance Strategies for Open Collaboration: Focusing on Resource Allocation in Open Source Software Development Organizations. *International Journal of Information Management*, vol. 37, no. 5, pp. 431-437.

[12] Mendelová, D. and Zaušková, A. (2015). Innovation in the Slovak Advertising Environment. *Communication Today*, vol. 6, no. 1, pp. 38-56.

[13] Sims, J. and Seidel, VP. (2017). Organizations Coupled with Communities: The Strategic Effects on Firms Engaged in Community-coupled Open Innovation. *Industrial and Corporate Change*, vol. 26, no. 4, pp. 647-665.

[14] Stanko, M. A. and Henard, D. H. (2017). Toward a Better Understanding of Crowdfunding, Openness and the Consequences for Innovation. *Research Policy*, vol. 46, no. 4, pp. 784-798.

[15] Svec, M., Olsovska, A. and Mura, L. (2015). Protection of an “Average Consumer” in the Digital Society – European Context. *Marketing Identity: Digital Life II.* Trnava, Slovakia, pp. 273-282.

[16] Svec, M. and Valentova, T. (2016). *Ochrana osobných údajov v pracovnoprávnych vzťahoch*. Bratislava: Wolters Kluwer.

[17] Vinals, CR., Munoz, EP. & Silvente, VB. (2017). Entrepreneurial Activities and Alternative Learning Spaces. Skills Development for a Hackathonday. *Doxa Comunicacion*, vol. 24, pp. 175-186.

[18] Vlacsekova, D. and Mura, L. (2017). Effect of Motivational Tools on Employee Satisfaction in Small and Medium Enterprises. *Oeconomia Copernicana*, vol. 8, no. 1, pp. 111-130.

THE HABITS AND GLOBAL PROBLEMS OF CROSS-BORDER ON-LINE SHOPPING

Lucia Madleňáková[1,a,*], Radovan Madleňák[2,b] and Anna Rudawska[3,c]

[1] University of Zilina, The Faculty of Operation and Economics of Transport and Communications, Department of Communications, Univerzitna 1, 010 26 Zilina, Slovak Republic

[2]University of Zilina, The Faculty of Operation and Economics of Transport and Communications, Department of Communications, Univerzitna 1, 010 26 Zilina, Slovak Republic

[3]Lublin university of Technology, Mechanical Engineering Faculty, 36 Nadbystrzycka str., 20-618 Lublin, Poland

[a]lucia.madlenakova@fpedas.uniza.sk, [b]radovan.madlenak@fpedas.uniza.sk, [c]a.rudawska@pollub.pl

*Corresponding author

Abstract. Now we are living in the digital age and an increasing number of transactions are made online in the global environment. Cross-border online shopping goods and services from internet retailers in European Union and other world offers potential benefits to consumers, including financial savings and a wider geographically unlimited offer of goods and services with accessibility 24/7. However, this process of globalization brings various problems. The paper uncovers habits and global problems of cross-border online shopping that the authors have identified based on the results of their own research, relying also on international studies and reports. We can also uncover a significant amount of problems with international delivery, such as poor communication, unacceptable delays, high shipping costs and unexpected charges, also cross-border returning unwanted or faulty items. Here the authors think it is necessary to improve the world-wide interoperability of international delivery operations (e.g. the data elements related shipments, label production for global tracking and identification). The second key aspect is gaining the transparency about transit time. The development and open access to standard information generated using standard measures, definitions and metrics for transit times (domestic and international) would allow shippers to better tailor their offers and manage cost and service according to needs of selected world market parts.

Keywords: online shopping, cross-border, e-commerce, customer, delivery

JEL Classification: F61, F68, L81, L87

1. Introduction

Many researches (Stalmasekova at al., (2017), (Zhuwen & Sun, 2016), (Madlenak & Madlenakova, 2015 A), (Barone at al., 2014), (Pilik, (2012). and statistical reports indicate that the cross-border online shopping has its disadvantages, seen in several problematic areas, which affect the customer shopping habits to a great scale. This existing issue was finally acknowledged also by the European Commission. Already in 2009, it found out that customers were not completing up to 60% of cross-border online transactions and this trend is still ongoing. This is primarily due to the problems with the actual delivery of the ordered goods, respectively, problems with the possibility to realize a cross-border payment. In 2015, the European Commission launched a survey in all European countries, involving 25,000 online shops and the results have shown that online traders using cross-border transactions are constantly confronted with obstacles such as: legal uncertainty caused by unclear rules or legal discrepancies across countries, different tax and payment systems; high delivery prices, and so on (Dieke at al., 2014). All these and many more problems occur not only on the trader's side but also on the consumer's, despite the existence of one uniform European Union legislation. In terms of the Slovak e-commerce and also the global online environment, this issue and many their problems (as a ICT, delivery, costs, quality, habits) are deal in the works of academics and stakeholders (Madudova & Kolarovszki, 2016), (Madlenak & Madlenakova, 2015 B), (Corejova & Weick, 2009), (Madlenak & Svadlenka, 2009).

2. Analysing of current state

The European e-commerce turnover grew to 530 billion euro in 2016 (by 15%). It is expected that in 2017, Europe´s e-commerce turnover in the B2C segment is about to reach approximately EUR 602 billion, with an almost 14% growth rate. The majority of online customers on the advanced Western European e-commerce markets in 2016 were from United Kingdom. The rate represented here was up to 87%, in Denmark 84% and Germany 82% online customers. By contrast, the proportion of online shoppers was the lowest in Romania and Bulgaria. However, in the countries of Central and Eastern Europe a constant growth is being noticed. For example, Slovak and Estonian markets has shown an increase by 35%.

In 2016, 33% of the European online buyers were buying goods cross-borders, whereby Luxembourg, Russia and Switzerland got 60% of the buyers. Differences in the shopping habits are evident, especially from the perspective of age segmentation. It was shown that, two-thirds of the customers aged 16 to 24 are used to shop online, while only one third of the customers aged 55 to 74 are using online shopping (Hunter & Wilson, 2015). The cross-border shopping in the world and the global customers habits are solved by many authors (Mills & Low, 2015), (Madleňák & Madleňáková, 2015), (Schiffman & Wisenblit, 2014) and studies (Chu & Zhang, 2016), (Mandilas at al. 2013).

3. Methodology and goals

The information and conclusions presented in the article were obtained by analysing the results of the primary and secondary research focused on detecting the barriers and most common habits when using online shopping (Madleňáková & Mišíková, 2016). The primary research was carried out by the author in 2016 on samples of 20 e-shops, registered in the SR. The survey was complemented with a detailed and in- depth interview carried on a sample of 10 experts. Another significant part of the primary survey was a questionnaire survey carried out on a target group of online customers (200 respondents in the Slovak Republic). Based on the realized orientation analysis, the risk aspects of online shopping habits were identified. The second component supporting the research conclusion was based on the information gained from secondary sources such as the EC surveys, assessments and statements focused on highlighting the shopping habits and problems of both, customers and e-commerce merchants (Hunter & Wilson, 2015), (Borbon-Galvez, Y at L., (2015).

4. Results and discussion

4.1 Online shopping habits and trends

According to the surveys, the majority is enjoying online shopping. Only 0.5% of respondents have never purchased online. Up to 89.2% of the online customers are using it at least once a month. Two-thirds of the online customers (66.4%) purchase goods or services from an online seller based in another EU country. Customers regularly shop once or couple of times per month, but cross-border online shopping is still making only 10% of transactions. The prior reason for a cross-border purchase is to obtain goods that are not available in the home country. Nearly six out of ten respondents said they were shopping cross-borders because the goods were cheaper abroad. Approximately one third of respondents said there was a wider choice of online retailers based in the other EU countries. The most common reasons for cross-border online shopping are lower delivery fees, delivery times and more varied options for delivery to the addressee. The survey also implies that purchases from abroad are not always targeted. A lot of respondents were often unaware of the origin of an online seller before buying. In some cases, the online seller's allocation was detected only after receipt of the order confirmation or even when the shipment was received. Many respondents approved online purchases from a retailer based in another EU country without considering the retailer's origins. In this context, however, another critical aspect is also being noticed - the origin of the goods (Madlenak at al., 2015). Respondents report this problem especially on intermediary sites such as Amazon Marketplace or eBay.

Respondents' confidence in online shopping is mainly tied to their home country. Not surprisingly, only 28.4% trustfully buys from retailers of EU countries and 14.7% outside EU countries. And almost every third online customer (28.3%) showed mistrust in online sellers in other countries.

Financial security is undoubtedly one of the most important aspects of online shopping. 65.6% of respondents said they do not like to provide their personal information when making online payments with a credit card. Greater restraint is noticed in the case of payments going outside the home country. Many respondents said they only trust payments via PayPal. Conversely, an e-shop which does not offer another, more secure payment choice as a credit card, becomes unreliable for the customer.

An important aspect of cross-border online shopping is for sure the reviews. Up to 77.7% of respondents said they are influenced to a certain rate by the customer’s ratings on a retailer when deciding. It has also been shown that a significant decision maker is the “trusted brand” logo, based on customer’s positive recommendations and support they have given to a seller. It shows to the potential buyer that an e-trader has demonstrated compliance with certain standards, security, privacy, and business practice. Three quarters of the respondents (76%) said that sites marked with the “trusted brand” logo are more likely to be chosen than the unmarked. However, the level of protection or warranty offered by these systems may also be confusing for the online customers. In its report from 2013, European Consumer Centres Network (ECC-Net) concluded that overall, customer can encounter 54 different brands of trust when shopping online in Europe. In addition, there are countries that do not have any signs of trust at all. This status is currently prevailing and there is no overview of the trusted brands available for the customers.

4.2 Reasons for never shopping cross-border

A third of the online customers never bought anything from an online retailer based in another EU country. As a reason, they stated the possibility of a potential problem occurred during a business transaction (Hudak at al., 2017). Three quarters (74.1%) said they were worried about troubleshooting or about the return of goods. Language barriers posed a problem in 42.6% of the respondents and the concerns about high delivery fees was noticed in 38.1% of the respondents. For example, online respondents from Slovakia (age 45 - 54) expressed great concern about the return of the goods and subsequent delivery overhead cost related to the return. Another important and nowadays, a new phenomenon is the social responsibility. Respondents reported also, that they prefer domestic or regional and local retailers, from pure ethical reason, to support for domestic production and trade. Environmental reasons have also been shown (7.1%), such as reducing emissions, aviation emissions, or the threat of being supplied with contaminated food from abroad. Interestingly, more than a quarter (26.5%) of the respondents said they have not made yet any cross-border online purchases because they did not know about any EU websites where they can shop online.

4.3 Cross-border customer problems

Most retailers are fair and are trying to fulfil their obligations towards its customers. Many respondents point to their positive online shopping experiences. However, according to ANEC, 15.2% of the customers have experienced a transaction problem while shopping cross-borders. Of these, 27.4% received the goods purchased later than the promised delivery date, 24.5% had experienced rejected orders due to their geographical location, and 22.1% of the ordered goods were not even delivered. Nearly a quarter (23.1%) experienced problems with faulty goods.

4.3.1 Geographical differences

The Services Directive gives European consumers the right to access services across the EU, regardless of their nationality or the place where they live. This means that they should not be otherwise charged or redeemed. There should be no refusal of access to the goods or, services. However, the ANEC survey (Hunter & Wilson, 2015) revealed many practical examples of geographical discrimination, with which approximately 24.5% of respondents have experience. This is mainly about: refusing delivery to another country, problems with another type of payment, payment in another foreign currency, but also language barriers. Here we can see unfair business practices also (traders' websites often automatically detect where a consumer lives and redirect them to a national website, where the prices may be different, or some retailers required customers to have a bank account in that particular country, …). This kind of problem has already been solved and monitored.

4.3.2 Delivery of ordered goods

Many respondents are convinced that delivery is the biggest problem when shopping online. More than a quarter of respondents (27.4%) confirmed that the goods were delivered later than the deadline. Up to 22.1% said that the shipment was not delivered at all. Respondents are generally divided into two groups regarding these issues. One group is convinced that delivery problems are caused by post offices /couriers. The second group is convinced that the problems are caused by a vendor with an ambiguous definition of the delivery method, time of delivery but also by the delay of the shipment. A common issue for cross-border online shopping is the cost of delivery. According to the EU legal regulations, traders must provide the closing price including postal fees before the consumer clicks on „buy “.

But even though the prices were clearly displayed, some respondents think that delivery fees are not making the online shopping cost-effective. In case of unfair commercial practices, there have been problems with the charging of postal fees separately for each item in the consignment. Labelled as a risky aspect was also the reliability on the delivering of the shipments. Customers are not always given the possibility to track the shipment online as an option of the distribution system. Respectively, customer is not always properly informed, do not have the chance to change the place and time of delivery (Vaculik at al., (2014).

In Britain, there were often problems with leaving the subject of shipment unprotected, if the addressee couldn't been reached (in front of the door, stairs, etc.). It is mainly matter of the so called geo-blocking, still existing inconsistency of the payment systems, ambiguous and inaccurate information given in the business terms, resolving disputes etc.

4.3.3 Problems with returning goods

Three quarters (74.1%) of those who have never traded cross-border have said that they are worried about resolving or returning goods. These problems persist. Solving these problems is often complicated by cross-border delivery costs, problems in interpreting EU regulation and language barriers. Other risk aspects are linked to prices of postage due to return of goods, respectively by replacement or substitution. According to EU legislation a retailer should ensure the return of postage if the goods are defective. However, the customer is responsible for returning the postage if he wishes to cancel his purchase without having any reason. Some e-shops offer free returns even without giving them any reason. Therefore, ensuring which is the return policy of the retailer should be a crucial step in purchasing online. This can be another crucial factor when choosing a suitable online retailer.

4.3.4 Complaints

Complaints are very sensitive issue address also in many specially works (Majercakova, (2016). Research has shown that customers (39.8%) are less complacent when it comes to cross-border purchases relative to complaints about domestic online purchases. Three out of ten respondents (31.3%) who experienced a problem with online shopping did not lodge a complaint. Respondents claims that the biggest obstacle when lodge a complaint is that they have complicated and challenging complaints (29.3%). Only one out of five felt it would be successful. Another 17.7% could not lodge complaint as a result that the retailer did not provide adequate contact details, respectively it was not possible to find out who or where the complaint can be lodged. However, research has shown that six out of ten respondents (59.6%) complained directly to an online retailer. Only half of them (56.2%) were satisfied with the result of their complaint, one out of three (32.5%) said they were dissatisfied. This dissatisfaction suggests that online retailers do not fulfil their obligations according to EU law (as reiterated by the European Commission, retailers do not always know about their legal obligations).

Exercising customers' rights and entitlements when buying cross-border is on a large scale marked by knowledge in the field of consumer's rights declared by the legislation. 30,01% of the respondents claimed to know their rights. However, when testing their knowledge, it was found that only 2.2% of the respondents could clearly identify their rights. Nine out of ten respondents were not able to answer all questions correctly. Almost half of the respondents (46,4%) did not even know that there are ECC (European Consumer Centre) in each EU country, that provides advice and assistance in dealing with cross-border disputes.

5. Conclusion

In e-commerce are not present only the traditional barriers associated with doing the business, but also there are specific barriers stem from the virtual environment in which trading is taking place. E-commerce, after overcoming the initial barriers associated with entering a competitive global environment, can further limit problems with the location of small businesses and their competitive power in the global market, which in many segments are dominated by large online shopping malls. According to the results of the research, consumers have several problems with cross-border online shopping (geographical discrimination, inconsistent payment systems, low level of awareness about their rights and responsibilities…).

Anyhow, there are many significantly more serious problems in terms of their solvability, and not only in terms of legislations, but also of technical or technological nature. For example, one of the main problems associated with the delivery of shipments and online purchased goods can be solved by creating global distribution system.

However, here arises the question of the interoperability of the postal and logistical systems, not only at national, but, above all, at global level.

Initiatives to describe the e-commerce delivery global value chain such as platforms, websites for improving the transparency of information in relation to prices and time of delivery or other measures (pricing tools, price comparison), standardize tracking systems, defining roles of third party as a couriers and delivery services, retailers and consumers rights and responsibilities, are created very carefully. They are funded either publicly or privately, and they are present in some member states. Until the present, there is no single suitable European initiative that would allow e-retailers to better coordinate distribution activities (solving the technical and operational interoperability problems, e.g. shipment information transfers, labelling, real-time data exchange including tracking data, agreements where and how shipments are exchanged, would allow the development of better delivery and return solutions for e-retailers and consumers). This is the main added value of interoperability will undoubtedly also be shown on the part of the customer and e-traders particularly in the case of cross-border trade.

Acknowledgment

This paper is an output of the science projects:

1/0515/15 Endogenous factors of the IPR intensive Industries in the regional enterprise environment in Slovak Republic

1/0721/15 Research on the impact of postal services and telecommunication convergence on regulatory approaches in the postal sector

References

[1] Barone, V., Crocco, F. and Mongelli, D. W. E. (2014). Models of Choice between Shopping and E-Shopping. *Materials Engineering and Mechanical Automation,* vol. 442, pp. 607- 616.

[2] Borbon-Galvez, Y., Dewulf, W., Vanelslander, T., Van de Voorde, E., Cardenas, I. and Onghena, E. (2015). *Cross-Border Parcel Delivery Operations and its Cost Drivers* (Rep.). Antwerp, Belgium: University of Antwerp.

[3] Chu, F. L. and Zhang, X. (2016). Satisfaction, Trust and Online Purchase Intention: A Study of Consumer Perceptions. *2016 International Conference on Logistics, Informatics and Service Sciences (Liss' 2016)*, vol. 4.

[4] Corejova, T. and Weick, L. (2009). B2B Market Research in the Context of Regional Disparities. *Cers 2009 - 3rd Central European Conference in Regional Science, International Conference Proceedings - Young Scientists Articles*, pp. 160-167.

[5] Dieke, A., Hillebrand, A., Joyce, C., & Niederprüm, A. (2014). *Design and development of initiatives to support the growth of e-commerce via better functioning parcel delivery systems in Europe* (Rep.).

[6] Hudak, M., Kianickova, E. and Madlenak, R. (2017). The importance of e-mail marketing in e-commerce. *12th International Scientific Conference of Young Scientists on Sustainable, Modern and Safe Transport,* vol. 192, pp. 342-347.

[7] Hunter, J. and Wilson, M. (2015). *Cross-Border Online Shopping Within The Eu - Learning From Consumer Experiences* (Rep.). [Online]. Available: http://www.anec.eu/attachments/ANEC-RT-2015-SERV-005.pdf

[8] Madleňák, R. and Madleňáková, L. (2015). *Basics of e-Commerce*. Bratislava, Slovakia: DOLIS s.r.o.

[9] Madlenak, R. and Madlenakova, L. (2015). The Differences in Online Advertising Acceptance in China and Slovakia. In M. Wang (Ed.), *Proceedings of the 2015 International Conference on Management Engineering and Management Innovation,* vol. 3, pp. 45-49.

[10] Madlenak, R. and Svadlenka, L. (2009). Acceptance of Internet Advertising by Users in the Czech Republic. *E & M Ekonomie a Management,* vol. 12, no. 1, pp. 98-107.

[11] Madlenak, R. and Madlenakova, L. (2015). Comparison of Regional Postal Transportation Networks in Zilina Region. *Transport Means 2015,* pp. 277-280.

[12] Madlenak, R., Madlenakova, L., Svadlenka, L., & Salava, D. (2015). Analysis of Website Traffic Dependence on Use of Selected Internet Marketing Tools. In A. I. Iacob (Ed.), *2nd Global Conference on Business, Economics, Management and Tourism,* vol. 23, pp. 123-128.

[13] Madleňáková, L., and Mišíková, M. (2016). *Barriers of starting a business in electronic commerce* (Working paper). Slovakia: Department of Communication, University of Žilina.

[14] Madudova, E. and Kolarovszki, P. (2016). Results of a Cluster Analysis of the ICT Sector Case study from the Slovak republic. *Proceedings of the 2016 International Conference on Engineering Science and Management (Esm),* vol. 62, pp. 156-159.

[15] Majercakova, M. (2016). Consumer Confidence in the Use of e-Commerce. *Marketing Identity: Brands We Love, Pt Ii*, pp. 189-198.

[16] Mandilas, A., Karasavvoglou, A., Nikolaidis, M., & Tsourgiannis, L. (2013). Predicting Consumer's Perceptions in On-line Shopping. *6th International Conference on Information and Communication Technologies in Agriculture, Food and Environment (Haicta 2013),* vol. 8, pp. 435-444. D

[17] Mills, J. E., & Low, R. (2015). *Handbook of Consumer Behaviour, Tourism, and the Internet*. USA: Routlege.

[18] Pilik, M. (2012). Factors Influencing On-line Buying Behaviour in the Czech Republic: E-Shop Selection Criteria. *Innovation Vision 2020: Sustainable Growth, Entrepreneurship, and Economic Development,* vol. 1-4, pp. 1621-1629.

[19] Schiffman, L. G., & Wisenblit, J. (2014). *Consumer Behavior* (11.th ed.). Pearson.

[20] Stalmasekova, N., Genzorova, T., Corejova, T., & Gasperova, L. (2017). The impact of using the digital environment in transport. *12th International Scientific Conference of Young Scientists on Sustainable, Modern and Safe Transport,* vol. 192, pp. 231-236.

[21] Vaculik, J., Tengler, J., Maslak, O., & Tanger, L. (2014). How Can New Technologies to Improve the Delivery Process. *Clc 2013: Carpathian Logistics Congress - Congress Proceedings*, pp. 236-242.

[22] Zhuwen, B. H., & Sun, B. (2016). A Study on the On-line Shopping Behavior of Chinese Female Consumers. *2016 3rd International Conference on Economic,* Business Management and Educational Innovation (Ebmei 2016), vol. 1, no. 54, pp. 126-130.

THE GLOBAL FASHION VALUE CHAIN

Emília Madudová[1,a], Margita Majerčáková[2,b,*]

[1]University of Zilina, Faculty of Operation and Economics of Transport and Communications, Slovak Republic

[2]University of Zilina, Faculty of Operation and Economics of Transport and Communications, Slovak Republic

[a]Emilia.Madudova@fpedas.uniza.sk, [b]Margita.Majercakova@fpedas.uniza.sk

*Corresponding author

Abstract. The paper provides a deeper look into value chain logic in value chain relationships in a global fashion industry value chains. In recent years, value has been recognized as a key factor in better understanding consumer behavior and thus gaining competitive advantage. Value chain analysis can expose strategic and operational misalignments within the global value chains, and the consequential misallocation of resources and hence opportunities for improvements which create value and economic sustainability. The paper focuses mainly on the fast fashion business model and fast fashion global value chain. The aim of this paper is to provide an overview of the whole fast fashion business model by describing its key drivers from a strategic international management perspective. There are huge differences in the value chain and supply chain relationships between creative industries and one of creative – fashion industry and it is not possible to generalize these relationships in one value and supply chain. For this reason, the paper describes dimensions of fashion industry value chain, mostly fast fashion in the context of industry analysis, value chain processes, support and related environment and evaluation of the relationship of stakeholders. Findings present main generalized value chain of the global fashion value chain. The paper also takes into account the of value chain approach that describes the vertical and horizontal linkages. The value chain conception is important for the identification and development of the enterprise.

Keywords: value chain, fashion, apparel, value chain analysis

JEL Classification: D46, F63, 031

1. Introduction

Fragmentation of production across borders has become a salient feature of the global economy (Stofkova K. & Stofkova J., 2010), (Majernik et al., 2016). The phenomenon, generally referred to as global value chains (Tambo, 2014) (Stofkova et al., 2015). Fashion retail is normally recognised as having a strong focus on product-centric innovation and seasonal product development in general (Sorecsu et al., 2011), (Reinartz et al., 2011).

With rapidly changing market conditions in form of multiple, competing sales channels, need for smarter supply chains, diverse geographical conditions and limited consumer loyalty, innovation in the space between the brand owner and the store is generally overlooked, but of increasing importance (Cillo & Verona, 2014), (Moore, 2002), (Kovacikova & Repkova Stofkova, 2016)

Brand owners do not have any particular technological skills and innovation capabilities, and most retail innovation must come from direct and indirect business partner networks (Madlenak & Madlenakova 2015), (Stofkova 2010)

The goal of this paper is to describe the value chain logic in a global fashion value chain relationship (Figure 1). There are many ways of production, for the reason, on differences between value added fashion creative industry and low value added fast fashion business model so popular in recent years, the paper mostly focuses on the fast fashion business model and its There are huge differences between creative industries and their characteristic features, for this reason, paper focuses mainly on fashion and its impact on the environment and the human health.

1.1 Exclusivity and no application to fast fashion business model

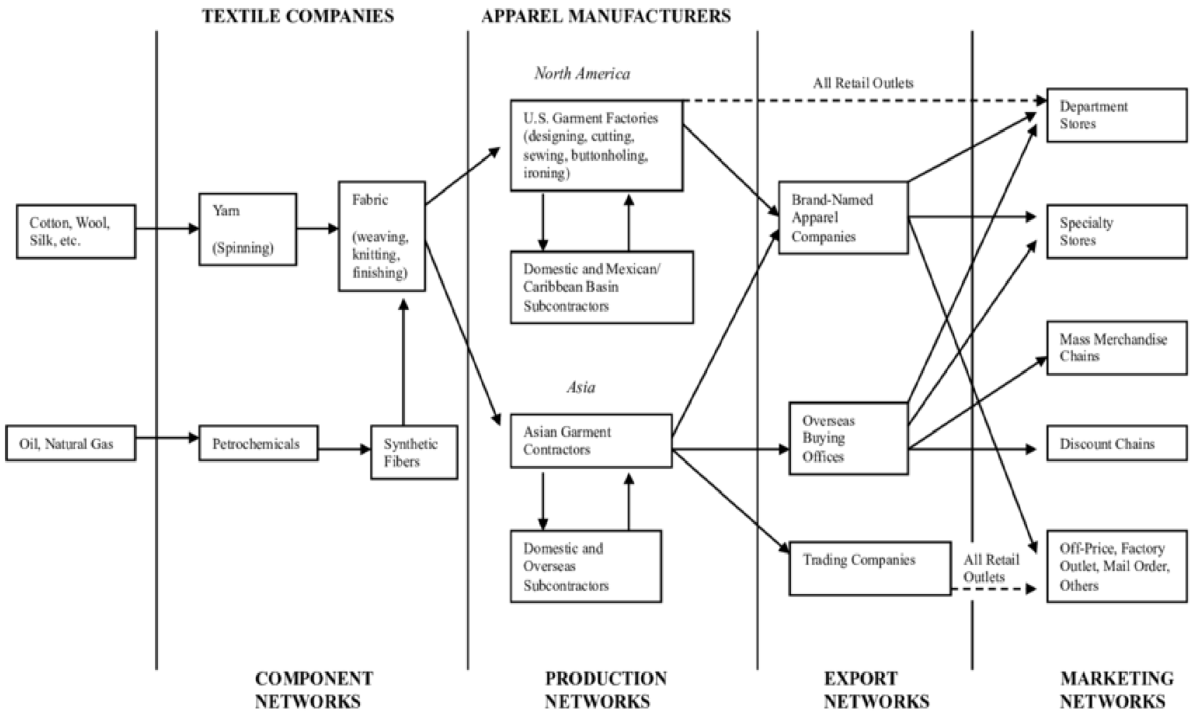
Creative sector has mostly been recognized for its intangible asset of this market is its exclusivity. Distribution, pricing, and consumer strategy continue to be the tactical priorities for managers. The main feature of fashion designers is exclusivity and good quality materials, fabric, unique designs that customers value and war for a long time period.

In contrary, fashion brands take into account contemporary market dynamics and came into market with fast fashion business model. Fashion is the practice of rapidly translating high fashion design trends into low-priced garments and accessories by mass-market retailers at low costs. Emphasis is on optimizing certain aspects of the supply chain for these trends to be designed and manufactured quickly and inexpensively to allow the mainstream consumer to buy current clothing styles at a lower price. This philosophy of quick manufacturing at an affordable price is used in large retailers such as H&M, Zara, Mango, Esprit, C&A. There are a number of elements that can be defined as a key factor to the fast fashion process, namely: the price of the garments and accessories; the method and timeline of manufacturing; the trend-based nature and dispersibility of the clothes themselves.

Initial exploration and conceptualization of fast fashion phenomenon began in 2004 when it started to gather popular cultural interest (Barnes & Lea-Greenwood, 2013). Two main perspectives concerning fast fashion are: the supplier-driven and consumer-driven approaches. *The consumer-driven perspective* asserts that the fashion industry renewal process leading to fast fashion development, has been determined by changes in customer life styles and customers started demanding both fashionable and more affordable products in higher frequencies with respect to the past. The *supplier-driven perspective* claims that the rapidly and efficiency of a fast fashion supply chain aimed at gaining a competitive advantage position, have seen a surge in fast fashion as a new innovative business model. A supply chain can be defined as a network of organizations that are involved, through upstream and downstream linkages, in the different processes and activities that produce value in the form of product and services delivered to the ultimate consumer (Arrigo, 2016), (Christopher, 2000).

Nevertheless, (Bruce et al., 2004), highlight the way in which clothing supply chains are "leagile" since they combine features of a lean supply chain with those of an agile supply chain. In fact, fast fashion companies adopt an agile approach in downstream stages of the manufacturing processes in order to be able to respond quickly to the market through the supply of new fashion garments. On the opposite side, they tend to set up a lean approach in supply chain´s upstream stages, which are usually the most stable and predictable (Vecchi & Buckley, 2016).

Figure 1: The Global Fashion value chain



Source: (Industry Canada, 2008), (Cammett, 2006), (Appelbaum & Gereffi, 1994)

2. Methods

The research carried out two types of information sources – the secondary and the primary data. The secondary data were collected with the theoretical basis, for the reason of the evaluation of the importance and necessity of describing the issue of the value chain. The object of the primary research was the fashion and apparel value chain. Primary research was conducted with the aim of describing the value chain of H&M brand and consequently describing the connections to global fashion value chain. When analyzing the value chain, the fashion and apparel industry was mapped, as well as the important participants and components of the value chain processes, supportive and related environment was evaluated in the relationship of stakeholders. Authors had also taken into account the creation of the value chain approach that describes the vertical and horizontal linkages defined by the several authors in the past (Gereffi & Memedovic, 2003), (Corejova & Imriskova, 2010). Described value chains reflect the recent trend of fast fashion and apparel industry.

3. Results

Creative industry makes more high and low fashion and no mass fashion goods, while non-creative industry makes “mass fashion” goods. Many firms not only from the fashion industry but also from the other creative industries, that seems to be creative and presents themselves as creative, only copy creative products, this is the core of the fast fashion business model. It is well known, that many IT products and components are made and produced in China and offered worldwide. The fashion industry is no exception. As an example can be presented “business model” of not only European traders buying fashionable clothing from Chinese warehouses that copy the most famous designers in Italy (mainly Prato and Milan) and sell them as their original creative product. Italy produces 45% of all clothes made in the EU. China's textile industry is a world beater, accounting for over 60% of world chemical and synthetic fiber production. Cotton production is lower, but still large, at over 20% of the global total, ranking only behind India in 2016. The trend, however, is downwards as China is caught between rising domestic costs, persistent technical and distribution advantages elsewhere (Figure 2).

The problem of the global value chain of the fast fashion business model is not only a diminishing value in the individual parts of the value chain but mainly the first and the last part of the vertical global value chain. E.g. clothes are inexpensive and available but high-quality materials such as cotton are replaced with "false" cotton and the other materials made of chemical.

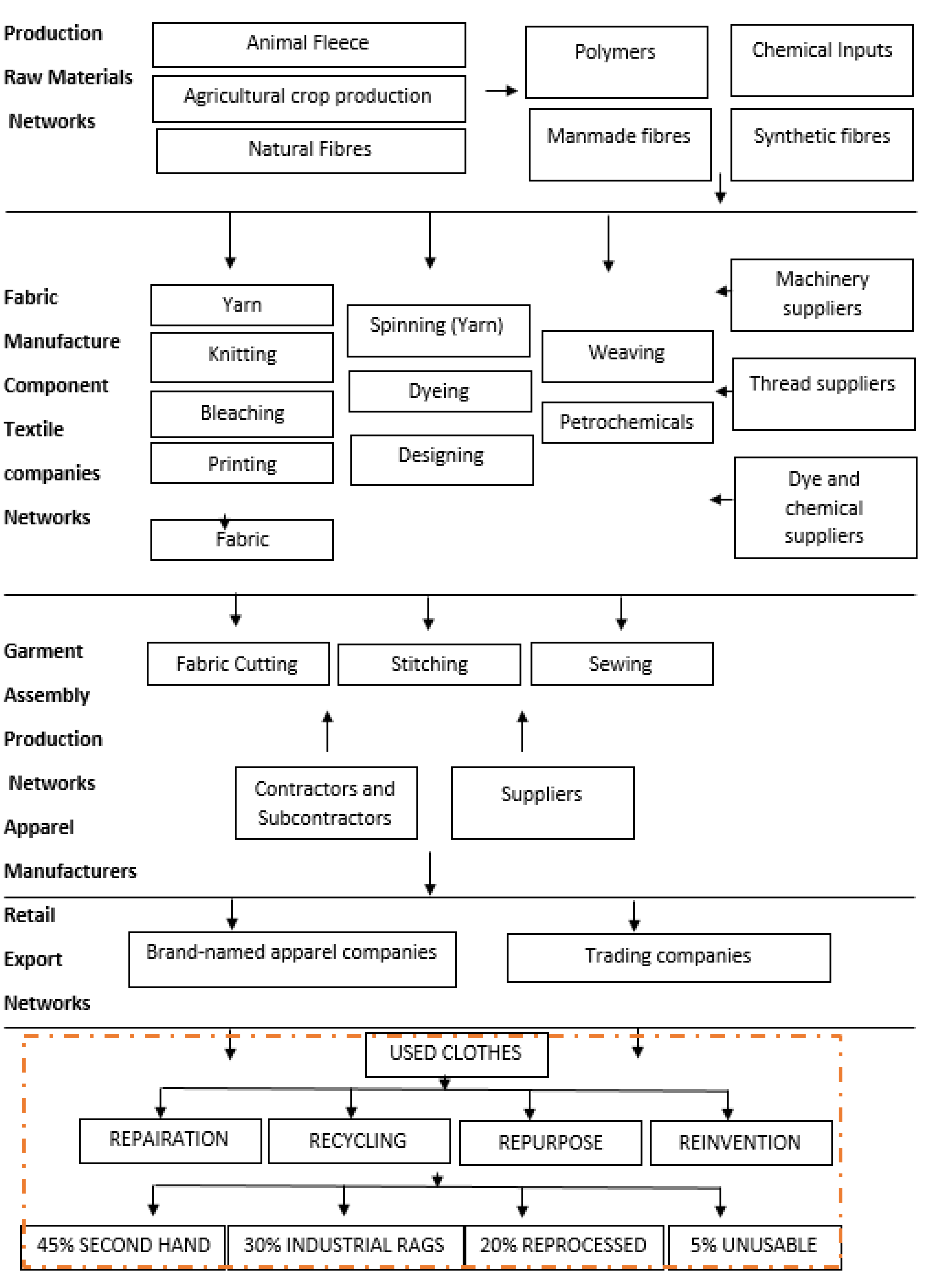
When mentioning the working conditions and rewards of those working in the industry, it is possible to mention the well-known example of Rana Plaza factory in Bangladesh. More than 1,134 people died making clothes sold in one month of 2013. 28 brands were linked to the factory complex including Primark, Matalan, Benetton, Bonmarché, El Corte Inglés, and Mango. The fast fashion industry relies on a year-round production flow, low stock levels in stores and a supply chain that responds to rapidly changing demands.

Buying a piece of clothing was once a celebrated occasion in 1900 15% of household income was spent on clothing, compared to 2.8% in 2010. And it's not because customer spend more on a few quality items, in 1997 the average woman bought 19 pieces of clothing, and 10 years later 34 (The Guardian, 2014)

The last part of the vertical value chain is a major threat, as well. Namely, the use of the cloths used. Most of the used clothes end up in landfills. Even though some of the clothing is recycled, this method of consumption puts pressure on the environment as well. Currently, the modest industry is one of the reasons for introducing the fast fashion business model to the second most polluting industry in the world. The production of millions of pieces of clothing requires annual high energy consumption. Most of the energy needed to make clothing is made from a coal. From this, it can be deduced that the fashion industry is responsible for the large amount of carbon emissions worldwide.

Fashion production is also extremely demanding for soil and water, which aggravates the use and refilling of toxic chemicals in the materials from which the clothing is used, not to mention the subsequent contamination of water. Also, in order to maintain the rapid demand for fashion, natural fibers were predominantly substituted by synthetic fibers, i.e., plastics, i. fabrics made of oil. Polyester based on oil replaced cotton.

Figure 2: The Fast Fashion Global Value Chain



Source: Author

4. Conclusion and Discussion

A critical mass of each of the value, supply and demand chain actors is a necessary condition for industries growth (Corejova & Al Kassiri, 2016). Building a critical mass of supply chain actors can help emerging industries within a region (Corejova & Rostasova, 2015). Moreover, industry value chains are often complex without a strong organizing entity.

As written above, the creative thinking is the most value added but without the existence of innovation, collaboration, contrasting abilities and styles of thinking, creative enablers, distributors and public institutional involvements and mainly the demand, the creative industries will not have sufficient conditions for progress, development, and prosperity what can lead to copying, duplicating, replication and reproduction of creative products by non-creative sectors or parasitizing of "creative" firms on not own creative ideas.

The changing dynamics of the fashion industry have forced retailers to desire low cost and flexibility in design, quality, and speed to market, key strategies to maintain a profitable position in the increasingly demanding market. At a macro level, China has for years aspired to move up the value chain, to capture more of the higher skilled components of the global supply chain. In keeping with this, China was content for the low-value textile industry to relocate to South East Asia in search of cheaper labor. But now, as China's own costs rise still further, they find themselves competing against long established, higher quality production centers like Italy, and losing out.

Internet is a world-wide medium and has a global impact on companies and customers. Physical boundaries have disappeared and the virtual boundaries are relative unknown (Madlenak & Madlenakova, 2016). As paper describes, the huge problem of the fast fashion value and chain intend the respond of fashion trends by updating the fashion products disregarding environment and "health, resp. natural" consumption. Collaborative consumption is an alternative way of doing business to the conventional model of ownership-based consumption, and one that can potentially reduce the environmental impacts of fabion by prolonging the practical service life of clothes (Zamani et al., 2017).

Acknowledgment

This paper is an output of the projects No. VEGA 1/0515/15 and VEGA 1/0693/16 and No. 5/KS/2017

References

[1] Appelbaum, R. and Gereffi, G. (1994). *Power and Profit in the Apparel Commodity Chain* Rome. PA: University Press

[2] Barnes, L. and Lea-Greenwood, G. (1993). Fast fashion: A second special issue, *Journal of Fashion Marketing and Management: An International Journal*, vol. 17, no. 2, pp. 12-35.

[3] Bruce, M., Day, L., and Towers, N. (2004). Lean or agile: A solution for supply chain management in the textiles and clothing industry?, *International Journal of Operation & Production Management*, vol. 24, no. 2, pp. 151-170.

[4] Cammett, M. (2006). Development and Changing Dynamics of Global Production: Global Value Chains and Local Clusters, *Apparel Manufacturing, Competition and Change*, vol. 10, no. 1, pp 23-48.

[5] Christopher, M. (2000). The agile supply chain: Competing in volatile markets, *Industrial Marketing Management*, vol. 29, no. 1, pp. 37-44.

[6] Cillo,P. and Verona, G. (2008). Search Styles in Style Searching: Exploring Innovation Strategies in Fashion Firms, *Long Range Planning*, vol. 41, no. 6, pp. 650-671.

[7] Corejova, T. and Al Kassiri M. (2016). Knowledge triangle, innovation performance and global value chain. *Globalization and its socio-economic consequences, 16th International scientific conference proceedings.* Rajecké Teplice, Slovak Republic, pp. 329-336.

[8] Corejova, T. and Imriskova, E. (2010). The postal supply chain versus postal value chain, *Problems of maintenance of sustainable technological systems,* vol. 10, no. 2, pp. 81-91.

[9] Corejova, T. and Rostasova M. (2015). Regional Development, Innovation and Creativity. *Proceedings from IX. International conference on applied business research (ICABR).* Talca, Chile, pp.114-127.

[10] Gereffi, G. and Memedovic, O. (2003). *The Global Apparel Value Chain: What Prospects for Upgrading for Developing Countries (Report)*, Vienna, Austria: United Nations Industrial

[11] Industry Canada (2008). A Canadian Approach to the Apparel Global Value Chain. [Online]. Available: https://www.ic.gc.ca/eic/site/026.nsf/vwapj/apparel-vetement-gvc-vms_eng.pdf/$file/apparel-vetement-gvc-vms_eng.pdf

[12] Kovacikova, M. and Repkova Stofkova, K. (2016). Impact of globalization on access to process businesses management. *Globalization and its socio-economic consequences, 16th International scientific conference proceedings*. Rajecké Teplice, Slovak Republic, pp. 1022-1030.

[13] M. Moore (2002). Retail performance in U.S. apparel supply chains: operational efficiency, marketing effectiveness and innovation, *Technoly Management*, vol. 2, no. 3, pp. 1-9.

[14] Madlenak, R. and Madlenakova, L. (2015). The Differences in Online Advertising, Acceptance in China and Slovakia. *Proceedings of the 2015 International Conference on Management Engineering and Management Innovation*. Changsha, Peoples R China, pp.45-49

[15] Madlenak, R. and Madlenakova, L. (2016). The Global Impact of e-marketing strategies on SME in the segment of touristic services. *Globalization and its socio-economic consequences, 16th International scientific conference proceedings.* Rajecké Teplice, Slovak Republic, pp. 1235-1243

[16] Majernik, M. et al. (2016). Integrated auditing of enterprise management systems in a globalized environment. *Globalization and its socio-economic consequences, 16th International scientific conference proceedings.* Rajecké Teplice, Slovak Republic, pp. 1261-1269.

[17] Sorescu, et al. (2011). Innovations in retail business models, *Retailing*, vol. 87, pp. 3-16

[18] Stofkova, J., Stricek, I. and Stofkova, K. (2015). Data analysis in quality management of the network enterprise. International Conference (ESPM). *Production management and engineering sciences.* Tatranská Štrba, Slovak Republic, pp. 273-278

[19] Stofkova, K. (2010). Research of strategic management methods utilization for support of prosperity. Proceedings of *2nd International Conference on Education and New Learning Technologies (EDULEARN)*, Barcelona, Spain, pp. 1330-1334

[20] Stofkova, K. and Stofkova, J. (2010). Implementation of the knowledge management as a competitive advantage. *Proceedings of 2nd International Conference on Education and New Learning Technologies (EDULEARN)*. Barcelona, Spain, pp. 1323-1328

[21] Tambo T. (2014). Collaboration on technological innovation in Danish fashion chains: A network perspective, *Journal of Retailing and Consumer Services,* vol. 21, no. 5, pp.827-835.

[22] The Gurardian (2014) Did the Rana Plaza factory disaster change your fashion buying habits? [Online]. Available: https://www.theguardian.com/world/2014/apr/16/rana-plaza-factory-collapse-bangladesh-change-fashion-shopping-habits

[23] Vecchi, A., and Buckley, C. (2016). *Handbook of research on global fashion management and merchandising*. Hershey, PA: Business Science Reference.

[24] W. Reinartz, et al. (2011). Retailing innovations in a globalizing retail market environment, *Retailing*, vol. 87, pp. 53-66.

[25] Zamani, B., Sandin, G., and Peters GM. (2017). Life cycle assessment of clothing libraries: can collaborative consumption reduce the environmental impact of fast fashion?, *Journal of Cleabner Production*, vol. 162, pp. 1368-1375

THE INFLUENCE OF VALUE ADDED AND ECONOMICAL VALUE ADDED IN THE CONSTRUCTION INDUSTRY

Veronika Machová[1,a,*], Petr Šuleř[2,b]

[1] The Institute of Technology and Business in České Budějovice, Okružní 517/10, 370 01 České Budějovice, Czech Republic

[2] University of Žilina, Univerzitná 1, 010 26 Žilina, Slovakia

[a]machova@mail.vstecb.cz, [b]petr.suler@cez.cz

*Corresponding author

Abstract. The aim of the current enterprise in the globalized world is to create a value for shareholders. That may be measured in several ways. One of them is, undoubtedly, via an indicator, the economic value added for shareholders (EVA Equity). It is a difference between equity rentability and the amount of alternative costs on equity multiplied by the value of equity. According to this indicator, we not only evaluate the enterprise´s ability to generate value for shareholders, but we also measure its success on the market, especially on global capital markets. If EVA Equity results are positive, the investor, shareholder, has chosen a suitable investment opportunity at the given risk level. In case of a negative result, they should be considering a change of their investment priorities. The value added represents a very important enterprise indicator – it measures how the enterprise valorizes material incomes. Already according to the name, EVA Equity and value added are assumed to be based on the same inputs. Is it so in reality? The contribution sets its aim to identify dependency between value added and economical value added in the construction industry in the Czech Republic during the period of 2006 to 2015. The calculation is carried out on a collection of building enterprises in an observed period. To find a dependency, neural networks were used. The result is a dependency and identification of individual variables that appear during the calculation of both variables. Their influence was determined via sensitivity analysis.

Keywords: value added, economical value added, neural networks, value for shareholders

JEL Classification: C21, C45, D46, G31

1. Introduction

Value added represents a certain wealth by making use of human potential. Very often, value added is taken into account in assessing financial performance of the company, or takes into account the indicators, which include such a value and are a part of corporate financial analysis (Soaita, 2012). Trento et al. (2016) claim that value added represents certain effort which could be expressed in monetary terms by which the entrepreneur contributed to the business activities to the inputs gained from purchases from suppliers. Value added thus enables to show the relation between the revenues for certain outputs and costs of acquiring individual inputs (Vochozka & Psarska, 2016). According to Marian et al. (2009), value added is an indicator that measures the level of production activity. In addition, the authors claim that the value added is a synthetic indicator expressing the wealth created by the company and value of work over a certain period of time. Figge & Hahn (2004) state that the method for measuring value added consists in summing up all data elements in the form of expenditures that reflect input elements creating the value of the company and even profit for the investor. Value added can be expressed by the following equation (Marcu et al., 2015):

$$VA\ (Value\ added) = Cs + CF + A + IT + PN \tag{1}$$

where: Cs = wage costs, CF = financial costs, A = depreciation, IT = import and taxes, Pn = net profit.

According to Kvach & Il'ina (2013), using various measuring tools to assess the company performance is considered a relatively complicated process, which is, nevertheless, key to any economic organization. This process could reveal unidentified problems that would improve the company´s position on the market. The objective of the companies is currently creation of values for shareholders. This could be measured by several methods. One of them is EVA Equity indicator. According to Stehel & Vochozka (2016), it is a difference between the return on equity and the amount of the alternative cost on equity multiplied by the value of equity. Using this indicator, it is possible to assess not only the ability of the company to generate value for shareholders, but also its success on the market, in particular on the capital markets (Morard & Balu, 2009). If the value of EVA Equity is positive, the investor / shareholder opted for a suitable investment at a given level of risk. In case of negative values, the investors should consider changing their investment priorities (Issham et al., 2008).

For measuring and evaluating these indicators, various models are used, including models of neural networks. In this contribution, artificial neural networks related to various problems in technical and economic applications as well as in other scientific disciplines are used. A large number of models of neural network applications were used to discover and extract the hidden structures in the data set (Tseng et al., 2004). According to Enke et al. (2005), neural networks attempt to copy the processes in the human brain and nervous system by computer systems. The method of their use is widely applied for predicting and classifying due to its ability to model a complex nonlinear system using hidden units in the compact range (Chen et al., 2009). According to Tseng, Yu & Tzeng (2002), neural networks consist of input layer, output layer and one or more intervening layers, which are also referred to as hidden layers and are able to capture the nonlinear relation between variables. According to Vochozka et al., (2016), each layer is composed of neurons, which are connected to neurons in adjacent layers. The networks contain a number of mutually interacting nonlinear neurons in several layers, and therefore can capture relatively complex phenomena. However, networks have also some disadvantages. The main disadvantage consists in time-consuming preparation of the network in the form of network learning and also frequently necessary statistical adjustment of input data. Another disadvantage is also possible overthrowing or inability to detect the functioning of internal structure of the system (Vochozka, 2016).

Value added thus represents an important indicator for a company, as it measures how the company values material inputs, i.e. how much activity is added to the material input before the material becomes a product. The names imply that EVA Equity and value added are based on the same inputs. But is it really the case?

The objective of the contribution is to identify the dependence between value added and economic value added in the construction industry in the Czech Republic between 2006 and 2015. Based on the objective, a hypothesis can be formulated: There was a significant dependence between value added and EVA Equity in Czech construction industry between 2006 and 2015.

2. Data and methods

Calculations are performed on a set of building companies in the reference period between 2006 and 2015. This is in total 65,357 data lines. For each company, information provided by accounting statement will be available. Basic descriptive characteristics of the data were created and illustrated.

In addition, weighted average costs of capital will be calculated for each enterprise (Neumaierova & Neumaier, 2008):

$$WACC = r_f + r_{LA} + r_{entrepren.} + r_{FinStab} \tag{2}$$

where: WACC = Weighted Average Cost of Capital, r_f = risk free, r_{LA} = function of indicators characterizing the size of the enterprise, $r_{entrepren.}$ = function of indicators characterizing creation of production power, $r_{FinStab}$ = function of indicators characterizing the relationship between the property of the enterprise and the source of its coverage.

Subsequently, alternative cost of equity will be determined (Neumaierova & Neumaier, 2008):

$$r_e = \frac{WACC * \frac{MS}{A} - (1-t) * \frac{U}{BL+B} * \left(\frac{MS}{A} * \frac{E}{A}\right)}{\frac{E}{A}} \tag{3}$$

where: r_e = rate of equity (Cost of Equity), WACC = Weighted Average Cost of capital, MS = money sources (equity and interest bearing outside capital), A = Assets, E = Equity, BL = bank loans, B = bonds, U / BL+B = interest rate, it is also possible to use *i* (interest), t = rate of income tax (tax).

Salaga et al. (2015) see the EVA Equity indicator as a structure indicating that economic profit of the company depends on the equity (E), return on equity (ROE) and cost of equity (r_e). EVA Equity will be calculated as follows:

$$EVA\ Equity = (ROE - r_e) * E \tag{4}$$

where: ROE = return on equity, R_e = cost of equity, E = equity.

Two tools will be used to determine the dependence. First, neural network will be used, whose structure will be calculated using DELL´s Statistica software, version 12. Subsequently, the results will be validated using Microsoft Excel software.

Within regression using neural structures, multilayer perceptron networks and neural networks of basic radial function will be generated. As an independent variable, value added will be used. Economic value added will be determined as the dependent variable. The data set will be divided into three subsets – training, testing and validation. The first subset will contain 70 % of input data. Based on the training data subset, neural structures will be generated. The two remaining subsets will contain 15 and 15 % of the input data. Both subsets will serve for verification of the reliability of the found neural structure, or the found model. In total, 1,000 neural networks will be generated. From these, 5 neural networks with the best characteristics will be retained[19]. There will be at least 2 and at most 50 neurons in the hidden layer. In case of a radial base function, the hidden layer will contain at least 21 and at most 30 neurons. For the multilayer perceptron network, the following distribution functions in the hidden and output layer will be considered: Linear, Logistics, Atanh, Exponential, Sinus. Other settings will be still default (according to the ANN tool – automated neural network).

In the case of Excel, coincidental relation will be ensured and the Correl function will be used. Next, the most appropriate regression curve will be examined. This will be carried out by linking the points in the graph by trend line. The following functions will be used: Linear, Polynomial (1st – 6th degree), Rolling average. As an appropriate regression line, a trend line with the best correlation coefficient will be selected.

3. Results

3.1 Regression using neural structures

Table 2 shows generated and retained neural networks.

Table 1: Generated and retained neural networks

	Network	Training performance	Testing performance	Valid. performance	Training error	Testing error	Validation error	Training algorithm	Error function	Activat. of hidden layer	Output act. function
1	MLP 1-7-1	0.57737	0.638619	0.65761	176170440	114401399	67601277	BFGS (Quasi-Newton) 76	Sum of squares	Tanh	Tanh
2	MLP 1-6-1	0.5748	0.63262	0.657332	176970469	115369995	68138136	BFGS (Quasi-Newton) 91	Sum of squares	Logistics	Tanh
3	MLP 1-8-1	0.574778	0.638134	0.656731	176883194	115711798	68293092	BFGS (Quasi-Newton) 41	Sum of squares	Tanh	Exponential
4	MLP 1-8-1	0.576098	0.643675	0.657096	176697774	114918445	68951852	BFGS (Quasi-Newton) 35	Sum of squares	Tanh	Exponential
5	MLP 1-3-1	0.580314	0.616508	0.660136	176464023	117373084	67781207	BFGS (Quasi-Newton) 28	Sum of squares	Sinus	Exponential

Source: Author

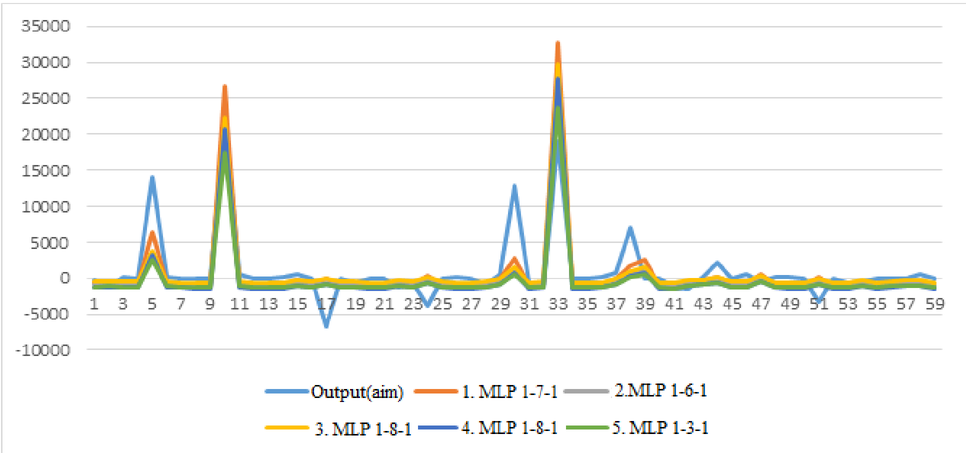
From Table 2 it is clear that all suitable structures are multilayer perceptron networks. The input layer consists of one neuron (value added). The number of neurons in individual

[19] The method of least squares will be used. Generation of networks will be finished when there is no improvement, i.e. when there is no reduction in the sum of the squares. We thus preserve the neural structures whose sum of squares of residues to actual development of gold will be as low as possible (zero, ideally).

networks is different. The number varies from three to eight neurons. The output layer contains only one neuron (EVA Equity) as well. All preserved networks use the Quasi-Newton training algorithm. The first network, MLP 1-7-1, uses hyperbolic tangent for activation of hidden and output neuron layers. Other networks use logistics and exponential function and sinus. However, the performance and hence the relevance of acquired neural structures are evaluated by correlation coefficient. The coefficients for individual networks and data sets are showed in Table 2 (Training performance, Testing performance and Valid. Performance).

Ideally, we are looking for the neural network, which has a similar correlation coefficient for the training, testing and validation data set, and the coefficient is close to one. The software assumes that the first of the preserved neural networks meets this requirement. It is very important to verify/ explore possible interpretation of the result, analyse the residuals and to justify the overall result. Figure 1 shows the course of actual EVA Equity and predicted outputs. In the graph, only each one thousandth case is showed, so that the result is graphically interpretable.

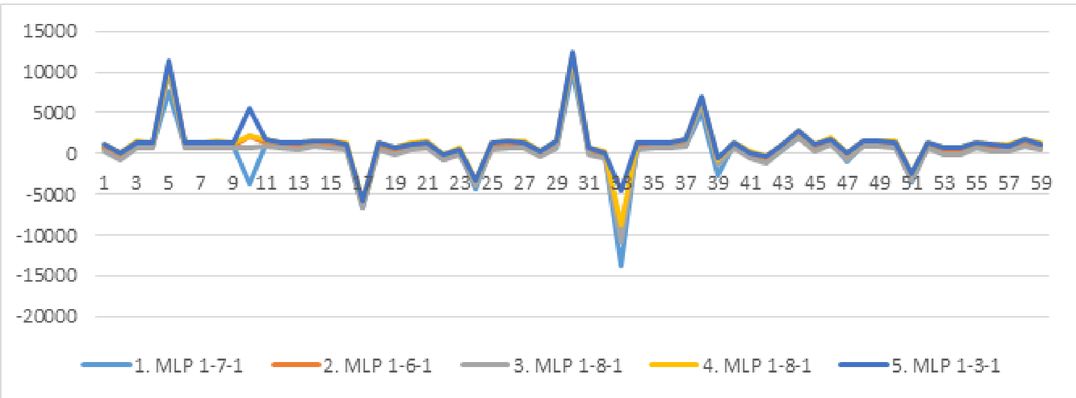
Figure 1: Course of actual and predicted EVA Equity



Source: Author

As shown in the graph, the predictions have a very similar course. However, it can be seen that the MLP 1-7-1 network output is the most similar to the actual EVA Equity. The situation will also be verified on the graph of residuals of the individual networks (Figure 2).

Figure 2: Residuals of predicted EVA Equity



Source: Author

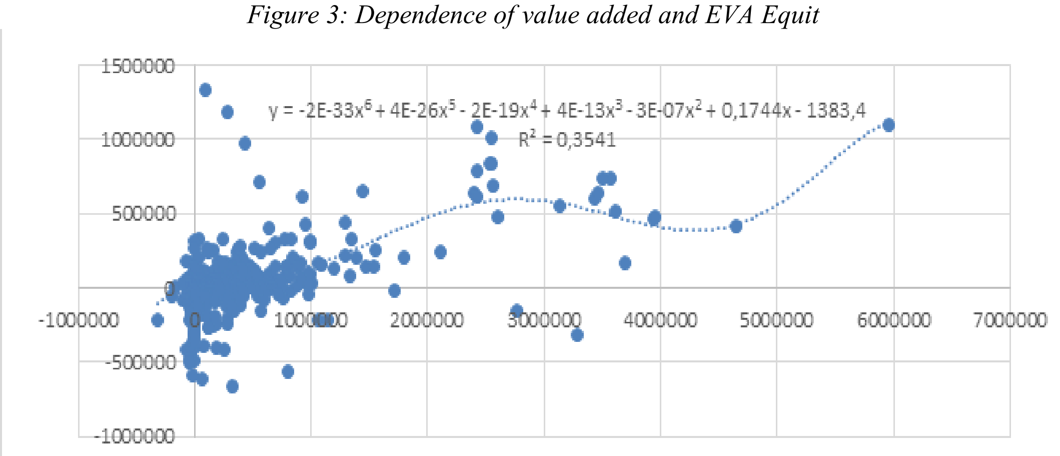
Based on the residuals analysis, the best result seems to be the MLP 1-6-1 network (network no.2), with the sum of residuals of approx. CZK 8 billion. However, the second best network is no. 1, with the sum of residuals of approx. CZK 15 billion.

It can thus be evaluated that in the Czech construction industry between the years 2006 and 2015, there is a significant dependence, which could be expressed in the form of regression curve.

3.2 Results validation

As already mentioned in Data and methods, the results were verified using Microsoft Excel software. Figure 3 shows a point graph with a trend line.

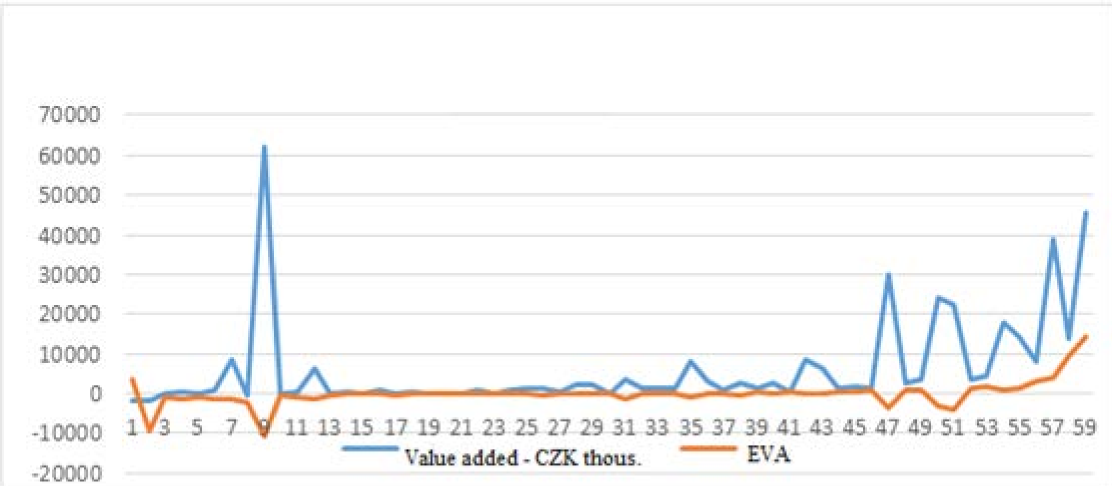
Figure 3: Dependence of value added and EVA Equit



Source: Author

The trend line is a 6th degree polynomial. Its mathematical expression is a part of the graph. What is more interesting is the result of the correlation analysis. In this case, the correlation coefficient is 0.595. Again, there is a significant dependence of both variables. This has confirmed the results obtained using neural networks. This is also illustrated by the graph in Figure 4.

Figure 4: Relation between value added and EVA Equity



Source: Author

With isolated exceptions, Figure 4 shows a similar course of value added and EVA Equity.

4. Discussion and results

Value added measures how the company contributed to the original material input by its own activity. Economic value added then focus on how the funds invested by the company owner or shareholders are being valued. It can be assumed that there is certain dependence between the variables, which is also logical. However, to be sure, adequate evidence had to be brought.

The hypothesis formulated, that there was a significant dependence between the value added and EVA Equity in the construction industry in the Czech Republic between the years 2006 and 2015, was confirmed. Correlation coefficient varied at 0.6 with the application of two methods. The objective of the contribution was to identify the dependence between value added and economic value added in construction industry in the Czech Republic between 2006 and 2015. Besides the value of correlation coefficient, the contribution also describes specific shapes of possible regression curves. The objective of the contribution was thus achieved.

What is the practical output of the contribution? It is obvious that the value added is a basic generator of EVA Equity. In such a case, the company owners can insist on the growth of value added as on the objective of a building company and thus ensure achieving their objective, that is, the growth of EVA Equity. The objective thus becomes more transparent for the management and employees and they will be more motivated to achieve this objective. If we wanted to analyse the situation in detail, the relation of value added and EVA Equity to EBIT indicator and operating economic result should be examined. This would, however, exceed the content of this contribution.

References

[1] Chen, S., Hsiao, Y., Huang, Y., Kuo, S., Tseng, H., Wu, H. and Chen, D. (2009). Comparative Analysis of Logistic Regression, Support Vector Machine and Artificial Neural Network for the Differential Diagnosis of Benign and Malignant Solid Breast Tumors by the Use of Three-Dimensional Power Doppler Imaging. *Korean Journal of Radiology*, vol. 10, no. 5, pp. 464-471.

[2] Enke, D., Thawornwong, S. and Fidan, B. C. (2005). The use of data mining and neural networks for forecasting stock market returns. *Expert Systems with Applications*, vil. 29, no. 4, pp. 927-940.

[3] Figge, F. and Hahn, T. (2004). Sustainable Value Added—measuring corporate contributions to sustainability beyond eco-efficiency. *Ecological Economics*, vol. 48, no. 2, pp. 173-187.

[4] Issham, I., Fazilah M., A. S., Hwa, Y. S. and Kamil, A. A. (2008). Economic value added (EVA) as a performance measurement for GLCs vs Non-GLCs: Evidence in Bursa Malaysia. *Prague Economic Papers*, vol. 17, no. 2, pp. 168-179.

[5] Salaga, J., Bartosova, V. and Kicova, E. (2015). Economic Value Added as a Measurement Tool of Financial Performance. *Procedia Economics and Finance*, vol. 26, pp. 484-489.

[6] Kvach, N. M. and Il'ina, N. A. (2013). Use of the Concept of "Economic Value Added" to Evaluate the Performance of an Organization. *Fibre Chemistry*, vol. 45, no. 4, pp. 252-257.

[7] Marcu, N., Carstina, S. V. and Marian, S. (2015). GDP Correlation Analysis with Structural Elements of Added Value. *Procedia Economics and Finance*, vol. 22, pp. 282-286.

[8] Marian, S., Circiumaru, D. and Berceanu, D. (2009). The correlation between the market value added and the return. The case of the Romanian industrial companies. *16th International Economic Conference – IECS 2009*. Sibiu, Romania, pp. 595-600.

[9] Morard, B. and Balu, F. (2009). Developing a practical model for calculating the economic value added. *Economic Computation and Economic Cybernetics Studies and Research*, vol. 43, no. 3, pp. 107-122.

[10] Neumaierova, I. and Neumaier, I. (2008). Finanční analýza průmyslu a stavebnictví za rok 2007. *Analýzy MPO*, vol. 1, pp. 1-187.

[11] Soaita, D. (2012). Increasing the Production Capacity of the Value Added - Strategic Priority in the National Economy. *Procedia Economics and Finance*, vol. 3, pp. 823-828.

[12] Stehel, V. and Vochozka, M. (2016). The analysis of the economic value added in transport. *Nase More*, vol. 63, no. 3, pp. 185-188.

[13] Trento, C. R., Stüker, T., Pereira, G. M., Borchardt, M. and Viegas V., C. (2016). Strategic benchmarking of service pricing based on the value added. *Benchmarking: An International Journal*, vol. 23, no. 4, pp. 754-767.

[14] Tseng, C. L., Chen, Y. H., Xu, Y. Y., Pao, H. T. and Fu, H. (2004). A self-growing probabilistic decision-based neural network with automatic data clustering. *Neurocomputing*, vol. 61, pp. 21-38.

[15] Tseng, F., Yu, H. and Tzeng, G. (2002). Combining neural network model with seasonal time series ARIMA model. *Technological Forecasting and Social Change*, vol. 69, no. 1, pp. 71-87.

[16] Vochozka, M. (2016). Decomposition of a main objective of an international company set with the help of artificial neural networks into daily plans. *Proceedings of the Globalization and its Socio-economic Consequences*. Rajecké Teplice, Slovakia, pp. 2383-2390.

[17] Vochozka, M. and Psarska, M. (2016). Factors supporting growth of added value, performance and competitivness of SMEs and selected EU countries. *Innovation Management Entrepreneurship and Corporate Sustainability 2016*. Prague, Czech Republic, pp. 756-767.

[18] Vochozka, M., Rowland, Z., Stehel, V., Suler, P. and Vrbka, J. (2016). *Modelování nákladů podniku pomocí neuronových sítí*. 1st ed. České Budějovice: Vysoká škola technická a ekonomická, 114 p.

THE IMPACT OF THE GLOBAL SINGLE DIGITAL MARKET ON THE CONSUMER

Margita Majerčáková[1,a,*]

[1]University of Zilina, Faculty of Operation and Economics of Transport and Communications, Univerzitná 1, 010 26, Žilina, Slovak Republic

[a]Margita.Majercakova@fpedas.uniza.sk

*Corresponding author

Abstract. The digital economy is a global phenomenon. This article deals with the digital performance of the EU at global level. The contribution compares the potential of the digital economy in Europe and identifies the potential for improvement. Digitization is an integral part of people's lives. Everyday people use technology and digital networks to communicate with other people, work, shopping, and so on. The area of digitization consists of several areas that each country has created at different levels. Because of this, there are many differences between country digitization. The European Union has decided to minimize or completely eliminate these differences within the territory of the European Union with a view to the effective transfer of information, products and services between individual Member States. This situation aims to create a strategy for creating a digital single market. This document analyzes the impact of the digital single market on the consumer in the global dimension. The document also evaluates the current state of digitization in the Slovak Republic with all its areas. The paper describes the steps that lead to the realization of an effective digital single market and assesses the impact of planned activities on the e-commerce consumer. It also highlights the shortcomings and barriers that should be removed from the area of e-commerce, which is an important part of the Digital Single Market.

Keywords: single digital market, digitization, consumer. e-commerce.

JEL Classification: M20, L51, O57

1. Introduction

Digitalization is indispensable part of the people's lives. They use the electronic devices and digital networks to communicate with each other daily, there are several reasons to do so, it can be because of work purposes, shopping or in similar use cases. It is possible to divide the field of digitalization into few disciplines, whose development can differ. (Corejova & Imriskova, 2008) That is the main reason, why there are a lot of difference in a field of the digitalization between the countries and it also has an impact on the unified digital market. (Madlenak & Madlenakova, 2016), (Hudak et al., 2017) The unit digital market can be interpreted as an electronic form of the standard market. The development of e-commerce is of major importance as far as consumers are concerned, offering a wider choice, especially to those living in less accessible, remote areas and to those with reduced mobility, who would otherwise not have access to a wide range of goods and services (European Parliament resolution, 2013).

Government of the European Union decided to minimize or completely eliminate these differences between the member states. The main aim was to make the transfer of the information, products and services between the member states more effective (Madudova & Kolarovszki, 2016), (Strenitzerova & Garbarova, 2016). All of these reasons led to creation of the strategy for unified digital market.

2. Methods

The field of the digitalization, digital services, electronic shopping and activities linked to it is constantly expanding and evolving. This process is realized faster in some countries and some countries on the other side are lagging. A lot of different comparisons is carried out in the world nowadays, whose results demonstrate the state of the digitalization in the individual countries. Idea of the unit digital market is concerning mainly on the European Union, that is why we will focus on its member countries at first. ‘A Digital Single Market Strategy for Europe’; considers that achieving a Digital Single Market, based on a common set of rules, could foster EU competitiveness, have positive effects on growth and jobs, relaunch the Single Market and make society more inclusive, offering new opportunities to citizens and businesses (European Parliament resolution, 2016).

2.1 DESI (Digital Economy and Society Index)

European Union established the DESI (Digital Economy and Society Index) index to conceive the evolution of the development of the digital services according to the indicators, which accurately reflects the state of development of the member states. (Vidruska, 2016) This index has also its international version with shorthand I-DESI. In the I-DESI one the members of the European Union are compared with the fifteen non-member countries, which are Australia, China, Canada, Iceland, Israel, Brazil, Republic of Korea, Japan, Mexico, Norway, Russia, New Zealand, Turkey, Switzerland and the United States of America. The main aim of the DESI is charting the internet connection quality, services, that are offered to the inhabitants and the usage of the internet connection. Besides that, it also concerns about integration of new technology resources and processes in the business environment and examines the digital literacy of the inhabitants. That means we can use it to determine how the people understand digital technologies and how well they can work with them.

2.2 DESI structure

The DESI comprises 5 dimensions representing main policy areas. (Mateus, 2016)

1. Connectivity
   - Is a necessary infrastructure for a digital economy and society.
   - A digital society can only develop if its members are connected to the Internet.
   - A high-speed Internet connection is essential to fully benefit from the developments of today’s digital world.
2. Human Capital
   - Digital skills are a necessary infrastructure for a digital economy and society.
   - Citizens must have the appropriate skills to take advantage of the Internet its possibilities.

- Basic usage skills enable individuals to take part in the digital society and consume digital goods and services.
- Advanced skills empower the workforce to develop digital goods and services for enhanced productivity and economic growth.

3. Use of Internet
    - Citizens engage in a wide range of content-rich activities online:
    - They consume content, such as news, music, movies, TV or games.
    - They communicate in different ways (e.g., via online video-calls, or social networks),
    - They engage in transactions, such as banking or shopping online.
    - Such activities are drivers for the development of broadband networks. They drive users to subscribe to broadband connections as well as operators to deploy faster networks and better content delivery facilities.
4. Integration of Digital Technology
    - Business digitisation is one of the main contributors to enhanced economic growth.
    - Adoption of digital technology (such as Cloud, Big Data, or the Internet of Things) enhances efficiency, reduces costs and allows for closer engagement with customers, collaborators or business partners.
    - The ability to use the Internet as a sales outlet pushes businesses to modernise and allows them to exploit new sources of revenue.
5. Digital Public Services
    - Digital technologies can improve business and citizen interaction with the Public Sector.
    - Public Administrations can better address business and citizen needs, while reducing costs.
    - Better and more streamlined Public Services make citizens and businesses gain efficiency, both due to better functionality as well as to reductions in time spent.

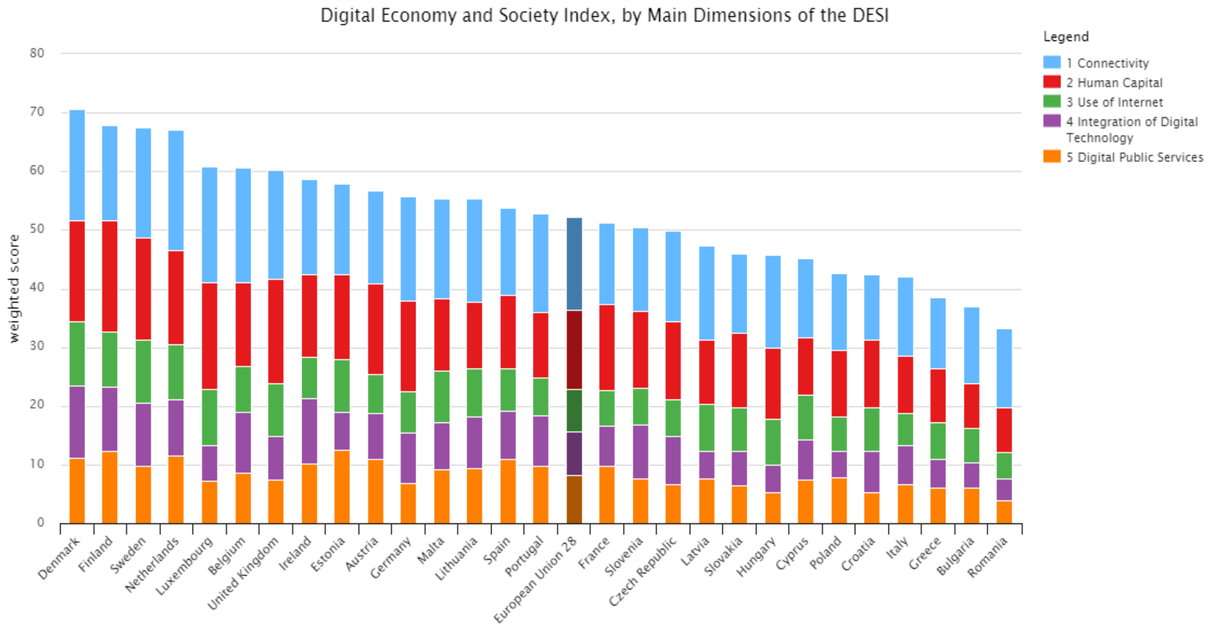
3. Results

The leaders in the field of the digitalization within the European Union are three Scandinavian countries and these are Denmark, Finland and Sweden according to the DESI results. The digital services in these countries that are provided to the inhabitants as well as to the businesses are on very high level. The rating is created on the bases of comparison of the quality of the services provided in digital form. Besides that, the overall usage of the digital services is examined and also the assistance provided to the people and businesses. On the other side of the chart are the countries like Romania, Bulgaria, Greece and Cyprus. The level and quality of the services provided throughout the digital technologies is understandably low as the living standard in these countries is also low. All of these countries are concerned little matured. (European Commission – Press release, 2017)

Out of the non-member countries almost half of them outrun the European Union average. The countries that outrun the European Union average are for example Norway, Switzerland, Australia, Japan or United States of America. This means, that in the field of the digitalization a lot of things are waiting for improvement within the EU. Such an improvement and overall rating increase should be brought by unification of the partial markets of the member states and creation of the one functional unit. (Mateus, 2016)

Needless to say, not all of the countries have better rating than the EU average and such countries, that are overrun by EU average, are China, Russia and Israel. When we focus on individual countries, we will find out, that the number of non-European countries, even the countries that have better rating than the EU average, are on the same level as some of the member EU states, or they are lagging behind them.

Figure 1: DESI 2017 - Ranking of EU countries



Source: (European Commission – Press release, 2017)

The United States of America and South Korea were placed behind the leading trio of Scandinavian countries. Although it is an order that is determined using average value of the values from all digitalization areas. The order of the countries changes on more detailed examination of the individual areas that are part of the digital market. When taking in account for example the internet connection, which is one of the major areas of the unified digital market, the South Korea would be the leader, because the internet connection provided to the users reaches the highest speeds. In the mobile internet connection, the leader is Japan. These facts justify that the DESI rating is too much global and in its essence, it only averages the values of the digitalization areas, which are examined. This means, even the country is at the end of the list it can excel in one of the examined areas. The best managed digitalization of the services and their user mediation is in the United States of America. Although in overall rating it is behind the Finland, Denmark and Sweden. The most evolved, in the area of electronic shopping, are two countries, China and United States of America, or in other words we can say that they are the biggest world's online markets. The goods produced in these countries are accessible in the entire world. There are several foreign websites, that ensures that inhabitants of almost all countries can buy it online. Electronic shops, that are most popular among the consumers, are for example Amazon, Ebay or Aliexpress. They represent online places, where the customers can look through products out of numerous categories, place an orders on these items and then let them deliver to their homes. All of the three corporations mentioned above have their headquarters in the United States and China. On the base of this information we can conclude, that these countries have the most developed area of the online shopping and they provide the best conditions to the users while shopping online. (Bilgihan, 2016, Kawaf & Tagg, 2017).)

3.1 The areas of digitization improvement in the EU

One of the major drawbacks are digital skills. In comparison with the previous years there was an increase in the count of the IT specialists (specialists in information technologies) and specialists in digitalization, besides that, up to 44% of Europeans do not have even the basic digital skills. Among such basic skills belong common activities like, for example installation of the new devices and the software, usage and communication using mails or usage of the office tools such as the Microsoft Office Word. (European Commission – Press release, 2017).

The problem is that the connectivity is still not solved. Up to 24% of households does not have access to the high-speed internet connection. The percentage declined by 9% in a year, but it still represents almost a third of the EU population. Another area that needs a focus is online shopping. Online shopping is used by 65% of inhabitants but only 15% of the people buys the goods from the other EU countries. It is even worse among the businesses. Only 17% of the SMEs is selling their goods online and out of them less than half, to be precise 7.5% is selling the goods online to the other EU countries. Based on these data the European Commission has taken steps. The drafts of the digital contract policies were submitted, these should protect consumers and also help businesses to sell the goods online. Legislative measurements have also been adopted in May, they includes measurements like eliminating unjustified geographic barriers or improving transparency of the delivery markets. The EU is still lagging behind the United States, China or the South Korea. Besides that it is told, that nowadays the development of the digital services within the EU is evolving faster than in the past years and the gap, that is between the non-EU countries and the EU countries will diminish. The base for achieving higher competitiveness of the continent is overcoming the differences of the member states. (Wei at al., 2017)

4. Conclusion and discussion

The rating of the Slovakia in the field of digitalization is not the best one. According to the DESI results from the year 2017, we were able to reach twentieth place, which is the part of the bottom half of the EU countries. In comparison with year 2016, Slovakia improved by one place, but on the other side it just returned to the place it was in the year 2015. (Stalmasekova at al., 2017) This means, that the movement on the digital technologies stagnate, or in other words it was evolving very slowly in comparison with other countries. Besides this, Slovakia achieved average values of the EU.

Undeveloped areas of the computerization and digitalization, it is important to improve and diminish the shortcomings, which persists in them. In this regard, the Slovakia can rely on the financial aid from the EU and the tools, developed for the government which are on the high level. Financial aid of 845 million euro was trimmed to improve the informatization of the society from the year 2007 till 2013. Although the results are not noticeable enough for the people. From the year 2014 till 2020, which also includes nowadays, financial aid continues and 805 million euro is available. On the base of this facts it can be seen that the funds are available and it is waited for high quality projects to submitted, which will make the use of digital market more effective. (Chrenek, 2016)

Acknowledgment

This paper is an output of the science project VEGA 1/0515/15 Endogenous factors of the IPR intensive Industries in the regional enterprise environment in Slovak Republic

References

[1] Bilgihan, A. (2016). Gen Y customer loyalty in online shopping: An integrated model of trust, user experience and branding, Computers *in Human Behavior*, vol. 61, pp. 103-113.

[2] Chrenek, D. (2016). Jednotný digitálny trh posunie dopredu EÚ aj Slovensko, Goodwill, vol. 4-5, pp. 18-19.

[3] Corejova, T. and Imriskova, E. (2008). Convergence at the postal market, *Eksploatacja Niezawodnosc-Maintenance and Reliability,* vol.3, pp.74-76.

[4] European Commission – Press release (2017). The Digital Economy and Society Index (DESI) [Online]. Available: https://ec.europa.eu/digital-single-market/desi

[5] European Parliament resolution (2013) of 4 July 2013 on completing the digital single market (2013/2655(RSP)) P7_TA(2013)0327 [Online]. Available: http://www.europarl.europa.eu/RegData/seance_pleniere/textes_adoptes/definitif/2013/07-04/0327/P7_TA(2013)0327_1_EN.pdf

[6] European Parliament resolution (2016) of 19 January 2016 on Towards a Digital Single Market Act (2015/2147(INI)) P8_TA(2016)0009 [Online]. Available: http://www.europarl.europa.eu/RegData/seance_pleniere/textes_adoptes/definitif/2016/01-19/0009/P8_TA(2016)0009_1_EN.pdf

[7] Hudak, M., Kianickova, E. and Madlenak, R. (2017). The importance of e-mail marketing in e-commerce, *Procedia Engineering* vol. 192, pp. 342-347.

[8] Kawaf, F. and Tagg, S. (2017). The construction of online shopping experience: A repertory grid approach, *Computers in Human Behavior*, vol. 72, pp. 222-232.

[9] Madlenak, R. and Madlenakova, L. (2016). The global impact of e-marketing strategies on SME in the segment of touristic services. *Proceedings of 16th international scientific conference Globalization and its socio-economic consequences.* Rajecke Teplice, Slovak Republic, pp. 1235-1243.

[10] Madudova, E. and Kolarovszki, P. (2016). Results of a Cluster Analysis of the ICT Sector Case study from the Slovak republic. *Proceedings of International Conference on Engineering Science and Management.* Zhengzhou, China, pp. 139-149.

[11] Mateus, A. (2016). Digital Economy and Society Index [Online]. Available: http://unctad.org/meetings/en/Presentation/dtl_eweek2016_AMateus_en.pdf

[12] Stalmasekova, N., Genzorova, T. and Corejova, T. (2017). The impact of using the digital environment in transport, *Procedia Engineering* vol. 192, pp. 231-236.

[13] Strenitzerova, M. and Garbarova, M. (2016). Impact of globalization on human resource management in the information and communication sector. *Proceedings of 16th international scientific conference Globalization and its socio-economic consequences.* Rajecke Teplice, Slovak Republic, pp. 2143-2150.

[14] Vidruska, R. (2016). The digital economy & society index and network readiness index: Performance of Latvia on European Union Arena. *Proceedings of International* Conference *on New Challenges of Economic and Business Development - Society, Innovations and Collaborative Economy.* Riga, Latvia, pp. 901-916.

[15] Wei, J., Seedorf, S., Lowry, PB. and Thum, C. (2017). How increased social presence through co-browsing influences user engagement in collaborative online shopping, *Electronic Commerce Research and Applications*, vol. 24, pp. 84-99.

EVALUATION OF "GREEN" BUSINESS GROWTH AND ECONOMY IN SLOVAKIA USING INTERNATIONAL INDICATORS

Milan Majerník[1,a,*], Pavol Andrejovský[2,b], Gabriela Sančiová[3,c] and Katarína Repková Štofková[4,d]

[1]University of Economics in Bratislava, Faculty of Business Economics with seat in Košice, Department of Management, Košice, Slovak Republic

[2]University of Economics in Bratislava, Faculty of Business Economics with seat in Košice, Department of Management, Košice, Slovak Republic

[3]University of Economics in Bratislava, Faculty of Business Economics with seat in Košice, Department of Management, Košice, Slovak Republic

[4]University of Žilina, Faculty of Operation and Economics of Transport and Communication, Department of Communication, Žilina

[a]milan.majernik@euke.sk, [b]pavol.andrejovsky@euke.sk, [c]gabriela.sanciova@gmail.com, [d]katarina.stofkova@fpedas.uniza.sk

*Corresponding author

Abstract. The current stage of the development of consumer and production processes is characterized by their environmentalisation and the fulfillment of principles and goals of sustainable development. Sustainable socio-economic development is, according to both the original and recent knowledge, considered as balanced and optimized development from the point of view of its three components, social, economic and environmental component. Global sustainability coordination is implemented through global, European and national strategies, mostly in EUROPE 2020, Sustainable Production, Green Growth under the OECD, Green Economy under UNEP. The authors present the results of their research in the field of monitoring and measuring the progress of green initiatives in Slovakia in the form of relevant measurable and internationally comparable indicators considering national specifics, still developing economy, social disproportions and low environmental awareness. Formalization and integration of green growth indicators and the green economy result in the concept of "Greening the Slovak economy" within the framework of the Environmental Strategy of the Slovak Republic with a view to 2035 and its integrated environmental-health and economic assessment. In evaluating the variants of the strategy and determining their preferences, five variants were set: zero status - without significant link to the European strategies, medium environmental commitment to greening the Slovak economy, strict link to EUROPE 2020 (2035), local quality of Slovak environment and extreme green strategy. Variants were linked to a group of thirty-five assessment criteria, broken down into economic, social and environmental impacts and OECD indicators.

Keywords: sustainable development, green growth, green economy, progress monitoring, indicators

JEL Classification: Q01, Q58, M21

1. Introduction

In recent years, a large number of international and national initiatives have emerged, to find new ways, methods, models, incentives and tools to achieve the strategic objectives of sustainable socio-economic development. Several concepts have been formulated at the level of various international institutions or states, and the most important are: green economy, formulated by UNEP and green growth, formulated by the OECD. These concepts have no ambition to replace the Sustainable Development Strategy. They are both a subset of it and a tool for achieving its goals in a globalized and regional context. (Hak et al., 2016)

2. Green initiatives such as global strategies for business growth and the economy

The issue of sustainable socio-economic development and various green initiatives, concepts and standards, focusing on green growth and the green economy, are currently among the priority political and economic themes. Sustainable development and green initiatives are closely related and mutually supportive to the common goal of quality of life.

Quality of life is a very complex concept and is influenced by several factors, one of which is the quality of environment. Increase in quality of environment calls for greening of social development, awareness of all segments of society, legal and economic instruments. These authors are to highlight the development of human development index, environmental performance index and corruption perception index in selected countries. (Hajduova et al., 2014) According to some authors, there are three main philosophical approaches to determining quality of life. (Brock, 1993) The first approach describes the characteristics of the good life dictated by normative ideals based on religion, philosophy or other systems. The second approach is based on the satisfaction of preferences. Under this approach, quality of life is based on whether citizens can obtain things they crave. The third definition of quality of life is comes from the perspective of individuals. (Diener & Suh, 1997), (Samimi et al. 2011)

2.1 Green growth and Green economy

To date, various international organizations have formulated several definitions of green growth characterized by several common features. Under the UNDESA, more than 13 definitions have been formulated. Green growth according to the OECD Green Growth Strategy is a way of promoting economic growth and development and protecting natural resources in order to further exploit the resources and environmental services on which our prosperity depends. It is therefore necessary to support investment and innovation, which will be the basis for sustainable growth and enable the emergence of new economic opportunities. The concept of green growth integrates an economic, environmental and health context that has implications for other social and cultural policy areas. (England, 2000), (Kasztelan, 2017) The economic context is related to economic growth. Economic growth represents an increase in the overall economic product over the same time period. If the gross domestic product expresses the state of the economy, economic growth is talking expresses change over time. (Del Rio, 2009) The main goals of the green economy, in line with the millennium goals, are: economic recovery, poverty eradication, carbon emissions reduction and ecosystem degradation. After the global crisis it was necessary to start economic growth. Word economy growing there were calls for global Green New Deal. (Jackson & Senker, 2011) We see the potential for a green economy.

Various international organizations have proposed different principles of green economy. The UNDESA analysis shows that the green economy:

- is a tool for achieving the goals of sustainable development,
- create green jobs related to the creation and protection of the environment,
- Efficient and sustainable use of natural and energy resources,
- respects the limits of optimal use of natural resources and strategic environmental limits and constraints,
- applies an integrated approach in the decision-making process,
- not only monitors GDP growth, but also other expanding indicators of quality of life,
- applies the principles of equality, justice and fairness between countries and between generations,
- contributes to the protection of biodiversity and ecosystems,
- contributes to reducing poverty, increasing welfare, improving people's living conditions, securing their social protection and access to the necessary economic needs,
- internalizes negative environmental externalities,
- improves the governance system and the legislative system in a global environment,
- is inclusive, democratic, collective, responsible, transparent and stable, therefore sustainable.

2.2 Monitoring of green growth progress

Table 1: Indicator Groups and Green Growth Areas Evaluated

INDICATORS	EVALUATION AREA
1. Indicators of environmental productivity and resource productivity	Carbon and energy productivity Resource productivity: materials, nutrients, water Multi-factor productivity
2. Indicators of nature reserves	Sources of renewable resources: water, forests, fish Sources of non-renewable raw materials: rocks, minerals Biodiversity and ecosystems
3. Indicators of environmental quality of life	Environmental health and risks Environmental services and equipment
4. Indicators of political response and economic measures	Technology and innovation Environmental goods and services International financial flows Prices of turnovers Skills and training Integrated management
5. Socio-economic aspects of growth	Economic growth and structure Labour productivity and trade Labour market, education and income Socio-demographic trends

Source: Own processing

To an effective implementation of green initiatives within the framework of globalized developing strategies requires regular monitoring and evaluation of the effectiveness of implemented the instruments and measures. The results of monitoring should provide to a general public as well as a politicians are deciding in further direction and the adopted procedures. An effective tool for monitoring shall be a set of relevant, internationally comparable indicators. Indicators are measurable variables providing information on the development and trends of phenomena and processes in quantitative and qualitative terms. (Horbach et al., 2012), (Thazib, 2014) Indicators (according to OECD criteria for environmental indicators, have to be scientifically justified and measurable) (Table 1).

2.3 Monitoring of progress towards green economy

The Green Economy Initiative led by UNEP provides analysis and advice to countries in policy reforms and investments needed to achieve green transformation of key sectors and the economy. The initiative included the development of a framework for assessing progress in moving towards a green economy. This framework of indicators and capabilities, which will present governments and other stakeholders with opportunities, provide part of the green economy advisory services that UNEP offers governments. The Green Economy Indicator Framework consists of three main areas: Green Transformation of Key Economics and Economics, Goods and Efficiency, Overall Indicators of Progress and Well-Being. Responding to the international challenges and EU and OECD strategic development documents - EUROPE 2020, HORIZONT 2020, the Green Growth Strategy of the OECD, Sustainable Consumption, Production and Green Growth, etc., a new environmental strategy for Slovakia with a view to 2030 is in Slovakia.

3. Environmental strategy of the Slovak Republic by 2020 (forecast to 2035)

The draft strategy is based on international and European documents (Europe 2020 Green Growth Strategy by OECD, the fifth IPCC assessment report, Horizon 2020, Sustainable consumption and production strategy, Green economy, etc.). The development of Slovak society, as well as all sectors of its economy and the development of environmental protection can be seen as an opportunity for sustainable and balanced growth of all aspects of the economy - economic, social, environmental and institutional). The title of the strategy is “Environmental Strategy of the Slovak Republic in 2020 - Stable and sustainable economy” respectively “Environmental Strategy of the Slovak Republic in 2020 - the opportunity for a green economy”. The strategy is based on these challenges: Problem of global warming and related processes, Changing weather events (extreme droughts, rains, etc.), Changes of natural processes, Atmospheric processes. Priority areas of the strategy are Water (including "virtual water"), Energy, Waste management (recycling, Life-Cycle Assessment, LCA), Innovative areas - Recycling areas (high-tech with a direct or indirect impact on the environment).

The "greening" of the Slovak Economy - topics of green growth and green economy is an issue integrating role of the various partial policies in the Slovak Republic and the umbrella theme of the environmental policy strategy by 2020. The topic falls within the competence of all sectors of the economy, which could be achieved by coordinating the various policies within a single file, so that together they contribute to economic growth, social inclusion, quality of life and sustainable use of natural resources and the environmental protection in general. A separate document to the Strategy will be economic analysis of the impacts, costs and benefits of the proposed measures (Impact Assessment). It should be based on the modelling of all possible relevant impacts on various sectors of the economy suggesting possible scenarios and comparing impact in various variants and zero variant (business as usual scenario).The analysis should specify the implications, in particular on: GDP, employment, the individual components of the environment (air, water, waste, biodiversity, etc.), energy, distributive impact of measures (to households, organizations and the government itself, especially for the most vulnerable groups of population and strategic sectors of Slovak economy). (Rodriguez-Labajos et al., 2009)

4. A draft of model of integrated environmental - safety - health assessment of the environmental strategy

The purpose of the following integrated assessment is to monitor a fulfillment of economic, social, environmental and institutional objectives of individual policy options in connection with environmental, health and safety aspects of socio-economic development.

Table 2: Specified reference set of criteria for evaluating the options

CRITERION					
	Environmental impacts		**Economic impacts**		**Social impacts**
1	Climate and its quality	14	Internal market and effective competition	25	Labour market and employment
2	Energy use forms and transportation	15	Competitiveness, trade and investment flows	26	Legislative standards of quality of work
3	Air quality	16	Operating costs and behavior of SMEs	27	Social inclusion and protection of particular groups
4	Biodiversity, flora, fauna and landscape	17	Business burdens of administration	28	Gender equality, equal treatment and opportunities, non-discrimination
5	Sources of drinking water and its quality	18	Public authorities	29	Individuals, private and family life, personal data
6	The quality of soil and land resources	19	property rights	30	Public governance, participation, good administration, access to justice, media and ethics
7	Land use	20	Research and innovations	31	Public health and safety
8	Renewable and non-renewable resources	21	Consumers and households	32	Crime, terrorism and security
9	Environmental aspects of suppliers and consumers	22	Specific areas and sectors	33	Access and impacts on social protection, health and education systems
10	Manufacturing/Waste Production/Recycling	23	Third countries and international relations	34	Culture
11	The rate of environmental risks	24	Makroeconomic environment	35	Social impacts in third countries
12	Welfare for animals				
13	International environmental aspects and impacts				

Source: Own processing

Initially, overall 5 variants of the strategy were evaluated qualitatively: Business as usual - no significant links with the European strategy, Medium environmental commitment - within greening of the economy, Europe 2020, Horizon 2020 – strict link, Europe 2020 – taken into account local quality of the Environment of the SR, Green utopia. Within the 4 pillars of sustainable development (social, environmental, economic, institutional), 6 social, 2 environmental, 11 economic and 12 institutional indicators were formulated and analysed. The results of the analysis were tabulated and synthesized into the overall environmental result of the variants in the form of 6 indicators: Environment in general, Environmental health, Urban centre/greening the city, rural areas, Consumption of resources, Quality of life. (Majernik et al., 2015), (Moldan et al., 2012) A group of thirty-five criteria were later quantitatively expertly specified in the assessment of the strategic document "Environmental Strategy SR by 2020" (Table 2). A potential impact has been defined by verbal - numerical rating scale. Each verbal assessment of the potential impact is entitled to receive the rating.

4.1 Impact on the Environment - environmental indicators of the SR

A way of a managed team of expert survey has been applied in order to obtain objective outcomes. The parameter values (i.e. potential impacts of the proposed five options on the environment according to 35 criteria) were determined by a team expert way. File polls of experts made up by a total of 15 respondents' answers, environmentalists, ecologists, environmental economists, engineers, managers and experts in environmental health, safety and social responsibility. These respondents' answers are recorded in the tables. Pie charts have been drawn for selected criteria. It is possible for each partial evaluation (criteria) to determine individual preferences considered a set of five options from the graphs and tables.

Table 3: Criterion 1: Climate and its quality

Criterion 1: Climate and its quality Does the option affect the emission of greenhouse gases (e.g. carbon dioxide, methane etc.) into the atmosphere? Does the option affect emissions of substances that deplete the ozone layer (hard and soft CFCs, CFCs, HCFCs)? Does the option affect our ability of civilizations to adapt to climate change?						
EXPERTS in the field		**V1**	**V2**	**V3**	**V4**	**V5**
1	Environmentalism - Environmental Engineering and Management	1	2	3	4	5
2	Occupational safety and health – Risk Management	1	3	3	5	5
3	Environmental Civil Engineering	1	3	3	4	5
4	Environmentalism - Environmental Management	2	2	4	4	5
5	**Ecology and Economics of Agriculture**	1	2	3	5	4
6	Industrial Engineering and Management	1	2	3	4	4
7	Forest Ecology	1	3	4	4	4
8	Environment - Management of sustainable development	1	3	4	5	5
9	Environmental Economics and Innovation Management	2	2	4	4	5
10	Environmental Manufacturing Engineering and Waste Management	1	2	3	4	5
11	Economics of Waste Management	2	3	4	4	4
12	Environmental Economics and Environmental Management	1	2	4	4	5
13	Societal and Social Responsibility	1	3	3	4	4
14	Environment and Sustainable development	2	2	4	4	5
15	Environmental Safety	2	2	3	4	4
Sum		**20**	**36**	**53**	**63**	**66**
Average		**1.33**	**2.40**	**3.53**	**4.20**	**4.60**

Source: Own processing

Similarly, as in Table 3, other criteria were evaluated. The choice of the best option in order is shown in Table 4. Experts assessed 35 criteria. When experts evaluated each criterion assessed options awarding marks. Sum, average, and percentage assessment have been calculated separately on the basis of these assessments was for each criterion. On this basis, it was established by order of the different options most suitable to least suitable for each criterion separately.

Table 4: Choice of the best option in the order

CRITERIA	V1	V2	V3	V4	V5
1	5	4	3	2	1
2	4	5	3	2	1
...	...	...	...	...	...
35	5	4	3	2	1
Sum	**167.5**	**122**	**106.5**	**52.5**	**76.5**
Average	**4.786**	**3.486**	**3.043**	**1.500**	**2.186**
Order	**5**	**4**	**3**	**1**	**2**

Source: Own processing

Determined order of different options serve as a basis for calculations shown in Tab. 5. The output of this table is the final assessment of options 1 to 5, where 1 is the best flavour. In this particular case, as the best option discovered option V4: 2020 - taking into account local environmental quality SR.

The choice of the best option according to the sum of the points allocated according to individual criteria experts is shown in Tab. 5. The total amount has been calculated from these sums and percentage of the various alternatives on which has been found the best option. The grey colour shows us the best option for the individual criteria.

Table 5: Choice of the best option according to the sum of the points allocated according to individual criteria experts

CRITERIA	V1	V2	V3	V4	V5
1	20	36	53	63	69
2	26	20	56	65	69
3	27	18	48	66	70
4	21	20	54	65	68
…	…	…	…	…	…
33	19	60	61	63	69
34	20	62	63	70	70
35	16	52	60	63	69
Sum	**751**	**1499**	**1895**	**2204**	**1992**
Order	**5**	**4**	**3**	**1**	**2**
Percentage	**9.00%**	**17.97%**	**22.72%**	**26.42%**	**23.88%**

Source: Own processing

5. Conclusion

The current stage of development of production and consumption activities, processes and services is strongly marked by their environmental aspect and compliance with the manners and the principles of sustainable development. Impact assessment of herein mentioned activities on components of environment and human health is undoubtedly the most efficient and effective tool for sustainable development. Experience and knowledge of the assessment processes (EIA / SEA / HIA) of concrete activities and strategic documents highlight the need for improvement and elimination of subjective (often lobbying and political) approaches and attitudes. The way to such aims is quality legislation, corresponding environmental awareness of society as a whole and efficient mathematically supported procedures of quantitative evaluation and assessment of impacts on the health of the population resulting from changed quality of the environment. It seems necessary to assess impacts of the forthcoming activities and development strategies on environmental components and population health interact with globally recognized, monitored and assessed indicators of sustainable consumption, production, green growth and sustainable socio-economic development in the future. (Pack, 1994)

Acknowledgement

This work has been supported by the Scientific Grant Agency of the Ministry of Education of the Slovak Republic (Project VEGA 1/0251/17).

References

[1] Brock, D. (1993). *Quality of health care and medical ethics*. In M. Nussbuam & A. Sen (Eds.) The Quality of Life. Oxford: Clarendon Press. pp. 95-132.

[2] Del Rio P. (2009). The emprirical analysis of the determinants for environmental technological change: A research agenda. *Ecological Economics*, ISSN 0921-8009, 2009, vol. 68, no. 3, pp. 861-818

[3] Diener, E. and Suh, E. (1997). Measuring quality of life: economic, social, and subjective indicators. *Social Indicators Research*, vol. 40, pp. 189-216.

[4] England, R. W. (2000). Natural capital and the theory of economic growth. *Ecological Economics*, vol. 34, no. 3, pp. 425-31

[5] Hajduova, Z., Andrejovsky, P. and Beslerova, S. (2014). Development of quality of life economic indicators with regard to the environment. *Procedia-Social and Behavioral Sciences*, 110, pp. 747-754.

[6] Hak, T., Janouskova, S. and Moldan, B. (2016). Sustainable Development Goals: A need for relevant indicators. *Ecological Indicators*, vol. 60, 2016, pp. 565-573,

[7] Horbach, J. – Rammer, C. – Rennings, K. (2012). Determinants of eco-innovations by type of environmental impact. The role of regulatory push/pull technology push and market pull. *Ecological Economics*, 2012, vol. 78, pp. 112-122.

[8] Jackson, T. and Senker, P. (2011). Prosperity without growth: Economics for a finite planet. *Energy & Environment*, vol. 22, no. 7, pp. 1013-1016.

[9] Kasztelan, A. (2017). Green Growth, Green Economy And Sustainable Development: Terminological And Relational Discourse. *Prague Economic Papers*, vol. 26, no. 4, pp. 487-499.

[10] Majernik, M., Chovancova, J., Daneshjo, N. and Danishjo, E. (2015). *Environmental and health impact assessment of development strategies*. Albersdruck GmbH&Co.KG, Düsseldorf, GERMANY.

[11] Moldan, B., Janouskova, S., Hak, T. (2012). How to understand and measure environmental sustainability: Indicators and targets. *Ecological Indicators*, vol. 17, pp. 4-13.

[12] Pack, H. (1994). Endogenous growth theory: Intellectual appeal and empirical shortcomings. *Journal of Economic Perspectives*, vol. 8, no. 1, pp. 55-72

[13] Rodriguez-Labajos, B., Binimelis, R. and Monterroso, I. (2009). Multi-level driving forces of biological invasions. *Ecological Economics*, pp. 63-75.

[14] Samimi et al. (2011). Environmental Performance and HDI: Evidence from Countries Around the World. *Middle-East Journal of Scientific Research*, vol. 10, no. 3, pp294-301.

[15] Tahzib, B., Zelenakova, M., Majernik, M. (2014) *Significance Of The Environmental Indicators*. 14th International Multidisciplinary Scientific Geoconference (SGEM), Albena, Bulgaria, Geoconference, vol. 1, pp. 593-599.

EDUCATIONAL AND COMMUNICATION SUPPORT FOR GLOBALIZED DEVELOPMENT STRATEGIES BY PROFILING GRADUATES IN THE FIELD OF ECONOMICS AND BUSINESS MANAGEMENT

Milan Majerník[1,a,*], Naqib Daneshjo[2,b], Gabriela Sančiová[3,c] and Zuzana Štofková[4,d]

[1]University of Economics in Bratislava, Faculty of Business Economics with seat in Košice, Department of Management, Košice, Slovak Republic

[2]University of Economics in Bratislava, Faculty of Business Economics with seat in Košice, Department of Management, Košice, Slovak Republic

[3]University of Economics in Bratislava, Faculty of Business Economics with seat in Košice, Department of Management, Košice, Slovak Republic

[4]University of Žilina, Faculty of Operation and Economics of Transport and Communication Department of Economy, Žilina, Slovak Republic

[a]milan.majernik@euke.sk, [b]daneshjo47@gmail.com, [c]gabriela.sanciova@gmail.com, [d]zuzana.stofkova@fpedas.uniza.sk

*Corresponding author

Abstract. The authors present results of their original research on an integration of issue of sustainable, i.e. economically, socially and environmentally balanced socio-economic development. They analyse derived objectives of the EU and OECD strategic development documents in particular EUROPE 2020 with an outlook to 2035, Horizon 2020, Sustainable Production, Green Economy and Green Growth. In confrontation with tasks of the Action Plan of Education to the sustainable development (SD) at Slovak universities, they will implement the results of the research into the profile of university graduates in the study field (SF) 3.3.16 Economics and Business Management (EAMP). The research is oriented on an innovation of provided study programs but especially on a formalization of a concept of the new study program "Integrated Enterprise Management" at the 2nd and 3rd level of education, on the conceiving and formalization of new areas and subjects of study overlapping requirements for graduates resulting from global development strategies programs. The direction of scientific and research focus on their support is also formulated to relevant educational and communication activities on the identified tasks, objectives and milestones of globalized strategies and new fields of study and subjects of study. The research outcomes obtained under the University of Economics Bratislava, Faculty of Business Economics (UEBA FBE) are generalized for an application in economics and management fields and study programs in general.

Keywords: development strategies, globalization, education and communication, economy and business management, innovated graduate profile

JEL Classification: I25, M21, O01

1. Introduction

Sustainable development as a new socio-economic phenomenon, whether from a global, regional, corporate or social view, is perceived as an economically, socially and environmentally balanced development today. Its strategic objectives are ensured by various instruments dominating the "green" economic growth or green economy. Their essence lies in focusing on ensuring economic and social objectives of humankind to ensure global environmental protection and quality of life. (Wals & Benavot, 2017)

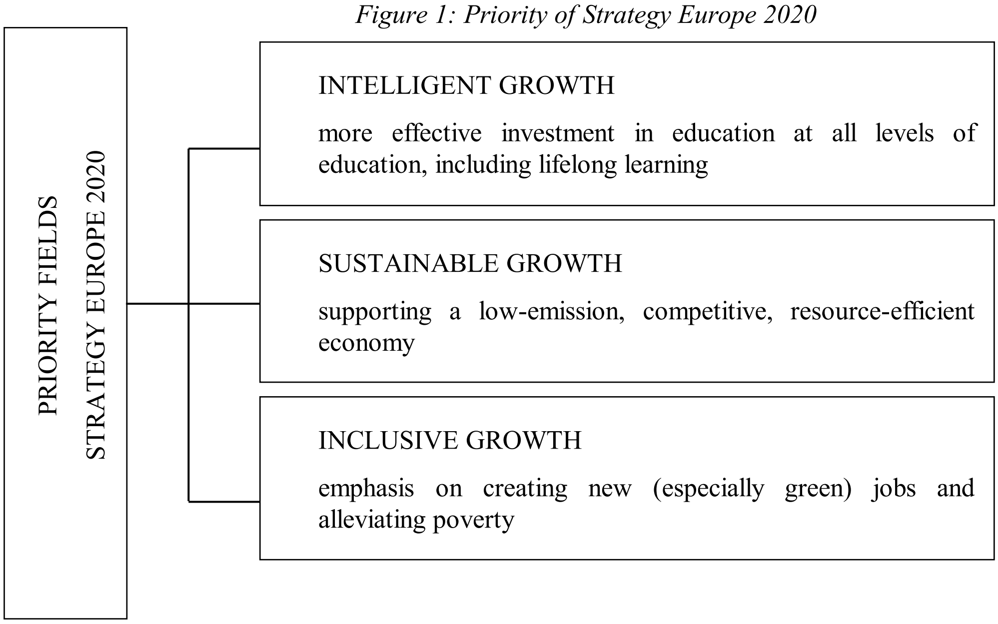
The basic prerequisite for the green direction of socio-economic development is awareness of a need for this approach and enhancing environmental awareness in society, company, family, education in particular. Sustainability development strategies and their objectives have to therefore also be reflected in innovated profile of university graduates and economically-oriented study programs in particular.

2. Sustainable Development in the Higher Education Environment

Sustainable development is an economic growth that meets society's needs by creating welfare conditions in a short, medium, but especially long term. The concept is based on meeting current development needs without jeopardizing potential for continued growth for future generations (e.g. by exhausting non-renewable resources without finding alternatives, a destruction of the necessary ecosystems, triggering changes in natural conditions that greatly complicate a possibility of human survival, etc.). (Cochrane, 2006), (Owens, 2017)

The concept of sustainable development is based on an assumption that human civilization is a subsystem of the ecosphere and is dependent on its resources, energy flows, stability, and an ability to adjust itself to these conditions. A key strategic document for sustainable development in the EU environment has set new ambitious objectives to address five key areas: knowledge, innovation, a more sustainable economy, high employment and social inclusion, Fig. 1. (Lawn, 2005), (Majernik et al., 2017, A), (Majernik et al., 2017, B)

Figure 1: Priority of Strategy Europe 2020



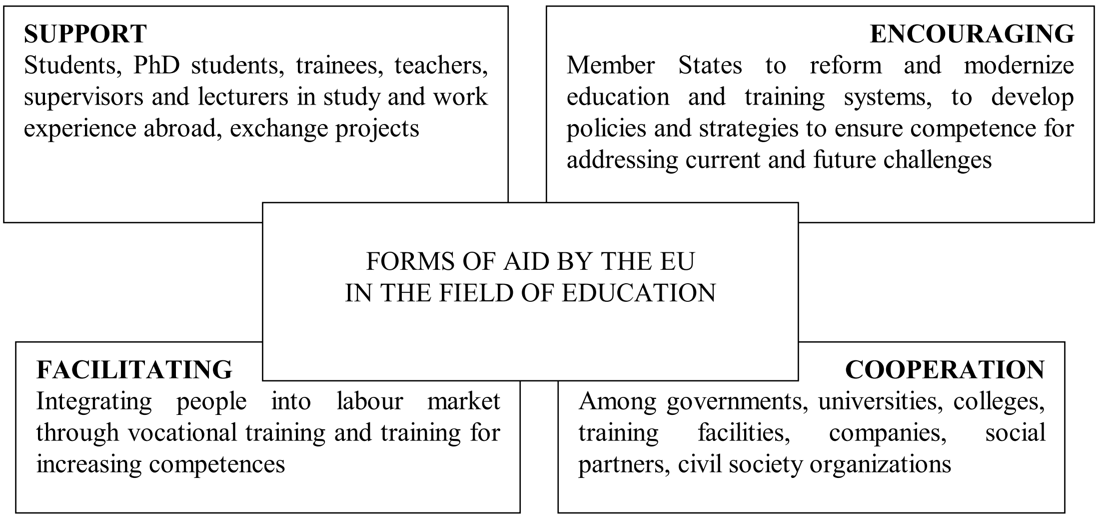
Source: own processing

Intelligent growth follows a qualitative change in EU performance in specific areas:

- Education - it is about motivating people to education and adapting their skills to the current and future requirements of the European economic practice.
- Research and innovation - the goal of this area is to create new products and technologies generating growth and jobs while contributing to solving social problems.
- A digital society - based on progressive information and communication technologies and their use. (England, 2000), (Frondel et al., 2007)

As the EU has no competence to set individual policy rules in the field of education, training and youth education, it acts only as a co-ordinator, facilitator and counsellor, Figure 2.

Figure 2: Forms of aid by the EU for member states in the field of education and their interconnection



Source: own processing

Horizon 2020 as an EU program for research and innovation funding under the Europe 2020 strategy reflects a decision to increase innovation, growth and employment in the future. The main objectives of Horizon 2020 are: excellent science, industry leadership and societal challenges. (Horbach et al., 2012)

The specific objectives of the program are Spreading excellence and increasing participation, Science with society and for society. Horizon 2020 also supports:

- Activities of the European Institute of Innovation and Technology - 3.5%.
- Non-nuclear research of the Joint Research Centre - 2.5%.
- Activities EURATOM - 2%.

The funds earmarked for the funding of Horizon 2020 (about € 80 billion) can be obtained by subscribing to the call published by this program.

The Green Growth Strategy and Green Economy should be seen as an economic growth strategy that takes into account environmental aspects, impacts and risks with the core of support of economic growth and development, taxation, innovation, knowledge economy, labour market and business environment.

The green growth is seen as an integral part of the strategy and programs of Sustainable Development and Sustainable Production with a proposed feasible policy framework that is flexible to different circumstances and stages of development in individual countries in this context. Progress towards green growth is monitored by key groups of indicators characterizing changes in selected areas, Table 1. (Kasztelan, 2017)

Table :1 Indicators of green growth from the level of the OECD

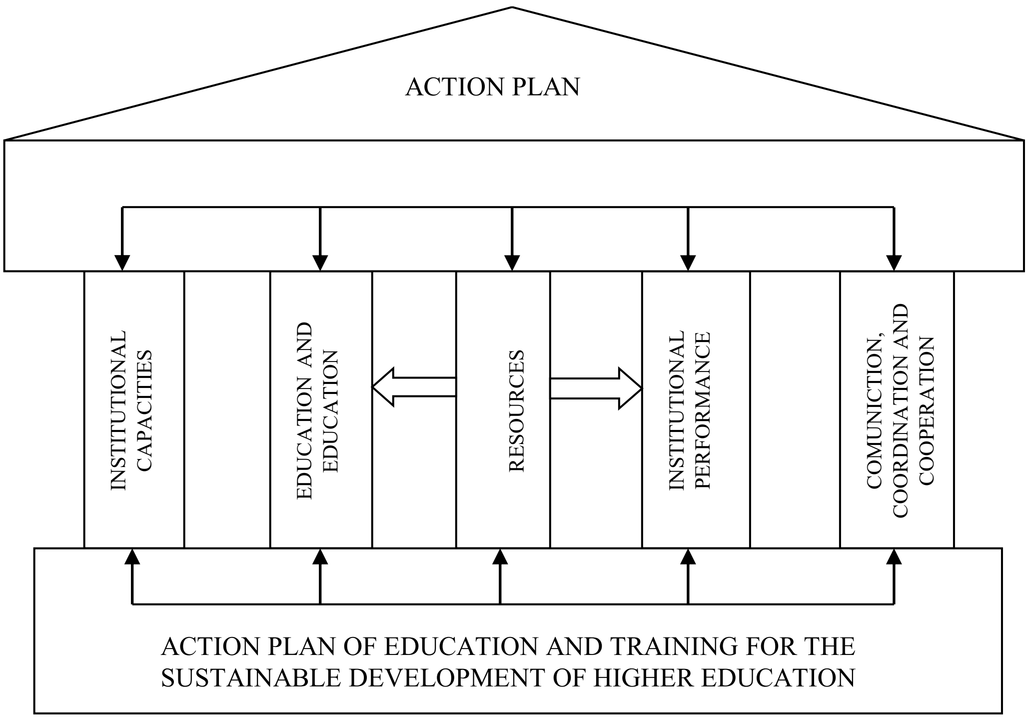
GROUP INDICATORS	SELECTED FIELDS
environmental a resource productivity	energetic and carbon (CO_2) productivity
	resources productivity
	multifactor productivity
Basis of natural resources (natural wealth)	renewable resources: water, forests, fish
	non-renewable resources (raw materials)
	biodiversity and ecosystems (landscape, soil, flora and fauna)
environmental quality of life	environmental health and risks
	environmental services and civic amenities
economic tools and political measurements	voluntary environmental policy instruments
	technology and innovations (R&D, patents, environmental innovations)
	international financial flows
	prices and transfers (environmental taxation, energy pricing, water pricing, reuse)
socio-economic connections and characteristics of growth	economic growth, productivity and competitiveness
	labour market, education and income, socio-demographic structure

Source: own processing

3. Action Plan on Education and Education for Sustainable Development

The action plan for education and education to the SD is considered to be the current source document within all levels of schools in Slovakia. The action plan for universities consists of five interconnected pillars, Figure 3.

Figure 3: Pillars of Action plan of R&D to SD and their interconnection with tasks



Source: own processing

The action plan is currently in the third Phase (to 2015 and further) - making a significant progress in implementing SD education.

The importance of universities in sustainability lies in educating it not only in terms of education but also scientific and research. It represents an investment in the future of a country that fully supports the principles and objectives of the SD. (Soltes et al., 2016) Key aspects of environmental sustainability require universities to deal with a number of complex tasks relating to environmental issues and sustainability challenges that require changes in all areas of the higher education environment. The task of research of universities and research institutions is to ensure synergies between environmental protection and improvement and closely related economic growth. In the context of social sustainability, the training of skilled workers with acquired skills and competencies plays a key role in developing and exploring sustainable technologies effectively that contribute to low environmental impacts through interdisciplinary procedures and in connection with existing networks. An important role, supported by the 2006 Sustainable Development Strategy, is also a creation of relations and mutual cooperation between universities within the EU and other higher education and research institutions. (Stofkova & Stofkova, 2015)

Implementation of the principles of sustainable development into the higher education system can be performed from three levels:

1. Integrating the ideas of sustainability into a functioning system while the system remains largely unchanged.
2. Reformation which is a wider level of response and involves "incorporating" ideas into existing systems, curricula and the overall activity of the university. This level can also be called "education for sustainability".
3. The transformation concerns a new design of a higher education system based on the principles of sustainability. It is a shift in learning based on learning, sustainability in context. This level can be defined as "sustainable education".
4. It is extremely important to note that integrative approaches to sustainable development are important in order to consolidate potential benefits of creating conditions for promoting sustainability in all spheres of universities and universities, thus achieving the means of interdisciplinary work, supporting the academic remuneration system, and strengthening academic culture and university strategy.

4. Innovated graduate profile in the SF „Economics and Business Management“

Based on the analysis of the current graduate profile in SF 3.3.16 and structural composition of study programs related to the principles and objectives of the globalized development strategies and the R&D Action Plan to the SD and their subsequent comparison, there is a need to innovate both the core of knowledge and complementary knowledge, and graduate skills. It also requires third stage of an Action plan for education and training to the SD. The results of our multiannual research under the conditions of the UEBA Faculty of Business Economy were continuously transmitted through innovations of study subjects but mainly by introducing new study subjects into the educational and supporting scientific and research activities in the SF and relevant study programs (SP), Table 2.

Table 2: Transfer of the objectives of globalized strategies to study subjects to the newly introduced courses at the Faculty of Business Economics, University of Economics in Bratislava.

SP within the SF 3.3.16 Economics and Business Management	Newly introduced subject of study on SD	Characteristics of the subject of the study				
		Level of the study and year	Form of study	Range	Credits	Pedagogical documentation for the subject and study literature
Economics and Business Management (Corporate entrepreneurship as CO or C)	Sustainable development	I/3 (1/1)	Compulsory (C)	2-1 exam	4	IL (Information letter) PS (Project subject) Co-authorship monographs
	Assessment of economic activities impacts on environment	I/2	Compulsory optional (CO)	2-1 exam	4	IL, PS Monographs slov., engl. (like university textbooks)
	Sustainable of natural resources	I/2	CO	2-2 exam	4	IL, PS, textbooks
Economics and Business Management	Econ. a manag. Of use renewable energy sources	I/1	CO	2-0 exam	3	IL, PS, recommended literature
Corporate entrepreneurship	Euromarketing	I/2	CO	2-2 exam	4	IL, PS, recommended literature
Financial management of company	Quality Management in an Integrated System	II/2	C	2-2 exam	6	IL, PS, textbooks
	Environmental Economics	II/2	CO	2-2 exam	4	IL, PS, recommended literature in IL and PS
	Economic aspects of environmental management	II/2	CO	2-2 exam	4	IL, PS, Monographs (as university textbooks)
	Accreditation, certification, auditing	II/2	CO	2-2 exam	4	IL, PS, university textbooks
	European development strategies and innovative programs	II/1	CO	2-2 exam	4	IL, PS, the upcoming set of textbooks over VEGA
	Regional development	II/1	CO	2-2 exam	4	IL, PS, recommended literature

Source: own processing

The development and implementation of new study subjects has been and is supported by the results of applied and solved scientific and research projects (VEGA, KEGA, requested projects from practise), e.g.:

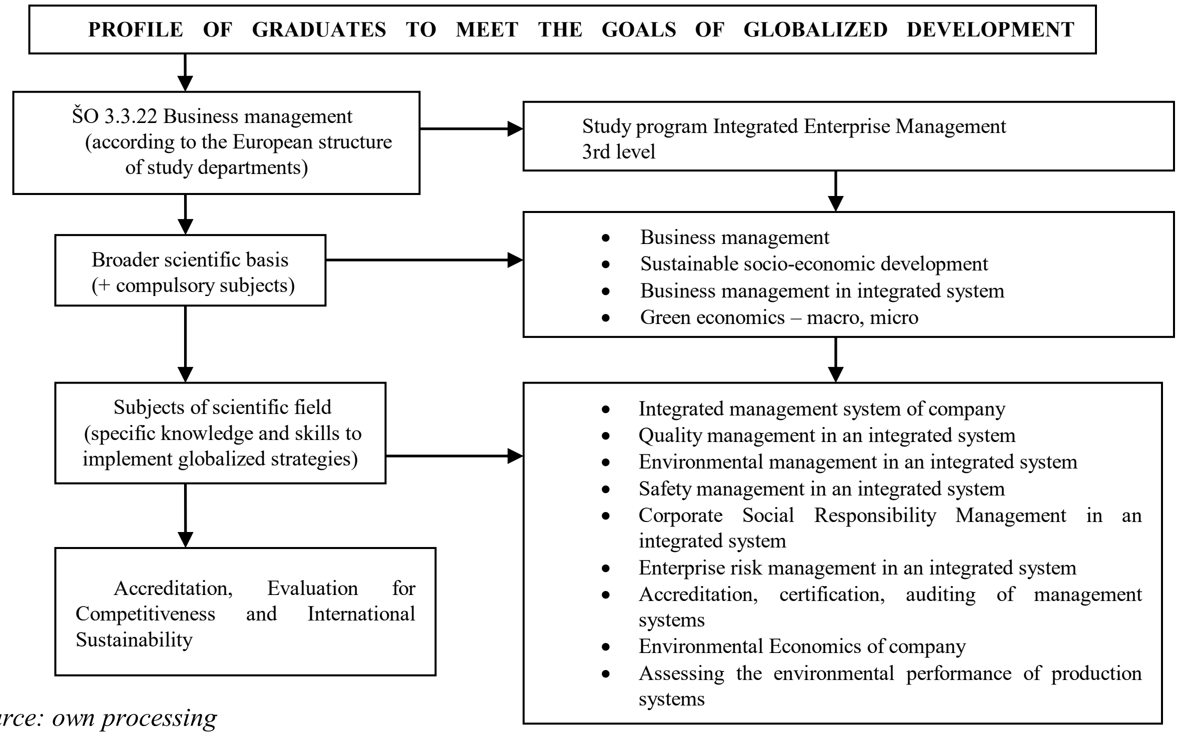
- VEGA No. 1/0936/15 - Economic and Environmental Study and Experimental Verification of Tillage Reclamation Possibilities TPZ-EVO
- VEGA No. 1/0251/17 - Research and Development of an Innovative Model for Accounting for Material and Energy Flows of Company
- Upcoming projects with experience under RIS 3 - Intelligent Specialization
- KEGA No. 026 EU - 4/2018 - Educational and Communication Support for European Development Strategies by Profiling Graduates in the Field of Economics and Business Management and others.

4.1 The concept of the study program the Integrated Enterprise Management (IPM)

Study program IPM, within the study area 3.3.22 corporate management has not been accredited at any Slovak university or university or college yet. It is significant from the results of our research that the study program so designed (either at the 2nd or 3rd level of study) would meet the objectives of globalized development strategies (SD, Sustainable

Production, EUROPA 2020, Green Growth, Green Economy, etc.) best. (Ehrenfeld, 2003), (Sastry, 2005), (Stofkova et al., 2015) Currently, an accreditation file for the so designed SP is being prepared at EUBA FBE as a tool for direction to the green economy and environmental management of company - the "green university", Fig. 4. In Fig. 4 is mentioned subject composition of the study program with the definition, respectively by covering the core of knowledge and complementary specific capabilities and skills to meet the principles, principles and goals of sustainable development.

Figure 4: Structure of SP in the field of EAMP for the implementation of globalized development strategies



Source: own processing

5. Conclusion

The results of our research and analyzes as well as the lessons learned and the experience innovations of study programs in the study field 3.3.16 Economics and Business Management (according to the European structure of SP) to sustainable development and fulfillment of the tasks and objectives of globalized development strategies are also welcomed by economic practice. Evidence is the very good placement of the faculty graduates, demanded projects of economic practice and involvement in calls for Horizon 2020.

Acknowledgement

This work has been supported by the Scientific Grant Agency of the Ministry of Education of the Slovak Republic (Project VEGA 1/0936/15).

References

[1] Cochrane, P. (2006). Exploring cultural capital and its importance in sustainable development, *Ecological Economics*, vol. 57, pp. 318-30.

[2] Ehrenfeld, D. (2003). Globalization: effects on biodiversity, environment and society, *Conservation and Society* (New Delhi), vol. 1, no. 1, pp. 99-111.

[3] England, R. W. (2000). Natural capital and the theory of economic growth, *Ecological Economics,* vol. 34, no. 3, pp. 425-431.

[4] Frondel, M., Horbach, J. and Rennings, K. (2007). End–of-pipe or Cleaner Production? An empirical Comparison of Environmental Innovation Decisions Across OECD Countries. *Business Strategy and the Environment*, vol. 16, no. 8, pp. 571-584.

[5] Horbach, J., Rammer, C. and Rennings, K. (2012). Determinants of eco-innovations by type of environmental impact. The role of regulatory push/pull technology push and market pull. *Ecological Economics,* vol. 78, pp. 112-122.

[6] Kasztelan, A. (2017). Green Growth, Green Economy And Sustainable Development: Terminological And Relational Discourse. *Prague Economic Papers*, vol. 26, no. 4, 2017, pp. 487-499.

[7] Lawn, P. A. (2005). An assessment of the valuation methods used to calculate the index of sustainable economics welfare (ISEW), genuine progress indicator (GPI) and sustainable net benefit index (SNBI). *Environment, Development and Sustainability*, vol. 7, pp. 185-208.

[8] Majernik, M., Daneshjo, N., Chovancová, J. and Sančiová, G. (2017). Modelling the Process of Green Public Procurement. *TEM Journal*, vol. 6, no. 2/2017

[9] Majernik, M., Daneshjo, N., Chovancová, J. and Sančiová, G. (2017). Design of Integrated Management Systems according to the revised ISO standards. *Polish Journal of Management Studies*, ,o. 15.

[10] Owens, T. L. (2017). Higher education in the sustainable development goals framework. *European Journal of education, research, development and policy*. vol. 52, no. 4, pp. 414-420.

[11] Sastry, G. S. (2005). A model for sustainable development of mountain regions*, Indian Journal of Regional Science*, vol. 37, no. 2, pp. 53-65.

[12] Soltes, V., Stofkova, K. and Kutaj, M. (2016). *Education as a regional development aspect.* 8th International Conference on Education and New Learning Technologies EDULEARN) Barcelona, *EDULEARN Proceedings*, pp. 3643-3647.

[13] Stofkova, J., Madlenak, R. and Repkova Stofkova. K. (2015). *Business management*. Bratislava: DOLIS.

[14] Stofkova, K., Stofkova, J. (2015). Some aspects of the impact of ict for university studies. 7th International Conference on Education and New Learning Technologies (EDULEARN), Barcelona, *EDULEARN Proceedings*, pp. 6590-6596.

[15] Wals, A. E. J. and Benavot, A. (2017). Can we meet the sustainability challenges? The role of education and lifelong learning. *European Journal of Education*, vol. 52, no. 4, pp. 404-413.

CROSS-CULTURAL RESOURCES OF INTERNATIONAL BUSINESS IN THE AGE OF GLOBALIZATION

Svetlana Maksimova[1,a,*]

[1]Entrepreneurship and Logistics Department, Plekhanov Russian University of Economics, Russia

[a]SMaksimova2015@yandex.ru

*Corresponding author

Abstract. The paper studies the issues of corporate development of international business structures in a condition of cross-cultural interaction. The process of globalization, international business activities expansion and, as a consequence, international companies growth determine the feasibility of examining the factors that influence organizational structure of international business structures. One of the important components of business structures development is organizational culture. The author notes that organizational culture is influenced by the national culture of a country, carries national traditions, customs, rules and norms of behavior, which in turn influence the formation of cultural values of the organization, the definition of behavior patterns, symbols, business ethics, and the management style of the company. The author analyzes the experience of the companies Volkswagen, Toyota, Hyundai. The research results show the effect of cross-cultural interaction on corporate development. The author brings up a proposal for organizational culture use, built in accordance with the national cultural differences, as an additional resource for the organization development of international business structures. The author's approach is to consider the use of cross-cultural differences of international business structures as an additional resource for the corporate development and increasing its competitive advantages. Using the experience of international companies, the author considers the possibility of cross-cultural differences intake as an additional source for organizational development and growth of competitive advantages of international business structures.

Keywords: organizational culture, national cultural, cross-cultural interaction, international business, globalization.

JEL Classification: A13, L30, O15

1. Introduction

Globalization acceleration processes resulting in the international market generation influence greatly the trends and the essence of development stages of national organizations in the local areas. Globalization makes new markets and changes old ones, creates new players on different markets to compete with. Some scientists concluded *"the competition in a turbulent business environment is like a race which results are often unpredictable. Intensification of foreign economic activities of Russia, the process of globalization, expansion of international business activities and, as a consequence, the growing number of international companies determine the feasibility of studying the influence factors of cross-*

cultural communication organizational culture international business structures." (Ashmarina et al., 2016).

One of the major components of business structures development is organizational culture. Organizational culture is influenced by national culture of the country, carries national traditions, customs, rules and norms of behavior, which in turn influence the formation of cultural values of the organization, the definition of behavior patterns, symbols, business ethics, and management style of the company. Experts and enterprises themselves are increasingly dealing with how to arrange it so that the employees were motivated to higher performance, loyalty to the company without any additional cost. All factors contribute not only to a higher salary, or other financial or non-financial benefits, but they are among the most important factors shaping the correct setting of corporate culture. So says a number of scientists and researchers (Aimaganbetova et al., 2017), (Kuchynkova, 2016), (Osagie et al., 2016).

According to Enderle *"focus on organizational culture as a powerful source of competitive differentiation, is now shared by many scientists studying the peculiarities of the national governing practices."* (Enderle, 2014). However, some authors state that *"currently there is no single technique or mechanism of organizational culture use or formation, taking into account national differences and use it as a tool to improve the competitiveness of the company."* (Chabowski et al, 2017). In this context there is a need to study the peculiarities of national cultures and their impact on organizational culture of companies, develop approaches and techniques to enhance the effectiveness of intercultural communication, cultural adaptation, motivation, leadership, decision making, personnel management in a different cultural environment.

Scientific novelty of the approach suggested is to consider the use of cross-cultural differences of international business structures as an additional resource for the development of the organization and increasing its competitive advantages.

Adamova and Krninska consider that "*the purpose of this work is theoretical and methodical substantiation of the possibility of cross-cultural resources use, international business structures as an additional source of development and growth of its competitive advantages."* (Adamova & Krninska, 2016).

The implementation of the objectives of the study determined the formulation and solution of the following tasks:

- to reveal the peculiarities of forming organizational culture in international businesses;
- to analyze main prerequisites for cross-cultural differences use as an additional resources in the formation and development of international business structures organizational culture;
- to review experience of international companies the possibility of using the cross-cultural differences as an additional source for organizational development and growth of competitive advantages of international business structures.

2. Methods

As experimental material the author used documentary materials, reports, reviews about activities of international companies hosted on their official websites on the Internet. In this study methods of synthesis, systemic and statistical analysis, method of expert evaluations, method of modeling and forecasting were used.

Methodological and practical significance of the study lay in identification, formulation and coming up with possible solutions of issues connected with shaping and development of organizational culture with the factors of cross-cultural interaction. The offered solution is to use organizational culture as a resource to improve the competitiveness of the company in terms of cross-cultural interaction. The author substantiates the possibility of applying the results obtained into practice of Russian and foreign companies involved in international business.

3. Results

In this study, the author analyzes the influence of cross-cultural characteristics on the organizational development of international business organizations and considers the results obtained. As the literature analysis of the literature on the study of organization development in the past sow, many authors believed that *"cultural differences appear to be a barrier that prevents cooperation and collaboration."* (Verjel & Schmid, 2015), (Zav'yalova et al., 2015), (Patel, 2016), (Salgovicova & Klicekova, 2016), (Shin et al., 2017). As for modern executives who have attained success in their field, they recognize that reasonable and proper use of national cultural differences allows you to turn it into a source of additional opportunities. Consider how cross-cultural interaction on the example of several major international companies, and observe the influence it has on the organizational culture and the activities of business organizations in general, having studied the materials from the official sites, statistical and reporting documentation. As objects of study of this phenomenon, we selected the following companies, international leaders in automotive manufacturing and production of electronic equipment, representatives of different cultures: the German car company Volkswagen, the two Japanese companies: Toyota automotive company and a company producing electronic appliances of Sony, the Korean car company Hyundai.

Sony is a symbol of Japanese electronic equipment, and is the leader among Japanese organizations in international activity. Sony was established on 7 may 1946, Masaru Ibuka and Akio Morita. Initially, the company had a complicated name "toke tsusin Koge kabusiki-gaysya", which was translated from Japanese as "Tokyo telecommunications industry company. This name was obtuse for Americans. For this reason, Morita coined a new word, which was from none of the world's languages. He combined the Latin word *sonus,* the "sound" and the English *boys sunny* - "Sunny guys" or, as the phrase has gained importance in Japan, "juvenile genius" So then everyone knows the name Sony. Almost from its inception, "*Sony's corporate policy effectively combines features of Japanese and Western management models."* (Morita, 2017). Retaining all the best that is inherent in the Japanese system, for example, job security, reasonableness, centralization, commitment to itself and partners, sustainability, the company tried to incorporate everything valuable from the Western model. So, Sony successfully managed to combine national Japanese features with traditional features of Western European business: openness, loose inner structure, encouragement of initiative, creative effort, system of bonuses.

In due course, Sony has become a Corporation with a huge number of units around the world. The company employs more than 120 thousand people, and 55% of them are not

Japanese. It is worth noting that this is the highest figure among Japanese corporations. In his book "Sony: Made in Japan" the company President says "*foreigners are not the same, they support different ideas, practice different religions, they have different past.*" (The official website of the Sony company, 2017) One of the components of Sony's management ideology is respecting personality. According to Patricia Sanchez, a Human Resources Manager the American division of Sony, "*the company does not have discrimination on national basis, allowing you to put employee's professional qualities first.*" (Morita, 2017). Assign the most effective specialist to a position where it is mostly needed. Cross-cultural differences also affect the formation and adherence of internal rules and regulations, but in the modern global economy borders are becoming more transparent. Sony sees the diversity of effective way to create business value.

Thus, we may conclude that one of the main reasons for such success of Sony corporation, is its ability to organize cooperation of its staff coming from different cultures and to adopt the most effective strategy out of a wide management strategies range. The policy of Akio Morita in relation to the intercultural atmosphere in the Sony had a significant impact on the company's organizational development.

In continuation of the research it will be examined how factors of cross-cultural interactions affect the success and development on the example of Volkswagen. Major German automotive concern Volkswagen Group is the world's leading and the largest European automobile maker. According to the magazine Forbes 2016, Volkswagen comes 14th in the ranking of the world's largest companies. If compared to 2014, the company has moved up from rank 24 to 14. The structure of the group comprises twelve brands from seven European countries: Volkswagen, Audi, Seat, Skoda, Bentley, Bugatti, Lamborghini, Porsche, Ducati, Volkswagen Commercial Vehicles, Scania and MAN. Each brand has its own character and operates as an independent legal entity on the market. (The official website of the company Folkswagen Group RUS, 2017). The company manufactures an entire range of vehicles, from motorcycles, buses, heavy-duty trucks to luxury cars. Volkswagen is also actively involved in large diameter diesel engines production for power plants, turbo compressors, steam and gas turbines, and chemical reactors. The task of the group is manufacturing of attractive, safe and eco-friendly automobiles. Moreover, the company offers a wide range of financial services: leasing, banking and insurance activities.

It can be definitely stated, that Volkswagen is has a strong organizational culture. Its employees understand the mission clearly, accept values, standards and rules of conduct which they must follow. As for basic principles of Volkswagen's organizational culture formation, they are as follows: staff training and development, promotion the company's employees to management positions, predictability, orderliness and consistency, encouraging personal initiative, freedom of selection ways to achieve goals, management's credibility to individual employee, and developing collective problem-solving methods, resolution, employee's remuneration system, result-related bonuses. All the above-mentioned principles are reflected in the organizational culture and create the basis for successful organizational development of the company Volkswagen.

As noted above, the company pays great attention to the development of the human factor within the company, and this is one of the components of the organizational culture. Volkswagen has developed a network of training centers to meet the technical level and the European level of training. The latest versions of technical training, regulatory documentation for the entire model range are used for the process of training. Volkswagen provided access to e-learning tools of the Academy Volkswagen in Germany, Wolfsburg. Every year dealerships of Volkswagen are held in the Training center basic, professional, expert training. Volkswagen's service dealers are regularly trained at the Academy and get relevant certificates of trainers. It should be added that the main condition to achieve and maintain high productivity in any company is a good balance in the staff's requirements and abilities. Therefore, the company on the one hand, reduces excessive stress of its employees, on the other hand, there can be no deviations from the working rules and discipline. From early times to the present, the company is engaged in its staff development and improving the system of work arrangement. Volkswagen's organizational culture is focused not only on people but also on sustainability of economic and social goals, corporate social responsibility.

The main competitor of Volkswagen is the company Toyota. Today, Toyota is one of the leading manufacturers which is growing rapidly and penetrating the global market successfully, ranking 8-th out of 500 largest companies of the world. Toyota produces more than 7 million cars a year, that means that every few seconds a new automobile comes off the conveyor. The company employs about 300 thousand people worldwide. But the matter is not only in figures (The official website of the Toyota company, 2017) First of all, Toyota is a vivid example of the famous "Japanese Economic Miracle", a model of successful management and a Creator of a new production philosophy, which is reflected in the company's organizational culture. Let us investigate how Japanese companies have managed to combine the features of Japanese national identity with other cultures in the organizational culture formation and how it has affected the company's management and growth.

As for its management style, the company Toyota has an unambiguous philosophy, where the emphasis is laid not on a technique and not on Finance, but primarily on human capital development. To achieve this, the company strives to create an atmosphere of trust, cooperation, and mutual support. The company encourages initiative and ability of each employee to be engaged in the process of change and innovation, willingness to learn and perception of learning as the way for development. The principle of non-punishment is based on the management philosophy of the company. Toyota's main principle is not to seek a guilty person, but to investigate the cause of an error: if a student has not learned, then the teacher, who has not taught him is to blame. The chief also combines the roles of a teacher and mentor. This principle contradicts a widely accepted management paradigm, according to which the boss is always right.

Undoubtedly, the Japanese mentality plays an important role in a management philosophy shaping and company development. Personal relationships are very important for traditional Eastern business practices and Toyota makes a good example. It has welcomed the free circulation of information flows, the intersection of the structural and hierarchical boundaries. Another feature of Toyota's HR policy is that the company prefers in-house training for skills enhancement. Toyota's management system rests on the ideology of "learning" and not "command". Responsible executives don't give orders, but train staff. The company has a "suggestion system", introduced in the 1950s, which encourages employees to bring new constructional ideas for production cycle improvement and technology.

It is important to note that the organizational culture of the company is also the quality control system of products, which is based on a Japanese philosophical concept of "Kaizen". It is aimed at productivity gain and improvement in the quality of production. The philosophy of "Kaizen" implies adherence to the following principles: focus on the customer, total quality control system for innovative proposals, discipline in the workplace, "just in time", zero defects. Japanese culture is based on thinking long term and collectivism, where an individual is subordinated to a group. On the contrary, in Western cultures, individualism and situational thinking prevail. This does not mean, however, that the Japanese organizational culture is not suitable for Western countries it is just different from Western culture and has strong unique features. The main problem of the company working in other country is finding of the general solutions of the problems and questions concerning the organization of management and development. The Toyota company is convinced that without strong culture in all divisions of the company and worldwide she will lose the competitive advantage. This experience suggests that the company aims to use cross-cultural resources as assets for the development and competitiveness of the company.

Let us consider the experience of cross-cultural interaction and the formation of organizational culture on the example of another company. The Hyundai Motor company is the largest Korean car manufacturer and from year to year it is among the five leading manufacturers. Automotive experts recognize the fact, that Hyundai brand is the fastest growing in the world. In 2000 was the year when the Hyundai Motor company was recognized as the undisputed leader of the national market. In 2005 it entered the list of Top 100 global brands, and in 2010 it was recognized as the fifth largest automaker in the world.

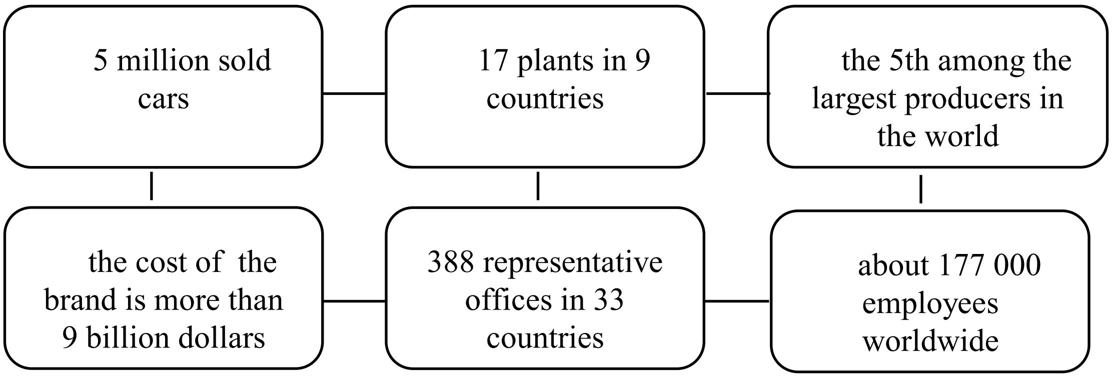
Interest is the emergence of Hyundai in Russia. Hyundai Motor Manufacturing Rus (Hyundai Motor manufacturing Rus) – the sixth plant of Hyundai Motor Company, which opened the company abroad. Hyundai Motor manufacturing Rus, only among the foreign automakers plant in Russia that provides a full production cycle. The technological process of the plant includes stamping major body panels, welding, body painting and Assembly of the car. Until 2010, the Assembly of models of cars of Hyundai was made at the factory TAGAZ in Taganrog 2010, the year began its work plant, built in St. Petersburg.

By analyzing organizational culture of the company Hyundai will try to identify the features of organizational culture of the company arising in the process of cultural interaction between Korean and Russian companies. It should be noted that an important place in the company given to the management of human resources and their development. The company guarantees to its staff not only the stability, social guarantees and good working conditions, but also opportunities for professional and personal growth. Automobile plant Hyundai the selection of staff preference for a highly motivated and proactive people willing to develop together with the company. For the employees of production shops do not have the experience, the company provides free training, foreign training at the company Hyundai Motor in South Korea and the Czech Republic. The company makes every effort to form common values, rules and norms of behavior, which unites the traditions and attitudes of both cultures. Thus, the process of integration and adaptation of Russian and Korean cultures, with the purpose of formation and development of strong organizational culture, leading to improve the ability of staff to build a team of professionals and realize its potential.

In addition to the above-mentioned, the company shapes its organizational culture taking national factors into account and pays great attention to corporate social responsibility. For more than five years the company implements social projects in Russia under the Hyundai brand. Hyundai cars are very popular among Russian people, the company is proud and considers it to be its duty to take care of safety on the roads, people in need, nature conservation, development of culture, art, and sports. This is a system of priorities and values in the sphere of corporate social responsibility, applied by the company in their Russian programmes and reflects the most vivid episodes in charity activities. As the Director General of "Hyundai Motor CIS" Koo Yong-Ki said, future plans include further development of the company implemented by social initiatives for the benefit of Russian society, art and culture.

Hyundai Motor Company today is a large international company, successfully engaged in manufacturing and selling cars in many countries. Table 1 shows the indices characterizing the activities of the company in a cross-cultural environment.

Table 1: The efficiency indicators of the Hyundai company functioning in the cross-cultural environment



Source: elaborated by author on materials http://hyundai-expert-auto.ru/o_kompanii/novosti/hyundai_motor_group_predstavlyaet_svoyu_koncepciyu _razvitiya_2020_i_novyj_logotip

Hyundai has a high productivity and sales of cars, it is on 5th place in production of automobiles in the world. The brand value of the company is 9, 004 billion. The company has 38 factories in 9 countries and 38 sales offices in 33 countries, it employs 98 348 employees. Judging by the figures we can say that Hyundai operates effectively and successfully on the international automotive market, outperforming its competitors in the industry. This is largely due to the presence of a strong organizational culture that is shaped and developed with consideration of cross-cultural interaction.

4. Discussion

Based on the results obtained in the course of study and analysis of large international companies performance, it can be concluded, that in terms of political, economic and cultural integration, organizational culture may be an effective tool in maintaining the integrity and competitiveness of international business structures: it contributes to a positive image and investment attractiveness of the company, increases its intellectual property.

The experience analysis of such companies as Volkswagen, Toyota, Sony, Hyundai revealed that major international business organizations have a strong organizational culture built in light of national cultural differences. This fact is which is especially important for the company, performing in conditions of cross-cultural interaction. Shaped in such a way organizational culture allows an international company to turn cultural differences into benefits, and transfer organizational culture into an asset for its development and competitive ability. The result of the study have revealed peculiarities of organizational culture shaping in international businesses, the basic premise of using cross-cultural resources in the formation and development of organizational culture of international business structures.

5. Conclusions

In the age of globalization international relations are displayed in a huge variety of forms and business ethics needs to take them seriously and draw with great sensitivity and sophisticated consciousness. Thus, currently organizational culture, including components of the national culture should be seen as a powerful source of competitive differentiation, and cultural differences, as a source of additional resources for organizational development of business structures. From the perspective of international business, it is important to understand the value of national cultural differences and learn to gain on them. International companies with a developed organizational culture are more successful and competitive than companies that do not pay sufficient attention to their intangible resources development.

Acknowledgment

This article is the result of a research project in the framework of dissertation research on "the Formation and development of organizational culture in international business structures".

References

[1] Adamova, M. and Krninska, R. (2016). The influence corporate culture of knowledge economy on financial performance of small and medium-sized enterprises. *Proceedings of 16th international scientific conference on globalization and its socio-economic consequences.* Rajecke Teplice, Slovakia, pp. 7-15.

[2] Aimaganbetova, O., Aimaganbetov, Ak.and others (2017). The psychological aspects of cross-cultural differences in organizational culture. *Proceedings of 4th international conference on business and economics.* Rajecke Teplice, Slovakia, pp. 119-129**.**

[3] Ashmarina, S., Zotova, A., Mantulenko, V. (2016). New values forming among russian entrepreneurship under the influence of globalization. *Proceedings of 16th international scientific conference on globalization and its socio-economic consequences.* Rajecke Teplice, Slovakia, pp. 58- 64.

[4] Chabowski, Br., Samiee, S., Hult, G., Tomas M. (2017). Cross-national research and international business: an interdisciplinary path. *Proceedings of International business review.* pp. 89-101.

[5] Enderle, G. (2014) Exploring and Conceptualizing International Business Ethics. *Journal of business ethics.* vol. 4, pp.723-735.

[6] Kuchynkova, L. (2016) The influence of globalization on small and medium-sized enterprises. *Proceedings of 16th international scientific conference on globalization and its socio-economic consequences.* Rajecke Teplice, Slovakia, pp. 1110-1118.

[7] Morita, A. (2017) *Made in Japan: Akio Morita and Sony*. Russia, Moscow: Alpina Pablisher.

[8] Osagie, E. R., Wesselink, R., Blok, V., Lans, M. and Mulder, M. (2016). Individual competencies for corporate social responsibility: A literature and practice perspective. *Journal of Business Ethics*, vol. 135, no. 2, pp. 233-252.

[9] Patel, T. (2016). Multiparadigmatic studies of culture: needs challenges and recommendations for management scholars. *European management review.* . vol. 1, pp. 83-100.

[10] The official website of the Hyundai company (2017) [Online]. Available: http://hyundai-expert-auto.ru/o_kompanii/novosti/hyundai_motor_group_predstavlyaet_svoyu_koncepciyu_razvitiya_2020_i_novyj_logotip.

[11] The official website of the Sony company (2017) [Online]. Available: www.sony.com.

[12] The official website of the Toyota company (2017) [Online]. Available: www.toyota.com.

[13] The official website of the company Folkswagen Group RUS (2017) [Online]. Available: www.volkswagengrouprus.ru.

[14] Salgovicova J. and Klicekova S. (2016) Globalization and its impact on values of information society. *Proceedings of 16th international scientific conference on globalization and its socio-economic consequences.* Rajecke Teplice, Slovakia, pp.: 1940-1945.

[15] Shin, Duckjung; Hasse, Vanessa C.; Schotter, Andreas P. J. (2017) *Multinational enterprises within cultural space and place: integrating cultural distance and tightness-looseness academy of management journal*, vol. 3, pp. 904-921.

[16] 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.

[17] Zav'yalova, N., Musatova, Zh. and Saginova, O. (2015). Born to survive: small and medium business in Russia needs marketing. *Ideas in marketing: finding the new and polishing the old.* vol. 1, pp. 782-793.

CREATIVE TOURISM IN DESTINATION MANAGEMENT IN THE ERA OF GLOBALIZATION

Andrej Malachovský[1,a,*], Marta Valihorová[2,b] and David Cole[3,c]

[1]Faculty of Economics, Matej Bel University in Banská Bystrica, Tajovského 10, 975 90 Banská Bystrica, Slovak Republic

[2]Faculty of Economics, Matej Bel University in Banská Bystrica, Tajovského 10, 975 90 Banská Bystrica, Slovak Republic

[3]Faculty of Economics, Matej Bel University in Banská Bystrica, Tajovského 10, 975 90 Banská Bystrica, Slovak Republic

[a]andrej.malachovsky@umb.sk, [b]marta.valihorova@umb.sk, [c]david.cole@umb.sk

*Corresponding author

Abstract. In the era of globalization, there are significant changes in destination management. On the one hand, there is product unification and service standardization and, on the other hand, an authenticity and uniqueness of the product. This paper describes how strategies and strategic management can increase the tourism performance in Slovakia at the state and regional level. The result of strategic management of tourism must be, after the analysis of external and internal environment, selection an appropriate strategy and set the right goals and priorities in the tourism development. For such properly defined objectives in Slovak conditions we consider, inter alia, the use of creative tourism as a form of cultural tourism. Cause is the demand a return to traditional values in tourism. Paper shows examples of creative tourism from a selected successful tourism region, which are proven statistical data on the development of tourism. The aim of this chapter is in the context of the theory of strategic and destination management to highlight the important contribution and potential of creative development of tourism for the development of tourism regions. Creative tourism significantly contributes to improving the offer and increasing its competitiveness both domestically and internationally. At the same time, it is a path from static to dynamic offering in line with tourism trends

Keywords: globalization, destination management, tourism region, cultural tourism, creativity in tourism, voluntary tourism

JEL Classification: F61, F69, Z10

1. Introduction

Slovakia recorded growth after 1989, particularly in active foreign tourism. These trends intensified after Slovakia joined the EU in 2004. In 2008, however, came the crisis, which also affected the tourism sector. Globalization is the most significant process influencing supply and demand in tourism. Both sides are creating new chances and new problems. Unified products are now no more popular and people are trying to be involved in product creation on local and regional level. This is also a part of globalization in tourism. Of the decrease in the number of overnight stays, Slovakia has not recovered to this day, as the only country in Europe. Cause is the lack application of strategic and destination management, strong competition neighboring countries (Austria, Hungary, Czech Republic, Poland) and insufficient reflection of trends in demand.

In Slovakia crisis phenomena in tourism still exist in the long term and there is not still completely recovered. Therefore, this condition is called systemic crisis of tourism in Slovakia. This is due to the previously mentioned uncontrolled processes in management of the sector and little innovation at regional level. The solution is to increase the attractiveness of the offer by new products such as creative tourism. For example Tirnavia tourist region in Region Trnava we can demonstrate successful application of new products of creative tourism. It is a region with a tradition of industrial development. The region began to invest in the development of tourism and creative tourism and in a few years achieved remarkable success in the quality and quantity of development.

The aim of this chapter is to demonstrate that the application of principles of strategic management and development of creative tourism are able to stimulate the development at a time when other regions of tourism in Slovakia were not successful. Creative tourism so provides both quality and quantity development in the region.

2. Creativity in Tourism

According to Potts et al. (2008), there is only a limited number of studies on creativity and innovation in tourism and this is one of the least explored sectors in the world economy. General knowledge of these issues commonly include innovations in tourism management, a focus on information and communication technologies, structural and organizational changes that will enable the creation of new products or services, and methods of delivery to the customer (Richards, 2013A). All this can be considered methods of creativity towards the supply of tourism (Richards, 2013B). Creative Tourism is considered a new generation of tourism that involves the tourists themselves and the locals in the creation of the tourist products

Creative tourism was initially defined by Richards & Raymond (2000) as "tourism that offers visitors the opportunity to develop their creative potential and get closer to local people through active participation in seminars and courses that derive from the culture of the destinations ". In this respect, we can say that creativity is the demand. Creative tourism enables making contacts with locals who can be understood as the key players in getting to know the local culture and sharing the experience. They show visitors how to explore the city creatively and discover places where only locals go (Richards, 2001).

Local residents can take their role in the region not only as an accompanying host, but also as a teacher of different activities that tourists do not know and are typical for the tourist region. Managers in tourism and local governments can increase the value of tourism by encouraging the intangible heritage (workshops) and optimize the use of existing infrastructure in the region (Okumus, 2002). Creative tourism has many potential uses. They can also be used in many situations where visitors, service providers and local communities influence each other in a synergistic manner for the exchange of ideas and skills (Kiráľová, 2010). As such, there is a relationship between supply and demand for tourism (Cole, 2007).

Creative tourism is a form of cultural and sustainable tourism that develops the creative potential of visitors by active participating in courses organized by the local population in the authentic environment of the destination through the teaching of traditional crafts and art. Due to the creative process, the destination becomes more attractive. Participation of visitors in the creative activity leads to the formation of a new cultural heritage. The synergy of tourism and culture grows with the development of creative tourism and marketing. The effort of the tourist destinations is to distinguish themselves from the competition with the use of cultural differences. Culture that is increasingly linked to tourism becomes a means to generate income and employment (Richards, 2001). To ensure the development of the cultural industries it is needed to update state cultural policy and define the steps necessary to fulfil its main objectives. These include the creation of conditions for effective involvement of culture in the development of tourism and services (Kiráľová 1995).

The updated cultural policy could have a synergistic effect on the cultural sector as well as tourism. Creative activities could be based on cultural, art and creative services based on tourism. The authors of specific publications stipulate the key success factors of creativity as having an established culture of collaboration between local government and the private sector, with strong partnership and high ambitions between both spheres. Policy, which will support creative activities should primarily (Marques et al., 2013) support local characteristic features by marketing and selling distinctive products and services that provide lifelong learning that will facilitate the improvement of the structure of creative activities. Their aim is also to promote innovation and entrepreneurship together with creative activities, to balance economic and social development, promote the integration of the city, municipality and region and to preserve the historical heritage of the region. Creative activities have an impact on the economy in municipalities and regions, which is not currently developed through urbanization and the economic impact on the development of the region is minimal. When the region offers creative services, products and activities, it increases the development of trade and mobility of products and services beyond the borders of the state (Potts, et al., 2008).

Accordingly, in many European regions, effective policies are designed to push the local economy towards knowledge and creative activity. Creative activities play a key role in terms of competitiveness because the supplied tourism products with their immaterial value are converted into a special form of experience. Today, more and more operators are increasingly allocating resources to creative activities as an input for their products (Kim, 2003). The creative sector has, apart from the fundamental importance of international competitiveness of businesses, a positive impact on the rest of the economy (Kiráľová, 2010). Searching the creative activities correspond to the human desire for transformation by a process in which one tries to do, perform and interpret its own role in society. It is a process that is related to the construction of identity and personal development (Richards and Tomor 2012), (Richards, 2013B).

Creative activities are based on long-term intangible resources and the symbolism of the region. They are placed in emotional and spiritual areas where active individuals look for ways to monitor lifestyles of a certain creative atmosphere. This process results in the co-creation of creative activities that are important not only for visitors but also for service providers and local communities. And that is the reason why the presence of creativity in tourism is increasingly unavoidable. The main focus of creative activities in the region should be the development of creativity, challenging stereotypes, new approaches in problem solving, as well as relaxation (European commission, 2011). This includes a variety of art forms, but also an external environment and non-standard setting. When designing creative activities in a region, tourism can be used as activities for colleges and universities. These organizations can create opportunities for regional growth (Gajdošík et al, 2017). From the economic aspect, the universities have traditionally been regarded as the engine of innovation. The universities conduct research that leads to new ideas, inventions as well as development of new creative activity (Kotler & Gertner, 2002).

If the city has a quality college or university, it is attractive for people and it also attracts many students from a bachelor to the doctorial level. It affects the whole local community and creates relationships between universities and regions. Thus it creates an environment that is open to different lifestyles that stimulates creative activity and provides experiences. Regions can use creative activities as an instrument of urban infrastructure that serve to attract skilled labor and also acts as a space for the realization of very specific and purposeful leisure time (Marčeková et al., 2016). Cultural and natural heritage can be made more interesting by the creation of the route associated with historical personalities and memorial institutions can demonstrate the collected objects (Neumann & Rijpers 2013). The regions can demonstrate traditional crafts and engage visitors and the whole product can be supplement with courses in folk dance and cooking traditional dishes alongside the visitors.

3. Results of tourism in Slovakia in the era of globalization

Before the crisis (Table 1) in 2008, Slovakia achieved a historic record attendance, with the total number of overnight stays 12,464 million. The same number of overnight stays by foreign and domestic guests was the highest since 1989. Subsequently, however, there was a crisis, the consequences of which we have borne until 2015. Only in 2015 the number of overnight stays by domestic guests (7,894 million) exceeded the level of 2008 (7,203 million). The number of overnight stays by foreign guests in 2015 lagged behind the year 2008 by 805 thousand overnight stays.

It is a critical development in the number overnight stays of the key adjacent markets (tab. 1). Slovakia in the years 2008 - 2015 lost a significant part of the previously key markets such as Poland, Czech Republic, Hungary and Germany. In comparing with neighboring States we consider, that any competitive state did not record such drastic losses in key markets such as Slovakia. It is generally accepted that tourism is generally bound to the neighboring states. The causes of this development are many, such a course of introducing the euro in 2009 but also the weak national and regional tourism marketing. In the compared period of years 2008 - 2015 from the Czech market, we have lost 303 thousand overnight stays, from the Polish market 512 thousand overnight stays, from the Hungarian market 72 thousand and form the German market 231 thousand overnight stays. These losses have not been able to replace the acquisition of any new markets.

Significantly disproportional has been the development in different regions of Slovakia. Bratislava as the capital has benefited mainly from growth in demand for so-called city breaks and cheap tickets. In the monitored period 2008 – 2015, top recovered have Žilina and Prešov region, which have traditionally strong position in the tourism market. We focused our attention on the Trnava region. This region didn't have in previous year tradition in tourism. However, in comparison with other regions could eliminate loss at a low level 23 thousand overnight stays. Banská Bystrica and Košice region achieved in this period loss to 227 thousand overnight stays. Bratislava growth about 700 thousand overnight stays in that period 2008 - 2015 had the effect of increasing its market share from 14.9 to 20.7 % overnight stays from all regions.

Table 1: Development of the number of overnight stays by key markets in Slovakia

Indicator/year (th.overnight stays)	**1998**	**2008**	**2014**	**2015**	**2015/2008**
CZ	792	1 705	1 225	1 402	-303
PL	492	942	412	430	-512
HU	167	225	125	153	-72
AT	112	158	134	157	-1
UA	107	120	191	160	+40
Neighbors	**1 670**	**3 150**	**2 087**	**2 302**	**-848**
DE	825	682	423	451	-231
RUS	132	111	167	107	-4
Foreign	3 312	**5 261**	3 905	**4 456**	-805
Domestic	7 145	**7 203**	6 997	**7 894**	+691
Total	10 457	**12 464**	10 901	**12 350**	-114

Source: Own processing based on data of Statistical office of Slovakia

The cause of success in the Trnava region we consider the application of strategic management at the level DMO Tirnavia tourism. Long-term concept activities were able to significantly mitigate losses and restart the development of tourism in the region. The success is based on cooperation of entrepreneurs and creative tourism products following the traditional culture of the region and the city of Trnava.

Table 2: Development of the total number of overnights by regions in Slovakia

Indicator/year (th. overn. stays)	**2008**	**2014**	**2015**	**2015/ 2008**	**2015/ 2014**
BA	1 859	2 025	**2 555**	**696**	**530**
TT	1 204	1 112	**1 181**	**- 23**	69
TN	1 218	987	**1 109**	**- 109**	122
NR	750	656	**708**	**- 42**	52
ZA	2 536	2 148	**2 440**	**- 96**	**292**
BB	1 624	1 293	**1 397**	**227**	104
PO	2 448	1 143	**1 362**	**-86**	**219**
KE	825	537	**598**	**-227**	61
TOTAL	12 464	10 901	**12 350**	**- 114**	1 449

Source: Own processing based on data of Statistical office of Slovakia

These statistics for the Slovak Republic in Tables 1 – 2 are in contrast with development in the European Union and neighboring countries of Slovakia. While in years 2008 – 2014 increased the number of overnight stays in the EU by 14.8 %, in Slovakia fell by 12.1 %. Neighboring countries generally achieved robust growth rates, while in the Czech Republic increased in that period the number of overnight stays by 9.3 %, in Hungary by 30,4 %, in Austria by 5.5 % and in Poland by 17.5 %. The strongest growth was the number of overnight stays by domestic guests in Hungary, up by 37.5 %.

These results are a prerequisite for Slovakia growth. Tourism in Europe is growing at a rapid pace. In the competition is only a setting effective mechanism of strategic management at the state level and DMO in the regions and choice of suitable products.

Table 3: Development of tourism in Europe a neighbors states in Slovakia in years 2008 – 2015

State/type of tourism in %	Total	Foreign	Domestic
EU 28	**14,8**	**21,4**	**9,8**
CZ	9,3	10,6	8,0
HU	**30,4**	23,4	**37,5**
AT	5,5	4,5	7,9
PL	17,5	**27,7**	15,3
SK	- 12,1	- 25,1	- 2,6

Source: own processing from Eurostat data

For perspective products with high growth potential we consider creative tourism products following elements of local culture, combined with an attractive natural supply. An example of such successful development in Slovakia is Tirnavia region in Trnava Region. Application of similar products and destination management system in other regions of Slovakia is regarded as effective and perspective.

4. Creative Tourism in Region Tirnavia

Important is the cultural and religious tradition in Trnava and in recent years the achievements of wine companies, such as Mrva and Stanko, which receive annually medals at international wine exhibitions including Paris.

To the product of creative tourism belongs mainly event called Return to life medieval Trnava with products of craftsmen and active involvement in the production, Days of wine with the active participation of visitors at the wine tasting, workshops for children and adults in the production of traditional craft products and wine production. Specific group is local gastronomy presented in several events such as urban markets. Visitors have the opportunity to participate in the production of gingerbread, specialties of meat, fish, pasta or vegetables. Interest in the production of culinary specialties and craft products is usually highest.

Foreign visitors have a share on overnight stay 38 % and domestic and 62 %. In Trnava there are 29 accommodation facilities with 1,865 beds. In municipalities falling within to the region Tirnavia (Ružindol, Jaslovské Bohunice, Smolenice Suchá nad Parnou) there are 299 beds in 8 accommodation facilities. In 2011, before the establishment of the Region Tirnavia, the number of overnight stays accounted 75,376th, in year 2015 it increased to 172,015th. The number of visitors increased in that period from 35,978th to 60,194th. About the positive impact of creative tourism activities and activities DMO evidenced by the increase in the overnight stays from 2.1 day in 2011 to 2.9 day in 2015. This is a unique trend, because in Slovakia there is the opposite tendency, namely a decrease in the number of overnight stays. The highest proportions of overnight stays have neighboring countries (Czech Republic, Poland, Hungary). Positive developments of overnights were also recorded from France and Netherlands. In 2015 traffic in TIC increased to 18,837 from the level of 12,223 in 2014. Views of the town tower in 2015 reached 12,179 guests.

Among the traditional events with a significant elements of creative tourism include Wine Tirnavia (active lessons about wine production), Májový kvet (flower exhibition with teaching and practical examples of growing flowers), Slávnosť ruží (like the Májový kvet), Trnava language (teaching region dialect with a popular form), Stredoveká prešovačka (actively involving in the production of wine), Trnavský jarmok (teaching traditional crafts), The day of wine cellars (wine tasting and gastronomic specialties) and Christmas markets (production and purchase of traditional culinary specialties).

5. Conclusion

Tourism in Slovakia has considerable potential for growth and development. The country has an attractive relief, beautiful nature, cultural sites and cities of the European and world importance. The early 20th century, Slovakia was a rural country with a minimum share of industry in the economy. It is now the third most industrialized economies of Europe. Economic policy is focused strongly to support the industry. Economic policy places little emphasis on the service sector and tourism. It is in this sector conceals a considerable potential for development. Significant investments in the tourism sector are evidence of investor confidence. Slovakia has in addition to mentioned offer of natural and cultural attractions also excellent new and renovated hotels, wellness hotels, guesthouses, restaurants, spas, aqua parks and other tourism businesses. Cultural heritage and traditions, including gastronomic give good precondition for the development of creative tourism.

The problem exists on the part of public administration and local government. Tourism is not the priority of development like industry. Tourism development is uneven. The capital city Bratislava in the long term benefits from its geographical proximity of Vienna and Budapest. At the same time there is a strong trend to cheaper flights and city breaks. Traditionally strong are regions in the north of Slovakia – Liptov in region Žilina and the High Tatras in region Prešov. Other regions recorded in the long term lack of demand. The situation with respect to several characteristics we refer as a systemic crisis of tourism in Slovakia.

The solution is a cooperation of public and private sector in tourism at local and regional level (Pompurová & Šebová, 2016). The application of standard principles of strategic management and selected strategies in destination management provides rapid success in the short and medium term. In combination with these principles and the selection of attractive products of creative tourism can be a fast recovery of local markets and a revival in demand. Visitors currently look for traditional values and products and involvement in their creation. Diversified natural and cultural tourism offer in all regions of Slovakia create real preconditions for fast and efficient change. The proof of such possibilities is Tirnavia region in Region Trnava. By application of strategic management in DMO and by linking cultural traditions and products with the product of business they achieved reviving of tourism. Establishment of tourism in the structure of the economy at local, regional and national level is also a positive factor reducing the risk from the current one-sided focus on industry sectors. The principle of success is the effective work of DMO at regional level and development of products related to cultural heritage with regard to trends in demand.

Acknowledgment

This paper is an output of the science project VEGA 1/0509/16 Perspectives of development volunteer tourism in Slovakia, which is addressed at the Faculty of Economics at Matej Bel University in Banská Bystrica.

References

[1] Cole, S. (2007). Beyond Authencity and Commodification. *Annals of Tourism Research*, vol. 34, no. 4, pp. 943-960.

[2] European Commission (2011), "*Creative Europe – A New Framework Programme for the Cultural and Creative Sectors (2014-2020)*", European Commission, Brussels.

[3] Gajdošík, T., Gajtošíková, Z. and Marčeková, R. (2017) *Informačné technológie v cestovnom ruchu.* Bratislava: Wolters Kluwer.

[4] Kim, C. and L. Dwyer (2003). Destination Competitiveness and Bilateral Flows between Australia and Korea, *Journal of Tourism Studies*, vol. 14, no. 2, pp. 54-67.

[5] Kiráľová, A. (2010). Destination Marketing in Times of Crisis. *Third International Scientific Conference Management 2010. Knowledge and Management in Times of Crisis and Ensuing Development*, Prešov: UNIPO, FM , pp. 564-591.

[6] Kiráľová, A. (1995). Marketing Tourism Destination. *Journal of Economics*, vol. 43, no. 6.

[7] Kotler, P. and Gertner, D. (2002). Country as Brand, Product, and Beyond: A Place Marketing and Brand Management Perspective. *Journal of Brand Management*, vol. 9, no. 4-5, pp. 249-261.

[8] Kozak, M. and Rimmington, M. (1999). Measuring Tourist Destination Competitiveness: Conceptual Considerations and Empirical Findings, *International Journal of Hospitality Management*, vol. 18, no. 3, pp. 273-284.

[9] Marčeková, R., Šimočková, I. and Šebová, Ľ. (2016) Health tourism in context of active aging of Slovak population. *Economic Annals*, vol. 156, no. 1-2, pp. 109-111.

[10] Marques, L. (2013). Constructing social landscape through events: The glocal project of 's-Hertogenbosch, *Exploring the Social Impacts of Events,* Routledge, London, pp. 84-94.

[11] Neumann, I. and Y. Rijpers (2013). *Cultural Clusters as a Commodity for Cities, Plannable and Makeable?*, Deltametropolis Foundation, Rotterdam, Netherlands.

[12] OECD (2009), *The Impact of Culture on Tourism*, OECD Publishing, Paris, [Online]. Available: http://dx.doi.org/10.1787/9789264040731-en

[13] Okumus, F. (2002). Can Hospitality Researchers Contribute to the Strategic Management Literature, *International Journal of Hospitality Management*, vol. 21, no. 2, pp. 105–110.

[14] Potts, J., Cunningham, S., Hartley, J. and Ormerod, P. (2008). Social Network Markets: A New Definition of the Creative Industries, *Journal of Cultural Economics*, no. 32, pp. 167-185.

[15] Richards, G. (2013A). Tourism and Creativity in the City, *Current Issues in Tourism*, vol. 17, no. 2.

[16] Richards, G. (2013B). Creating Relational Tourism through Exchange, *ATLAS Annual Conference "Environments of Exchange*", Malta.

[17] Pompurová, K. and Šebová, Ľ. (2016). Volunter tourism in example of three cultural festivals., *Trendy v podnikání,* vol. 6, Special Issue, pp. 42-50.

[18] Richards, G. (2001, ed.). *Cultural Attractions and European Tourism*, CAB International, Wallingford, Oxfordshire, England.

[19] Richards, G. and Raymond, C. (2000). Creative Tourism, *ATLAS News,* no. 23, pp. 16-20.

[20] Richards, G. and Tomor, Z. (2012). Leisure Clusters: From Theory to Practice, Tilburg University, Netherlands.

[21] Statistical office of Slovakia, 2016, Tourism, [Online]. Available: https://slovak.statistics.sk/wps/portal/ext/themes/!ut/p

[22] Taylor, S. and Edgar, D. (1996). Hospitality Research: The Emperor's New Clothes? *International Journal of Hospitality Management*, vol. 15, no. 3, pp. 211–227.

THE IMPACT OF GLOBALIZATION ON CONSUMER BUYING BEHAVIOR

Iveta Máliková[1,a,*]

[1]The Faculty of the Mass Media communication, The University of SS. Cyril and Methodius in Trnava, J. Herdu square 2, 917 01 Trnava, The Slovak Republic.

[a]iveta@pauma.sk

*Corresponding author

Abstract. In a number of ways, globalization can be seen as a synonym of today's times as it affected not only the economic, and political areas of managing individual economies and people's lives, but also the cultural, religious and social spheres. From the point of view of consumer buying behavior free market with almost unlimited opportunities is the consequence of globalization. Products that cannot be bought at the home stores are ordered via the Internet or mobile device from anywhere in the world. In addition, the price and the quality of the goods can be quickly and efficiently compared and buyers can choose the best alternative, i.e. goods that meet all their requirements. Not to mention that a lot of information about products or new trends can be searched for through the Interneta and we can communicate with people from all over the world. For this reason, globalization processes supported by internationalization, information technologies, top-level logistics systems and advanced communication have created a global market where there are almost no restrictions. The products and services offered by domestic and foreign companies are being constantly improved and upgraded because of consumers whose demands and needs grow from year to year. The aim of the paper is to highlight the advantages and disadvantages of globalization that have an impact on the consumer behavior of particular generations, whereas attention will be paid to online shopping, trends and communication.

Keywords: globalization, consumer, buying behavior, communication, online shopping, trends

JEL Classification: M30, M31, F60

1. Globalisation

Globalisation can be understood as the global integration of political, economic and cultural processes, or as a non-directed process of intensive country integration that leads to the creation of a single economic system of market economy. (Mezřický, 2011) In general, it is a process of international interconnection increasing in all areas, not only in political, economic and cultural processes, but also in social, demographic and ecological ones, where the highest degree of globalisation leads to the creation of a homogeneous culture with the elimination of all local and national differences. (Procházková, 2017) Changes in the economy of many countries in the world, which facilitate the access into international trade and advances in communication facilitating technologies, highlight the need for an effective implementation of the international marketing strategy. According to some marketing experts, business companies those want to take the advantage of the opportunities and benefits of converging local markets to global ones have to look for similarities to the differences between these markets, while others declare that the cultural characteristics and expectations of markets are not homogeneous and therefore no reason for standardized procedures. When considering standardization, the needs and wishes of global markets are the basic dimension for marketers. Although some experts disagree with the argumentation to the benefit of standardization, they admit the existence of homogeneity of consumer requests and demands which lies in the fact that certain segments of consumers around the world have demands for similar products. (Šímová, 2002)

The emergence of global needs and demands in various markets of the world stems from many factors, among which economic integration and technological progress are the most dominant.

In economic terms, integration can be understood as a process in which barriers, such as tariffs, quotas, etc. to the free trade are abolished, by which this trade is suppressed. At the same time, we can understand it as a process of convergence of national economies and the creation of a single market with the keeping of sovereignty of individual states. The above mentioned abolition of barriers to free trade leads to lower costs for producers and lower prices for consumers in order to increase the competitiveness and economic productivity of the states. Of course, it is important to say that free trade without barriers is an ideal status that can never be achieved, so even in economic integration these obstacles exist, but they should be minimized.

The relations within the economic integration are more stable and stronger, leading to the formation of better conditions for society as such. In economic integration, it is necessary to add that it has three forms: liberal, neoliberal and neokeynes. In liberal terms, it is about removing obstacles to the free movement of goods, services and factors of production, where the state has no role, because the object of integration is the market and the subjects are the individual entrepreneurs. In the neoliberal form, some state interference is taking place, but these are marginal interventions which improve the functioning of competitiveness within the economy, and in the neokeynesian form it is an active interference of the state. At the micro level, there are integration relationships within companies, in the areas of pre-production, production, and sales of goods or services. At the macro level, agreements emerge between national economies. Here is the coordination of economic policies in the form of international treaties.

As far as the technological progress, we can say that *"today's technologies enable the transfer of information around the world and everyone has the access to the same information sources at the moment. Companies learn how to manage their information channels in a way to be comprehensible and understandable to people from many countries of the world."* (Copuš, 2015)

The advancement of information and communication technologies, growing social responsibility and the need for sustainability, overcoming cultural differences, and legislative measures contribute to continuous integration and the creation of market space without unnecessary obstacles, restrictions, to building the free trade zone.

2. Globalization and information-communication technologies

The globalization of the world economy and the emergence of the information society go hand in hand, and their synergy greatly affects the image of today's world. *"The open labour market, technology development, progress in the quality of communication systems and the strong impact of social media in recent years have made easier to engage these interactions anywhere in the world. This process of changes called globalization has brought new elements into the business communication."* (Hrehová, 2015) It is precisely information and communication technologies that enable a quick link not only between firms, whether they are transcontinental online transactions or quick transfers of financial resources, but also between consumers and firms, and also among individuals around the world. By enabling the transfer of information from different countries of the world, and each of us has the access to the same sources of information, companies learn how to manage their information channels in such a way they are comprehensible and understandable to people from many countries of the world, while they face the great competition. *"We are the witnesses of the fact that "the world" becomes smaller and the distance is minimized by information and communication technologies"*. (Richnák, 2015) For that reason, it is important for companies to develop employees so that they think not only locally, but also globally, develop communication skills and establish world standards so that companies can produce and communicate at a level that will compete globally and not only in the domestic market. (Copuš, 2015)

Globalization and the development of information and communication technologies are closely linked to e-commerce. Electronic commerce (e-commerce, e-shop, online shop, internet shopping) is generally understood as the shopping, sale or exchange of goods, services and information through electronic networks not only within the country but also abroad. According to Krška, this is a new way of shopping where every e-commerce participant can get different products, get in touch with different institutions, or even provide some formal obligations. (Krško, 2001) Shopping through e-shops has certain advantages and disadvantages from the customer's point of view. The advantages that can be included:

- the possibility to shop from the comfort of home or the place where the customer is right at that time,
- time saving,
- ordering goods at any hour, even during the weekend,
- the possibility to use mobile devices while shopping,
- compare the prices of the same products in different e-shops and choose the most advantageous one,
- get and add the necessary information about the searched product,
- the possibility to filter the offer according to specified criteria
- more choice options,
- the uniqueness of products,
- easy accessibility,
- more time for decisions,
- cashless system of payment
- delivering the goods directly home,
- provide the value,
- the possibility to return the goods within 14 days without giving any reason.

From the customer´s point of view, there are some disadvantages of online shopping:

- the customer cannot see and try the goods,
- the ignorance of internet shopping, no references,
- problems with claiming the goods, postage,
- lack of information,
- inadequate communication,
- payment risk, insufficient payment options,
- misuse of personal data,
- failure to meet delivery time,
- foreign language ignorance when shopping from a foreign e-shop.

Despite these disadvantages, *"shopping through e-shops is very popular in the world; the frequency and number of shopping per year are rising"*. (Miklenčičová, 2015) This worldwide trend is also confirmed by the development of e-commerce in Slovakia. *"At present, there are about ten thousand e-shops with an annual turnover of almost one billion euros in Slovakia "*. (TA3, 2017) However, despite this growth, we are significantly behind our Czech neighbours, where the number of e-shops is around 36,800. Surveys have also shown that there is an increasing interest in consumers for narrowly specialized e-shops. In the long-term, electronics (40%) is the most sold category. In addition, people increasingly buy food and beverages (the increase by 45%), or the products of hobby, cosmetics and health segments (the increase upwards of 1/3) and clothing (the increase by 1/4). The average European spends €760 per year for goods and services, an average of €96 for intangible services, and for a digital content of approximately €107. (DHL, 2016) This information can be supplemented by a survey by which men buy mainly electronics, appliances and movies with music, and women buy clothing and cosmetics. Approximately half of Slovak shoppers spend monthly on internet shopping up to €50, a third up to €100. In total, men spend more than women do. 54.32% of people look for the products they want to buy through the internet on price comparator. When selecting a particular product, decisions are made based on: references (58.58%), prices (55.12%), properties and parameters (49.23%). The main criterion for choosing an e-shop is the price (52.2%), the brand and name is important for 40.3%. (Prieskum Pricemania, 2015)

With the boom of new technologies, we can see a number of changes in the value-based approach of man in a modern and ever-globalizing society. (Hes & Hesová, 2015) These changes can be observed not only in the citizen migration of individual countries, and building the relationships face to face, but also in the use of information and communication technologies, when individual members come into the direct contact with the members of different cultures and make contacts with each other, or relations at a verbal, non-verbal, or a media level. (Markovic, 2008), (Morey, 2004) These relationships are based, in particular, on the mutual exchange of values and life models through which the two sides seek to establish links among the various entities, to seek ways of co-existence of different cultures with the aim to a detailed mutual understanding and conflict prevention. Here again we can say that, in addition to a direct contact between individuals due to migration, the Internet is a network of interconnected computer networks that serve to transmit information via e-mail, chat, websites or social networks. Considering the fact that almost everyone has the access to the Internet nowadays, it has become an important intermediary for individuals and companies all over the world. Today, we cannot claim that it is used only by the younger generation, but it has also been found in the older generation that does not impede the convenience of new technologies and it has therefore become a part of their lives, either on the job or on the personal side. In particular, the younger generation uses the Internet to find out information about novelties, trends, for sharing photos, videos, expressions, communicating with their peers, online shopping, and so on. Similarly, it is also an older generation that, in addition to searching for information about latest happenings in the world, news, online shopping and communication with the relatives and friends, uses the Internet for business purposes as well.

Globalization and, of course, the massive use of information and communication technologies means that consumers' shopping behaviour continues to evolve and directly influences the market mechanism. (Fašiang, 2015) At present, consumers are much more educated, more informed, more demanding and less loyal than in the past. Within the shopping decision making process they verify and compare not only the prices, products and services they are interested in, but also the companies which provide them with these products and services. (Máliková & Rybanský, 2015) Suffice it to compare today's consumer behaviour with the behaviour ten or twenty years ago. While in 1989 the interest in computers was minimal, only some of us had mobile phones, it is different nowadays. Both computers and mobile phones are a part of almost every household. The impact of all these changes in technology was amazing. Digitization and ubiquity of computers or mobile phones have not changed the way of users´ behaviour, but also their thinking. The way how users have adopted some types of products and others started to reject has also had an impact on the development of some industry areas. The purchase of new technology ceased to be the domain of the younger generation, as it has become more and more interesting for the older generation. If we take the area of finance, changes have also occurred here. Prior to the revolution, the citizens of our country used to use the check-books, or they paid for the purchased products in cash. Today, the payment is largely made via payment cards or via internet banking. In addition, media have a significant impact on consumer behaviour, which, in addition to influencing consumer behaviour, attitudes and opinions, also expands knowledge, education, and help the consumer with the decision-making or influencing the lifestyle. (Máliková & Rybanský, 2014) The speed of changes in the consumer and goods environment, the overthrow of traditional demographic boundaries, the growing power of consumers and the nature of globalization have made the trend discovery literally as a necessity. It is the media that is the source of information about novelties and trends, whether in the field of fashion, new technologies, healthy lifestyle, etc. New information spreads in the course of several hours or days and therefore, if one market is affected by trends, it can quickly pass on to others. Based on this information, consumers get to a wide range of products, choosing products, services, and activities which define their lifestyle, co-create their identity, help them successfully manage their social roles in society, and at the same time they serve as means of communication and expressions of belonging to a particular social group. (Olšiaková et al., 2015)

Trends have already been affected by governments and business for centuries, the increasing rate of changes with consumers makes them more important than ever before, as we can see that the product and behavioural changes are growing, and their relationship to certain types and brands is becoming more and more volatile. These changes affect all generations, the young, the elderly, men, women, rich and poor as well. New consumer groups, new views and behaviour patterns are developing. For example, today's seniors have significantly different demands not only compared to seniors twenty years ago, but also compared to their parents. Besides being more proficient in using new technologies, they are more concerned about their outlook, health, physical condition, more traveling, etc. They are the people who have experienced a lot and they have a lot of experience. Their vital interests are, besides their health, also good feeling, security and comfort. (Schurmann, 2015) Likewise, today´s youth is more self-reliant, more energetic, has a more mature approach to life, and has insight into many areas, they are not afraid to be assertive, the speed at which they share information at present made them very flexible people – they change the style, the fashion, work, and partners. At the same time, it is a generation that is not afraid of change, it does not have the problem to be in debts, and they like get to know the world, for the vision of better life they look for job opportunities not only in their homeland but also abroad. Typical thing for this generation is that they feel free, they are accustomed to speaking what they think, they want to communicate globally and work interculturally, at the forefront of their interest is their privacy, partnership and family relationships, and they want to live their life to the fullest. (Horváthová & Čopíková, 2015) Trends also affect gender differences or social groups, they gradually become smaller, shopping behaviours, the habits and interests of men and women step by step approximate what we can see, e.g. when buying electronics or cars which were mostly bought by men, today we can say the same thing about women. Also, the purchase of clothing and cosmetics is no longer the domain of women only, but also men. Similarly, it is also in the wiping of borders between higher and lowlier social groups. Also in this case we can see the similarity in the purchase of certain categories of products such as food, clothing or cosmetics.

In the context of globalization and information and communication technologies, it is also important to mention certain changes which have a negative impact not only on consumers within purchasing behaviour but also on their own behaviour. Here we can mention, e.g. an increase in obesity due to a wide range of products, fast-food restaurants, a better economic situation, eating disorders caused by the promotion of perfectly beautiful and slim women, easy access to addictive and narcotic substances, food wasting, changes in value ranks, when money and career start to dominate, possession of expensive cars or properties for which some people do not have enough financial means and therefore they are often indebted, personal contact between people is lost due to the use of social networks, mobiles, dominating envy and indifference to others, preferring their needs to the detriment of others, marriage ceases to be "lifelong" bond between a man and a woman, young people prefer a free relationship, and in case of misunderstandings, they give up in a short time, etc. These negatives those we are aware of are much more, but it is important to add that it is up to each individual to face these changes and to what extent he allows them to influence his behaviour.

3. Conclusion

Globalization and the associated technical achievements predetermine its development and, of course, business development as well. Business is constantly improving and appearing in new forms. The future of business can be seen increasingly on the Internet. For an increasing number of customers, the Internet has become a part of their everyday life. Shopping of clothes, footwear, cosmetics, appliances, electronic banking, holiday booking, social network communication, or searching for assorted information over the Internet is now considered to be a matter of course. At present, most customers access this information through smart devices, and they use them not only for email reading or surfing the web, but increasingly for online shopping. With the arrival of smartphones and mobile devices connected to the Internet, the customer profile has also been changed. The customer is much more informed, more educated and more demanding than it was ten or twenty years ago. This is also related to the fact that online shopping through domestic and foreign e-shops has become popular not only with the younger generation but it has also found its merit among the older one. The low price or the discount itself is no longer the only factor that affects the consumers when buying products. Time savings, shopping from the comfort of home or a mobile device, product offer, current trends etc. also rank among. There are much more factors, of course, and therefore the final decision as to what, when, why, how, where and for how much the individual will buy is only at his own discretion. (Máliková, 2015)

Acknowledgment

This contribution is a partial output of the VEGA project No. 1/0283/15 „Aspects of marketing communication in the process of creating customer value in the B2C market in the context of maximizing the market share in descending retail sales.“

References

[1] Copuš, L. (2015). Influence of selected hr competencies on the performance of organizations. *International Scientific Conference Globalization and Its Socio-Economic Consequences 2015,* Rajecké Teplice, Slovak Republic, pp. 96-97

[2] DHL *(January 2016.) Slovaks increasingly indulge in e-shops. What goods do we order most often?* [Online]. Available: http://www.balikovapreprava.sk/novinka/slovaci-holduju-e-shopom-stale-viac-aky-tovar-objednavame-najcastejsie

[3] Fašiang, T. (2015). Significance of retail gravity models. *International Scientific Conference Globalization and Its Socio- Economic Consequences 2015,* Rajecké Teplice, Slovak Republic, pp. 129

[4] Hes, A. and Hesová, I. (2015). Global impact of intercultural communication in the environment of Czech universities. *International Scientific Conference Globalization and Its Socio- Economic Consequences 2015,* Rajecké Teplice, Slovak Republic, pp. 207

[5] Horváthová, P., Čopíková, A. (2015). Generation and its impact on the performance of personnel activities. *International Scientific Conference Globalization and Its Socio-Economic Consequences 2015*, Rajecké Teplice, Slovak Republic, pp. 219

[6] Hrehová, D. (2015). Face to face business meeting as the primary communication tool. *International Scientific Conference Globalization and Its Socio-Economic Consequences 2015,* Rajecké Teplice, Slovak Republic, pp. 224

[7] Krško, M. (2001.) Helping to develop e-commerce in Slovakia. *Parliamentary courier,* vol. 9, no. 83, p. 25-26

[8] Markovic, M. R., (2008). Managing the organizational change and culture in the age of globalization. *Journal of Business Economics and Management*, vol. 9, no. 1, pp. 3-11.

[9] Máliková, I., Rybanský, R. (2015) Perception of the value of customers. *International Scientific Conference Globalization and Its Socio- Economic Consequences 2015*, Rajecké Teplice, Slovak Republic, pp. 627

[10] Máliková, I., Rybanský, R. (2014) The influence of media on consumer buying behavior. *Psychology and Psychiatry, Sociology and Healthcare, Education, Conference proceedings VOL II. International Multidisciplinary Scientific Conferences on Social Sciences and Arts,* SGEM 2014. Albena, Bulgaria, pp. 1003.

[11] Máliková, I. (2015) Customer and online shopping. *Marketing identity 2015: Digital marketing & Digital consumer.* FMK UCM in Trnava. pp. 196-203.

[12] Mezřický, V. (2011). *Perspectives of globalization.* Prague, Portal 2011, pp. 12.

[13] Miklenčičová, R. (2015). Internet Purchasing. *International Scientific Conference Globalization and Its Socio- Economic Consequences* 2015, Rajecké Teplice, Slovak Republic, pp. 427

[14] Morey, Al., (2004). Globalization and the emergence of for-profit higher education. *Higher education*, vol. 48, no. 1, pp. 131-150.

[15] Olšiaková, M., Šupín, M., Dovčíková, A. and Triznová, M., (2015) Marketing and its application in practice. *International Scientific Conference Globalization and Its Socio-Economic Consequences 2015,* Rajecké Teplice, Slovak Republic, pp. 105

[16] Pricemania survey (September 2015). Survey of Slovaks' shopping behavior on the Internet. [Online]. Available: https://www.slideshare.net/PricemaniaAcademy/prieskum-nkupnho-sprvania-slovkov-na-internete-2015

[17] Procházková. K. (2017). *Globalisation and internationalisation in international environment.* [Online] Available on: http://www.akademickyrepozitar.sk/sk/repozitar/globalizacia-a-internacionalizacia-podniku-v-medzinarodnom-prostredi.pdf

[18] Richnák, P. (2015) Globalization and its impact on the present concepts in company management**.** I*nternational Scientific Conference Globalization and Its Socio-Economic Consequences 2015,* Rajecké Teplice, Slovak Republic, pp. 608

[19] Schurmann, H. (2015) Marketing focused on seniors as a factor of regional development**.** *International Scientific Conference Globalization and Its Socio-Economic Consequences 2015,* Rajecké Teplice, Slovak Republic, pp. 684.

[20] Šímová, D. (2002). *Globalisation of markets and marketing. Marketing and Trade 2002.* Technical University in Zvolen. pp. 26.

[21] TA3 (2017). *The number of e-shops in Slovakia is moving up, the online business has the potential.* [Online]. Available: http://www.ta3.com/clanok/1103375/pocet-e-shopov-na-slovensku-stupa-online-obchod-ma-potencial.html

COOPERATION STRATEGIES OF POLISH ENTERPRISES IN THE AGE OF GLOBALIZATION

Bartosz Marcinkowski[1,a], Sebastian Chęciński[2,b] and Katarzyna Suszyńska[3,c,*]

[1]Poznań University of Economics and Business, Poland

[2] Poznań University of Economics and Business, Poland

[3] Poznań University of Economics and Business, Poland

[a]bartosz.marcinkowski@ue.poznan.pl, [b]sebastian.checinski@ue.poznan.pl, [c]katarzyna.suszynska@ue.poznan.pl

*Corresponding author

Abstract. In the last decades a clear tendency in the behavioral patterns of enterprises has been observed. It involves a shift from the confrontation conflict approach to the cooperation model aimed at achieving common goals. Entities recognize that previously used strategies based on standard management tools, such as price, quality, distribution, product or location are no longer sufficient to create the competitive edge. Entrepreneurs realize that solitary and autonomous action is doomed to fail in the age of globalization, since it limits access to new technologies, financial resources, cheap and skilled labour force, as well as to knowledge and experience. It becomes necessary to search for new, distinctive features, resources, methods and activities that allow for the effective implementation of complex goals. To achieve it, entities must create various types of dynamic and multi-dimensional relations based on cooperation. It should be noted, that those inter-organizational relationships can serve as a source of services and tools, they can contribute to problem solving, winning new markets and deploying new technologies, as well as building a sustainable competitive advantage. On the basis of the above considerations, the analysis and assessment of cooperation strategies of Polish enterprises have been conducted. The study presents the results of the empirical research employing an in-depth survey, direct interview and participatory observation carried out on a sample of 244 Polish enterprises.

Keywords: cooperation, business strategy, IOR, enterprise relationships

JEL Classification: L22, L24, L26, M10

1. Introduction

The ongoing dynamic processes of globalization, the growing role of global competition and rapid progress in the field of innovations have caused significant changes in the behavioral patterns of enterprises. It involves a shift from the confrontation conflict approach to the cooperation model aimed at achieving common goals. Entrepreneurs realize that solitary and autonomous action is doomed to fail in the age of globalization, since it limits access to new technologies, financial resources, cheap and skilled labour force, as well as to knowledge and experience. Inter-organizational cooperation can be treated as a natural phenomenon in the implementation of economic processes, because according to the theory of resource dependence, the sustainable competitive advantage is the result of proper allocation of resources in the imperfect market. In this context, the activity of each individual entity depends on the access to specific, rare and difficult to imitate key competences[20]. To obtain them, organizations must actively seek, establish and develop relations with other enterprises, creating a network of interdependencies and relationships (Aldrich, 2008), (Buchanan, 1992), (Finkelstein, 1997), (Lewandowska & Więcek-Janka, 2016), (Nowak, 2016), (Nowak & Sobolewski, 2016), (Pfeffer & Salancik, 2003), (Suszyńska, 2016), (Spychała et al., 2017).

It should be noted though, that inter-organizational relationships are a source of the necessary materials and services, they contribute to overcoming the difficulties, conquering new markets and deploying new technologies. They help to build a sustainable competitive advantage (Jacobs et al., 2001), (Ulaga, 2001). It is worth noting, that by creating inter-organizational relations based on various types of dynamic and multi-dimensional cooperation, each organization expects it will bring tangible benefits. Through cooperation entrepreneurs seek to increase profitability, reduce costs, optimize the use of production potential, as well as access to scarce resources of knowledge, technology and new markets (Bengtsson & Kock, 2000), (Dembińska-Cyran et al., 2004), (Dudzik, 2005), (Lenz–Cesar & Heshmati, 2009).

On the basis of the above considerations, the analysis and assessment of cooperation strategies of Polish enterprises have been conducted. The study presents the results of the empirical research employing an in-depth survey, direct interview and participatory observation carried out on a sample of 244 Polish enterprises.

2. Diversity of strategies used in cooperation between companies

Each company operating on the market does not limit to one the forms of business cooperation, and most often decides to establish relationships of various nature, depending on the current needs, implemented strategies and development plans. In addition, interorganizational relationships are not permanent but they tend to evolve, and as a result mutual relationships between businesses may change forms in time (Marcinkowski, 2015), (Nowak, 2010), (Rangan & Yoshino, 1996).

When analyzing the types of interorganizational relationships, Webster's research (1992) deserves special attention. The author notices a specific continuum of relationship forms. It extends from simple and individual occasional transactions to a completely integrated vertical hierarchy. Moving along this chain, it can be observed that companies whose aim is to increase efficiency use more and more administrative control while diminishing market control.

Diffuse transactional forms can include occasional transactions, as well as other, more "compact" types of interaction, i.e. repetitive transactions and long-term relationships. It

[20] Key competences should be understood as tangible or intangible assets that cannot easily be copied by competitors and are difficult to replace in case the enterprise loses or damages them (Bakker, Jones, & Nichols, 1994), (Whitehall, 1997).

should be noted, however, that all three of these forms are antagonistic relationships largely dependent on market forces.

An indirect type of relationship is a real partnership where there is total dependence between the cooperating organizations in a chosen common area of activity. Mutual antagonism is replaced by trust, and prices are no longer determined solely by the market, but are fixed in the process of negotiations (and under market pressure).

The other forms of interorganizational cooperation are more advanced. Strategic alliances are determined by the emergence of a new entity (such as a product development team, a research project, a production site) that pursues a clear strategic goal for all partners and is based on their resources. Joint Ventures are the epitome of strategic alliances, being fully integrated companies with their own separate capital structure. Network organizations are the corporate structures created by multiple relationships, partnerships, and strategic alliances. The last, most advanced stage of the joint action is the complete vertical integration of enterprises, where individual features of enterprises disappear and a unified structure is created instead.

A different approach to interorganizational relationships is presented in the research by Kale and Singh (2009), who focus on the specific field of cooperative relations. The authors argue that some of the numerous types of interorganizational relationships that exist in business environment should be considered strategic alliances, including such collaborative structures as joint R & D, joint product development, joint marketing, reciprocal access to complementary resources and skills, research and development consortia, minority equity investments, equity exchanges and various types of joint ventures e.g. with respect to share of parties in the structure). In turn, Provan and Kennis (2008) point out that business cooperation should be studied through the prism of the inter-organizational network. They distinguish three different types of enterprise networks: the ones managed by their participants, those governed by the main organization and the ones managed by the administering organization.

Summarizing the theoretical considerations on the nature of cooperation among companies, it should be noted that there is a vast body of literature analyzing the forms of inter-organizational cooperation. The studies have resulted in the creation of various distinguishing criteria, yet not all of them fulfill the prerequisits of logical division, i.e. exhaustion and disconnection. Although there are many papers that scrutinize the problem of heterogeneity of interaction types, it is worth pointing out that the authors view the forms of cooperation as dynamic and evolutionary - they perceive the interactions as changeable, transforming over time depending on the current needs of the entities, their level of development, market situation or the employed strategy.

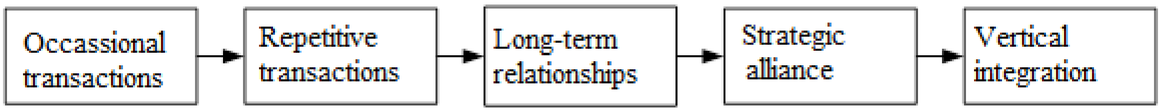
3. Specificity of cooperation between companies and suppliers in Poland

It is worth emphasizing that companies deciding on a strategy of cooperation determine the level of familiarity with suppliers, which not only reflects on the level of interdependence, but also directly affects key factors such as costs, efficiency or safety of operation. It is natural for companies to enter various collaboration forms with different contractors, adjusting the degree of „closeness“ to a number of factors such as the area of cooperation, the volume and subject of exchange, the number of potential suppliers available, the time span, expected effects, market situation, and current needs. Companies can have very loose and noncommittal relationships with some business partners, while maintaining very close bonds with other entities.

On studying this aspect of inter-organizational co-operation, Webster's (1992) continuum model is used, adjusted to best suit the Polish economic realities. It is assumed that the type of transactions concluded with suppliers reflect the nature of the cooperation well. On the basis of this assumption, the transactions are divided as follows (Figure 1):

- occasional, i.e. the ones that are rare and not associated with any additional benefits,
- repetitive, which due to their cyclical nature are often associated with a number of additional benefits, i.e. discounts, deferred payment dates etc.;
- long-term relationships that, apart from the possibility to achieve additional benefits like in the case of repetitive transactions, involve high level of mutual trust and aim at pursuing common goals;
- strategic alliances that encompass full cooperation in joint projects, production plants, and new products. Within these forms, companies implement common strategic goals, adapt their production processes, integrate some of their structures etc. Strategic alliances can take form of joint R&D, joint production, joint marketing, reciprocal access to complementary resources and skills, consortia, exchanges of shares, minority equity investments, joint venture;
- vertical integration where individual characteristics are being blurred, and where individual parties are deprived of the freedom to make decisions etc. (e.g. mergers, acquisitions).

Figure 1: The scope of inter-organizational relationships



Source: Own elaboration on the basis of Webster, 1992

In the empirical part of the research concerning cooperation strategies among companies, the focus is on the relationships of enterprises (located in Poland) with suppliers. The questionnaire survey spanned the period October 2015 – January 2016 and involved 244 respondents. The participant observation and direct interviews were carried out in selected companies. This enabled for gathering more information and opinions derived from experience and market practice.

Table 1 illustrates the average percentage share of particular transaction types with suppliers in the total number of transactions according to the size of companies. In case of small enterprises, repetitive transactions prevail in the relationships with suppliers (39% of all transactions), long-term relationships follow (29%), while occasional transactions take third place accounting for 23% of all transactions entered between small companies and their suppliers.

Direct relationships represented by transactions entered within strategic alliances or full vertical integration constitute a relatively small share of transactions – respectively 8% and 2% of the total number of transactions.

The medium enterprises have a slightly smaller share of repetetive transactions than the small ones (37% of transactions as opposed to 39%) and vertical integration transactions (1%

compared to 2%). A small difference occurrs in terms of the share of transactions made within strategic alliances (10% of transactions with suppliers for the medium companies and 8% for the small ones). As for the occasional transactions, the discrepancy is significant, i.e. the share of transactions between medium companies and suppliers oscillated around 16% of the total and as much as 23% for the small units). The difference is also considerable in case of long-term relationships (36% of transactions entered by medium-sized enterprises as opposed to 29% within the group of small companies).

Table 1: Types of transactions entered between companies and the suppliers according to the size of a company

	Average percentage share in the total number of transactions			
Type of transaction	**Small enterprises (N = 159)**	**Medium enterprises (N = 52)**	**Big enterprises (N = 33)**	**Total no. of enterprises (N = 244)**
Occassional	22,58	15,71	11,36	19,60
Repetetive	38,53	37,13	42,64	38,79
Long-term relationships	29,06	36,19	36,09	31,53
Strategic alliances	7,94	10,35	8,85	8,57
Vertical integration	1,90	0,62	1,06	1,51

Source: own elaboration based on empirical research

With further growth in the size of the company, more changes can be observed – while comparing the medium companies to the big ones, the number of occasional transactions decreases from 16% to 11%, and the number of repetetive transactions increases (37% of all transactions between companies and suppliers, entered by medium-sized companies and 43% made by the big ones). Similarly to medium-sized companies, the share of long-term transactions amounts to 36% of the total number of transactions between big enterprises and their suppliers) while strategic alliances for medium and big companies account for 10 and 9% respectively. The figure for vertical integration is also very similar in the two groups (1%).

4. Conclusion

All things considered, it is important to note that the surveyed companies, when developing their cooperation strategies with suppliers, appreciate the benefits of building and maintaining long-term relationships. This is due to additional financial benefits but also to a high level of trust with the partner and the realization of common instead of individual goals. Transactions entered within the long-term interorganizational relationships account for almost one third of the total number of transactions between enterprises. On the other hand, while analysing the structure of the relationships maintained by the surveyed entities, one can observe significant reluctance to further tightening the connections. Transactions characterized by a high degree of closeness represent a small percentage of all transactions with suppliers - 9% in case of strategic alliances and less than 2% in case of vertical integration. It should be emphasized at this point that there is a weak negative correlation (rxy = -0.2) between the share of occasional transactions with suppliers and the size of the enterprise. It proves that along with the growth of a company, the share of occasional transactions in the total number of transactions is reduced in favour of repetitive and close relationships.

Thus, it can be stated that the research findings presented in the paper clearly indicate that the Polish enterprises are characterized by limited development of relationships with suppliers, and by the low rate of direct bonds.

References

[1] Aldrich, H. (2008). *Organizations and Environments*. Stanford University Press.

[2] Bakker, H., Jones, W. and Nichols, M. (1994). Using Core Competence to Develop New Business. *Long Range Planning*, vol. 27, pp. 13–27.

[3] Bengtsson, M. and Kock, S. (2000). ”Coopetition” in Business Networks—to Cooperate and Compete Simultaneously. *Industrial Marketing Management*, vol. 29, no. 5, pp. 411–426.

[4] Buchanan, L. (1992). Vertical Trade Relationships: The Role of Dependence and Symmetry in Attaining Organizational Goals. *Journal of Marketing Research*, vol. 29, no. 1, pp. 65–75.

[5] Dembińska-Cyran, I., Hołub-Iwan, J. and Perenc, J. (2004). *Zarządzanie relacjami z klientem*. Warszawa: Difin.

[6] Dudzik, M. (2005). Outsourcing zakupów, czyli koniec funkcji zakupów? *Gospodarka Materiałowa I Logistyka*, no. 1, pp. 2–8.

[7] Finkelstein, S. (1997). Interindustry merger patterns and resource dependence: a replication and extension of Pfeffer (1972). *Strategic Management Journal*, vol. 18, no. 10, pp. 787–810.

[8] Jacobs, F. A., Johnston, W. and Kotchetova, N. (2001). Customer profitability: prospective vs. retrospective approaches in a business-to-business setting. *Industrial Marketing Management*, vol. 30, no. 4, pp. 353–363.

[9] Lenz–Cesar, F. and Heshmati, A. (2009). *Determinants of Firms Cooperation in Innovation*. Seoul National University; Technology Management, Economics, and Policy Program (TEMEP).

[10] Lewandowska, A. and Więcek-Janka, E. (2016). *European Version of a Balanced Scorecard in Family Enterprises (Own Research)*. Atlantis Press.

[11] Marcinkowski, B. (2015). Formy kooperacji przemysłowej. Studium przypadku Terravita sp. z o.o. In A. Zimny (Ed.), *Wybrane problemy i wyzwania gospodarcze. Ujęcie interdyscyplinarne* (pp. 297–310). Konin: Wydawnictwo Państwowej Wyższej Szkoły Zawodowej (PWSZ) w Koninie.

[12] Nowak, D. (2010). Bariery rozwoju powiązań kooperacyjnych w ocenie polskich przedsiębiorstw. *Zeszyty Naukowe Uniwersytetu Szczecińskiego. Finanse. Rynki finansowe. Ubezpieczenia*, vol. 34, pp. 289–302.

[13] Nowak, D. (2016). Kilka refleksji nad pojęciem kluczowych kompetencji. *Studia Oeconomica Posnaniensia*, vol. 4, no. 2, pp. 9–25.

[14] Nowak, D. and Sobolewski, H. (2016). Architektura kluczowych kompetencji - analiza wybranych modeli. *Studia Oeconomica Posnaniensia*, vol. 4, no. 2, pp. 26–51.

[15] Pfeffer, J., & Salancik, G. R. (2003). *The External Control of Organizations: A Resource Dependence Perspective*. Stanford University Press.

[16] Rangan, U. S., & Yoshino, M. Y. (1996). Forging alliances: A guide to top management. *The Columbia Journal of World Business*, vol. 31, no. 3, pp. 6–13.

[17] Spychała, M., Szafrański, M., Graczyk-Kucharska, M. and Golinski, M. (2017). The Method of Designing Reference Models of Workstations (pp. 930–939). Barcelona, Spain: International University of Catalonia.

[18] Suszyńska, K. (2016), *Nowy paradygmat zarządzania społecznymi zasobami mieszkaniowymi w Europie*, Studia i Prace WNEiZ Uniwersytetu Szczecińskiego, vol. 45, no. 1, pp. 125-136.

[19] Ulaga, W. (2001). Customer value in business markets: an agenda for inquiry. *Industrial Marketing Management*, vol. 30, no. 4, pp. 315–319.

[20] Webster, F. E. (1992). The Changing Role of Marketing in the Corporation. *Journal of Marketing*, vol. 56, no. 4, pp. 1–17.

[21] Whitehall, M. (1997). The theory and practice of competence based competition. *Long Range Planning*, vol. 30, pp. 620–651.

THE DEVELOPMENT LEVEL OF THE LABOUR MARKET IN EU COUNTRIES IN GLOBALIZATION CONDITIONS – SPATIAL AND QUANTITATIVE ANALYSIS

Adrianna Mastalerz-Kodzis [1,a,*]

[1]University of Economics in Katowice, Department of Statistics, Econometrics and Mathematics, 1-Maja 50 street, , 40-287 Katowice, Poland

[a]adrianna.mastalerz-kodzis@ue.katowice.pl

*Corresponding author

Abstract. Throughout the last couple of decades, we can witness both positive as well as negative results of globalization in economy. One of the markets which is very highly influenced by globalization is labour market. In the article, on the base of economic values which characterize the member countries of the EU, an attempt to evaluate the labour market development level has been conducted. With the use of selected quantitative methods, a comparison of the development level of labour markets has been made and an analysis of the influence of labour market development on the indicators concerning the population's life standard and the level of income range has been conducted. The aim of the article is to present the scale of relationship of selected labour market variables and the study of their influence on the socio-economic development of EU countries. In order to improve the standard of living of EU countries inhabitants and in order to enhance the socio-economic development, special attention should be drawn to analyzing the state of the labour market and its determinants. The paper consists of two parts: theoretical, which includes a brief description of the research methodology and empirical, which includes the results of analyses and conclusions.

Keywords: globalization, labour market, socio-economic development, HDI, GINI coefficient, potentials method. multivariate comparative analysis

JEL Classification: C33, C34, C44

1. Introduction

Globalization is a process which has been present in the world economy for many centuries. However, together with the development of modern technologies and computerization at the turn of the 20th and 21st centuries, the process has become faster. The changes observed in world economy, liberalization of economic relationships, the decreasing role of countries in economy, internationalization of capital, as well as computer technology revolution and the increasing value of international corporations, significantly influence the development of labour markets of single countries and the level of population's life standard.

In hereby article, the globalization process is considered with restriction to the member countries of the EU. The commonwealth of countries which the EU is, without any doubt, has been for the member countries for many years on the one hand - a guarantee of security in some fields of economy, whilst on the other hand - it creates some kind of conflict of interests. In the paper, special attention has been drawn to the economic characteristics of the labour market, as, according to the author, it is the level of the labour market which determines a well balanced, stabilized economic growth, it contributes to population's life standard improvement and in a long time perspective, it enhances the socio-economic indicators. In this article, the considerations have been restricted to EU countries, as, despite a different legislation system in each of the countries, the free flow of population and capital, liberty in running a business activity in the EU territory allow for a comparison of the development level of the countries. Quantitative methodology applied in the paper enables a precise comparison of the studied characteristics and allows to draw constructive conclusions.

The aim of the article is to present the scale of relationship and differentiation of selected labour market variables and the study of their influence on the socio-economic development of EU countries. Repeatedly, the relationship between the labour market variables and the values stating the economic development level is not normally observed. Nevertheless, conducting a multivariate comparative analysis and the construction of a synthetic variable will allow us to find significant correlations between the analyzed characteristics.

2. Globalization process and labour market development

Globalization is a complex phenomenon which includes almost all the fields of human life: economy, culture, population and politics (Krugman, 1991), (Stiglitz, 2011), (Stiglitz, 2012).

By the term globalization we mean all the phenomena and processes, which lead to growing relationship and deepening bonds between countries and nationalities in the fields of economy and culture. Globalization makes each country's and each population's world turn into a world of common interests and standards and communities into so called global communities. However, economic changes bring about disadvantages as well as benefits, what can be especially observed in the changes taking place in the last couple of years.

According to scientists, globalization is a theoretical, applied in many fields of science, ideological slogan, as well as a dynamic social phenomenon. There exist many positive consequences of this process, and negative; we can enumerate many features of globalization which influence the labour market development level (Table 1). Restricting the considerations to EU member countries, it must be pointed out, that a great influence on the globalization process is also exerted by political decisions of EU member countries' governments, as well as those of the European Council (Krugman, 1991), (Raab et al., 2008).

By the term globalization we mean all the phenomena and processes, which lead to growing relationship and deepening bonds between countries and nationalities in the fields of economy and culture. Globalization makes each country's and each population's world turn into a world of common interests and standards and communities into so called global communities. However, economic changes bring about disadvantages as well as benefits, what can be especially observed in the changes taking place in the last couple of years.

Table 1: Positive and negative aspects of the globalization.

Positive aspects of the globalization	Negative aspects of the globalization
Positive aspects of the globalization process, which influence the leading labour market characteristics: • limiting of international barriers in corporate development, • economic development possibility also in countries with very weak economies in result of the inflow of international investment , • communication possibility (Internet), • promotion of knowledge, exchange of ideas, exporting of technology, • increase in employment, • easier access to products and services, • work posts for educated people with the knowledge of foreign languages in international corporations, • cultural development, Moreover: • integration and interdependence of each of the country's economies can prevent possible armed conflicts , • in countries with different types of political system globalization can lead to a positive, for the citizens, political change, • the pressure of international opinion on different kinds of local conflicts can result in an earlier end to a conflict , • development of human rights and international pressure on the abidance by these laws, • development of international organizations, which guard the settled before agreements and conventions.	The disadvantages of globalization in labour market context are: • growth of international corporations, which can even dictate conditions for other countries to fulfill, being led not by citizen's common wealth, but their desire for greater financial interest, • influencing the income level through economic migrations and low income jobs performed by the immigrants. Moreover: • homogenization and decline of culture, based on forcing out of native symbols and traditions, • development of consumerism and looking at the world in market categories , • change of values and priorities - the desire of financial interest is frequently the base of undertaken activities, • growth of social inequalities - growing differences between developed and the so called: developing countries, • weakening of the sovereignty of some of the countries which are often forced to negotiate the economic conditions with international organizations, • negative aspects of intensified migrations causing cultural conflicts, • imposition of idea patterns, very often not adjusted to the local conditions, • growing threat of international terrorism.

Source: Own study

According to scientists, globalization is a theoretical, applied in many fields of science, ideological slogan, as well as a dynamic social phenomenon. There exist many positive consequences of this process, and negative; we can enumerate many features of globalization which influence the labour market development level (Table 1). Restricting the considerations to EU member countries, it must be pointed out, that a great influence on the globalization process is also exerted by political decisions of EU member countries' governments, as well as those of the European Council (Krugman, 1991), (Raab et al., 2008).

3. Research methodology

Empirical analyses were conducted on the base of the following quantitative methods: multivariate comparative analysis (a model-free measure was used), method of potentials and quotient of potentials. Moreover, the analysis also covered indicators which characterize the socio-economic development, income inequalities and labour market development: HDI, Gini coefficient and leading labour market characteristics.

A model-free synthetic measure allows for the comparison of statistic units (in this case EU countries) being characterised in terms of many features as well as for a linear arrangement in terms of all the studied features simultaneously. In order to calculate the measure, the data matrix must be narmalized and subsequently, the arithmetic average of the obtained values for each of the units must be calculated.

Labour market characteristics are often analyzed with the use of classical methods of spatial econometrics and multivariate comparative analysis (Miskiewicz-Nawrocka, 2015), (Miskiewicz-Nawrocka & Zeug-Żebro, 2015), (Wolny-Dominiak & Zeug-Żebro, 2012), (Zeug-Żebro & Miskiewicz-Nawrocka, 2017). The method of potentials defines regions strong in terms of economic values. In the article, the method of potentials was used in the characteristics of labour market (Kugman, 1991). In hereby article, however, the method of potentials was used, as, apart from the characteristics assigned to a given region (country), in empirical analyses, it also takes into consideration the influence of neighbourhood, surrounding on the economic development of a given region. The analyses focused on the potential of population and income. The potential of regional income is treated as a measure of economic activity availability. There exists a significant spatial correlation between the changeability of population's potential and the changeability of many indicators stating the level of socio-economic development of regions. Therefore, population's potential can be treated as a substitute of socio-economic phenomena. The measure P, applied in empirical analyses, is the quotient of income potential and population's potential.

The HDI indicator informs about the socio-economic development level of a country taking into consideration three areas of living: health, education and income. It belongs to the value range [0, 1], the better the country developed, the closer the indicator value to 1. The Gini coefficient belons to the value range [0, 1], the closer the value to 0, the lower the inequalities in incomes in a given country, the closer it is to 1, the more differentiated the incomes. According to the author, a valuable supplement to the analyses considering the socio-economic development of EU countries would be adding the income differentiation indicator (Engineer & King, 2013), (Lockhart & Rencher, 1997), (Pinar et al., 2013), (Salas-Bourgoin, 2014), (Gaygisiz, 2013), (Zambrano, 2014), (Bilbao-Ubillos, 2013), (Stanton & Ackerman, 2009).

4. Results of empirical study – the development level of the labour market in EU countries

The empirical analyses focused on variables characterizing the labour market, the socio-economic level and the degree of differentiation of EU countries' income in 2015. The following variables are considered (Eurostat, UNDP): GDP, Population number, Average lifespan, Expected years of schooling, Mean years of schooling, Employment to population ratio (% ages 15 and older), Labour force participation rate, Unemployment Total (% of labour force), Youth not in education or employment (% ages 15-24), Exports and imports (% of GDP), Stock of immigrants, Communication internet users (% of population).

There are many variables stating the level of labour market development. Analysis of each of the variables does not allow for a thorough evaluation of labour market. For example the variable (stimulant): employment to population ratio - takes the highets values for countries: Netherlands, Sweden, United Kingdom; variable - Exports and imports - reaches the highest values for Luxembourg and Austria, whereas the variable - Communication Internet users – for Denmark and Luxembourg. The ranks for each of the countries according to a given variable are different. There exists, therefore, the necessity to construct a sythetic measure which, after considering many variables, many criteria simultaneously, will allow to create the countries' ranking.

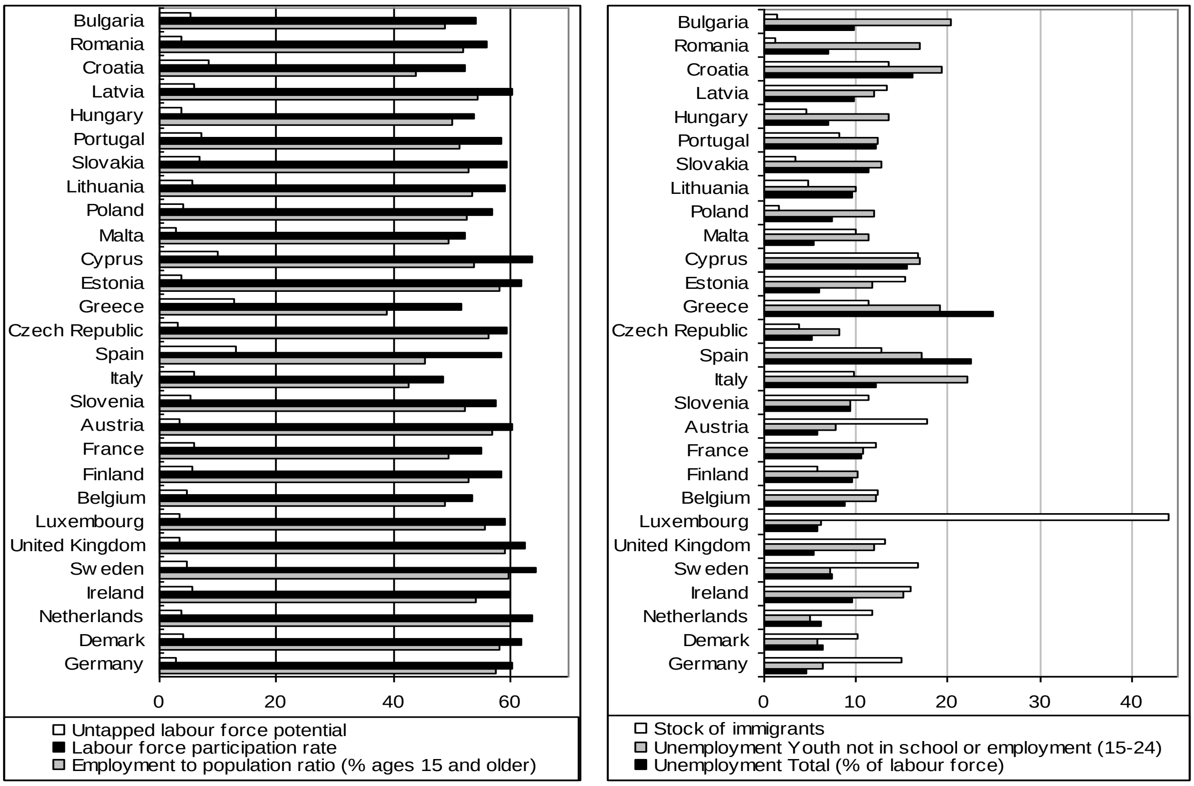
In all of the diagrams presented in the article, the order of the countries is due to the decreasing value of the HDI indicator in the year 2015. We can state that (Figure 1):

- The highest employment index in 2015 was reached in: the Netherlands (59,9%), Sweden (59,8%), the United Kingdom (almost 59,3%), whereas the lowest in Greece (38,8%), Ilaly (42,5%), Croatia (43,9%).
- There is a strong linear interdependence between the variables: Employment to population ratio and labour force participation rate (Pearson's coefficient equals 0,867) and beetween Unemployed labour force potential and Unemployment total (Pearson 0,986).
- The highest values of the variable - Labour force participation rate were recorded for Sweden (64,5%), Cyprus (63,9%) and for the Netherlands (63,8%). The lowest values belong to countries: Italy (48,4%), Greece (51,7%), Croatia i Malta (52,3%).
- Whereas the highest percentage of unemployed labour force is recorded in Spain (13,1%), Greece (12,9%), Cyprus (10,0%) and Croatia (8,4%).
- The calculated characteristic - Unemployed labour force potential is very strong, positively correlated with Unemployment total variable. Pearson's coefficient equals 0,986.
- The countries in Fig. 1 are laid out according to the decreasing value of the socio-economic development indicator. Therefore, there does not exist a significant interdependence between the HDI value and the variables which directly inform about the employment situation on the EU labour markets. The lowest values of the variables: Employment to population ratio and Labour force participation rate do not, surprisingly, belong to the countries with the lowest values of HDI indicator.

The data concerning the employment of young people is also surprising, as it turns out, that a considerable part of the unemployed are precisely young people (aged 15-25). The percentage of the unemployed youth, not in education, is presented in Fig.1. It turns out, that the highest unemployment indicator is recorded for Greece (24,9%) and Spain (22,4%), whereas the highest percentage of youth (aged15-25), who do not undertake neither employment nor education belongs to Italy (22%), Bulgaria (20,2%), Croatia (19,3%) and Greece (19,1%). This is a very alarming situation both in economic, as well as social point of view. It can be noticed that the variables stating the level of unemployment do not also reach their extreme values for countries with the highest and the lowest level of socio-economic development. Therefore, there does not also exist a significant interdependence between the unemployment rate, youth unemployment and the level of socio-economic development. For countries: Bulgaria, Romania Croatia the high unemployment rate amongst young people and the lack of undertaking education is strongly correlated with the lowest in EU level of socio-economic development.

The free flow of population, also of financial character, is strictly connected with the globalization process. Data concerning the state of labour markets in European community should constitute a source of information about the potential labour force resources for employers and about job vacancies for potential employees.

Figure 1: Selected characteristics stating the level of employment on EU countries' labour markets in 2015.



Source: Own study

The geographic mobility results in the flow of immigrants to EU countries. There are very large differences between the percentage of immigrants in EU countries. This is strongly connected with social and economic conditions offered to immigrants. The highest percentage of immigrants in 2015 was recorded in Luxembourg (44%), Austria (17,5%), the lowest in Romania (1.2%), Bulgaria (1,4%) and Poland (1,6%). However, there does not exist a relationship between the immigration rate in a given country and the indicators: Unemployment total and Youth not in education or employment. It can therefore be stated that the inflow of immigrants does not cause an increase in unemployment. It can, therefore, be noted that there does not exist a relationship between the percentage of immigrants and HDI. (the relationship is very weak, positive, however, statistically insignificant).

The analyses also included the variable Internet users. It turns out that its values are strongly correlated with HDI (Pearson 0,782). The analyses were conducted with the application of the socio-economic development measure HDI. Its values have been measured for EU countries since 1980. The HDI values rise gradually from year to year, but the dynamics of changes is weakening. According to the synthetic measure HDI, in 2015, 27 out of 28 EU countries had a very high development level, only Bulgaria indicated a high level.

The HDI values were compared with the synthetic measure (SM) made up of the following 4 variables (stimulants), indicating the level of labour market development: Employment to population ratio, GDP per capita, Exports and imports, Internet users. The above mentioned variables were used because the employment index and the level of GDP per capita influence both, the socio-economic development level and directly the population's standard of living. Analyzing the characteristics of labour market in globalization conditions, it seems reasonable to include such variables as: Export and Import, which informs about strong relationships between countries and Internet users – a variable, which informs about a fast and easy access to information, which, in economic activity, is very valuable. The Gini coefficient, which informs about the level of inequalities in income and the potential for EU countries were also determined. Population's potential, income potential and the quotient of potentials P as well as the P/g quotient for the EU countries were calculated (Table 2, Figure 2).

Table 2: Measure values: HDI, Gini coefficient, SM and standardized value of P. Data for EU countries in 2015.

EU country	HDI	Gini	SM	P	EU country	HDI	Gini	SM	P
Germany	0,926	0,301	0,449	1,783	Czech Republic	0,878	0,25	0,285	0,706
Demark	0,925	0,274	0,710	1,207	Greece	0,866	0,342	-1,344	-1,359
Netherlands	0,924	0,267	0,975	1,401	Estonia	0,865	0,348	0,458	-0,027
Ireland	0,923	0,298	0,759	1,132	Cyprus	0,856	0,336	-0,237	-0,599
Sweden	0,913	0,252	0,643	0,835	Malta	0,856	0,281	-0,102	-0,220
United Kingdom	0,909	0,324	0,427	0,963	Poland	0,855	0,306	-0,520	-1,492
Luxembourg	0,898	0,285	2,552	1,017	Lithuania	0,848	0,379	-0,161	-0,749
Belgium	0,896	0,262	0,225	1,163	Slovakia	0,845	0,237	0,238	0,111
Finland	0,895	0,252	0,200	-0,038	Portugal	0,843	0,34	-0,592	-0,576
France	0,895	0,292	-0,216	0,778	Hungary	0,836	0,282	-0,259	-0,747
Austria	0,893	0,272	0,387	0,181	Latvia	0,83	0,354	-0,138	-0,514
Slovenia	0,890	0,245	-0,177	-0,070	Croatia	0,827	0,306	-0,977	-0,303
Italy	0,887	0,324	-1,052	-0,262	Romania	0,802	0,374	-0,958	-2,207
Spain	0,884	0,346	-0,615	-0,298	Bulgaria	0,794	0,370	-0,961	-1,634

Source: Own study

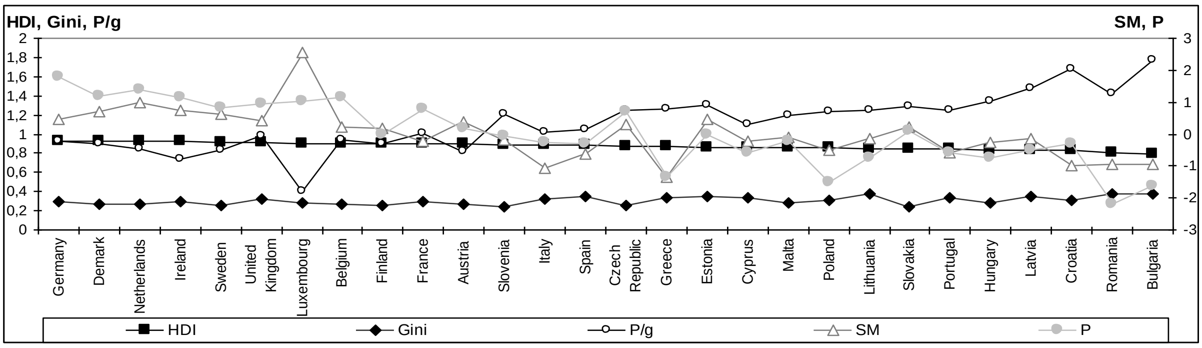
From the values included in Table 2, Figure 2 we can conclude that:

- The values of HDI indicator for EU countries belong to the range [0.794; 0.926]. Maximum value was recorded for Germany, minimum for Bulgaria.
- Income inequalities determined with the use of Gini coefficient are from the range [0.24; 0.38]. The countries with the lowest level of inequalities are: Slovakia, Slovenia and Czech Republic, whereas the highest inequalities are recorded for Lithuania, Romania, Bulgaria.
- There exists a negative relationship between the socio-economic development level and the level of income inequalities (Pearson coefficient equals -0.54). The lower the development level, the larger the income inequalities.
- 3 out of 4 of the synthetic measure SM components are not correlated with HDI, however, the created measure possesses a positive relationship with HDI. Therefore, connecting the information concerning the labour market with the use of the synthetic measure provides valuable information about the labour market and its development level.
- Both measures informing about the labour market development level, that is the quotient of potentials and the model-free synthetic measure SM in Fig 2 have a descending tendency. The quotient of potentials (income through population) analyzed for the EU countries indicates the income and population strength of a country, also taking into consideration its geographical surrounding and its location on the map of Europe. The synthetic measure constructed on the base of selected labour market characteristics, informing about the level of development progress of this market, also informs about the strength of the labour market, but it does not take into consideration

geographical surrounding. Pearson correlation coefficient between the measures equals 0.737, which informs about a significant interdependence between the measures.

- The quotient P/g (P – quotient of potentials, g – GDP per capita) has a growing tendency, therefore, the lower the socio-economic development level, the bigger the interdependence between countries and their neighbours (other countries of the EU) the smaller their independence (P/g>1).

Figure 2: Values of indicators: HDI, GINI, P, SM and P/g. EU countries in 2015.



Source: Own study

5. Conclusion

The obtained study results indicate, that in order to reach a balanced economic growth and lessen the income inequalities between EU countries, special meaning must be appointed to the influence of the labour market. The level of labour market development influences the level of socioeconomic development, the higher the characteristics - labour market stimulants, the better the socio-economic situation of the population and lower income inequalities.

In order to improve the standard of living of EU countries inhabitants and in order to enhance the socio-economic development, special attention should be drawn to analyzing the state of the labour market and its determinants. An improvement of the situation on the labour market influences the growth of the HDI indicator components, leads directly to income rise and also indirectly implies a higher level of community's education, growth of population's awareness and, subsequently, better health conditions.

In the globalization era, labour migrations allow for an improvement in the economic situation of EU inhabitants, country borders do not constitute a barrier in finding employment and a place of living, this is certainly a positive result of the globalization process. Making use of economic possibilities, which are provided by the labour market, implies a faster and more balanced socio-economic development.

References

[1] Bilbao-Ubillos, J. (2013). Another Approach to Measuring Human Development: The Composite Dynamic Human Development Index. *Social Indicators Research*, vol. 111 no. 2, pp. 473-484.

[2] Engineer, M. and King, I. (2013). Maximizing human development. *Canadian Journal of Economics-Revue,* vol. 46, no. 2, pp. 497-525.

[3] Gaygisiz, E. (2013). How are cultural dimensions and governance quality related to socioeconomic development? *Journal of Socio-Economics,* vol. 47, pp. 170-179.

[4] Krugman, P. R. (1991). *Geography and Trade*, MIT Press, Cambridge, Massachusetts.

[5] Lockhart, B. D. and Rencher, A.C. (1997). Worth Index, *Perceptual And Motor Skills* vol. 85, no. 3, Part 1, pp.827-834.

[6] Miśkiewicz-Nawrocka, M. (2015). Analiza porównawcza czynników wpływających na zmiany demograficzne w Polsce. *Metody i modele analiz ilościowych w ekonomii i zarządzaniu*. Part 7, Katowice, Poland, pp. 34-58.

[7] Miśkiewicz-Nawrocka, M. and Zeug – Żebro, K. (2015). Ocena stopnia zagrożenia bezrobociem województw Polski w latach 2005-2012. *Cracow Review of Economics and Management,* vol. 4, no. 940, Kraków, Poland, pp. 145-161.

[8] Pinar, M., Stengos, T. and Topaloglou, N. (2013). Measuring human development: a stochastic dominance approach. *Journal of Economic Growth*, vol. 18, no. 1, pp. 69-108.

[9] Raab, M., Ruland, M., Schonberger, B., Blossfeld, H.P., Hofacker, D., Buchholz, S. and Schmelzer, P. (2008). Global Index: A sociological approach to globalization measurement. *International Sociology*, vol. 23, no. 4, pp. 596-631.

[10] Salas-Bourgoin, M.A. (2014). A proposal for a modified Human Development Index. *Cepal Review*, vol. 112, pp.29-44.

[11] Stanton, E. A. and Ackerman, F. (2009). Climate and development economics: Balancing science, politics and equity. *Natural Resources Forum* 33, vol. 4, pp.262-273.

[12] Stiglitz, J. E. (2011). Rethinking Development Economics. *World Bank Research Observer,* vol. 26, no. 2, pp.230-236.

[13] Stiglitz, J.E. (2012). Macroeconomic Fluctuations, Inequality, and Human Development. *Journal of Human Development And Capabilities,* vol. 3, no. 1, pp.31-58.

[14] 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.992-997.

[15] Zambrano, E. (2014). An axiomatization of the human development index. *Social Choice And Welfare,* vol. 42, no. 4, pp. 853-872.

[16] Zeug – Żebro, K. and Miśkiewicz-Nawrocka, M. (2017). Spatial analysis of the population aging phenomena in European Union. *Proceedings of 35th International Conference Mathematical Methods in Economics*, Czech Republic, Hradec Králové, pp. 866-871.

[17] Eurostat. [Online]. Available: http://www.ec.europa.eu/eurostat/data/database.

[18] UNDP Human Development Report. [Online]. Available: http://www.hdr.undp.org

GREEN PREFERENCES OF GENERATION Y

Hana Maťová[1,a], Vladislav Kaputa[2,b,*]

[1]Technical University in Zvolen, Faculty of Wood Sciences and Technology, T. G. Masaryka 24, 960 53 Zvolen, Slovak Republic

[2]Technical University in Zvolen, Faculty of Wood Sciences and Technology, T. G. Masaryka 24, 960 53 Zvolen, Slovak Republic

[a]matova@tuzvo.sk, [b]kaputa@tuzvo.sk

*Corresponding author

Abstract. Increasing level of economic welfare in certain countries around the globe brings lots of issues where environmental challenges play a special role. Critics of consuming lifestyle of developed countries led to couple of initiatives against the "Growth" (as the economic mainstream) such as "Degrowth" or Green and Circular models of economy. Lot of businesses switched to environmental strategies due to changes of legislative, pressure of stakeholders or consumers' buying behaviour. International business environment influence significantly final consumers' markets, especially in countries where interdependence is high. Environmental business concept tries to attract consumers through emphasis of environmental (green) attributes of products. This paper deals with preferences of certain group of consumers, known as generation Y, towards green products. To reveal green preferences the survey method was carried out using a questionnaire. The research was carried out in the Slovak Republic within the sample of generation Y respondents. Basic findings showed that the awareness of "green" products among a sample of respondents is rather positive. Consumers of generation Y with higher education are willing to prefer "green" products even if their price is higher. These products must have a clearly recognized environmental label. Regarding attributes of green products, consumers perceived them as high-quality, value-for-money, human-friendly and environmentally friendly. Respondents do not prefer green products to increase their prestige in society, they realize that their actions and lifestyle can influence environmental impacts and contribute to have a better environment.

Keywords: buying preferences, generation Y, consumers, green products, environment

JEL Classification: M31, Q56, Q13

1. Introduction

Počnúc 90-tymi rokmi minulého storočia vstupuje intenzívnejšie do hry ďalší z faktorov presadenia sa konkrétnych produktov na medzinárodných trhoch – environmentálny faktor. K jeho uplatneniu ako marketingového nástroja prispel hlavne tlak globálneho environmentálneho hnutia vyvíjaný záujmovými skupinami, citeľný hlavne v posledných dvoch desaťročiach minulého storočia, ale aj v súčasnom „energo-úspornom" ťažení (Kaputa, 2013). Problémy súvisiace s ekonomickou aktivitou človeka vplývajúce na kvalitu životného prostredia, ale aj na kvalitu života samotného človeka viedli k rozvoju viacerých iniciatív s kritickým postojom k ekonomickému mainstreamu. Ako protiváha ekonomiky rastu je to napr. koncept „Degrowth" alebo ako protiváha lineárnej ekonomiky a konzumizmu je v súčasnosti celosvetovo proklamovaný koncept zelenej, resp. kruhovej ekonomiky. V zmysle programu Európskej komisie (2014) ju chápeme ako systém, ktorý umožňuje, aby pridaná hodnota produktov bola udržaná najdlhší možný čas pričom odpad je eliminovaný. Pri konci takto nastaveného životného cyklu produktu je zdroj (príp. zdroje) zachovaný v rámci hospodárstva, takže produkt alebo komponent je viacnásobne využitý a následne tvorí ďalšiu hodnotu.

„Zelená spotreba“ je úzko spojená s environmentálnou zodpovednosťou, pri ktorej spotrebiteľ zvažuje environmentálne dopady svojho nákupného procesu, používania produktu aj jeho likvidácie po použití (Moisander, 2007). Joshi & Rahman (2015) analyzovali štúdie spotrebiteľov z rôznych krajín a poukázali na to, že tí ktorí majú pozitívny postoj k zeleným produktom nie vždy zelené produkty nakupujú, najmä ak majú možnosť výberu. Dôvodmi môžu byť: cena, dostupnosť produktu a jeho prítomnosť v mieste predaja a sociálne ovplyvňovanie ostatnými zákazníkmi. Spotrebitelia s obavami o environmentálne a sociálne problémy vyhľadávajú environmentálne atribúty produktov, zatiaľ čo spotrebitelia, ktorí prikladajú väčší význam osobným hodnotám a potrebám (napr. zdravie, bezpečnosť, spokojnosť a blahobyt vlastnej rodiny) hľadajú hlavne funkčné atribúty produktu. To vysvetľuje, prečo niektorí spotrebitelia vykazujú veľkú environmentálnu a sociálnu citlivosť, ale nedokážu premeniť tento pozitívny postoj na skutočné zelené nákupné rozhodnutie.

Apaydin & Szczepaniak (2017) vo svojom výskume identifikovali tri segmenty zelených spotrebiteľov v Poľsku. Takmer 84 % z najpočetnejšieho segmentu tzv. „potenciálni zelení“ tvorili respondenti z generácie Y (od 18 do 35 rokov), mali značné environmentálne znalosti a vysokú záujem o environmentálne otázky. Neboli ale veľmi ochotní platiť viac za zelené produkty a za ochranu životného prostredia. "Potenciálni zelení" vykazujú miernu úroveň zeleného nákupného správania, nemajú záujem o environmentálne aktivity (napr. podpora environmentálnych organizácií, čítanie správ o eko-výrobkoch a aktivitách firiem alebo financovanie environmentálnych aktivít). Ako ich „zelené“ návyky autori označujú napr. zastavenie vody pri čistení zubov alebo šetrenie energie vypnutím nepoužívaných svetiel v domácnosti. Kanchanapibul et al. (2014) vo svojej štúdii medzi generáciou od 18 do 30 rokov tvrdia, že vplyv blízkeho okolia a vedomosti mladých ľudí o problémoch životného prostredia majú významný vplyv na ich environmentálne úmysly. I keď sa preukázalo, že ich znalosti o environmentálnej problematike nie sú na vysokej úrovni, cítia osobnú zodpovednosť za environmentálne problémy. Výsledky štúdie ďalej naznačujú, že osobná emočná (afektívna) odozva respondentov je kľúčovým motívom k nákupu zelených produktov.

2. Methods

Cieľom štúdie je zhodnotiť „zelené“ nákupné preferencie spotrebiteľov generácie Y. Pri spracovaní sme zisťovali postoje danej kategórie spotrebiteľov voči vybraným environmentálnym atribútom určitých spotrebných produktov (drogistický tovar, elektronika, spotrebný tovar do domácnosti, oblečenie). Prieskum sa realizoval prostredníctvom štandardizovaného dotazníka konštruovaného pomocou Google docs platformy a šíreného sociálnou sieťou a elektronickou poštou. Dotazník pozostával zo štyroch meritórnych otázok ohľadne zelených nákupných zvyklostí a siedmich otázok identifikujúcich demografické údaje o respondentovi. Na vyhodnotenie sme využili frekvenčné a kontingenčné analýzy. V meritórnych otázkach bola použitá päť stupňová Likertova škála, na ktorej mali respondenti vyznačiť mieru súhlasu s vopred stanoveným výrokom.

V tomto článku sa adjektívum „environmentálny“ a jeho gramatické tvary chápu v súvislosti s interakciou človeka a životného prostredia. S pojmom produkt nepoužívame pojem „ekologický“ frekventovaný (často nesprávne) laikmi v praxi, ale širší pojem „zelený“ produkt (green product). Chápe sa ním produkt, ktorý má menší negatívny vplyv na životné prostredie v porovnaní s ostatnými produktmi rovnakých funkčných a úžitkových vlastností (v texte označovanými ako „konvenčné“ produkty). V tomto duchu chápeme aj pojem „zelené“ nákupné správanie. Pri posudzovaní úlohy faktora „environmentálna vhodnosť produktu“ na nákupné rozhodnutie spotrebiteľa by mal byť tento schopný rozlíšiť produkt zelený (environmentálne vhodnejší) od konvenčného, napr. na základe informácii uvádzaných producentom alebo predajcom.

Vzorka respondentov pozostávala z 200 zástupcov generácie Y. Generácia Y sa vo vzorke vyčlenila ročníkmi narodenia od 1981 do 2000. Rámec ročníkov sa stanovil na základe odporúčaných hraníc v štúdiách s problematikou generácie Y (napr. Muralidharan & Xue, 2016). Vzorku tvorilo 63 % žien a 37 % mužov, pričom 66 % respondentov ukončilo prvý, resp. druhý stupeň vysokoškolského vzdelania, 33 % má stredoškolské vzdelanie (s maturitou alebo bez) a 1 % ukončilo základné vzdelanie.

3. Results and Discussion

Na základe výsledkov môžeme konštatovať, že viac ako 85 % respondentov z generácie Y využívajú zakúpené produkty počas celej životnosti. Motiváciou pre nižšiu spotrebu zdroj ov (voda, elektrina, palivá) sú pre väčší podiel respondentov (76 %) dôvody ekonomické. Takéto správanie je environmentálne motivované u približne 56 % opýtaných (Table 1). V štúdii Benda-Prokeinovej (2015) 53 % respondentov zo Slovenska uviedlo, že môžu prispieť k riešeniu environmentálnych a sociálnych problémov skrz ich osobnú voľbu.

Table 1: Miera súhlasu s výrokmi (n = 200)

Výroky	Súhlas (%)	Neutrál (%)	Nesúhlas (%)	Suma (%)
Triedim odpad z domácnosti	69,50	15,00	15,50	100,00
Snažím sa produkovať menej odpadu	55,00	27,00	18,00	100,00
Produkty využívam, kým nevypovedajú službu	85,50	3,50	11,00	100,00
Šetrím zdrojmi (voda, elektrina, palivá a pod.) menšou spotrebou, lebo je to ekonomické	76,00	17,00	7,00	100,00
Šetrím zdrojmi (voda, elektrina, palivá a pod.) menšou spotrebou kvôli dopadom na životné prostredie	55,50	29,00	15,50	100,00
Zúčastňujem sa environmentálnych aktivít (účasť na občianskych aktivitách smerom k životnému prostrediu; aktívne zveľaďujem/chránim verejný priestor a pod.)	21,50	15,50	62,00	100,00
Do istej miery som zmenil/-a životný štýl a správanie (kvôli možným dopadom na životné prostredie)	38,00	26,00	35,50	100,00
Uprednostňujem kúpu "zelených" produktov	37,00	33,00	30,00	100,00

Source: Vlastný výskum

Odpad v domácnosti triedi takmer 70 % respondentov generácie Y. Zaujatie neutrálneho postoja (15 %) pravdepodobne reflektuje fakt, že časť z nich ešte nežije vo vlastnej domácnosti a na nakladaní s odpadom sa podieľa viacero osôb. Nie všetci, ktorí odpad triedia sa ho snažia aj menej produkovať (55 %). Práve približovanie k nulovému odpadu je premisou kruhovej ekonomiky. Zaujímavým faktom je až 38 % podiel respondentov, ktorí zmenili svoj životný štýl a správanie kvôli zmierneniu možných dopadov na životné prostredie. Vnímame ich ako environmentálne citlivých. Za ešte vyšším stupňom zaangažovaných považujeme jednu pätinu respondentov (21,5 %), ktorí sa aktívne zúčastňujú občianskych environmentálnych aktivít (napr. zveľaďovanie a ochrana verejného priestoru). Benda-Prokeinová (2015) v štúdii uvádza, že viac ako 71 % Slovákov vníma pokračovanie súčasného životného štýlu, ako blíženie sa k environmentálnej katastrofe. V porovnaní s ostatnými krajinami V4, tu Slováci vykazovali mierne nižšiu environmentálnu citlivosť.

Kúpa zelených produktov sa javí v rámci vzorky spotrebiteľsky problematickou, keďže je len mierna prevaha respondentov, ktorí ich v nákupnom rozhodovaní uprednostnia (37 %) nad tými, u ktorých zelený produkt nezaváži (30 %). Naviac, ostáva značný podiel (33 %) nerozhodných. Tento postoj je pre objasnenie vhodné spojiť s postojmi k ďalším atribútom zelených produktov – napr. k cene (jej výške), k druhu produktu, alebo aj k dôveryhodnosti a zrozumiteľnosti certifikátu, ktorý preukazuje environmentálne hodnoty daného produktu.

Table 2: Atribúty spotrebného tovaru a ich dôležitosť pri nákupnom rozhodovaní (n = 200)

	Súhlas (%)	Neutrál (%)	Nesúhlas (%)	Suma (%)
Dôvera k výrobcovi / značke	84,50	12,00	3,50	100,00
Krajina pôvodu	61,50	26,00	12,50	100,00
Dizajn	55,00	31,50	13,50	100,00
Podmienky reklamácie	46,50	30,50	23,00	100,00
Recyklácia materiálu	33,00	38,50	28,50	100,00

Source: Vlastný výskum

Medzi atribúty najviac ovplyvňujúce respondentov pri kúpe spotrebného produktu (Table 2) patria: dôvera k značke, krajina pôvodu a dizajn produktu. Recyklácia materiálu je dôležitá len pre tretinu z opýtaných, pričom 38,5 % respondentov vyjadrilo k tomuto atribútu neutrálny postoj. Aj keď nie je jasné, ako sa bude do budúcna vyvíjať postoj skupiny nerozhodných, je evidentné, že recyklovateľnosť materiálu patrí k najmenej dôležitým spomedzi dopytovanej skupiny atribútov.

Table 3: Uprednostnenie zeleného produktu (n = 200)

	Súhlas (%)	Neutrál (%)	Nesúhlas (%)	Suma (%)
Ak má nízku cenu	78,50	15,50	6,00	100,00
Ak je jeho cena vyššia max. o 10 %	58,00	28,50	13,50	100,00
Ak ide o spotrebný tovar do domácnosti (čistiace prostriedky, kozmetika, obaly, žiarovky a pod.)	54,50	29,50	16,00	100,00
Ak má zrozumiteľný a dôveryhodný (environmentálny) certifikát	47,00	29,00	24,00	100,00
Ak ide o elektroniku	37,50	34,00	28,50	100,00
Ak ide o oblečenie	34,50	36,50	29,00	100,00
Ak má akékoľvek "eko-označenie"	33,50	38,50	28,00	100,00
Ak je jeho cena vyššia aj viac ako o 10 %	24,00	41,00	35,00	100,00
Ak to zvýši moju prestíž v spoločnosti	20,50	22,00	57,50	100,00

Source: Vlastný výskum

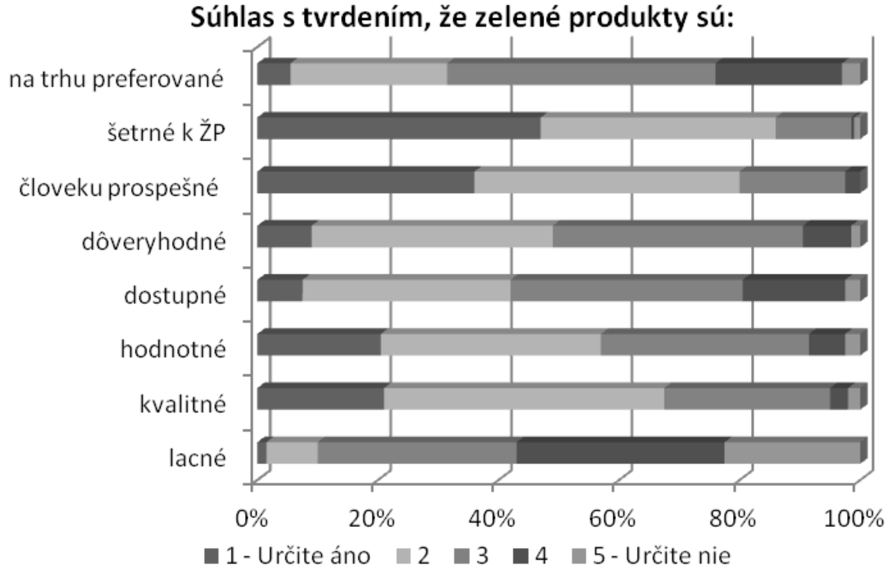
Cena sa vo všeobecnosti považuje za faktor, ktorý ovplyvňuje nákupné rozhodnutie spotrebiteľov v najväčšej miere, aj keď súčasné spotrebiteľské štúdie (napr. Olšiaková et al., 2016) poukazujú na pokles miery významnosti tohto faktora, najmä ak sa jedná o špecifické produktové kategórie. Podobne je to aj medzi dopytovanými generácie Y, ktorí vyjadrovali svoje postoje k rôznym cenovým aspektom. Majorita respondentov (58 %) vyjadrila nesúhlas s tvrdením, že zelené produkty sú lacné a zároveň tretina (33 %) zaujala k tomuto tvrdeniu neutrálny postoj (Figure 1), čo reflektuje ich skúsenosti s trhovými cenami týchto produktov v porovnaní s konvenčnými. Z pohľadu cenovej politiky výrobcov a predajcov je zaujímavý fakt, že nadpolovičná väčšina respondentov z generácie Y (58 %) by uprednostnila zelený produkt, aj keby jeho cena bola vyššia ako cena konvenčného produktu – presnejšie vyššia max. o 10 %. To je v kontraste s výsledkami štúdie Musovej (2010), kde respondenti (42 %) uviedli preferenciu environmentálne priateľských produktov iba v prípade, ak ich cena nie je vyššia ako cena konvenčných produktov. Pri cene vyššej o viac ako 10 % ceny konvenčného produktu sa podiel ochotných akceptovať ju výrazne znižuje (len 24 %), pričom existuje významný podiel respondentov s neutrálnym postojom (až 41 %). V štúdii Nadányiovej (2016) až 80 % (zo 130 respondentov) uviedlo, že organické produkty nekupujú kvôli ich vysokej cene. Koudelka et al. (2010) uvádzajú, že u štandardných produktoch sa vyžaduje akceptácia výšky ceny u dvoch tretín respondentov, a ak výšku ceny akceptuje okolo 50 % respondentov (resp. väčšina respondentov) môžeme očakávať, že sa tento názor postupne rozšíri ďalej. Z uvedeného možno predpokladať, že spotrebitelia z generácie Y by vyššiu cenu zeleného produktu postupne akceptovali.

Takmer polovica respondentov našej vzorky (47 %) uprednostňuje zelené produkty so zrozumiteľným a dôveryhodným certifikátom. Predpokladá sa tu spojitosť s tzv. „greenwashingom“ kedy nadužívanie a zdôrazňovanie (často nedôveryhodné) environmentálnych atribútov má za cieľ zatraktívniť produkt v očiach spotrebiteľa (Kaputa, 2013). Práve dôvera k výrobcovi a značke je faktor, ktorý ovplyvňuje nákupné rozhodnutie respondentov najviac (Table 2). Možno to považovať za signál od tejto generácie spotrebiteľov smerom k producentom, že sú citliví na zavádzanie a klamlivé výroky. Napriek tomu viac ako 33 % respondentov z generácie Y by uprednostnili zelený produkt, ak by mal „akékoľvek eko-označenie“, čiže sa jedná aj o environmentálnu značku alebo vyhlásenie dané samotným producentom (nie nezávislou/treťou stranou). Aj vo výskume Benda-Prokeinovej (2015) až jedna tretina slovenských respondentov uviedla, že pri kúpe produktov si všímajú environmentálne (resp. aj sociálne) označenie. Zároveň 52 % Slovákov si nie je istých, ktoré eko-označenie je spoľahlivé a 30 % tvrdí, že nevedia rozlíšiť medzi environmentálne bezpečnými a nebezpečnými produktmi. Podobné zistenia sú zosumarizované aj v práci Joshi & Rahmana (2015), kde sa konštatuje, že eko-označovanie a certifikáty nemusia mať účinok na spotrebiteľa napr. kvôli ich nezrozumiteľnosti, nedôvere zo strany spotrebiteľa.

Majerová (2015) uvádza, že zelený charakter produktu má vplyv na nákupné rozhodnutie viac ako u polovici skúmaných (384 respondentov vo vzorke). V štúdii Križanovej et al. (2013) za jeden z najsilnejších faktorov rozhodnutia o kúpe auta uviedli zákazníci environmentálny aspekt produktu.

Respondenti z generácie Y tvrdia, že zelené produkty sú: šetrné k životnému prostrediu (86 %), prospešné pre človeka (80 %) pričom pri oboch atribútoch je zaznamenaný vysoký podiel hraničných postojov (určite áno). Ďalej ich vnímajú ako kvalitné (67,5%), hodnotné (57 %) a dôveryhodné (49 %). Zaujímavým je ich zovšeobecňujúci pohľad na celkový dopyt po zelených produktoch, kde 31 % respondentov súhlasí s tým, že sú na trhu preferované a 24 % s tvrdením nesúhlasí. Až 45 % nevedelo zaujať jednoznačný postoj. Tieto nejednoznačné všeobecné preferencie po zelených produktoch trh (výrobcovia, predajcovia) citlivo zvažuje a vidíme v tom aj súvislosť s dostupnosťou zelených produktov, ktorá sa javí problémovejšou aj očami respondentov (viď Graf 1).

Figure 1: Postoje k tvrdeniam o zelených produktoch (n = 200)



Source: Vlastný výskum

4. Conclusion

Zo zistení je zrejmé, že ak nie je environmentálna vhodnosť produktov zo strany spotrebiteľa jednoznačne identifikovaná a dôveryhodná („environmentálny certifikát“ verzus „akékoľvek eko-označenie“) potom klesá jednoznačnosť, že produkt má minimálne negatívne dopady na životné prostredie. Nejasnosť, triviálnosť a zavádzanie vo vyhláseniach a značkách na produktoch, ale aj ich nadužívanie spôsobuje pochybnosti o ich úprimnosti. V tomto kontexte možno znovu vyzdvihnúť význam atribútu „dôvera k výrobcovi / značke“, ktorý je dôležitý v nákupnom rozhodovaní takmer 85 % dopytovaných. Možno konštatovať, že dôvera v environmentálnu vhodnosť produkcie známeho výrobcu má pri nákupnom rozhodovaní vyššiu váhu ako environmentálne označenia a vyhlásenia. Ako tvrdia Pasarro et al. (2015) podnikoví marketéri musia jasne a pravdivo informovať spotrebiteľov o svojich zelených produktoch, ak chcú dosiahnuť to, aby ich spotrebiteľ vnímal ako kvalitné. Nadányiová et al. (2015) uvádzajú, že 67 % (zo 100 skúmaných) slovenských podnikov využívajú PR nástroje na komunikáciu. Z toho 19 % podnikov sa zúčastňuje aktivít s environmentálnymi cieľmi a snažia sa tým zvýšiť environmentálne povedomie. Autori považujú reklamu a PR za vhodné nástroje na zvyšovanie environmentálneho povedomia medzi zákazníkmi a zmenu nákupného správania cez zainteresovanie do edukačných aktivít.

Viac ako polovica zo skúmanej vzorky respondentov akceptuje aj vyššiu cenu zelených produktov, ale len do výšky nie viac ako o 10 % oproti cene konvenčných produktov. Aj keď sa pri ďalšom zvyšovaní ceny (aj viac ako o 10 %) podiel ochotných uprednostniť takýto produkt výrazne znižuje, je stále možné oslovovať a rozširovať spotrebiteľský segment tejto generácie, keďže existuje značný podiel respondentov (nad 40 %) s neutrálnym postojom (nerozhodnutých) k takejto cenovej úrovni. Young et al. (2010) tvrdí, že ak si spotrebitelia zvolia environmentálne vhodný životný štýl, ich výber spotrebných tovarov sa stáva komplikovaným. Keďže zelené produkty bývajú drahšie ako konvenčné, spotrebitelia priamo porovnávajú ich konkrétnu environmentálnu vhodnosť s nákladovou efektívnosťou.

Environmentálnu citlivosť spotrebiteľa nemožno posudzovať všetkými prejavmi správania. Triedenie odpadu a šetrenie zdrojmi v domácnosti môže mať aj výsostne ekonomické pohnútky. Naproti tomu zmena životného štýlu kvôli možným dopadom na životné prostredie, resp. (ešte priamejšie) aktívna účasť na environmentálnych aktivitách sú už prejavom vysokej citlivosti k vlastnému životnému prostrediu a sebauvedomenia si spoluzodpovednosti. Výsledky štúdie taiwanských študentov (Tai-Yi Yu et al., 2017) poukazujú, že jednotlivci musia mať vypestovanú environmentálnu etiku prv než si uvedomia ich spoločenskú a vlastnú zodpovednosť k životnému prostrediu, čo sa následne premietne do ich zámerov kupovať zelené produkty a stanú sa lojálnymi spotrebiteľmi.

V nákupných rozhodnutiach väčšiny spotrebiteľov generácie Y nezohrávajú v súčasnosti environmentálne atribúty produktov rozhodujúcu rolu. Ich nákupné správanie je ale vo fáze formovania, na čo poukazujú na významné podiely respondentov s ešte nevyhraneným postojom, t. j. nezaujmú jednoznačné stanovisko (ale neutrálny postoj) k významnosti tohto faktora na ich nákupné rozhodnutie (viď aj Kaputa et al., 2017). Zistenia týkajúce sa environmentálnych certifikátov a eko-označení ďalej indikujú, že existuje segment spotrebiteľov čítajúcich informácie na obaloch produktov resp. príbalových letákoch a majú znalosť o eko-označeniach. Ak rozhodnutia tejto generácie majú prvky environmentálneho správania, nerobia to zväčša pre zvyšovanie spoločenskej prestíže, ale skôr pre uvedomenie, že ich počiny a životný štýl majú environmentálny dopad.

Acknowledgement

Tento článok vznikol vďaka podpore grantovej agentúry VEGA v rámci projektu č. 1/0756/16 "Identifikácia spotrebiteľských segmentov podľa ich afinity k environmentálnym marketingovým stratégiám podnikateľských subjektov v podmienkach SR".

References

[1] Apaydin, F. and Szczepaniak, M. (2017). Analyzing the profile and purchase intentions of green consumers in Poland 1. *Ekonomika*, vol. 6, no. 1, pp. 93.

[2] Benda-Prokeinova, R. (2015). Sustainable Consumption Patterns in Visegrad Region: Slovak Report. 1st ed. [ebook] Nitra: Visegrad Fund, Available: http://www.k48.p.lodz.pl/ecomarket/en,reports-to-download.html

[3] European Commission. (2014). Towards a circular economy: a zero waste programme for Europe 2014. [Online]. EUR-Lex, Access to European Union law. Available: http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX:52014DC0398.

[4] Joshi, Y. and Rahman, Z. (2015). Factors affecting green purchase behaviour and future research directions. *International Strategic Management Review*, vol. 3, no. 1, pp. 128-143.

[5] Kanchanapibul, M., Lacka, E., Wang, X. and Chan, H. K. (2014). An empirical investigation of green purchase behaviour among the young generation. *Journal of Cleaner Production*, vol. 66, pp. 528-536.

[6] Kaputa, V. (2013). *Trh a environmentálne atribúty výrobkov z dreva.* Vedecká monografia, Zvolen: Technická univerzita vo Zvolene.

[7] Kaputa, V., Paluš, H. and Dzian, M. (2017). End-users' views on selected green properties of paper products. In *More wood, better management, increasing effectivess: starting points and perspective: proceedings.* Pague, Czech Republic, WoodEMA, i. a. pp. 204-211.

[8] Koudelka, J., Bártová, H. and Bárta, V. (2010). Spotřebitel (chování spotřebitele a jeho výskum). Praha: *Oeconomica*, 2010. Pp. 254.

[9] Krizanová, A., Majerova, J. and Zvarikova, K. (2013). Green marketing as a tool of achieving competitive advantage in automotive transport. 17th *International Conference on Transport Means, Transport Means-Proceedings of the International Conference.* Kauno Technologijos Universitetas, Lithuania, pp. 45-48.

[10] Majerova, J. (2015). Analysis of Slovak Consumers Perception of the Green Marketing Activities. *Procedia Economics and Finance*, vol. 26, pp. 553-560.

[11] Moisander, J. (2007). Motivational complexity of green consumerism. International *Journal of Consumer Studies*, vol. 31, no. 4, pp. 404-409.

[12] Muralidharan, S. and Xue, F. (2016). Personal networks as a precursor to a green future: a study of "green" consumer socialization among young millennials from India and China. *Young Consumers*, vol. 7, no. 3, pp. 226-242.

[13] Musova, Z. (2010). Implementation of modern marketing concepts in the Slovak Republic. *Development of marketing theory and practice* - scientific monograph proceedings, Zilina: EDIS, pp. 47-52.

[14] Nadányiová, M. (2016). Greenwashing and its Impact on Slovak Consumers. *Littera Scripta*, vol. 2, pp. 68-78.

[15] Nadanyiova, M., Kicova, E. and Rypakova, M. (2015). Green marketing and its exploitation in Slovak companies. *Procedia Economics and Finance*, vol. 26, pp. 219-226.

[16] Olšiaková, M., Loučanová, E. and Paluš., H. (2016). Monitoring changes in consumer requirements for wood products in terms of consumer behavior. *Acta Facultatis Xylologiae Zvolen*, vol. 58, no. 1, pp. 137−147.

[17] Passaro, P., Perchinunno, P. and Schirone, D. A. (2015). Green Marketing and Sustainable Development: A Statistical Survey on Ikea Customers' Perception. *International Conference on Computational Science and Its Applications.* pp. 130-145.

[18] Young, W., Hwang, K., McDonald, S. and Oates, C.J. (2010). Sustainable consumption: green consumer behaviour when purchasing products. *Sustain. Dev,* vol. 18, no. 1, pp. 20-31.

[19] Yu, T. Y., Yu, T. K. and Chao, C. M. (2017). Understanding Taiwanese undergraduate students' pro-environmental behavioral intention towards green products in the fight against climate change. *Journal of Cleaner Production*, vol. 161, pp. 390-402.

MEDICAL TOURISM IN GLOBAL MARKET

Jozef Matúš[1,a], Matej Martovič[2,b,]*

[1]University of Ss. Cyril and Methodius, Faculty of Mass Media Communication, Slovak Republic

[2]University of Ss. Cyril and Methodius, Faculty of Mass Media Communication, Slovak Republic

[a]rektor@ucm.sk, [b]matej.martovic@fmk.sk

*Corresponding author

Abstract. In a global economy, medical tourism gets increasingly into spotlight. It represents a state when people living in one country travel abroad to receive a medical, dental, surgical or aesthetic care. Several various organizations, like Medical Tourism Index or Medical Tourism Association, engage in medical tourism by assessing top destinations for medical tourism, thus helping patients to choose on the basis of various indicators. The area of medical tourism in a global economy becomes an attractive business, especially for countries able to offer equal or better quality of health care for a smaller price. Free movement of goods and services, under the auspices of the World Trade Organization and its General Agreement on Trade in Services, has accelerated the liberalization of trade in medical services. Therefore, medical services have become more tradable and mobility of cross-frontier patients has increased, causing the term "medical tourism" to emerge after this agreement. The paper Medical Tourism in Global Market will address analysing the present state of tourism for health care and also anticipated future development, considering this area of business now worth 439 billion US dollars with 25 percent growth anticipated in next ten years. According to findings of Oxford Economics and VISA, it is expected that, alongside medical tourism, other sectors beside health care will grow – e.g. 340 new international airports in a period of decades, while the market of medical tourism can grow up to 3 trillion dollars by 2025.

Keywords: medical tourism, healthcare marketing, global marketing, global market

JEL Classification: M30, M31, P46

1. Introduction

In times of an open market, the globalization gets into all sectors of industry and services. "*Process of globalization, development of information technologies, growing competition at all kind of economy interact with need for changes in the structure of marketing goals and tools"* (Matúš, 2013). In the global market the health care is not an exception. Medical tourism gets into the front positions, while providers of health care or the governments of developing countries themselves focus their marketing goals on medical tourism. "*Changes in the economy structure and its activities manifest not only in the growth of service sector share at overall number of working people, but also within departure changes. Higher complexity of global economy, growing specialization, complicated relationships net neither among individual countries or regions, but also among industry sectors and services, influence growing demand"* (Skórska & Balcerowicz-Szkutnik, 2016). In the terms of medical tourism we do not talk about growing demand from domestic population, but at global market we do talk about growing demand coming from rich countries directing towards developing countries. In medical tourism among these countries belongs Malaysia, Thailand, Singapore or India.

2. Globalization of Medical Market

"*Generally, globalization means linking activities via regional and national borders into many fields of the life, for example, in economics, politics, culture, communication and others*" (Grofcikova, 2016). When talking about globalization in economics, we talk about global economy. "*Di Mauro and Forster (2008) define globalization as growing interdependence of economics through cross-border transactions with goods, services, natural resources, the capital and manpower. Contemporary manifestations of globalization are mainly reducing transport and communication costs, processing and transmission of information and facilitating and accelerating of international business and financial transactions"* (Grofcikova, 2016). We can also talk about globalization in the health sector, when the market opens with providers of health care. It is called medical tourism. Area of medical tourism becomes an attractive business in the global economy, especially for countries able to provide health care in the equal or in the better quality for lower price. Free movement of the goods and services under the auspice of World Trade Organization and its General Agreement of business with services accelerated the process of liberalization of trade with medical services. Medical services have become more tradable, mobility of cross-frontier patients has increased, causing the term "medical tourism" to emerge after this agreement. In global economy to get the claimed objectives, it is needed to use toll of so called international marketing. International marketing could be defined as process, whose goal is to search for opportunities in the world market. In classical meaning of international marketing this process includes searching for foreign markets, on which we can place our product. At medical tourism we talk more about searching for potential clients in international markets with goal to provide them health care without let services leaving national market. We do not talk about expansion of services towards to international markets, but about attracting the clients to our market. It is related to health travel and it becomes trendy. "*Online research in 2013 in the USA mentions, that almost 27% of patients became part of in any form health tourism. Number of traveling patients and costs for medical tourism increased in last few years, what helped trade to reach amount of 439 billion of dollars"* (Hong, 2016). Traveling for health becomes everyday part of the life of economical active people. However, medical tourism can be also risky. "*In 2014 Reverly Brignoni from New York was looking for cheaper way of medical intervention. She travelled to the clinic in Dominic Republic her friends recommended her. During the cure she died for pulmonary embolism. Inspection afterward found presence of bacteria's and breaking of biological rules in the clinic"* (Nelson, 2017). Therefore it is questionable, in what quality the providing services are, if the price is always decisive factor and what countries are safe and available for our health. Availability of countries in the area of medical tourism is also related with infrastructure of the country. While looking for holiday destinations, we choose the countries easy to get to. "*Transport infrastructure is tightly connected to economic development of the region. In the history we can find the examples, when economic growth positively influenced development of transport infrastructure, but also the examples, when under the influence of improved mobility the economy increased or both in the same time*" (Botlík et al., 2015). Success of the country in the global market in the area of medical tourism depends on the development of international infrastructure. Countries have to have in mind the fact, that the presence of international airports with direct connection to economically developed countries as Europe, USA or Canada is a must. "*Current period is characterized by ongoing process of globalization, development of information and communication technologies and progress of materialization of knowledge from scientific and technical developments. In this situation, it is not difficult to produce, but to sell and that´s why marketing and its individual tools have been gaining ground. Implementation of marketing tools is important also in relation to sharpening competition on all types of the markets. From this perspective, marketing is becoming an inevitable tool of management for all, not only for market subjects. Product as a tool of marketing mix is related to – apart from physical products – services, organizations, territories, people but also ideas*" (Matúš & Martovič, 2016).

3. Defining the term medical tourism

"*Even there is no existence of standard definition of medical tourism, we can understand it as the process, when consumers decide to travel across the international borders with intention to get any kind of health care. This care can include all set of medical services, often including dental care, cosmetic surgery or fertility treatment"* (Ebrahim, 2017). Similarly defines this area OECD. It is area, where people living in one country are traveling to another country to get medical, dental chirurgic or aesthetic care. In the same time, they get equal or even the better medical care for lower costs as they would get in their country. Carrera defines medical tourism as "*organized traveling outside local environment for keeping, making stronger or restoration of welfare and the body of individual"* (Lunt & Carrera, 2011). Medical tourism has its historical background. When looking back to the past, the nobility used to travel for health care for example to the spas for different procedures, same as we can see nowadays. Low costs are main reason, why patients from industrial countries are looking for medical care in the less developed countries. Another reason, why patients are looking for medical care outside their regions, is long list of expectants, what do not limit them in the case of traveling. Nowadays, medical tourism has many definitions, as it is the area that still develops and gets front position. When we define medical tourism, the condition of traveling of patient abroad with the goal of getting better health condition or getting aesthetic surgery has to be fulfilled.

4. Providers of medical care in medical tourism

In the area of medical tourism there are acting different providers of health care in different countries of the world, however primarily we talk about developing countries. Providers are mostly from private sector, but also from public sector, for example in Singapore and Cuba. In the case of medical tourism we do not have to talk only about big providers of health services, but also about smaller providers. Small private clinics of aesthetic surgery are able to act in the area of medical tourism same as big medical facilities. Countries and the governments also act in the global market of medical tourism. They can expand their own medical service and create partnerships with multinational players. Ensuring accreditation from international programs is a part of development of services. For example, partnerships and surveillance of overseas hospitals and universities, mostly from American private sector is able to fulfil similar job. Medical touristic facilities are often focused on specific groups – for example Bumrungrad has the wing for patients at Middle East. (Cohen, 2009)

5. Top countries in medical tourism

Countries with assumption to be success in medical tourism are primarily developing countries, which are able to provide health care for lower price compared to price the patient would pay in his domestic country. American study from 2016 shows chart (below the text), which countries are for Americans the best in comparison to saved costs, that they would have to pay for cure in the USA.

Figure 1: Top medical tourism destination around the globe

Source: (Nelson, 2017)

The upper chart shows ten the most favourite destinations for medical tourism all over the world (from left to right) India, Malaysia, Thailand, Turkey, Costa Rica, Mexico, Taiwan, South Korea, Singapore and Brasilia. The percentage upper each country shows the average saving of costs for medical treatment in each country in comparison to costs in the USA. First five countries we describe below (Nelson, 2017).

5.1 India

Promoted by the government and stimulated by corporate growth in the area of health care, India is considered as the most favourite destination of "medical tourists", who cross national borders and look for treatment cheaper than in their domestic country. India checks in medical tourists from different countries of the world from Bangladesh and Persian Gulf to citizens of the USA, whose treatment in the USA would costs them 10times more than in their own country. Canada's and United Kingdom's citizens travel to India to avoid long waiting times and routine procedures. The key to succeed in medical tourism in India are high-quality health facilities, English speaking and professional doctors and the low price. For example, the price for cardiac surgery is different in different countries. In Britain the price is circa 700 000 dollars, in the USA 150 000 dollars and in India from 3 000 to 10 000 dollars.

In India, the medical tourism has become a part of public politics of the country. (Gupta, 2012)

5.2 Malaysia

Malaysian government identified medical tourism as growth sector during the financial crisis in 1997 to 1998, when significant amount of Indonesian became turn to Malaysian private hospitals for affordable and quality health care. In next years, private hospitals started cooperate with the government and Ministry of Health. They tried to attract not only neighbouring Indonesians, but also people from other countries (China, India, Japan, Nepal, United Kingdom, USA and Middle East countries). Malaysian government continued to support private health facilities with goal to invest into internationally recognized accreditation systems and to invest into state of the art health facilities with the goal to develop technologies (Ormond, 2014)

5.3 Thailand

Thailand is constantly recording the growth of medical tourism. Similar as in the other countries, in Thailand, there is interest of the government to attract more and more cross-frontier patients, while there is fear that domestic population will suffer, as health facilities from capacitive reason will not be able to provide health care for domestic citizens. Ministry of Public Health created the strategy of medical tourism. Within four years, Ministry wants Thailand to become the leader country in the area of medical tourism in Asia with the goal to reach 6 billions of dollars annual turnovers (Finch, 2014)

5.4 Turkey

In Turkey, after year 1990 investments into private sector of health care increased and made great progress. Turkey has become the destination of medical tourism, that welcomes about 40 000 medical tourist annually. Turkey has become the country with quality and affordable health care - primarily in the area of organ transplantation, cardiology, traumatology, spine surgery, neurosurgery and others (Yilmaz, 2012).

5.5 Taiwan

Taiwan government also understood the importance of medical tourism. In 2007 the government began to cooperate with private sector to focus on five items in the area of health services: liver transplantation, craniofacial surgery, cardiovascular surgery and artroplatika. The government presented the project “Medical Service Internationalization Flagship Program” with financial resources over 40 millions of dollars. The government together with others health organizations created net of 20 qualified hospitals with excellent health services for patient all over the world. They created also special group Taiwan Task Force on Medical Travel (TTFMZ) that serves as platform to integrate resources and to improve cooperation among governing organizations and segments of industry (as hotels, travel agencies, transfer companies, restaurants or flight companies) and participating hospitals (Lui, 2012).

6. Conclusion

By gradual globalization of medical market and by decreasing of transfer time, medical tourism gets front positions. Important role is played primarily by Asian countries, which have good access to resources and technologies. It is the area of medical tourism that can help countries such as India to grow in GDP, because the potential for health care provision is quite high. Governments' investment in this area can bring positive economic results, but it is essential that they continually invest funds into new technology as well as education of health care providing personnel. The USA and Europe countries are already addressed by cheaper health care interventions and the people of these countries are beginning to use medical tourism. In particular, an expensive US healthcare system made people turn to countries as India that are able to provide the same health service or even 80% cheaper. It is expected that the field of medical tourism will continue to grow. According to Oxford Economics and VISA, it is assumed that health care tourism will help to grow other sectors, such as 340 new international airports over the decades, with the medical travel market rising to 3 trillion of dollars by 2025.

References

[1] Botlík, J., Botlíková, M., Zedková, A. and Kostková, M. (2015). Transport infrastructure and business activities – globalisation consequences of opening of the Moravian-silesian region. *Globalization and its socio-economic consequences.* Žilina, Slovakia, pp. 45-57.

[2] Cohen, D. J. (2009). Transplant tourism: a growing phenomenon, *Nat Clin Pract Neph*, vol. 5, pp. 128-129.

[3] Ebrahim, A. H. and Ganguli, S. (2017). Strategic priorities for exploiting Bahrain´s medical tourism potential, *Journal of place managment and development,* vol. 10, pp. 45-60.

[4] Finch, S. (2014). Medical tourism driving health care disparity in Thailand. *Canadian medical association journal,* vol. 186, pp. 11-11.

[5] Grofcikova, J. (2016). Globalization and its impact on the corporate financial managment and control. *Globalization and its socio-economic consequences.* Žilina, Slovakia, pp. 547-555.

[6] Gupta, V. and Das, P. (2012). Medical tourism in India, *Clinics in laboratory medicine*, vol 32, pp. 321-330.

[7] Hong, Y. A. (2016). Medical Tourism and Telemedicine: A new frontier of an old busines, *Journal of medical internet research*, vol. 18, pp. 12-16.

[8] Lui, I. C. (2012). The research o medical tourism policy network in Taiwan. *Sociology Mind*, vol. 2, pp. 458-464.

[9] Lunt, N. and Carrera, P. (2011). Advice for Prospective Medical Tourists: systematic review of consumer sites. *Tourism Review,* vol. 66, pp. 57-67.

[10] Matúš, J. (2013). Nature and significance of identity in marketing. *Marketing identity, design that sells*. Trnava, Slovakia, pp. 13-19.

[11] Matúš, J. and Martovič, M. (2016), Interaction of brand and marketing (Implementation in health service). *Marketing Identity*, Trnava, Slovakia, pp. 195-2013.

[12] Nelson, R. (2017). The growing trend of medical tourism. *American journal of nursing,* vol. 117, pp. 18-19.

[13] Ormond, M., Wong, K. M. and Chan, C. K. (2014). Medical tourism in Malaysia: how can we better identify and manage its advantages and disadvantages? *Global health action,* vol. 7, pp. 96-99.

[14] Skórska, A. and Balcerowicz-Szkutnik, M. (2013). Globalization as the determinant of high-tech sectors development. *Globalization and its socio-economic consequences.* Žilina, Slovakia, pp. 2028-2035.

[15] Yilmaz, E. (2012). Medical tourism: an assessment on Turkey. *International Conference on Knowledge, Economy and Managment.* Istanbul, Turkey, pp. 1045-1060.

FACILITY MANAGEMENT AND PROPERTY MANAGEMENT AS CONTRIBUTION IN INTERNATIONAL PROGRESSING

Dominika Matusova[1,a,*] Olga Ponisciakova[2,b]

[1]University of Zilina, Faculty of Operation and Economics of Transport and Communications, Department of Economics, Univerzitna 8215/1, 010 26 Zilina, Slovak Republic

[2]University of Zilina, Faculty of Operation and Economics of Transport and Communications, Department of Economics, Univerzitna 8215/1, 010 26 Zilina, Slovak Republic

[a]dominika.matusova@fpedas.uniza.sk, [b]olga.ponisciakova@fpedas.uniza.sk

*Corresponding author

Abstract. Facility management (FM) is a dynamic field that relates to the general public. FM may significantly contribute to the sustainability of the building, as it covers a wide range of activities in the field of environmental, social and economic aspects. FM with its holistic approach will play an important role in the coming years and rive future requirements. Article is focused on characterizing the facility management (FM) and property management (PM). International Facility Management Association associates more than 18,000 members from 50 countries, defines the FM as a method in companies harmonize the employees, work activities and work environment, including the principles of business administration, architecture, humanities and technical sciences. Property and Facility Management deals with planning, construction and property management issues. FM can also provide Property Management services through qualified staff with years of experience. The PM relates to: property ownership, owner obligations, flexibility requirements, quick response to user needs. With changing tenants and their new demands is needed to face a new challenges. Article describes the PM services. The PM services are mainly focused on: representation of the property owner in the proceedings and management before the competent authorities; closing, terminating and making changes to the contracts relating to the supply and operation of real estate services and management on behalf of the landlord; acting on behalf of the property owner with suppliers, concluding the agreements and conciliation; implementation of all legal acts relating to real estate management, including the transfer and take-over of rented premises.

Keywords: facility management, property management

JEL Classification: K11, K12, O32

1. Introduction

The facility management model deals with the relationship between customer requirements and delivery of the service, and presents different levels of possible facility management interaction. (Jylha & Suvanto, 2015). The range of FM services is structured into two sections according to client requirements:

- Space and infrastructure requirements

- Requirements related to workers and organizations.

Berzakova & Bartosova (2016) mentioned that all the businesses have managers who manage different activities or operations. These operations are usually divided into two basic groups core activities and secondary activities that support the core ones. Kordalska & Olczyk (2016) mentioned on competitiveness and economic growth in these fields. According to McCarroll (2015) concentrating on the world of Facilities Management (FM), the metaphor of house is used alongside the concept of liminality to support further understanding of its current position as a secondary service, and overall identity within organisations at a time of transition. Vetrakova et al. (2013) emphasized that FM has got a important role for management of company, mainly with tool of FM – outsourcing. Vykopal (2012) perceives the facility management as an effective managerial control strategy.

Property management is the operation, control and oversight of real estate as used in its most broad terms. Management indicates a need to be cared for, monitored and accountability given for its usefull life and condition. This is much akin to the role of management in any business.

Property management (PM) as part of Facility management includes:

- property ownership brings:
- obligations,
- flexibility requirements,
- fast responses to user needs.

It is needed to face a new challenges with changing tenants and their new demands.

Figure 1: Property Management and its items

Source: (http://www.falconerp.com/proprty.html)

The PM is further focused on:

- conclusion of short-term lease agreements on supplementary premises under the power of attorney;
- arrangements with insurance company representatives for reporting and settlement of insured events;
- ensuring appropriate promotion for the purpose of renting premises, real estate presentation;
- collaboration with brokers of real estate companies in the preparation and updating of the leasing concept, active assistance in searching for potential tenants;
- communication with tenants of real estate;
- development of the operating order of the object and supervision of its observance;
- representation of the property owner in the processing of invoices in cooperation with the accounting company;
- control of real estate accounts in cooperation with the accounting firm;
- checking compliance with binding payment terms (rent, operating costs, energy, management company,…);
- monitoring and possibly proposing adjustments to the amount of advance payments for lease-related services;
- settlement of actual costs of services, notification of tenants with the cost of services, including arranging advance payments;
- keep constantly on the compliance of customer requirements with the possibilities of technical management of buildings and in case of potential conflicts actively seek compromise real solutions.

1.1 Life cycle of building within Property Management

Each building object, regardless of its purpose or size, passes through its life cycle. The lifecycle of buildings can be defined as a time period from the idea of construction and its transformation in the design through, the realization, its use and possibly the alteration of the structure until its destruction. Throughout the period of the idea, we define the outlines of the future investment intention, formulate basic questions that clarify the final proposal, make fundamental decisions that will affect the resulting comfort of use and the economic and energy intensity of the operation, define the objectives to be achieved and further important milestones. (Anderson & Kantarelis, 2016)

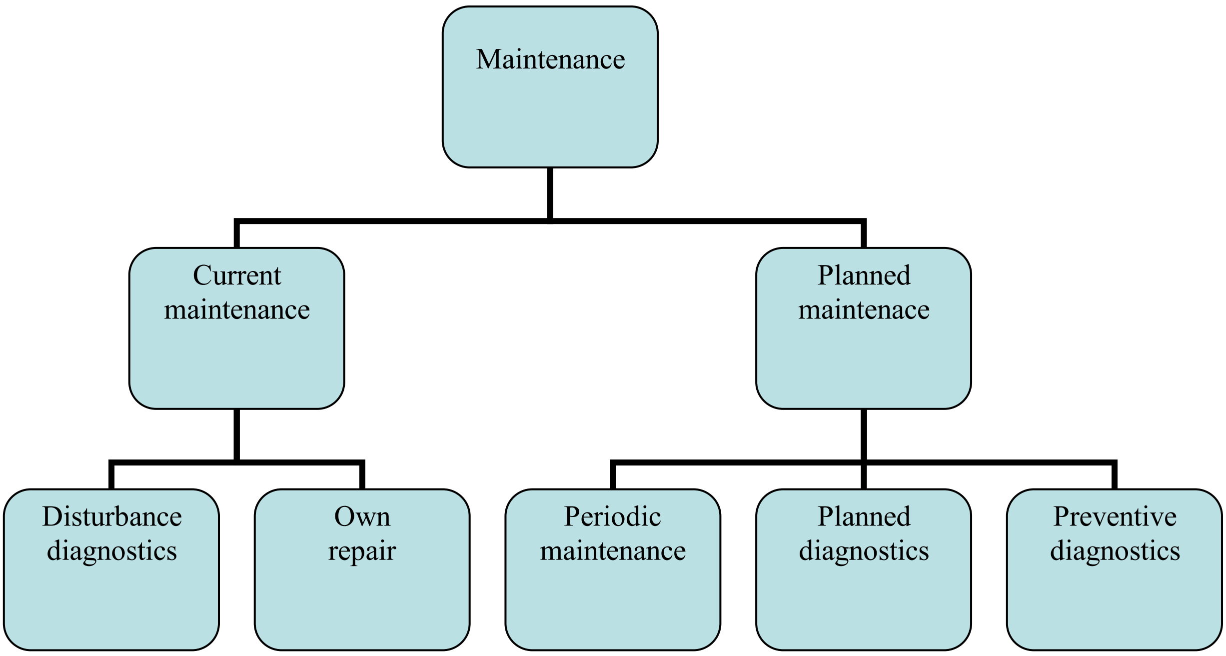
The lifecycle of buildings can be broken down into phases of the life cycle of buildings. Each such phase has its specific activities in which the decision that is characteristic of a given life cycle is taking place. The most important phase is the pre-investment phase. (Machan & Chesher, 2016) The phase in which these important decisions are made and in which it is possible to influence the cost of the construction work throughout the life cycle.

The origin of each object is conditioned by inputs, both material and energetic. The energy consumed and materials required for operation and maintenance are consumed throughout the life of the building. At each life cycle, not only is there a large amount of energy, but also a lot of waste and emissions. All these factors influencing the environmental impact of a building can be influenced prior to construction. It is generally known that the choice of cheaper solutions for the construction and implementation of the project during the use period will significantly increase the cost during the period of use of the building. From an economic point of view, the period of use of the building is the most demanding and constitutes ¾ of the total cost over the lifetime of the construction, of which one third consists of management and maintenance costs. Maintenance generally represents one of the most important activities carried out on real estate, because by its targeted and planed interventions we are able to extend the technical life of the immovable property. Maintenance, as a general concept, hides three areas: building maintenance, maintenance of technologies and maintenance of production and special technologies. The following will focus on building maintenance. All property owners have to deal with building maintenance of buildings. Construction Act No. 186/2006 Coll., as amended, refers to the obligation imposed on the owners of buildings who are obliged to maintain the building throughout its life, in order to ensure its good construction and there is no its depreciation, but on the contrary its user-friendliness has been prolonged. If the owner of the building duly fails to keep his property, the building office may order him to do so.

Real estate is a capital investment for future benefits, which is achieved through an active and planned approach that prevents and minimizes emergency interventions due to emergency situations. In addition, the building law orders the owner, according to § 138 Building Maintenance, to properly maintain the construction.

According to the Building Act, the maintenance of a building means work that ensures its good construction so as not to degrade the building and extend as much as possible its usefulness. The maintenance diagram is illustrated graphically in Figure 2.

Figure 2: Maintenance diagram



Source: Own processing

Maintenance of the building is the responsibility of each of its owners. The owner has the obligation to maintain the construction in accordance with the documentation verified by the building authority and the decision of the building office so that there is no danger of fire and hygiene defects, no degradation of the building or its appearance has occurred, and so as to maximize its usefulness. The maintenance of building structures, technical systems, devices and components is therefore a set of activities to ensure that their operational status is maintained or failing this will be rapidly restored. We must include diagnostic, maintenance and repair procedures for the maintenance of building structures. We are only able to tackle the issue globally and seek ways to improve the maintenance practices of such a wealth of society as the real estate is undoubtedly and to pass it on to other generations in a state-of-the-art situation.

According to Markova & Lesnikova (2015) - experience with past or present maintenance in the private and government sectors could indicate that maintenance is an activity related to the repair of facilities of buildings after it becomes inoperative. Once the facility management principles have been adopted this view should turn away and draw attention to how to perform non-reactive maintenance, and this way to prevent failures. Scheduled maintenance serves to prevent operational failures. Other expected benefits can be:

- Extending and optimizing the lifetime of buildings
- Improving operational safety
- Improving the readiness of the building to fulfil the required function
- Optimization of operational processes
- Reducing the number of faults

1.1.1 Planning the cost of running the building

Capturing the current status means converting passports to objects. Objects need to describe the individual components that generate maintenance and recovery costs over time. Each construction element has to be evaluated by the state of wear and from this point quantified the recovery and maintenance costs that each element of its cyclical pattern has for each structural element. Subsequently, the costs of renewal and maintenance for the whole object are calculated for the lifetime of the building or for the specified time investment horizon. (Gajdzik & Sroka, 2012) For these calculations, it is also advisable to view the individual components as this information can be used to make real repairs and not just to determine the amount of funds needed. Similarly to the financial requirements for the object, it is necessary to quantify the revenue side of the matter for the reference period. The administrator of an object in this regard only occupies „net" income from housing units per as a whole. This means that payments for energy and services are not essential for revenue tracking, as these items generate only a transfer of money that moves from tenants through the property manager to real energy and service providers. Administrators are interested in revenue that is tied or intended to maintain and restore objects. This is in particular a fund for repairs or other charges, which are bound, for instance – pay per elevator. According to (Endel et al., 2015) - brownfield structures often occupy extensive areas in urban areas of our cities. Owing to this fact, the compactness of built-up area of settlements and their overall urban economy is strongly impaired, which affects adversely primarily the expenses on operation of cities. According to Pasek (2015) - the operating costs of an average building makes approximately 80 % of all the expenses during its life cycle.

2. Property management in the global world

In Canada, the laws governing property management and landlord/tenant relations are generally speaking, a Provincial responsibility. Each province and Territory makes its own laws on these matters. In most cases any person or company can offer PM services and there are licensing requirements. Other that specific laws in each Province and Territory governing these matters. They are governed by English Common Law, except in the Province of Quebec where the Civil Code is used in place of English Common Law. In some cities, the Provincial Legislation is supplemented by City by laws. British Columbia – licensing of property managers is regulated by the provincial government and licensing by the BC Real Estate Council (BCREC).

In India, there is no statutory regulation of property management companies, real estate agents or developers. In 2013, a Real Estate Regulation and Development Bill was passed by the Union Cabinet, but has yet to take effect. The bill seeks to set up 3 regulatory bodies in the country. The Real Estate Regulation and Development Bill was passed by the Union Cabinet in early 2016 and this is expected to bring about a sea change in the management of real estate in India.

In the United Kingdom there is no statutory regulation concerning property management companies. Companies which manage rented residential property are often members of the Association of Residential Letting Agents. Companies or individual landlords who accept tenancy deposits for assured shorthold tenancies. The usual form of residential tenancy are required by statute to be members of a Tenancy Deposit Scheme. Companies which manage apartment buildings are often members of the Association of Residential Managing Agents (ARMA). ARMA is a trade association for firms that manage private residential leasehold blocks of flats in England and Wales. With over 280 firms in membership ARMA also campaigns for improvements in the legislation governing the leasehold sector.

Most states, such as New York, Texas and Colorado require property management companies to be licensed real estate brokers if they are collecting rent, listing properties for rent or helping negotiate leases and doing inspections as a third-party. A PM may be a licensed real estate salesperson but generally they must be working under a licensed real estate broker.

According to Kuda et al. (2015) - public contracts in the Czech Republic are a very sensitive and frequently discussed area where the safe price, which would not include other investment in both implementation and usage phases of the facility, is discussed more and more often.

According to Loosemore & Zou (2005) - risk management is no longer the preserve of insurers and financiers but is increasingly being recognised as a core businesses objective of property development, construction and facilities management companies worldwide. This is also true in China following recent changes in environmental and safety laws.

According to Tudzi (2006) - tertiary education is an important wheel for the development and progress of a nation. In Ghana it is heavily dependent on real estate since distance education is quite a new concept. However, there are problems related to the management of the landed properties.

3. Conclusion

This paper was focused on facility management and property management. Facility management (FM) is a professional management discipline focused upon the efficient and effective delivery of support services for the organizations that it serves. It serves to ensure the integration of people, systems, place, process and technology. According to Vagner & Bartosova (2016) - facility management has already a stable position in the world. Enterprises all over the world use it as an effective tool for costs optimization and operational processes.) Property management (PM) is also the management of personal property, equipment, tooling and physical capital assets that are acquired and used to build, repair and maintain end item deliverables. PM involves the processes, systems and manpower required to manage the life-cycle of all acquired property as defined above including acquisition, control, accountability, responsibility, maintenance, utilization and disposition. According to Kutvonen (2008) - management on inter-enterprise collaborations (business networks) still face grand challenges especially in terms of managing interoperability of non-functional properties (NFPs) at various levels (technical, semantic, pragmatic). CAD systems are very important for FM and PM – emphasized (Redlein & Rohrhofer, 1995).

Acknowledgment

This paper is an output of the science project 1/0870/16 The application of facility management in the business of transport companies in Slovakia. It led by the doc. Ing. Viera Bartošová PhD. From the workplace University of Zilina, Faculty of Operation and Economics of Transport and Communications, Department of Economics, Univerzitna 1, 010 26 Zilina, Slovak Republic.

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, no. 2, pp. 96–114.

[2] Berzakova, V. and Bartosova, V., (2016). The Basic Framework of Facility Management. *Proceedings of ICMIBI International Conference on Applied Social Science and Business.* Windsor, United Kingdom, pp. 3-8.

[3] Endel, S., et al, (2015), The Influence of Brownfields on Urban Economy of a Settlement. *Proceedings of International Conference on Architectural, Civil and Hydraulics Engineering (ICACHCE).* Guangzhou, China, pp. 337-342.

[4] Gajdzik, B. and Sroka, W. (2012). Analytic study of the capital restructuring processes in metallurgical enterprises around the world and in Poland, *Metalurgija*, vol. 51, no. 2, pp. 265-268.

[5] Jylha, T. and Suvanto, M. E. (2015). Impacts of poor quality of information in the facility management field. *Facilities*, vol. 33, no. 5-6, pp. 302-319.

[6] Kordalska, A. and Olczyk, M. (2016). Global Competitiveness and Economic Growth: A One-Way or Two-Way Relationship. Equilibrium. Quarterly Journal of Economics and Economic Policy, vol. 11, no. 1, pp. 121-142.

[7] Kuda, F. et al, (2015), Selection of a Construction Contractor for Public Contracts in the Czech Republic according to Safe Tender Price. *Proceedings of International Conference on Architectural, Civil and Hydraulics Engineering (ICACHCE).* Guangzhou, China, pp. 65-68.

[8] Kutvonen, L., (2008). Tools and infrastructure facilities for controlling non-functional properties in inter-enterprise collaborations. *Proceedings of 12th Enterprise Distributed Object Computing Conference Workshops*, Munich, Germany, pp. 23-30.

[9] Loosemore, M. and Zou, P. X. W. (2005). Risk and opportunity management systems for property development and facility management companies. *Proceedings of International Research Symposium on Advancement of Construction Management and Real Estate*, Hangzhou, China, pp. 1-11.

[10] Machan, T. R. and Chesher, J. (2016). Government Budget Crises, *Geopolitics, History, and International Relations*, vol. 8, no. 1, pp. 169–176.

[11] Markova, V. and Lesnikova, P. (2015). Strategic level of sustainable development of enterprises. Ekonomicko-manazerske spektrum, vol. 9, no. 1, pp. 9-15.

[12] McCarroll, P., (2015).The house that Facilities Management built a story of identity and metafor in a secondary services. *Proceedings of 33rd Standing Conference on Organizational Symbolism (SCOS)*, Nottingham, England, pp. 291-305.

[13] Pasek, J. (2015). Cooperation Between The Architect And Facility Manager Or Property Manager. *Proceedings of 7th Architecture in Perspective Conference*, Ostrava, Czech Republic, pp. 70-72.

[14] Redlein, A. and Rohrhofer, R. (1995). Use of CAD systems – Economic and organizational impact. *Proceedings of Conference on Integration in Manufacturing – Opening Productive Partnerships: Concerted Efforts for Europe*. Vienna, Austria, pp. 101-107.

[15] Tudzi, Eric P., (2006). Educational property and facilities management in Ghana: a new dawn. *Proceedings of 4th Conference of the World-Association-for-Sustainable-Development (WASD),* Naples, Italy, pp. 116-125.

[16] Vagner, L. and Bartosova, V., (2016). The Utilization Rate of Facility Management in Small and Medium-sized Enterprises in the Slovak Republic. *Proceedings of ICMIBI International Conference on Applied Social Science and Business.* Windsor, United Kingdom, pp. 26-30.

[17] Vetrakova, M. et al. (2013). Outsourcing Of Facility Management. *E+M*, vol. 16, no.1, pp. 80-92.

[18] Vykopal, J. (2012). Facility management as an effective managerial control strategy. In: *Ekonomicko-manazerske spectrum*, vol. 6, no. 2, pp. 40-42.

THE PERSONNEL MARKETING AS A COMPETITIVE TOOL IN GLOBAL ENVIRONMENT

Jaroslav Mazanec[1,a,*], Alzbeta Bielikova[2,b]

[1]University of Zilina, Faculty of Operation and Economics of Transport and Communications, Department of Economics, Univerzitna 1, 010 01 Zilina, Slovak Republic

[2]University of Zilina, Faculty of Operation and Economics of Transport and Communications, Department of Economics, Univerzitna 1, 010 01 Zilina, Slovak republic

[a]jaroslav.mazanec@fpedas.uniza.sk, [b]alzbeta.bielikova@fpedas.uniza.sk

*Corresponding author

Abstract. This paper deals with personnel marketing that refers to a specific connection of marketing and personnel management. In general, the aim of personnel marketing is to improve the marketing promotion of employer´s activities in seeking and acquiring workforce in eyes of potential candidates. Nowadays, the personnel marketing is a separate discipline from personnel management. The primary reason for origin is that workforce belongs among significant factors of competitive advantage in the global economy. Personnel marketing focuses on the domestic and foreign labour market to find a potential workforce with required education and experience. At present traditional methods of gaining workforce are not attractive for potential candidates. The reason is the decrease of unemployment rate in European Union (EU) countries. It means that business entities are forced to apply an active approach in seeking, acquiring, motivating and convincing the workforce to increase the competitiveness of the enterprise in the global environment. Based on these facts, personnel marketing is an indispensable tool to increase competitiveness in relevant companies. The aim of the paper is to identify which of tools (product, price, promotion and place) of personnel marketing has the most significant influence on the decision-making on the selection of working position or employer based on a questionnaire. Based on the results of the survey, we find out which of the tools of the personnel marketing mix plays the most important role for potential candidates and suggest recommendations for business entities.

Keywords: Personnel Marketing, Personnel Management, Personnel, Competitiveness, Global Environment

JEL Classification: M12, M31, M50

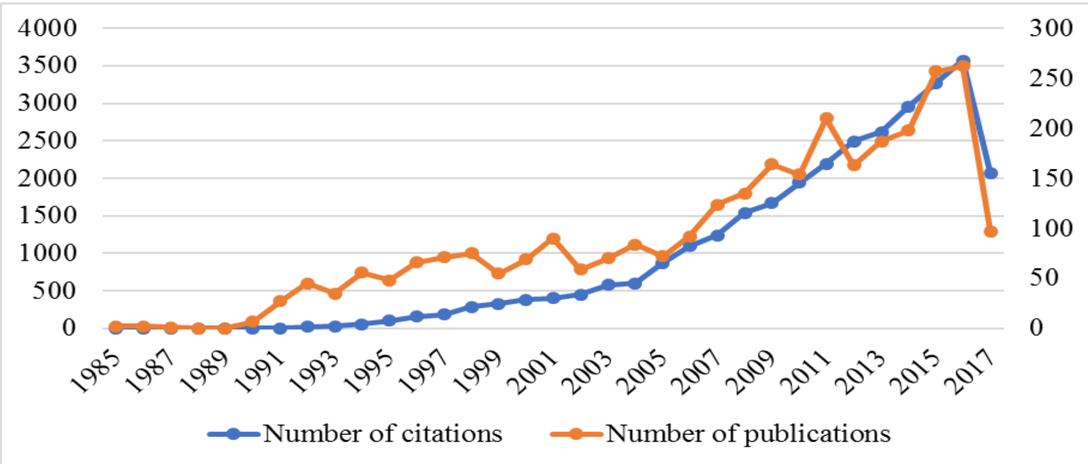
1. Introduction

In the up-to-date competitive environment, staff management faces extra challenges than in the past (Stefko, 2001). The reason is globalization, which removes barriers between countries. Postelnicu, Dinu & Dabija (2015) claim that globalization is a necessary phenomenon in the history of mankind. Recently, multinationals have been using marketing tools to gain the competitive advantage in the form of skilled labour through personnel marketing.

For Slovak enterprises, personnel marketing is an extremely important tool because in 2017 the Slovak economy has reached the lowest unemployment rate. It associated with favorable economic growth. Kondratiuk-Nierodzinska (2016) argues that economic growth is a long-term process that is shaped by economic, technological and social factors. Furthermore, Belas, Dvorsky, Tyll & Zvarikova (2017) point out that Naude, et al. (2008) argues that higher education is an important factor affecting the economic growth of society. However, the current problem of unemployment is the structure of job seekers. Surmanova & Reiff (2016) argue that long-term unemployment is a problem especially in the districts of Central and Eastern Slovakia, as well as the structure of applicants. Vojtovic & Krajnakova (2013) claim that unemployment is a serious economic and social problem. The structure of job seekers in connection to inadequate work habits forces businesses to look for suitable employees outside of the region in which the company operates. In some cases, businesses are looking for suitable employees outside of the country.

Based on the Web of Science (WoS), we claim that personnel marketing is a topical issue not only for employers but also for many scientists. The reason is that in recent years the number of scientific publications on personnel marketing has increased in comparison with the period before 2005. In addition, the number of cited publications on personnel marketing tends to increase. Figure 1 shows a detailed development of the total number of publications and citations about personnel marketing.

Figure 1 Number of citations and of publications with topic of personnel marketing from 1985 to 8th September 2018



Source: authors based on Web of Science (2017)

2. Literature review

Personnel marketing is emerging as a new phenomenon based on a combination of personal management and marketing tools. On the other hand, Koubek (2011) argues that HR is a process of creating conditions for effective job execution and job placement in the context of other jobs in the firm and in the context of work and production tasks in the enterprise. In general, marketing is a set of activities to create and introduce products that offer value to customers, partners, and society in a wider context. The essence of marketing is the philosophy of doing business, which reflects shared values and conviction about the importance of creating value for customers. This philosophy relies on information from customers that focus on decisions and solutions to major issues (Mohr, Senqupta, & Slater, 2010). Novotny (2016) explains that marketing mix tools can be used as an initial point for defining tools for a personnel marketing mix. Myslivcova (2015) emphasizes that personnel marketing contributes to increasing employee satisfaction and improving career development.

According to Štefka (2001), personnel marketing is the process of planning and implementing a marketing concept in the field of human resources to formulate and maintain the workforce. Personnel marketing can be divided into internal and external personnel marketing. Internal personnel marketing is characterized by a positive impact on business vision, job rotation, personal development, social benefits, performance and employer's brand. External personnel marketing is achieved through collaboration on bachelor and master work, trainee programs, recruitment in universities, internal recruitment, and employer branding. The "employer brand" concept is based on a similar concept as a brand in product and service marketing (Jorn, 2015). Berlet (2015) recommends how to optimize marketing tools for external personnel marketing in health care. The survey was applied based on 154 questions related to knowledge, applications and benefits of 43 personnel marketing tools. It finds that internet tools are more valued in terms of benefits compared to conventional tools. Furthermore, it finds that non-monetary factors and measures for the development of human resources belong to positive evaluators. (Lazaroiu, 2016) The most effective tools of personnel marketing contribute to creating working conditions and developing the employability of the employer. He adds that these two tools are a priority in the development of human resources. However, monetary stimulates need to be considered to effectively create an employer's mark.

Nadanyiova (2016) points out that personnel marketing is a relatively new approach to recruiting employees. In addition, Nadanyiova (2016) claim that personnel marketing is adapting to new trends due to the global market. Szarkova, et al. (2010) defines personnel marketing as a specific link between marketing tools in the human resources field. Koubek (2001) argues that the basis for success is mainly mutual trust between managers and employees. Among other things, Ungerman (2016) claims that an employee is a customer based on personnel marketing. Furthermore, Janoskova (2016) emphasizes that personnel marketing is a necessary tool from a global perspective. Currently, many businesses tend to attract workers with the requisite qualifications and personality characteristics, irrespective of the nationality of the tenderer.

The goal of personnel marketing is to achieve a competitive advantage in the field of human resources through marketing tools that aim at finding and acquiring high-quality people and building a positive image of the business. Personnel marketing was primarily focused on the external labour market. (Mihaila, 2016). From a broader point of view, personnel marketing means the marketing of staff that includes internal marketing. The private sector deals with internal marketing in the context of the internal competitive environment of the enterprise to maximize the performance of employees in achieving business goals (Stefko, 2001).

Personnel marketing tools include marketing tools "product, price, promotion, place, people". The marketing tool "product" means a comprehensive offer of a business for a potential employee in terms of job, career development, workplace conditions, working time, social benefits. The "price" marketing tool is a worker's salary that consists of a fixed and moving component. Daniel & Lauko (2014) points out that in many European countries wages differ depending on gender. However, this behaviour is a question of ethical values within an enterprise. Barbu (2013) evaluates the ethical principles of Romanian managers based on six questionnaires in three urban sports clubs.

The marketing tool "promotion" refers the communication policy of the organization. In the case of personnel marketing, it has the same form as the marketing of products, includes advertising, public relations, personal communication, and so on. The "place" marketing tool is a distribution policy. The position of the potential workplace, the mode of transport and the time-consuming nature of the journey to work is of great importance for the employee. The marketing tool "people" is referred to as staff. Its use is particularly endeavoured to define a marketing mix of services, as the staff is a central factor in personnel marketing, and at the same time a key factor in business processes (Jarosova & Corejova, 2015). In providing services, the staff has an immediate impact on the quality of the services provided (Stefko, 2001).

3. Methodology

The aim of the article is to find out which personnel marketing tool is most attractive to prospective seekers via a questionnaire. The questionnaire itself consists of three parts, namely socio-demographic parts, questions about personnel marketing and job mobility. The total number of respondents was 384.

4. Results

In the introductory part, we find out sociological and demographic data on respondents, based on results of questionnaire more than 40% of respondents have income up to 599 €. It means less than average wage in the Slovak economy. However, only 18% of respondents have an income ranging from 999 - 1 199 €.

Furthermore, we find out that respondents consider wage assessment and flexible working time as the most important benefit from an employer. Interestingly, adequate wage assessment and flexible working hours are required, above all, by respondents with a university education in the productive age range from 25 to 34 years. Other benefits include good working conditions, an interesting social program, etc. Based on the results of the questionnaire, we claim that almost 25% of respondents consider to the strongest stand - a sense of detail. Further, logical thinking, ability to work in a team (less than 20%), interest in continuous education, communication skills (more than 10%).

The final part of the questionnaire looked at work mobility. We find out that most respondents are not willing to move for a job offer (52.9%). In an open question, respondents argue that the primary reason for the reluctance to move is mainly family and high relocation costs. In addition, we note that almost 60% of respondents are unaware of the fact that the Ministry of Labor, Social Affairs and Family of the Slovak Republic provides a transfer allowance for work. However, less than 40% of respondents believe that the maximum average moving allowance is less than 210 €, with a maximum contribution of 1,327.76 €. On the other hand, more than 70% of respondents are willing to take up employment outside the municipality of residence, with 50% of respondents willing to work for about 30 - 45 minutes, on the other hand, less than 7% of respondents are willing to commute about 60 - 90 minutes.

Currently, the average cost of transport is less than 40 €, but if they have a better job they are willing to pay more than 55 € on average. Based on the results, we claim that the average starting time is less than 45 minutes, with fewer than 50% of respondents working less than 15 km. However, almost 65% of respondents think that the state provides a job attendance allowance, according to respondents, the maximum amount of the job-commuting contribution is less than 70 €. In fact, the maximum contribution for starting work is 135 €.

Based on these results, we claim that private businesses should offer potential candidates flexible working hours and adequate wage assessment, which can positively influence the job mobility of the job seeker. However, we report that the low level of information on employment services in relation to resettlement allowances and work commuting is considered unfavourable. Most respondents said that the main reason for the reluctance to move is family and high relocation costs. It means that companies should create better condition. IT means that businesses should create not only the right working conditions at work but also outside of employment through corporate rental flats. This measure can increase work mobility.

5. Discussion

The topic of personnel marketing is a discussed area, Gogolova, Ponisciakova & Ivankova (2015) dealt with the application of external personnel marketing in a selected engineering company in the Slovak Republic. The dataset was gathered through a questionnaire survey with secondary school students in the last year of study. Based on the results of the questionnaire, the authors recommend the intensive use of public relations tools.

Currently, Slovak enterprises have a significant labor shortage problem, and this problem is related to low-skilled labor within the group of the unemployed. Many potential employees are not willing to get a job offer. For this reason, businesses are forced to look for suitable employees abroad. Based on the survey (Agentura AKO, 2016), which was attended by 400 respondents, we state the willingness to get a job opportunity but a reluctance to move. Labor mobility is declining with increasing age. On the other hand, it is rising with better education. Based on a year-on-year comparison of surveys, we find out that willingness to travel for a job drops by 3.8% compared to 2015. From a gender perspective, unemployed women are less willing to travel to work than men, this difference being more pronounced than in 2016 compared to the previous year. Another issue was the willingness to work abroad, in this area the willingness to work mobility dropped by 8 % compared to the previous year 2015. From the point of view of travel costs, more than half of the unemployed are not willing to spend more than 50 € per month or more. a maximum of 2.5 € per day, with more than 60 % of respondents willing to work for an hour. The main reason for the unwillingness to get a job opportunity is the family. On the other hand, the willingness to move to work increased by less than 2%. The most significant increase is in the 18 - 24 age group, which shows an increase of more than 8%. From the point of view of education, we are most interested in moving to work offer for citizens with higher education at the first level (70 %). Interestingly, the willingness to move to the citizens of Kosice region declined by 13 % and by the citizens of Presov region by 7%. The reason is that a larger job offer in eastern Slovakia. Based on this survey, we note that citizens have lost their willingness to travel for a job opportunity. Combination of low labor and lack of skilled workforce causes Slovak business entities to look for workforce abroad. Thus, the number of foreign workers is increasing (Agentura AKO, 2016).

6. Conclusion

In general liberalization of free movement and low unemployment are key themes that contribute to an increase in the application of personnel marketing especially in the commercial sector. Private organizations offer a variety of personnel marketing tools that appeal to potential seekers. The main objective of private companies is to get a skilled workforce with the required personal characteristics.

Acknowledgment

This contribution was undertaken as parts of the research project VEGA 1/0696/16 and project VEGA 1/0244/16 Personnel marketing as a new approach of the ensuring and maintaining the skilled workforce in Slovak companies.

References

[1] Agentura AKO. (2016). *Nezamestnaným sa chce za prácou cestovať ešte menej než vlani.* [Online]. Available: https://ako.sk/wp.../Mesacnik_Obchod-priemysel-hospodarstvo_december_2016.pdf

[2] Belas, J., Dvorsky, J., Tyll, L. and Zvarikova, K. (2017). Entrepreneursnip of University Students: Important Factors and the Propensity for Entrepreneurship. *Administratie si Management Public,* vol. 28, pp. 6-25.

[3] Berlet, T. (2015). Personnel marketing in anesthesiology. Perception, use and evaluation by the target group. *Anaesthesist,* vol. 64, no. 9, pp. 659-668.

[4] Danielova, K. and Lauko, V. (2014). Impact of the Economic Crisis on the Gender Wage Difference and Unemployment in Slovakia. *Geograficke informacie,* vol. 18, no 1, pp. 24-33.

[5] Gogolova, M., Ponisciakova, O., & Ivankova, K. (2015). The Use of External Personnel Marketing in Slovakia. In C. Bektas (Ed.), *Procedia Economics and Finance. 26*, pp. 131-138. Ephesus: Elsevier Science. doi:10.1016/S2212-5671(15)00897-7

[6] Janosova, D. (2016). Human Resources and Personnel Marketing Management in Business Practice from the Perspective of Globalization. In T. Kliestik (Ed.), *Globalization and Its Socio-Economic Consequences, 16th International Scientific Conference Proceedings, PTS I-V,* Rajecke Teplice, Slovakia, pp. 767-774.

[7] Jarosova, J. and Corejova, A. (2015). Involvement of employee in the process of intellectual property protection in the conditions of the University of Zilina. *Ekonomicko-manazerske spektrum*, vol. 9, no. 1, pp. 47-52.

[8] Jorn, A. (2015). *New ways of personnel marketing and recuitment.* Essen: Anchor Academic Publishing.

[9] Kondratiuk-Nierodzinska, M. (2016). New Knowledge Generation Capabilities and Economic Performance of Polish Regions. *Equilibrium-Quarterly Journal of Economics and Economic Policy,* vol. 11, no. 3, pp. 451-471.

[10] Koubek, J. (2011). *Personalni prace v malych a strednich firmach* (4. ed.). Praha: Grada Publishing.

[11] Lazaroiu, G. (2016). Individual Personality Characteristics as Pivotal Predictors of Facebook Use, *Psychosociological Issues in Human Resource Management*, vol. 4, no. 1, pp. 182–188.

[12] Mihaila, R. (2016). Female Labor Force Participation and Gender Wage Discrimination, *Journal of Research in Gender Studies*, vol. 6, no. 1, pp. 262–268.

[13] Mohr, J., Senqupta, S., & Slater, S. (2010). *Marketing of High-Technology Products and Innovations* (3. ed.). New Jersey: Pearson Education.

[14] Myslivcova, S. (2015). Personnel Marketing in Corporate Practise. In L. Cechurova (Ed.), *Guc Fachburchreihe.* vol. *28*, pp. 79-86.

[15] Nadanyiova, M. (2016). Global Trends of the Personnel Marketing in Service Enterprises. *Globalization and Its Socio-Economic Consequences, 16th International Scientific Conference Proceedings, PTS I-V*, Rajecke Teplice, Slovakia, pp. 1474-1481.

[16] Novotny, J. (2016). The Process of Personnel Marketing in Management Production. (M. Majernik, N. Daneshjo, & M. Bosak, Ed.) *Production Management and Engineering Sciences*, pp. 235-240.

[17] Postelnicu, C., Dinu, V. and Dabija, D. C. (2015). Economic Deglobalization - from hypothesis to reality. *E + M,* vol. 18, no. 2.

[18] Razvan Barbu, M. C. (2013). Study regarding the Ethics of the Managers from the Municipal Sports Clubs in Romania. *Administrative si Management Public,* vol. 20, pp. 62-77.

[19] Surmanova, K. and Reiff, M. (2016). *Long-term unemployment in terms of regions of Slovakia.* Liberec: Technical university Liberec.

[20] Szarkova, M., et al. (2010). *Personálny marketing a personálny manažment (vybrané problémy).* Bratislava: Ekonóm.

[21] Stefko, R. (2001). *Personálna práca v hyperkonkurenčnomprostredí a personálny marketing.* Bratislava: R. S. Royal Service.

[22] Ungerman, O. (2016). Use of Social Networks in Personnel Marketing. *Proceedings of the International Scientific Conference of Business Economics Management and Marketing (ISCOBEMM) 2016*, Brno: Masayrik University, pp. 86-95

[23] Vojtovic, S. and Krajnakova, E. (2013). Trends in Economic Growth and Unemployment in Slovakia. In R. Zheng (Ed.), *Proceedings of the 2013 International Conference on Education, Management and Social Science (ICEMSS-13).* vol. 44, pp. 188-194.

[24] Web of Science. (2017). Create Citation Report. Retrieved from https://csi.webofknowledge.com/

INFLUENCE OF GLOBALIZATION ON SUSTAINABILITY AND RESILIENCE OF RURAL AREAS: LATVIA'S CASE

Ligita Melece[1,a,*]

[1]Institute of Agricultural Resources and Economics, Struktoru iela 14, Riga, LV-1039, Latvia

[a]ligita.melece@arei.lv

*Corresponding author

Abstract. Globalization and world trade affects all countries and various production sectors. Agriculture and food production, which is directly connected with the development of rural areas, is significantly influenced. Due to the import dependency of agri-food commodities and intensification of agricultural production, the decreasing of workplaces is observed in many countries, *inter alia* Latvia. The paper examines this impact on sustainability and resilience of rural areas, where the well-being of rural population has been chosen as the object of the study. The importance of sustainable development and resilience of the rural areas as well as the rural communities is widely accepted. The evaluation of the main issues or constraints and challenges of assuring the sustainability of rural areas was performed. Some indicators such as population density, poverty rate, unemployment rate, income level and other well-being indicators have been used for comparing the rural areas and urban areas in the Latvia, as well as for evaluating the trends among the Baltic States. The results of study suggest that the difference between rural and urban area inhabitants well-being still stay unequal. Moreover, the findings show that the well-being indicators have the lowest values in Latvia among the Baltic States. Although many of Rural Development Program measures are aimed to the support of job creation in rural areas, the projected results have not been met. The number of creating jobs is less than planned and created jobs, in most cases, requires low qualification, and therefore also with low pay.

Keywords: rural areas, resilience, poverty, unemployment.

JEL Classification: H29, I32, J21, O13, Q01

1. Introduction

Some key factors exist, such as: financial globalisation, global trade, technological change, which create the growing inequality issues of countries, regions, territories and population and its communities, (Darvas & Wolff, 2016). Dabla-Norris et al. (2015) indicated that the poverty has declined in many countries, but it has risen in the advanced or developed countries since the 1990s. High income inequality in advanced countries was induced by global financial and European financial and economic crises, and the gap between the rich and poor is at its highest level in decades (Duiella & Turrini, 2014), (Dabla-Norris et al., 2015). Moreover, the global financial crisis in 2008 had an important impact on work inequalities (Horemans et al., 2016), raising an increase in unemployment, part time work and work poverty.

The European Union (EU) definition of poverty goes beyond the 'satisfaction of basic human needs', which is used to measure poverty in developing countries (Lecerf, 2016). Poverty is multidimensional the monetary, particularly income, poverty is the most commonly used dimension (Ferreira & Lugo, 2013). Despite the income poverty is associated with other spheres of well-being, such as health, education, social status and political power, they are difficult to measure. The new type of poverty is recognized – work in poverty or working poverty, which is associated with a low wage or low-paid jobs and part-time work (Lecerf, 2016). There are on EU level accepted three indicators measuring the at-risk-of-poverty rate: 1) monetary poverty; 2) severe material deprivation, and 3) very low work intensity (Duiella & Turrini, 2014), (EC, 2017). Weziak-Bialowolska (2016) argues that the level of poverty could be indicated as economic well-being.

Resilience could be measured as the ability of a community or territory to withstand external pressures while maintaining its foundations of development (economic, social, cultural, etc.) or as its ability to respond to disturbances and change (Sanchez-Zamora et al., 2014), (Imperiale & Vanclay, 2016). Territories and communities with more diversified economic activity show the high level of resilience (Sanchez-Zamora et al., 2014). Multifunctionality has increased rural community resilience by raising multifunctional quality (Wilson, 2010). The diversification of farm activities and the development of rural non-farm entrepreneurship should be seen as components of a growth strategy of rural territories, inter alia, Latvia (Melece & Krievina).

It is widely recognised that the rural economy is not limited to agriculture or forestry; it rather encompasses the entire rural area, its population, economic activities, infrastructure and natural resources (Melece & Krievina, 2016). New and better solutions should be developed to empower rural communities to implement EU policy, such as food security, renewable energy, environmental protection and job creation (EESC, 2017). Global trade pushes to provide standardized products mainly produced by global corporations and international companies, which lost loyalty to local territory and community (Wilson, 2010), (Melece, 2015). Additionally, supermarket chains compete with low prices, uniform food (Berti & Mulligan, 2016). Accordingly, supermarkets require large volumes and not cooperate with local smaller producers and processors. Conversely, local food systems (including tourism, organic farming, recreation, etc.) provide the economic benefits from the valued-added to the local community (Sanchez-Zamora et al., 2014), (Lamine, 2015), (Melece, 2015), (Sidali et al., 2015,), and could be an instrument to replace food import (import-substitution), and decrease of food import dependency (Melece, 2015), (Watson et al., 2017).

The aim of the research is to evaluate the impact of financial globalisation, global trade, technological change as well as global and European financial and economic crises on: i) agricultural sector; ii) well-being of rural population, and iii) development of rural areas supported by the Rural Development Plan (RDP).

2. Materials and Methods

The principal materials used for literature review are as follows: different and various sources of literature, e.g., scholars' articles, research papers and the reports, as well as legislative acts, guidelines and recommendations of both EU and national. Due to the limited length of the paper, references are provided to the newest ones. For mixed or quantitative examination the following secondary data are used: from database of Central Statistical Bureau of Latvia[21] (CSB), from Eurostat database[22] (Eurostat), and from European Network for Rural Development (ENRD)[23], as well as from Ministry of Agriculture[24]. Unfortunately, the data of EU (Eurostat) and national (CSB) databases has various sources (e.g., surveys and census), different years and periods; and are obtained using different methodologies and approaches, which hinder comparisons. For example, material deprivation indicators have been included as the social indicators only since 2009. Nevertheless, in spite of this, it is possible to assess both the current situation and development trends in general. The Baltic States in the figures are indicated by the official EU country codes (Estonia – EE, Latvia – LV and Lithuania – LT).

The literature review is conducted using the systematic review approach, as well as the descriptive and comparative methods. The evaluation of the situation and trends accordingly the tasks has been performed using the mixed-methods based on the combination of quantitative and qualitative approaches (Buckley, 2015).

3. Results and Discussion

Despite the economic diversification of rural territories agriculture continues to play an important role in the rural economy (Sanchez-Zamora et al., 2014). From 2005 to 2013 the reduction of farms was by 64%. The loss of farms might lead to a depopulation of rural areas that affects the demand of services and infrastructure of local communities (Berti & Mulligan, 2016), as well as the availability and quality of basic services for rural residents, for example, health and education, *inter alia*, children care. The number of agricultural employers, measured in annual work unit (AWU), is reduced in EU-28[25], Estonia and Latvia, were observed the largest drop by 8.1% (Table 1). Furthermore, the labour productivity level in Latvia is the lowest among EU countries, and about five times lower than the EU average, and lower than in the other Baltic States. Moreover, employment in Latvian agriculture has high in-work poverty rate (Herman, 2016).

Table 1: Employed persons in agriculture and its labour productivity in EU-28 and Baltic States, 2013-2015

Countries	Thou. AWU*			2015/ 2013	Labour productivity		
					2015		Avg. 2013-2015
	2013	2014	2015		EUR/AWU	Index EU-28	Index EU-28
EU-28	9933.9	9763.5	9566.6	-3.7%	17156.2	100.0	100.0
Estonia	22.3	22.0	20.8	-6.7%	17803.7	103.8	93.9
Latvia	82.9	77.2	76.2	-8.1%	3985.6	23.2	19.3
Lithuania	144.8	149.9	150.8	+4.1%	7361.9	42.9	41.7

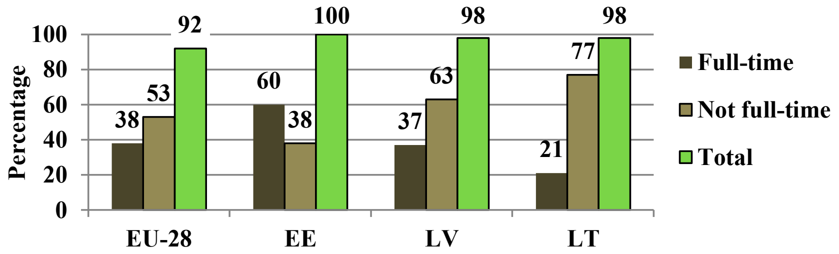
** - full-time equivalent*
Source: based on data from FADN and Eurostat database

Working poverty or in-work poverty is a complex concept which implies mixing two different dimensions, work and poverty (Herman, 2016). The rate of people in work poverty has risen since 2008, and part-time work is recognised as one of the causes of poverty

[21] http://www.csb.gov.lv/en/dati/statistics-database-30501.html
[22] http://ec.europa.eu/eurostat/data/database
[23] https://enrd.ec.europa.eu
[24] https://www.zm.gov.lv/lauku-attistiba/#jump
[25] EU-28 – an average of all EU member states

(Horemans et al., 2016). The comparative results of regular workers rate in farm labour force and distribution of work intensity indicate that Estonia has higher full-time rate of farm workers than EU-28 and among the Baltic States (Fig. 1).

Figure 1: Regular workers rate (%) in farm labour force and distribution by work intensity in Baltic States, 2013



Source: based on data from Eurostat database

Herman (2016) has noted the importance of productivity improvements for the poverty reduction, particularly of small farmers, through an increase in real incomes. Latvia, Bulgaria, and Romania with the highest share of poor people are the most disadvantageous in the EU (Weziak-Bialowolska, 2016). Despite recent improvements the poverty risk remains high also in Latvia and Lithuania (EC, 2017). At-risk-of-poverty (monetary poverty, severe material deprivation and very low work intensity) rate[26] or social exclusion (hereinafter - at-risk-of-poverty) among EU-28 and Baltic States is the highest in Latvia practically in all types of poverty risk (Table 3).

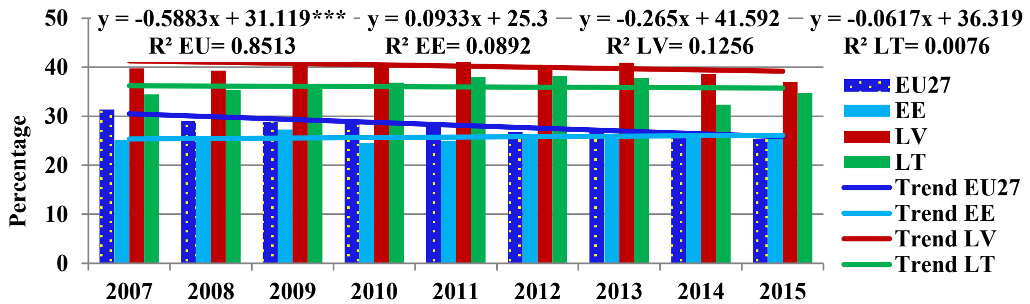
Table 3: At-risk-of-poverty rate of rural residents by type of poverty risk in Baltic States, 2015

	Rate of people, %:			
	at-risk-of-poverty/ social exclusion	at-risk-of-poverty	living in severe material deprivation	living in households with very low work intensity*
EU-28	25.5	19.8	8.3	9.1
Estonia	26.4	24.1	4.3	8.4
Latvia	**37.0**	**29.2**	**19.4**	9.3
Lithuania	34.7	28.7	15.0	11.4

*- people aged less than 60

Source: data from Eurostat database

Figure 2: At-risk-of-poverty rate of rural population and its trend in EU-27 and Baltic States, 2007-2015



*** Significant at 1% level.

Source: author's calculations based on data from Eurostat database

[26] share of people with an equivalised disposable income (EDI) (after social transfer) below the at-risk-of-poverty threshold, which is set at 60% of national EDI.

The at-risk-of-poverty trends of rural population among EU-28 and Baltic States show that the poverty rate of EU-28 has significantly decreased between 2007 and 2015, but of Baltic States it stays practically unchanged (Figure 2).

Notwithstanding the significant progress has been made to decrease the share of the population at-risk-of-poverty in Latvian towns and suburbs, as well as rural areas, compared to the EU and other Baltic States, the share in rural areas is still higher among others – 37% (Table 4).

Table 4: At-risk-of-poverty population rate by degree of urbanisation in Baltic States, 2007 and 2015

Countries	Cities		Towns and suburbs		Rural areas	
	2015	2015/2007, per cent points	2015	2015/2007, per cent points	2015	2015/2007, per cent points
EU-27	24.1	1.1	22.1	1.5	25.4	-6.0
Estonia	21.9	3.0	25.0	9.8	26.4	1.2
Latvia	25.6	-3.4	24.8	-30.6	**37.0**	-2.8
Lithuania	22.3	1.7	31.5	n/d	34.7	0.2

Source: author's calculations based on data from Eurostat database

The share of wages and salaries for total income of household members in Latvia's rural areas was lower by 3.5 percent points than in urban areas, but the share of self-employment and social transfers are higher by 1.6 and 3.3 percentage points, respectively (Table 5).

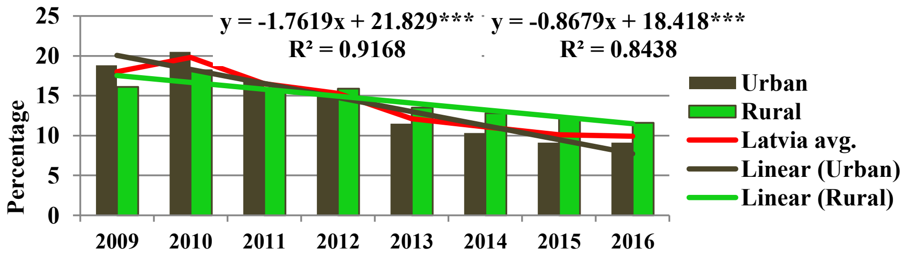
Table 5: Share of main sources of disposable income per household member in Latvia's urban and rural areas, 2015

Sources	Percentage			Difference, p.p.
	All	Urban	Rural	
Wages and salary	70.4	71.4	67.9	-3.5
Income from self-employment	3.7	3.3	4.9	1.6
Received social transfers	24.3	23.4	26.7	3.3

Source: author's calculations based on data from CSB database

Although the unemployment rate of urban and rural Latvian population has significantly decreased from 2009 to 2016, the rural unemployment rate remains higher than urban by 2.6 percentage points in 2016 (Figure 3).

Figure 3: Unemployment rate and trend of Latvian urban and rural population, 2009-2016



**** Significant at 1% level.*

Source: author's calculations based on data from CSB database

Diversification of farm activities is targeted to reduce farm household income risk, to encourage diversification of rural economies, accordingly providing economic growth in rural areas, as well as creating jobs (Quinn et al., 2014), (Barnes et al., 2015). RDP 2007-2013 Axis 3 measures and sub-measures have been supported by the European Agricultural Fund for

Rural Development (EAFRD)[27]. Axis 3 of RDP 2007-2013 were targeted enhancing the quality of life in rural areas and promoting diversification of economic activities through measures targeting encouraging of both agricultural and non-agricultural activities that aimed to income increase and job creation. The share of both total public funds and EAFRD of RDP 2007-2013 for all Axes 3 measures were only about 15% of total RDP expenditure, which was paid from 2007 to 2014 (Table 6).

Table 6: Share of total public and EAFRD expenditure per RDP 2007-2013 Axis 3 measure in Latvia

Measure	Realised 2007-2014, %		% of target	
	EAFRD	Total public	EAFRD	Total public
Business creation and development	7.7	8.0	100.0	100.0
Encouragement of tourism activities	0.5	0.6	73.0	73.0
Basic services for rural economy and population	6.6	6.7	99.0	98.0
Conservation and upgrading of rural heritage	0.1	0.1	35.0	34.0
Total: Axis 3	14.9	15.4	97.0	97.0
Total: RDP 2007-2013	100.0	100.0	96.0	95.0

Source: author's calculations based on data from ENRD

Despite the high contribution to biogas installations only 101 new jobs were created with the highest cost – almost 450 thousand EUR per created job, comparing with others (Table 7). The average cost of one workplace in other (no biogas) projects was about 49 thousand EUR (Melece & Krievina, 2016).

Table 7: Results of some implemented RDP 2007-2013 measures by NACE activity in Latvia by 2014

Code	NACE	Projects	Thou. EUR	Jobs created	EUR/ job
1.49	Raising of other animals	31	1226	25	49 000
2.1	Silviculture and forestry activities	21	101	2	51 000
2.2	Logging	29	1240	33	38 000
2.4	Support services to forestry	58	419	6	70 000
16.1-16.2	Sawmilling and manufacture of wood	184	8033	260	31 000
35	Electricity, gas and steam, i.e. biogas	41	45391	101	449 000
45.2	Maintenance and repair of vehicles	70	1907	67	28 000
55	Tourism	227	5716	147	39 000
56.2	Restaurants and mobile food service	12	454	16	28 000
81.3	Landscape service activities	28	1041	22	47 000
Various	Fuelwood	113	6206	141	44 000

Source: based on Melece & Krievina (2016)

The highest and unplanned share (44.7%) of public funding was used to support biogas projects with the highest cost per created job, but a small contribution to job creation (Table 8). Conversely, the implementation of other projects with lower cost of workplace has created far more jobs. For example, measure 'Support and development of microenterprises' was supported by 10.6% of public funds, where 538 projects were implemented and 921 jobs have been created, as well as under sub-measure 'Production of fuelwood in microenterprises' 73 projects have been implemented, using 4.7% of funding, and as result 117 jobs are created (Table 8).

[27] funding instrument of the EU's Common Agricultural Policy (CAP) and one of the European Structural and Investment Funds (ESIF).

Table 8: Share of supported RDP 2007-2013 Axis 3 measures from public and some results in Latvia 2007-2014

RDP Measure/ sub-measure	Public funds, %	Projects	EUR/ job	Jobs
Production of energy from biomass (biogas)	44.7	41	1 107 094	101
Support and development of microenterprises	10.6	538	45 412	921
Diversification of farms agricultural activities	8.9	196	46 328	118
Encouragement of tourism activities	5.6	227	25 182	141
Production of fuelwood in microenterprises	4.7	73	65 398	117
Production of fuelwood in farms	1.4	40	35 796	24

Source: based on Melece & Krievina (2016) and LVAEI (2014)

4. Conclusions

The main findings of research show that well-being monetary indices in Latvian rural areas are worth than in urban territories, as well as lower than in the other Baltic States. Moreover, the supported measures under Latvian RDP 2007-2013 Axis 3, which were targeted to diversify economic activities of both agricultural and non-agricultural, have not reached the planned results.

These findings provide arguments that the rural areas development issues require multiple measures, as well as reconsidered and improved RDP policy. For example, further measures and support under RDP could be targeted towards encouraging of entrepreneurship in rural areas, particularly, in non-agricultural sphere. Furthermore, in order to establish more efficient and effective measures both numbers of created jobs and its cost should be taken into account.

Further research is therefore needed to examine other aspects or dimensions of rural poverty, as well as diversification possibilities of commercial activities, taking into account regional and sectoral differences.

Acknowledgment

This study is funded by the National Research Program „Innovation and Sustainable Development" (SUSTINNO).

References

[1] Barnes, A. ., Hansson, H., Manevska-Tasevska, G. et al. (2015). The influence of diversification on long-term viability of the agricultural sector. *Land Use Policy*, vol. 49, pp. 404-412.

[2] Berti, G., and Mulligan, C. (2016). Competitiveness of Small Farms and Innovative Food Supply Chains: The Role of Food Hubs in Creating Sustainable Regional and Local Food Systems. *Sustainabilit*y, vol. 8, no. 7, 616, pp. 1-31.

[3] Buckley, A. P. (2015). Using Sequential Mixed Methods in Enterprise Policy Evaluation. *The Electronic Journal of Business Research Methods*, vol. 13, no. 1, pp. 16-26.

[4] Dabla-Norris, E., Kochhar, K., Suphaphiphat, N. et al. (2015). *Causes and Consequences of Income Inequality: A Global Perspective*. International Monetary Fund.

[5] Darvas, Z. and Wolff, G. B. (2016). An anatomy of inclusive growth in Europe. Brussels: Bruegel Blueprint.

[6] Duiella, M. and Turrini, A. (2014). Poverty developments in the EU after the crisis: a look at main drivers. *ECFIN Economic Brief*, no. 31, pp. 1-10.

[7] EC (2017). *Employment and Social Developments in Europe 2017*. Luxembourg: Publications Office of the European Union.

[8] European Economic and Social Committee (EESC) (2017). Villages and small towns as catalysts for rural development. [Online]. Available: http://www.eesc.europa.eu/en/

[9] Eurostat (2017). Statistics Explained. [Online]. Available: http://ec.europa.eu/eurostat/statistics-explained

[10] Ferreira, F. H. and Lugo, M. A. (2013). Multidimensional poverty analysis: Looking for a middle ground. *The World Bank Research Observer*, vol. 28, no. 2, pp. 220-235.

[11] Herman, E. (2016). Improving agricultural performance for the working poverty reduction in the European Union. *Agricultural Economics*, vol. 62, no. 6, pp. 247.

[12] Horemans, J., Marx, I. and Nolan, B. (2016). Hanging in, but only just: part-time employment and in-work poverty throughout the crisis. *IZA Journal of European Labor Studies*, vol. 5, no. 1, pp.5.

[13] Imperiale, A. J. and Vanclay, F. (2016). Experiencing local community resilience in action: Learning from post-disaster communities. *Journal of Rural Studies*, vol. 47, pp. 204-219.

[14] Lamine, C. (2015). Sustainability and resilience in agrifood systems: reconnecting agriculture, food and the environment. *Sociologia ruralis*, vol. 55, no. 1, pp. 41-61.

[15] Lecerf, M. (2016). *Poverty in the European Union: The Crisis and its Aftermath*. European Parliamentary Research Service, European Union.

[16] LVAEI (2014). Lauku attīstības programma 2007-2013: Ekonomikas dažādošanas pasākumu izpēte laukos. [Online]. Available: http://www.arei.lv/lv/2014-gads

[17] Melece, L. (2015). Social Innovation and Its Types in Rural Areas. *Economic Science for Rural Development*, vol. 38, pp. 142-153.

[18] Melece, L. and Krievina, A. (2016). Bioenergy Production for Sustainable Rural Development: Latvia's Case. *International Multidisciplinary Scientific Conference on Social Sciences and Arts, SGEM 2016,* Book 2, vol. 5, pp. 101-108.

[19] Quinn, B., Dunn, A., McAdam, R., McKitterick, L. and Patterson, D. (2014). 'Seeds' for Growth? Policy and Support for Micro Rural Food Enterprises in a Peripheral Region. *Exploring Rural Enterprise: New Perspectives on Research, Policy & Practice*, vol. 4, pp. 233-257.

[20] Sanchez-Zamora, P., Gallardo-Cobos, R. and Cena-Delgado, F. (2014). Rural areas face the economic crisis: Analyzing the determinants of successful territorial dynamics. *Journal of rural studies*, vol. 35, pp. 11-25.

[21] Sidali, K. L., Kastenholz, E. and Bianchi, R. (2015). Food tourism, niche markets and products in rural tourism: combining the intimacy model and the experience economy as a rural development strategy. *Journal of Sustainable Tourism*, vol. 23, no. 8-9, pp. 1179-1197.

[22] Watson, P., Cooke, S., Kay, D., Alward, G. and Morales, A. (2017). A Method for Evaluating the Economic Contribution of a Local Food System. *Journal of Agricultural and Resource Economics*, vol. 42, no. 2, pp. 180-194.

[23] Weziak-Bialowolska, D. (2016). Spatial Variation in EU Poverty with Respect to Health, Education and Living Standards. *Social indicators research*, vol. 125, no. 2, pp. 451-479.

[24] Wilson, G. (2010). Multifunctional ‘quality’ and rural community resilience. *Transactions of the Institute of British Geographers*, vol. 35, no. 3, pp. 364-381.

INFLUENCE OF INTERNATIONAL SANCTIONS ON INVESTMENT ACTIVITY IN RUSSIA

Svetlana Nikolaevna Meliksetyan[1,a], Ilmir Vilovich Nusratullin[2,b,*]

[1]Rostov State University of Economics, Faculty of Economics and Finance, Department of Finance, Bolshaya Sadovaya Str., 69, Rostov-on-Don, Russia

[2]Bashkir State University, Institute of Economics, Finance and Business, Department of Management and Marketing, Zaki Validi Str, 32, Ufa, Russia

[a]m.s88@bk.ru, [b]nusratullin.iv@gmail.com

*Corresponding author

Abstract. With the annexation of Crimea to Russia and the situation in the Ukraine in 2014, the EU, US and other Western countries imposed sanctions against Russia. These sanctions can be divided into three groups: 1. the restriction of access to Western financial markets and services; 2. a ban on exports to Russia of certain types of equipment; 3.a ban on exports to Russia of certain types of military equipment and dual-use equipment. In response, Russia has imposed a ban on imports of certain agricultural products from the EU, US and other Western countries and turned off certain programs within the framework of international cooperation in the field of security, science, education, culture and the interaction of non-profit organisations. At first, the macroeconomic effects of the sanctions were negligible due to the gradual introduction of sanctions, as well as measures taken by the Russian Government for their compensation. Later, however, the international sanctions have led to adverse effects within the Russian economy: loss of low interest credit financing for Russian companies, devaluation of the Rouble, high inflation, reduction of public consumption, loss of foreign investment etc. Additionally, the drop in energy prices, especially for oil and gas, has increased pressure on the Russian economy. This article discusses the impact of international sanctions on the Russian economy in terms of investment activity, analyses the positive and negative effects of international sanctions and gives forecasts of future developments of the situation.

Keywords: investment activity, sanctions, financial crisis, state regulation

JEL Classification: F21, F51, O16

1. Introduction

In late 2014, Russia faced negative economic results, which was the result of the sanctions policy against the country. Because of sanctions, the economy in Russia in 2015 - 2016 was in a state of recession. Negative dynamics of GDP was observed. This article cites classification of sanctions taking into account the emergence of new forms. The industries and regions affected by the sanctions are considered. The situation in the financial sector of the country is considered, on the condition of which the volume of inflow of investment capital directly depends on the real sector of the economy. The volume of direct foreign investments in the Russian economy in recent years has been estimated and predictions made for the future expansion of foreign investment in Russia.

1.1 Economic and social situation of Russia

Since 2014, the Russian economy has faced serious international sanctions against a backdrop of reduced of economic development. The sanctions have accelerated the transition in the Russian economy from stagnation to recession (Moagar-Poladian & Dragoi, 2015).

According to statistical data of 2015 and results of 2016, the economy in Russia was in a condition of steady recession. The fall of GDP in 2015 was 3.7% with a high level of inflation of 12.9%. Official projections for 2017 show that the impact of negative factors will remain, namely: the lack of reforms and working strategies for economic development, continuing economic sanctions against Russia, continued low oil prices, economic growth will be provided by the economy, the Central Bank of Russia will try to reduce inflation by reducing the spending and loans of the banking sector, the budget deficit will remain the same. Thus, in the year 2017, the economy will remain stagnant and will be returned to a commodity scenario. Nevertheless, following the results of 2016, the pace of crisis phenomena in the Russian economy has decreased slightly, which indicates a certain stabilisation of the situation. The fall in GDP in 2016 was 0.9% (inflation 5.4%), which makes it possible to assume that the fall of the Russian economy is coming to an end. But to represent the full picture, let us return to the main reasons for this crisis. To this end, it seems interesting and useful to consider the main aspects of economic sanctions directed against Russia.

1.2 Classifications of the international sanctions

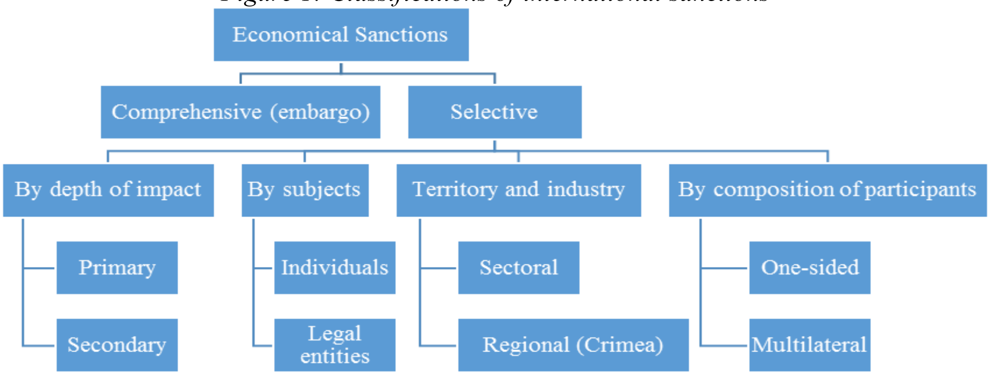
The relevance of the topic is at the peak of interest due to the currently introduced anti-Russian sanctions. This topic raises lively discussions, both in Russian and foreign media, starting from 2014 until today. Of particular interest is the assessment of damage caused by sanctions and, of course, the possibility of maximum reduction (Wang, 2015).

Economic sanctions are restrictive economic measures applied by a country or group of countries to another country or group of countries in order to force the governments of the target countries to change their policies (Hunter Christie, 2016). Economic sanctions can be comprehensive (embargo), but can be selective. The latter, in turn, can act against individuals and/or legal entities, including economic entities of the country (companies, banks). According to the territorial and sectoral composition, sanctions can be sectoral and, in the case of pronounced territorial concentration, regional (Crimea). In particular, in the summer of 2014, sanctions were imposed on three sectors of the Russian economy - military production, oil production, and the banking sector. Sanctions on the composition of participants can be unilateral (US) and multilateral (EU). Example: The United States, Canada and the EU imposed sanctions against Russian citizens who forbade them to enter the territory of these states, and also froze all accounts in banks. Sanctions on the depth of impact can be primary and secondary. In the first case, these are actions against citizens and economic entities of the "punishable" country. In the second actions against citizens, companies, banks of other countries, contributing to the violation of sanctions (see Figure 1) (Chetverikova, 2017). For the analysis of social and economic development of Russia in 2014-2016, it is important to track which industries are affected by the pressure of sanctions.

2. The effect of the sanctions on the economy

Industrial production is declining due to rising costs, a lack of investment and low effective demand, which was the result of a sharp decline in household incomes. Great influence is exerted by a general uncertainty in the future of the business environment. A significant role here is played by international sanctions. The constant monthly drop since January 2014 shows 3 types of production: machinery and equipment, vehicles, electrical equipment (Aalto & Forsberg, 2016).

Figure 1: Classifications of international sanctions



Source: author's material

The regions of Russia which have ferrous metal enterprises have suffered greatly due to the increase in import duties on their products and will become a negative factor. In addition, difficulties are being experienced by those regions where there are defense and machine-building enterprises (Uralvagonzavod - Sverdlovsk region, VKP "NPO of Mechanical engineering" - Moscow region, etc.). In addition, restrictions on the use of foreign technologies for exploration and production, as well as a decrease in the activity of companies, are felt by the "fuel" regions of Siberia. Naturally, heavily impacted were Crimea and Sevastopol, which have businesses with targeted sanctions : Feodosia enterprise for support with oil products, The Kerch ferry, Kerch and Sevastopol trade port, airline, wineries, Yalta film studio, etc. (Portela, 2016).

When analysing the sanctions from the US, we took into account approximately 324 enterprises of the non financial sector of the economy. Their location and branch (functional) affiliation were taken into account (see Table 1). Most of the damage occurred in the leading industrial centers of Russia: Moscow, St. Petersburg, Sverdlovsk and Moscow regions (they have in total more than 70% of enterprises under sanctions). In the sectoral context, the largest enterprises in electronics, instrumentation and optics suffered most (Dreger et al., 2016).

Huge pressure especially falls on the State Corporation Rostechnologi (Rostec), established in 2007 to promote the development, production and export of high-tech industrial products for civilian and military use. It includes 663 organisations, of which 8 holding companies in the defense industrial complex and 5 in the civilian industries have been formed. The organisations of Rostec are located in the territory of 60 subjects of Russia and supply products to the markets of more than 70 countries.

It is necessary to mention the foreign trade relations. Russia's foreign trade turnover with foreign countries (including sanctions countries), for example, in November 2015 amounted to 32.6 billion rubles. The US dollar decreased by 30.5% compared with the corresponding month last year. For 11 months of 2015, exports to other countries amounted to 311.9 billion dollars, imports reached 176.7 billion dollars (Frenkel at al., 2016). In general, turnover fell by 34.2% compared to the same period of 2014. If we consider the totals of 2016, then this year became the most unsuccessful for foreign trade relations. The final results for 2016, according to data from the Federal Customs Service of Russia, the total value of foreign trade turnover amounted to 471.2 billion dollars, which is 11.2% less than in 2015 (Davis, 2016).

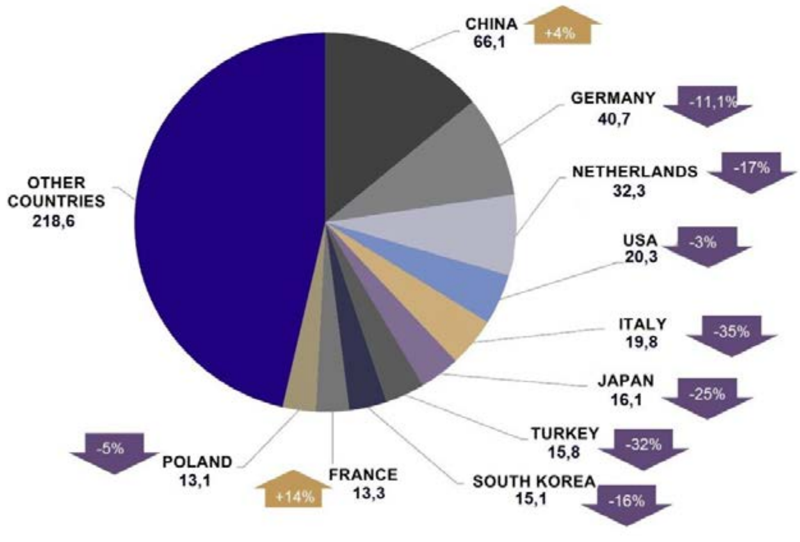
Table 1: Geography and branch accessory of the companies under sanctions

Subjects of Russia with the maximum number of non-financial companies under sanctions	Number of non-financial companies under sanctions (without electronics and instrument making)	Fields of activity of non-financial companies under sanctions	Number of non-financial companies under sanctions
Moscow	69	Electronics	112
St. Petersburg	21	Instrument making	61
Sverdlovsk region	13	Optics	45
Moscow region	10	Air electrical equipment	36
Samara region	6	Chemistry, Biotechnology	23
Bashkortostan	5	Engine building, Equipment for thermal power station	11
Kirov region	5	Defense industry	6
Perm kr.	4		
Tatarstan	3		

Source: (National Energy Security Fund, ttp://newgaztech.ru/upload/files/publications/2bf324464446f6a4cf32b9a37487888e.pdf)

The main reason for this decline is the devaluation of the ruble, which followed the strongest fall in oil prices in early 2016. In January quotes for Brent oil fell below $ 30 a barrel due to excess supply in the market, as well as the reduction in demand from China. However, Russia continued to hold an active balance of trade turnover (see. Figure 2).

Figure 2: Russia's foreign trade turnover with the main partner countries in 2016 ($ billion)



Source: Federal Customs Service, http://провэд.Роccuu/analytics/research/40407-vneshnyaya-topgovlya-possii-v-2016-godu-tsifpy-i-fakty.html

According to Figure 2, China is still in first place among the main trade partners of Russia. Despite the reduction of demand from China at the beginning of the year and a decrease in the supply of coal, Russia still managed to increase foreign trade turnover with China by 4% to 66.1 billion dollars (Hellquist, 2016). Importers from China began to buy more machinery and equipment, cars, metals, food products, including fruits and vegetables, sausages, bread, chocolate and other products. Cooperation also expanded in other areas, in summer, China concluded more than 30 different agreements with Russia (Hoffmann & Neuenkirch, 2015).

Trade with European countries showed a negative trend. Foreign trade turnover with Germany fell by 11.1% to $ 40.7 billion, with the Netherlands by 17% to $ 32.3 billion, with Italy by 35% to $ 19.8 billion. The only exception was France, whose trade increased by 14% to $ 13.3 billion due to an increase in the supply of Russian gas and grain [Kurilev at al., 2017; Vertakova at al., 2016].

The volume of trade with Turkey due to current trade restrictions fell by 32% and amounted to only 15.8 billion dollars. Because of political tension, and the existing bans, record-breaking supplies of fruits and vegetables, as well as Turkish textiles.

It is also worth noting that in 2016 an important event for Russia's foreign trade took place. Since autumn, the Agreement on the establishment of The Eurasian Economic Union free trade zone with Vietnam has come into force, according to which 59% of all tariff lines can now be traded duty-free.

3. The effect of the sanctions on the financial sector

The main targets of sanctions have become banks (Sberbank, VTB, Gazprombank, Rosselkhozbank, Vnesheconombank, the Bank of Moscow), and large companies with the state participation, relating to the fuel and energy sector ("Rosneft", "Transneft", " Gazprom oil ") and VPK ("Uralvagonzavod","Oboronprom", OAK, etc.). Financial sanctions for these banks and real sector companies are expressed in a ban on borrowing for more than 30 days. At the same time, there are actually two more forms of sanctions. Firstly, these are more stringent "SDN sanctions", prohibiting currency payments (banks and companies whose owners are subject to personal sanctions have fallen under their influence). Secondly, many Russian banks experience so-called "soft" sanctions, which consist in toughening the technical control of transactions, which usually slows their passage, significantly increasing transaction costs (Kapsdorferová & Sviridova, 2016).

The effect of financial sanctions was reinforced by the fact that in the previous period, the openness of the Russian financial system was consistently increased, it was integrated into the world capital markets. In 2006, the main restrictions on capital transactions were lifted and the growth of its net inflow started. The international financial crisis of 2008 put an end to this, but gross inflows and outflows of capital to Russia remained rather high 3-6% of GDP.

As a result, by the time sanctions were imposed, Russian borrowers accumulated debts to non residents amounting to $ 733 billion (equivalent to 35% of 2013 GDP). In the structure of this debt, 10% accounted for the public sector in a narrow definition, 29% for the banking and 62% for the non financial sector. According to the Bank of Russia, 12% of the total amount was short-term debt due for repayment within a year, and in the banking sector it accounted for more than 25%. Note that by this time the assets accumulated by Russian agents were

15% higher than liabilities (Pak & Kretzschmar, 2016). However, assets and liabilities were differently distributed among sectors: the banking and government sectors had positive net assets ($ 38 billion and $ 472 billion, respectively), and in the non financial sector they were negative (-318 billion dollars).

In addition, you can see a drop in the net profit in one hundred of the largest banks in the period from 01.01.2014 to 31.12.2016. Particular attention is required in 2015, when the assets of banks declined, respectively, and the profit went into negative transition. However, later, in 2016, profit indicators began to grow, but not reaching the level of early 2014. As for the banks under sanctions, their profits also decreased until July 2015, but then, there was a slight increase in 2016. Since these are usually large backbone banks with state support, their net profit level is higher than that of the top 100 banks during the entire period of observation.

4. Impact of sanctions on the investment climate

The reduction in the profits of the financial sector directly affects the state and level of capital inflows into the real sector of the economy. So, the investment climate in Russia in early 2017 can be estimated to be stable, with the prerequisites in place for improvement. The international rating agency Standart & Poors (S & P) are predicting Russia's GDP growth of 1.7% between 2017 and 2020, improvements of the country's credit rating, raising it from negative to stable, and the Central Bank of Russia lowering the key rate to 9.75%. These factors favourably increase the investment attractiveness of real estate in Russia, making investments in real estate more profitable for investors than bank deposits. Prerequisites for increasing the volume of foreign investment in real estate in Russia can be considered to be the creation of joint investment companies with foreign companies. The main investors in the Russian economy are Turkey, Bahrain, China. In view of the high depreciation of the basic production assets of Russian enterprises in all sectors of the economy (more than 80%), foreign investments are necessary for the modernisation of the oil extraction industry, efficient and safe development of new deposits, including the Russian Arctic continental shelf, where huge hydrocarbon reserves are concentrated (up to 30 % of world production) (Golikova & Kuznetsov, 2016), (Romanova, 2016).

Russia needs investments in geological exploration, modernisation of the instrument and analytical base. To develop the potential of the Russian economy, foreign investments in machine-tool construction, aircraft and shipbuilding, that is, foreign direct investment (FDI), which for the time being have to be modernised on their own, are extremely important.

Foreign investments are needed for the development of chemical and wood processing industries, light industry, the production of medical equipment and consumer electronics.

Foreign businessmen wishing to invest in the economy of the Russian Federation should realise that the Russian investment climate is characterised by a high level of corruption and misuse of allocated funds, increased economic and political risks. The economy is experiencing a serious crisis. The worsening of the international political situation, the anti-Russian sanctions, the sharp drop in oil prices, the growth of inflation, the weakening of the national currency and limited access to debt financing have seriously complicated the development of a number of sectors of the Russian economy. Investors who work in the Russian market suffer traditional bureaucratic red tape and unsustainable regulation (Tuzova & Qayum, 2016). The conditions of economic recession caused worries about adverse economic changes, an over complicated business environment and uncertainty in the future. Due to the deteriorating investment climate in 2014, foreign direct investment in the Russian economy has plummeted. In the second half of 2014, the outflow of foreign direct investment was reported by the Bank of Russia. This is the first time it happened since the serious economic recession in 2009. In 2014, foreign investment fell to 22 billion US dollars, which was a record low since 2006. Foreign direct investment in Russia in 2015 fell to 6.853 billion US dollars. The dynamics of foreign investment reflects the increased risks faced by investors conducting business in Russia (Table 2).

Table 2: Direct foreign investment in the Russian economy (billion US dollars)

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016
Bans	9887	6678	5164	5081	7786	9158	4394	589	1608
Other sectors	64896	29906	38004	50003	42801	60061	17637	6264	31369
Total	74783	36583	43168	55084	50588	69219	22031	6853	32976

Source: author's material

Thus sanctions are unprofitable for the sanctioners themselves, especially for European countries if the current situation persists in terms of anti-Russian sanctions. European countries in 2016 were damaged in the amount of 33 billion euros. At the same time, the Russian Ministry of Finance estimates the damage directly from sanctions at a rate of 40 billion dollars (Kurilev et al., 2017).

5. Conclusion

In conclusion, we note that sanctions, of course, have a negative impact on virtually everyone, with rare exceptions (agribusiness), sectors of the Russian economy. The biggest impact on the economy was made by the sanctions in the field of energy. A difficult situation is the provision of economy machines and electronic components. Of course, Russia's losses will be significant, but they can not be called critical for the future of Russia. Russia is looking for new partners in developing countries, which should positively affect the country's further development. Many European countries still cooperate with Russia, despite the emerging funding problems and the threat of sanctions. The economy of many countries already interacts so closely with the Russian economy that it is very difficult to chop off these historically established relationships.

References

[1] Aalto P. and Forsberg T. (2016). The structuration of Russia's geo-economy under economic sanctions, *Asia Europe Journal,* vol. 14, no. 2, pp 221–237.

[2] Chetverikova, A. S. (2017). Investment Cooperation of Russia and France: Influence of Sanctions, *Studies on Russian Economic Development*, vol. 28, no. 2, pp. 225–232.

[3] Davis Ch. M. (2016). The Ukraine Conflict, Economic-Military Power Balances and Economic sanctions, *Ekonomicheskaya Politika*, vol. 11, no. 4, pp. 196-216.

[4] Davis C. M. (2016). The Ukraine conflict, economic–military power balances and economic sanctions, *Post-Communist Economies*, vol. 28, pp. 167-198.

[5] Dreger C., Kholodilin K. A., Ulbricht D. and Fidrmuc J. (2016). Between the hammer and the anvil: The impact of economic sanctions and oil prices on Russia’s ruble, *Journal of Comparative Economics,* vol. 44, no. 2, pp. 295-308.

[6] Frenkel A., Tikhomirov B., Sergienko J. and Roshchina L. (2016). The Russian Economy in 2015-2017, *Economic Policy*, vol. 11, no. 5, pp. 198-233.

[7] Golikova V. and Kuznetsov B. (2016). Perception of risks associated with economic sanctions: the case of Russian manufacturing, *Post-Soviet Affairs*, vol. 33, no. 1, pp. 49–62.

[8] Hellquist E. (2016). Either with us or against us? Third-country alignment with EU sanctions against Russia/Ukraine, *Cambridge Review of International Affairs*, vol. 29, no. 3, pp. 997-1021.

[9] Hoffmann M. and Neuenkirch M. (2015). The pro-Russian conflict and its impact on stock returns in Russia and the Ukraine, *Research Papers in Economics*, no.1/15.

[10] Hunter Christie, E. (2016). The Design and Impact of Western Economic Sanctions against Russia, *The RUSI Journal*, vol. 161, no. 3, pp. 52-64.

[11] Kapsdorferová Z. and Sviridova O. (2016). Impact of sanctions on agricultural policy in European Union and Russia. *Proceedings of Conference of International Scientific Days.* Nitra, Slovak Republic, pp. 43.

[12] Kurilev, K., Martynenko, E., Parkhitko, N. and Stanis, D. (2017). Royal-Dutch Shell in Russia and Western Sanctions, *International Organisations Research Journal*, vol. 12, no. 1, pp. 189-208.

[13] Moagar-Poladian, S. and Dragoi, A. (2015). Crimean Crisis Impact on International Economy: Risks and Global Threats*, Procedia Economics and Finance,* vol. 22, pp. 452-462.

[14] Pak O. and Kretzschmar G. L. (2016). Western sanctions - Only half the challenge to Russia’s economic, *Research in International Business and Finance*, vol. 38, pp 577-592.

[15] Portela, C. (2016). Are European Union sanctions “targeted”?, *Cambridge Review of International Affairs,* vol. 29, no. 3, pp. 912-929.

[16] Romanova T. (2016). Sanctions and the Future of EU–Russian Economic Relations, *Europe-Asia Studies*, vol. 68, no. 4, pp. 774-796.

[17] Tuzova Y. and Qayum F. (2016). Global oil glut and sanctions: The impact on Putin’s Russia, *Energy Policy*, vol. 90, pp. 140–151.

[18] Vertakova Y., Plotnikov V. and Fedotova G. (2016). The System of Indicators for Indicative Management of a Region and its Clusters, *Procedia Economics and Finance*, vol. 39, pp. 184-191.

[19] Wang W. (2015). Impact of Western Sanctions on Russia in the Ukraine Crisis, *Journal of Politics and Law, v*ol. 8, no. 2.

ALGEBRAIC APPROACH TO REFORMING THE ACTIVITIES OF THE TAX AUTHORITY IN THE CONTEXT OF GLOBALIZATION

Yury B. Melnikov[1,a,*], Elena A. Onokhina[2,b] and Sergey A. Shitikov[3,c]

[1]Russia, 620014, Yekaterinburg, A.Valek str., 12-32

[2]Russia, 620130, Yekaterinburg, Traktoristov str., 17-27

[3]Russia, 620014, Yekaterinburg, Radischev str., 31-201

[a]UriiMelnikov58@gmail.com, [b]Onohina@yandex.ru, [c]Shitikov-s-a@yandex.ru

*Corresponding author

Abstract. In the context of globalization, taxpayers have become more mobile, informed and free to choose the country of business registration. In fact, the tax systems of countries are compelled to compete for the taxpayer. It requires effective management tools, in particular, the activities of tax authorities. The paper suggests an approach to manage activities of tax authorities, based on the application of a system of strategies, where the strategy is understood as the mechanism for creating an activity plan (proposed by Yu.B. Melnikov). One of the tools for describing this strategy is an algebraic approach. Yu.B. Melnikov understands it as a system of three components: a set of basic strategies; typical combinations of strategies; an approximation mechanism. It is shown that when performing some natural assumptions, the strategy of the tax authority activity is a particular case of the strategy of routine modeling. Previously, an algebraic representation of the strategy of routine modeling as a combination of two strategies was obtained. The first of these is called the strategy of algebraic creation of the plan, and the second is called the strategy of components change of the plan. The latter, in turn, can be represented in the form of a combination of three strategies: the strategy of searching for and using the analogy, the strategy of enrichment, reduction, abstraction, concretization of the plan, the strategy of construction the plan by iterative approximation. Examples of the use of strategies for managing the activities of tax authorities in the context of globalization are given.

Keywords: taxes, strategy, algebraic approach, economy.

JEL Classification: E62, H26, C02

1. Introduction

Globalization extends its influence to all spheres of economic activity, including the system of taxation. As a result of the developed mobility of labor and capital, as well as the Internet and IT technologies, mass media (Kasper, 2015), taxpayers can cross state borders and escape responsibility to the national tax authorities, choosing countries with a more comfortable taxation for their business. Globalization creates conditions for countries to compete for a taxpayer and forces them to take this into account when forming tax policy (Exbrayat, 2017), (Xiangjun, 2017), (Satsuk & Koneva, 2016).

The globalization of the economy requires the creation and use of management mechanisms that take into account, from the one hand, the ongoing globalization processes that lead to a convergence of business rules that are formed due to the ever deeper integration of economies of different countries and associations of countries, the formation of a competitive environment for business development (in particular, in terms of taxation); from the other hand the specifics of the concrete environment in which the economic activity of the subject is carried out: the legislation of the country and/or the union of countries (for example, the WTO, the European Union, the Eurasian Economic Union), the tradition of doing business, the peculiarities of the local labor force etc. (Nnyanzi et al., 2016), (Aslim & Neyapti, 2017), (Varvarigos, 2017).

For the success of the theoretical study and the practical recommendations derived from it, it is necessary to have a base providing a comfortable description of management that takes into account these two factors. As such a basis, we chose the Yu. B. Melnikov’s theory of modeling, based on the formal-constructive interpretation of the model (Melnikov et al., 2016) and the axiomatic method. Within the framework of a formal constructive interpretation, a model is understood as a system of interface and model-content components. Here, the interface component represents a system for exchanging information between the prototype and its image. The model-content component formalizes the image of the modeled object (usually it is identified as the model) and consists of three components: 1) the model carrier, i.e. a set of elements from which the image consists in terms of the given model; 2) a system of characteristics, i.e. system of functions defined on the model carrier (functions with numeric values are called quantities or scalar quantities); 3) a system of relations defined on the union of the carrier and a set of characteristics. The adequacy of the model is estimated by comparing it with a certain model accepted as a reference model, and the result of the comparison is interpreted as the value of the corresponding adequacy characteristic. The adequacy characteristic is considered as a function of two arguments, where then value of the first argument is the estimated model, and the value of the second one is the reference model, the values of this function can be non-numeric.

2. Algebraic representation of the strategy of routine activities of the tax authority

The subject of our study is the management system of the routine activities of the tax authority. In most cases, the activities of the tax authority is just such a routine (Xiangjun, 2017), (Aslim & Neyapti, 2017), (Tumanyants, 2017). Here we understand the routine activity as the creation of a model based on previously known phenomena, regularities, principles, the use of known patterns using the methods previously used in this field of activity, using traditional analogies.

One of the most popular types of activity models is the plan (Mullakhmetov, 2015). Two or more subjects participate in the planning of the activity (either it can be different collectives, or the same person can play the role of these subjects at different stages of activity) - the developer of the plan and the executor of the plan. We accept as a postulate the statement that each item of the plan the subject of activity can take either as a reference to a known algorithm or as an indication of the purpose of the activity without specifying the method of achieving it. For example, the item of the plan "to provide project financing" for an entity focused only on the government financing using established relationships may mean "asking some people for support in allocating the necessary resources". Other performers take this item of the plan as an indicate a target that can be achieved in various ways: to find a loan on acceptable terms, an investor, a sponsor, etc. Thus, the perception of a plan item is subjective. The aim of the planning is to obtain such a plan so that the prospective performer takes all the main points of the plan as references to the algorithms or, in the case of a qualified performer, the implementation of the plan item interpreted by the executor as a "local" target was reduced to a selection of known algorithms conducted under understandable criteria.

From our point of view, the situation when the performer understand the purpose of the activity can be considered as the construction of an initial plan consisting of one item perceived as a target. Consequently, the process of planning of activity can be considered as a gradual transformation of the plan, in which some items are perceived as the purpose of the activity, to the form in which each item is perceived as a reference to a known algorithm or as a "virtually achieved target", i.e. a target for which there is known at least the one plan which guarantees the achievement of this target. From this point of view, it is necessary to clarify the interpretation of the notion of "purpose of activity" in order to describe the planning mechanisms. Lets apply the "strategy of changing roles and priorities" (Melnikov et al., 2016) and consider the situation of the final stage of the activity when the executor evaluates whether it has achieved the target, whether it has been fully achieved, whether it is already possible to complete this activity. For this, it is necessary for the executor (or the subject controlling the activity) to have a set of reference models of the result of the activity, thanks to a comparison of which with real results, one can conclude on the extent to which the target has been achieved.

From the positions of the theory of modeling, ***the purpose of activity*** should be interpreted as *a system* ***of reference models of the result of activity***. By the level of generality of models from the composition of the target, three types of reference models can be distinguished: 1) requirements for the form of representation of reference models; 2) presentation templates of the result of activity (for example, the solution of the equation can be represented in the form $x = \dots$ or $x \in \dots$, etc.); 3) specific examples of the result of the activity (for example, the answers given in the tasks book). The target is considered achieved if the models of the obtained result of the activity prove to be sufficiently adequate relative to the reference models represented by specific samples of the result of the activity. One of the advantages of our interpretation of the notion of "target of activity" is constructiveness, which allows, for example, to measure the level of formation various typical objectives of activity: the completeness of a set of the reference models for a particular purpose, the connectivity of this set (the comprehension of typical relations between reference models from a particular target) , etc. This interpretation allows us to formalize typical relations between targets: cause-effect relations, the entry of one target into another as an integral part, etc.

As a mechanism for creating an activity plan, we consider a **strategy of activity**. The analysis of various interpretations of the latter concept (Arend et al., 2017) has shown that almost all of them admit a sufficiently adequate interpretation within the framework of the scheme presented in the form of Table 1.

Thus, we consider a system of managing activities based on strategies. The phrase "strategy is the mechanism for creating a plan of activity" obviosly is not a definition. In our opinion, such a multifaceted notion as an *strategy of activity* is inexpedient to introduce deductively, by definition. It is much more productive, in our opinion, to introduce it inductively, with the help of examples, i.e. in this case, by using different models of strategy. As a form of strategy presentation, we suggest using a hierarchical model of strategy. Suppose a certain target is set. We interpret the target as a system of reference models of the result of activity. We need to develop a plan to achieve this target by using a specific strategy, see Table 1.

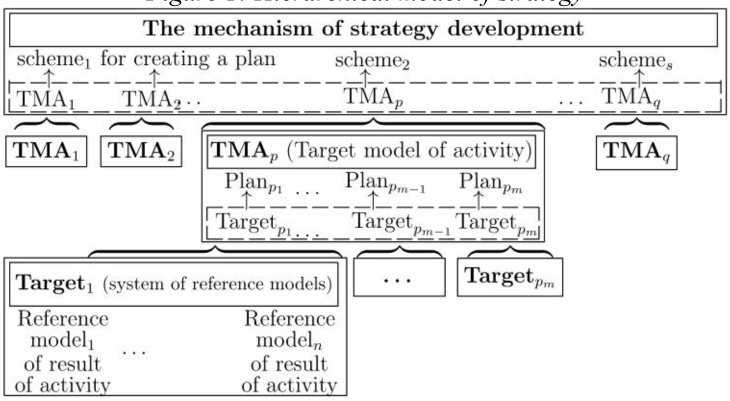
Table 1: Strategy and strategy implementation

Strategy	Strategy implementation	Plan of activity	Implementation of a plan
The mechanism for creating an activity plan	Create a plan using a strategy	The result of implementing the strategy	Activities for which the plan is a reference model

Source: authors, based on Arend et al., 2017

The application of the strategy begins with the decomposition of the purpose of the activity into a system of basic targets which are typical for this field of activity, see Figure 1.

Figure 1: Hierarchical model of strategy



Source: authors

Therefore, the lower level of the strategy model consists of all the basic targets that are typical for this area of activity, some of them are part of this target. The strategy should include model (initial) versions of plans to achieve basic targets. These plans are part of the target models of activity (TMA), representing the average level of the hierarchical model of the strategy. More precisely, the TMA consists of sets of basic targets, and within each TMA a set of targets is associated with a typical plan for achieving these targets. If the executor is able to fulfill all the items of the model plan, the implementation of the strategy is complete: the necessary activity plan has already been obtained. Otherwise, the application of the strategy requires the use of tools that are part of the upper level of the hierarchical model of the strategy: the development mechanism. It consists of typical TMA, and any TMA is associated the scheme for the development of the plan: the method by contradiction, the method of ascending analysis, the method of induction, etc.

However, the representation in the form of a hierarchical model is reasonable only for relatively simple strategies. In the case of obtaining an excessively cumbersome hierarchical model, we propose to describe the strategy of the activity of the tax authority on the basis of an algebraic approach to modeling (Melnikov et al., 2016): a) system of basic models; b) system of model transformations and combinations of models; c) approximation mechanism designed to represent the model in the form of the result of applying typical combinations and transformations to the basic models.

Using this approach, we performed the decomposition of the strategy of routine modeling which are presented in Table 2.

Table 2: Basic strategies of routine modeling

The strategy of algebraic construction of the model	**The strategy of changing the components of the model**
It is assumed that there is a complete set of basic elements, typical transformations, typical combinations, and a approximating mechanism for the given class of objects	The strategy of constructing a model by analogy
	The strategy of construction a model by changing roles and priorities (in particular, inversion)
	The strategy of iterative-approximation construction of a model

Source: authors

In our opinion, routine modeling is an activity that satisfies a set of postulates given below. The decomposition given in Tab. 2 is a consequence of a set of postulates. The fact that the activity of economic entities satisfies some of these postulates is unquestionable for us, because some of them are in fact the consequences of the main provisions of the system approach (Monat et al., 2015). Such "self-evident" postulates include the following.

Postulate of the structure of the model. *Building a model means creating, first, a model carrier (the elements of which the object consists from the point of view of the given model); second, the system of characteristics and relations (functions defined on the model carrier and relations defined on union of the carrier of model and set of characteristics) and, thirdly, the interface component of the model (the mechanism for the exchange of information between the image and the prototype).*

The postulate of algebraic. *The typical form of description of an object is of an algebraic nature, so it is reduced to a representation of it using a set of standard base models and a system of standard object transformations.*

The postulate of polymodality. *Any considered object can: 1) be a model, as well as a component or element of some component of some model; 2) be described by a set of models, including those that are substantially different, but have a certain, pre-specified level of adequacy.*

Postulate of the characteristic. *Every class of objects of the same nature is determined by a set of distinctive characteristics and a range of limiting values of these characteristics.*

The tax authority works with the already existing system of taxpayers according to previously approved laws, rules, instructions, etc. We will show that **the strategy of the activity of the tax authority satisfies the postulates of routine modeling in the sense of** (Melnikov et al., 2014). According to this work, in addition to the postulates listed above and taken without any justification, it is sufficient to prove the fulfillment of the postulate of the modeling purpose and the postulate of model changes for the proof of the proposed hypothesis.

The postulate of the purpose of modeling. *The aim of the* ***modeling*** *is to create a model of such an object, the existence of which is postulated before the beginning of the study (the object may be ideal). At the same time, the model to be created must have a sufficient level of adequacy with respect to the following reference models: a) subject models presented in the technical assignment; b) models represented by a set of rules and requirements for the form of representation of the model; c) models represented by resource constraints (economic, acceptable risk level, etc.).*

Postulate of changing the model. *The construction of a model without insight is carried out with the help of the following modifications of known models: 1) combining known models; 2) changes in the components of the model (interface component, carrier, characteristics and / or relationships) using methods traditional for the given field of activity.*

The strategy of the tax authority is aimed at creating a model of the work of the tax authority, where tax revenues to the budgets of the different levels will be complete and timely, and tax evasion is minimal with the optimal level of expenditure on the activities of the authority and certain requirements to the procedure of levying taxes. In the framework of the theory of modeling this technical requirement presented a reference model with zero evasion and zero costs to the tax authority and assumed to have the characteristics of adequacy, which takes into account the weighted deviation from this ideal. Thus, the **strategy of the tax authority satisfies the postulate of purpose**.

To solve the problem of filling the budget, to solve particular problems arising in tax practice, as well as to study and assess the impact of the tax system on the economy, the modeling method can be used. In this case, the construction of any specific model, for example, the model of optimization (Fletcher, 1987) of the activities of tax authorities, means the creation, firstly, the system of elements that make up the object (tax authority) from the point of view of this model, and secondly, the system of characteristics and relationships important from the point of view of the problem being solved (the ratio of costs and benefits derived from these costs) and, finally, the development of some interface component of the model designed to exchange information between the image and the prototype, that is, it satisfies the **postulate of the structure** of the model. In this case, the optimal variant can be obtained as a combination of the initially considered variants, i.e. *it can be represented by a system of typical object transformations.* Thus *this activity satisfies the* **algebraicity postulate**. Specificity of the activities of tax authorities is expressed in particular in the fact that the tax legislation is periodically amended, which can not but be reflected in the applied models. Thus, *the strategy of the activity of the tax authority satisfies* **the postulate of changing the model**. Finally, the models of the activities of tax authorities, for example cities, are part of the models of the regional tax system, and in turn, *include models of district tax authorities*, that is, in accordance with the system approach, *satisfy* **the postulate of polymodelality**.

Thus, **the strategy of the activity of the tax authority satisfies all the postulates of routine modeling**.

Consider as an example the application of strategies for routine modeling in the organization of tax collection in tourism. Suppose that the leadership of a city or region has decided to create a well-organized local tourist business, moreover, to create a tourist cluster. From the point of view of local government, this will lead to economic development of the territory and, consequently, to an increase in the taxable base. It is assumed that the share of deductions from the tourism business before this was negligible.

The procedure for collecting almost any traditional type of taxes is prescribed in the instructions, rules and other documents (Agiomirgianakis et al., 2017). Their application is naturally interpreted as **the application of the strategy of algebraic construction of the model**. In particular, in accordance with the law, at the first stage, state registration of legal entities and individuals as individual entrepreneurs is carried out. Then contacts with local executive authorities, local authorities, authorities of the subjects of the Russian Federation, public organizations and other organizations are established. Now consider the situation specific to the region, for example, the "scatteredness" of tourist sites, the abundance of small organizations associated with the tourism business, which makes it difficult to document their activities and, in particular, makes difficult the work of fiscal authorities.

In the absence of instructions that take into account local specifics, tax authorities will have to apply the ***strategy for changing the components of the model***.

As it is known ((Melnikov et al., 2014), see Tab. 2), this strategy can be represented as a combination of three strategies. First of all, ***the strategy of constructing a model by analogy*** will probably be used: it is necessary to isolate and formalize the specific features of the region, to find regions with a similar set of characteristics in which the tourist business is successfully operating. In the event that in the region the system of collection of taxes from the tourist business is already working, albeit not quite successfully, and the level of qualification and creativity of the tax authority staff is quite high, or the tax authority has the opportunity to apply to a research organization, etc., it is possible to improve the situation through the use of ***strategies of enrichment, reduction, abstraction and concretization of model***. In the case where preliminary analysis (calculations, results of the business game, the results of the survey the subjects of economic activity) shows that the result of the planned activities of the tax authority is unsatisfactory, we can either try to do a fundamentally different model, or to apply ***the strategy of iterative-approximation construction of a model***. One of the model plans of this strategy is to identify "weaknesses", gradual adjustment of the model, aligning it with the model of the activities of other structures (business structures, public organizations, law enforcement and administrative bodies, etc.).

We can consider the possibilities of developing a project (build a decision tree) depending on the economic situation, the external parameters of the financial system and demand, and we can use the strategy of iterative-approximation construction of a model. In accordance with this strategy, the model can be adjusted depending on the analysis of intermediate performance results, assessment of the current state and projected development prospects.

As another example of the application of ***strategy of iterative-approximation construction of a model*** we can consider the process of gradual introduction of property tax from 2017 for individuals. Previously, this tax was calculated based on the inventory value, and now based on the cadastral value of the property, which in most cases significantly increases the amount of tax (with the tax rate, for example, for an apartment in Moscow at a price of up to 10 million rubles is 0.1%). On January 2015 the law that adds a new chapter to the Tax Code "Personal Property Tax" came into force. In accordance with this law, in all regions of the Russian Federation until 2020, the tax authorities will begin levying taxes on real estate on the basis of its cadastral, rather than inventory value.

3. Conclusion

So, we have established that the activities of tax authorities satisfy the system of postulates of routine modeling. It allows us to use the algebraic representation and the strategies of routine activities to solve problems related to the optimization of the activities of tax authorities. This creates a methodological basis for improving the activities of tax authorities and allows us to unify the changes in the work of tax authorities in different regions (in particular, in different countries). According to this approach the specificity of the region may be taken into account by adjusting the corresponding basic strategies. This is relevant in the conditions of global economy.

Acknowledgment

The reported study funds by RFBR according to the research project No. 16-06-00240.

References

[1] Agiomirgianakis, G., Serenis, D. and Tsounis, DN. (2017). Effective timing of tourism policy: The case of Singapore, *Economic Modelling*, vol. 60, pp. 29–38.

[2] Arend, R., Zhao, Y. and Song, M. (2017). Strategic planning as a complex and enabling managerial tool, *Strategic management journal,* vol. 38, pp. 1741–1752.

[3] Aslim, E. and Neyapti,B. (2017). Optimal fiscal decentralization: Redistribution and welfare implications, *Economic Modelling,* vol. 61, pp. 224–234.

[4] Exbrayat, N. (2017). Does trade liberalisation trigger tax competition? Theory and evidence from Oecd countries, *World economy*. vol. 40, pp. 88–115.

[5] Fletcher, R. (1987). *Practical Methods of Optimization,* 2nd ed. New York, U.K.: Wiley.

[6] Kasper, M., Kogler, Ch. and Kirchler, E. (2015). Tax policy and the news: An empirical analysis of taxpayers perceptions of tax-related media coverage and its impact on tax compliance, *Journal of behavioral and experimental economics*, vol. 54, pp. 58–63.

[7] Melnikov, Yu., Evdokimova, D., Dergachev, E, et al. (2014) Strategies of building molel. *Upravlenetz*, vol. 3, no. 49, pp. 52-56.

[8] Melnikov, Yu., Onokhina, E. and Shitikov, S. (2016) The algebraic presentation of research strategy in the activity of tax authorities. *Globalization and its socio-economic consequences, 16th international scientific conference proceedings.* Rajecke Teplice, Slovakia, pp. 1355-1362.

[9] Monat, J. and Gannon, T. (2015). What is Systems Thinking? A Review of Selected Literature Plus Recommendations, *American Journal of Systems Science,* vol.4, no. 1, pp.11-26.

[10] Mullakhmetov, K. (2015). Some approaches to the development of the management control concept, *Journal of Advanced Research in Law and Economics*, vol 61, no. 11, pp. 128–137.

[11] Nnyanzi, J., Babyenda, P and Bbale, J. (2016). Regional Economic Integration and Tax Revenue: East African Community, *Journal of economic integration*, vol. 31, pp. 932–967.

[12] Satsuk, T, Koneva, O. (2016). Financial models of taxation systems: identification approaches. *Globalization and its socio-economic consequences, 16th international scientific conference proceedings*, Rajecke Teplice, Slovakia, pp. 1956-1963.

[13] Tumanyants, K. (2017). The impact of tax rate on activity of small enterprises: international experience and Russian case. *Globalization and its socio-economic*

consequences, 16th international scientific conference proceedings, Rajecke Teplice, Slovakia, pp. 2245-2251.

[14] Varvarigos, D. (2017). Cultural norms, the persistence of tax evasion, and economic growth, *Economic theory*, vol. 63, pp. 961–995.

[15] Xiangjun, M. (2017). Do taxes influence the organizational boundaries of international firms? An incomplete-contracting model with empirical evidence, *Journal of international trade & economic development*, vol. 26, pp. 801–828.

PARITIES AND DISPARITIES OF IDEA MANAGEMENT, DECISION SUPPORT AND INNOVATION MANAGEMENT SYSTEMS PROVIDED IN THE GLOBALISED WORLD

Elīna Miķelsone[1,a,*] and Elita Lielā[2,b,]

[1]BA School of Business and Finance, K. Valdemara street 161, Riga, LV-1018, Latvia

[2]BA School of Business and Finance, K. Valdemara street 161, Riga, LV-1018, Latvia

[a]mikelsone.elina@gmail.com, [b]elita.liela@ba.lv

*Corresponding author

Abstract. Globalisation leads to a more interconnected world and information and communication technologies are a major contributor to this interconnectedness. Web-based idea management (IMS), decision support (DSS) and innovation management systems (INMS) are a crucial part of this process being the nexus between various actors inside some of the largest and most important companies in the world. Based on previous researches by the authors there is a gap in the literature – terms for denominating these systems have been discussed and used, but the meanings are not strictly separated. The paper aims to clarify parities and disparities of IMS, DSS and INMS. It proposes definitions of these terms based on the parities and disparities of these terms. Research bridges this research gap theoretically by: (1) exploring terms denominating these systems by literature review in 7 scientific databases; (2) complementing the data using case studies. In the end of the research authors discuss possible implications, limitations, and future research directions. The paper provides not only theoretical, but also empirical insights about what are the main parities and disparities of IMS, DSS, INMS by demonstrating it by existing and applied systems. It suggests that the main parities of these systems are (1) aim to support decision-making processes and/or innovation, (2) they are manageable and systematic, (3) they are tools or tool kits, (4) web-based systems supports have potential in advancing international processes. Main disparities are revealed in created definitions of these terms.

Keywords: Idea Management Systems, Web-based Idea Management Systems, Decision Support Systems, Innovation Management Systems, Globalization

JEL Classification: L86, D89, D79, M15

1. Introduction

In 21st century knowledge and information technology application in organisations have become as crucial as ever. In previous decades, many information and communication technologies that help organisations have been introduced. For example, crowdsourcing tools, co-innovation platforms, knowledge-based systems, expert systems, business intelligence systems as well IMS, DSS and INMS. The terms for denominating these systems have been discussed and used, but the meanings are not strictly separated. The paper aims to clarify parities and disparities of IMS, DSS, INMS and it proposes definitions of these terms based on these parities and disparities. Research bridges this research gap theoretically by: (1) exploring terms of these systems by literature review in 7 scientific databases; (2) complementing the data using case studies.

2. Methods

Literature review was applied as the general data gathering method. The data were later analysed using content analysis. Data collection was conducted in 4 stages: (1) research of scientific databases to explore literature where terms ‘’idea management (IM)/idea management systems’’, ‘’decision support systems’’, ‘’innovation management systems’’ are mentioned, every term was researched in 7 databases; (2) selection of literature directly about these terms; (3) exclusion of duplicates; (4) appliance of selected literature. Detailed literature source count in different stages is reflected in Table 1.

Table 1: Count of the literature sources in stages

	Stage 1- in article title or/and keywords mentioned terms:			**Stage 2- directly about:**			**Stage 3- unique sources:**		
	IM/IMS	DSS	INMS	IM/IMS	DSS	INMS	IM/ IMS	DSS	INMS
ScienceDirect	364611	78 93 47	15 51 28	2	500*	8	82	789	176
Google Scholar	3980000	17500 00	3 17 00 00	33	500*	17			
Sage Journals	152934	368644	77684	8	272	9			
Ebsco	5129835	46911	1054	9	500*	11			
Emerald	107825	117388	56115	3	239	4			
Web of Science	269	68361	13573	52	104	35			
Taylor & Francis	-	755823	244332	-	268	122			
Sum:	9735474	3896474	3717886	107	883	206			

**overviewed first 500 appropriate articles according to the ‘’Relevance’’ filter*
Source: authors

All the sources that passed the stage 3 were analysed with content analysis. Content analysis was conducted in 3 steps: (1) preparation – gathering literature source analysis protocols; (2) organization - initial coding was conducted nonlinearly: there were predefined and data driven; (3) report development – described categories. The same analysis method was applied for case study analysis. Developed theoretical descriptions of the terms were highlighted with case studies of all three system application cases. These studies were selected based on the most widely applied system software case studies that are available on their case study virtual archives and have solved problems caused by globalisation.

3. Results

Literature analysis helped to highlight the parities and disparities of the systems and the case study analysis aided to practically prove the results. More in subsections 3.1. and 3.2.

3.1 Literature analysis results

Decision support systems (DSS) have been a topical research object since 1980's. Many scientists have defined these systems, for example, Turban and Watkins (1986) defined a DSS as a computer-based information system that utilizes decision rules/models, but Power, Sharda and Burstein (2015) revealed that DSS are a class of computerized information systems that support decision-making activities. Kazak et al. (2017) have highlighted that DSS provide the structure which consists of different elements (e.g. databases, models, participants, software, procedures, communication) that helps decision makers with unstructured or semi structured problems to choose one of several solution alternatives in the case of an analysed problem. These definitions provide the wide view on this term, highlighting that DSS are computer based support for decision making systems. Additional support for this view can be found in Alter's (1980) classification of DSS: (1) retrieving a single item of information; (2) providing a mechanism for *ad hoc* data analysis; (3) providing prespecified aggregation of data in the form of reports; (4) estimating the consequences of proposed decisions; (5) proposing decisions; (6) making decisions. According to this classification IMS - tool, tool kit or complex system which provides systematic, manageable process of idea generation, evaluation and further idea management (Mikelsone & Liela, 2016) - could be a tool to retrieve a single item of information – ideas for specific aims as well as basis for proposing and making decisions. Similar are INMS that also support further development of ideas till their implementation. There is also view that IM includes not only idea generation and evaluation, but also implementation or further development (Vieira et al., 2015). But it does not conflicts with the previous mentioned definition, because further IM includes not only idea generation and evaluation, but also development in some kind of level, that is, concept development, distribution of ideas, support during implementation with repeated IM and rewarding, retention. But it should be highlighted that the INMS supports idea implementation fully. It could be summed up that IMS provides ideas as raw ideas for decision propositions and making, but INMS focuses on decisions connected with innovations. There is also different classification (Power, Sharda & Burstein, 2015) of DSS based on their driven forces: (1) communications-driven; (2) data-driven; (3) document-driven; (4) knowledge - driven; (5) model-driven systems. According to the classification IMS and INMS are communications-driven systems for supporting decision-making and as recommender system are knowledge-driven DSS.

As in the era of globalization competition intensifies, organizations must innovate (Vieira et al., 2015). Among those attempts, are IMS that employ IT to support innovation processes in the organisations. Such systems are considered a very promising branch of computer software market as there is growing adoption of them in organisations in recent years (Westerski et al., 2013). If the IMS are mostly described as web-based systems then INMS are described as web-based and general frameworks. Literature about these systems also provides insight in social elements, for example, social capital, creativity, cognition etc. That shows that all of these factors are vitally important in connection with these systems. Explanation might be that DSS are more data driven systems, but IMS and INMS are ideas driven systems.

All three systems could be integrated with other systems as well, for example, INMS with an enterprise resource planning database and included a products and processes configurator (Klos et al., 2016) or quality-environment-safety system (Maier et al., 2017). Different types of IMS and INMS can be found, for example, there is a study that gives insights on how to establish a customer community-based innovation system from business management and computer engineering perspectives (Tian & Dragsten, 2015). That means that there are also sub-types of DSS, IMS, INMS based on their focuses and features.

Literature about IMS and INMS provides not only social elements, but also structural. INMS mostly describes different frameworks of Standardized INMS which have recently appeared on the innovation field. These frameworks are complexes of standards designed to help companies navigate the difficult process of innovation, systematize their activities and enhance efficiency of their management (Mir et al., 2016). IMS are mostly described as existing or planned web-based tools. INMS have also been described and frequently defined as innovation platforms or web-based INMS. INMS basic functions could be: (1) demand articulation; (2) institutional support; (3) network brokering; (4) capacity building; (5) innovation process management; (6) knowledge brokering (Kilelu et al., 2013). For IMS the functions are limited to idea generation and evaluation of ideas, but by contrast DSS have wide variety of functions possible, for example, *ad hoc* data analysis, aggregation of data in the form of reports, evaluating the consequences of decisions, proposing decisions and making decisions

Table 2. summarizes what authors envision as the major differences between DSS, IMS and INMS.

Table 2: Parities and disparities of DSS, IMS, INMS

Attributes	**DSS**	**IMS**	**INMS**
Objectives	Decision support	Systematic, manageable process of idea generation, evaluation	Innovation management
Involved persons	Humans/systems	Mainly – humans	Humans/systems
Orientation	Decision making	Idea transfer	Innovation development
Nature of support	Individuals, groups, organizations		
Characteristics of problem area	Broad, complex	Narrow (active IMS), broad (passive IMS)	Broad, complex
Characteristics of problem type	Unique		
Content of database	*Ad hoc,* Factual knowledge	Idea lists	Factual knowledge and idea lists
Explanation capability	Limited		
Systematic and manageable	Yes		
Applicable tools/tool kits/platforms	Yes		
Relations with decisions	Propose and make decision	Ideas as basis of decision proposition and making	Focused on decisions connected with innovations
Relations with innovations	Supports all innovation process	Supports idea generation and evaluation	Supports all innovation process
Advancing international processes	Web-based systems supports		
Integration with other systems	Yes		

**DSS section based on Turban & Watkins (1986), IMS, INMS on authors literature review results*
Source: authors

Differences mainly are revealed in the objectives of systems. The DSS supports a human who makes wide range of decisions in broad and complex area; the IMS operations are more focused as these systems are idea generation and evaluation tools; INMS concentrates only on innovation area. It suggests that the main parities of these systems are (1) aim to support decision-making processes and/or innovation, (2) they are manageable and systematic, (3) they are tools or tool kits, (3) web-based systems supports have potential in advancing international processes. Main disparities are revealed in created definitions of these terms: (1) IMS - tool, tool kit or complex system which provides systematic, manageable process of idea generation, evaluation (Mikelsone & Liela, 2016); (2) INMS – framework in which to systematically support and manage innovation process; (3) DSS - tool, tool kit or complex system which provides systematic, manageable process that support decision-making activities.

3.2 Case study analysis

As described in the previous section there are several parities and disparities of these systems based on the theory. In the end of the research authors try to find practical evidence of web-based systems application by case studies. Case studies were selected from systems virtual case study archives that are publicly available on the systems providers' web-pages. In these data bases those cases were selected that helped to resolve one of the main challenges of globalisation according to Mikelsone and Liela (2016): increasingly interconnected global market that pushes enterprises to adapt and compete with the best from around the world both in domestic and foreign markets (Koelliker, 2012), (Schwenninger, 2009), (Belova & Mickiene, 2008). In the Table 3 see selected case studies.

Table 3: Case studies

Case No.	Case challenge	System type	System provider	User	Application pattern	Idea/data source	Application field	Result
1	Innovations	INIMS	eZassi	Confidential pharmaceutical company	4 years project	Internal/ external	Worldwide	20 innovations from 194,000 idea
2	Process improvements in Service	IMS	Nosco	PENTAX Life Care is a global manufacturer of endoscopes and is renowned for technological innovation at the highest level	2 weeks	Internal		200 ideas, 8 developed
3	Improved Decision-making and Cost	DSS	TIBCO Spotfire	CargoSmart - leading provider of global shipment management	Permanently (from 2007)	Internal/ external		3.5% Reduced fuel consumption for carriers 4x Increase in vessels monitored

Source: authors developed table based on case studies (eZassi LLC, 2017), (Nosco, 2015), (TIBCO Software, 2016)

First case study shows that web-based INMS have been applied by a pharmaceutical company with the understanding of the need to accelerate the innovation process to maintain and increase revenue results to promote technical challenges and implement a system to secure and protect innovation discoveries and submissions. An innovation platform was applied to capture ideas worldwide. This system helped to promote, manage, review, advance and speed up the innovation process. System provided: (1) structured idea capture method that limits the submission of intellectual property; (2) ability to collaborate, brainstorm and expand upon existing ideas to improve productivity; (3) automated network building; (3) fully automated idea advancement stage-gated workflows customized for each task; (4) idea advancement, ideation and collaboration etc. By implementing this system, within a four-year timeframe company received 194000 ideas and 31000 submissions advanced with the automated stage-gate feature. 20 idea submissions moved to acceptance and completion. This case shows that innovation management systems support idea from generation till implementation. And they provide internal/external support worldwide.

Second case study shows how an IMS is applied by PENTAX Life Care that is a global manufacturer of endoscopes and is renowned for technological innovation at the highest level. The company was facing the challenge of effectively collecting, evaluating and managing ideas from employees all over the world. PENTAX launched Nosco with an idea campaign "Process improvements in Service" and defined four parameters to evaluate ideas: (1) the benefit for the costumer; (2) internal/external performance increase; (3) if the idea is easy to execute; (4) necessary investment. Employees from different departments were invited to participate for 2-week idea management. More than 160 ideas were submitted and eight best ideas were selected for development. This case illustrates that IMS supports ideas only through idea generation and evaluation process. Even as the case shows the worldwide application opportunities it only illustrates internal systems application. IMS are applicable also externally, for example, as crowdsourcing tools. It only depends on the systems and application aims. IMS mostly are applied to solve concrete problems such as campaigns but there are also permanent application cases of these systems.

Third case study shows how DSS differ. It highlights how TIBCO's system allowed the company to co-design with customers. Company were facing great challenge because shipping industry were becoming more dynamic the need for faster and improved decision making. Company needed a platform that would allow: (1) to crunch different kinds of data; (2) provide real-time analysis; (3) scalable platform; (4) to implement new data sources; (5) data-driven so we can deliver our solutions quickly; (6) to have data visualization. They developed a vessel speed and route monitoring application that analyses vessel's speed and distance against a complex variety of factors. The application of it helped ocean carriers reduce fuel consumption by up to 3.5% over the past two years. This case study ilustrates the complex nature of DSS, that does not limit to some innovative solution implementation, but more wider range of decissions. These systems differes with that they are based on *ad hoc* knowleadge and do not limites to concrete functions.

Future research directions - case studies proved that there are practical differences between these systems. For example, DSS has the greatest variety of features that support decision making and they apply factual and *ad hoc* base, but IMS and INMS apply ideas generated by people as a basic source. The main practical difference between IMS and INMS is that IMS focuses only on idea generation and evaluation process, but INMS also encompasses idea development until implementation. Results show the differences, for example, most concrete results are from DSS and INMS. But it should be highlighted that systems that are web-based provides a great potential to involve people and/or data worldwide without time or geographical restrictions. In future researches more case studies should be researched because case studies analysed in this article only illustrate small range of these systems application not explores their full potential.

4. Conclusion

The paper provides not only theoretical, but also empirical insights about what are the main parities and disparities of IMS, DSS, and INMS by demonstrating it by existing and applied systems. This paper offers several theoretical implications for scholars and practitioners. Even as there are several literature reviews about them, these reviews have not been extensively applied to clarify parities and disparities of these systems. It is a problem because as shown by theoretical and practical application of these terms there is some overlapping and confusion. Paper generates an in-depth understanding of these terms both theoretically and practically. It suggests that the main parities of these systems are (1) aim to support innovation and/or decision-making processes, (2) they are manageable and systematic, (3) they are tools or tool kits, (3) web-based systems supports have potential in advancing international processes.

There have been three main limitations: (1) analysed literature sources amount based on the research design (selected data bases, time frame and selection approach); (2) theoretical approach; (3) case studies only for result illustration (number of cases) and reflects only limited part of these systems application cases. Applied approach has led to the definitions that are mainly theory based. Based on the limitations authors have develop suggestions for future studies. First, additional research should be conducted to explore basic systems features based on empirical research. It would be advisable to mix methods in the future to research system feature element. That is, conduct technology research by gathering the most frequent applied features in technologies and expert method to pick the most important ones and to verify results. Second, future studies should analyse more case studies to explore parities and disparities in process elements, application, implication etc. Third, future studies should also compare one type of systems and create their sub-classifications, because as showed in researches there are many IMS and DSS with different features, applications etc. Fourth, there could be a comparison with other closely related systems, such as, design thinking systems, co-innovation platforms etc. In future study's authors plan to research web-based IMS, DSS and INMS and their application case studies to practically expand the understanding of differences and parities of these systems. It is practical and important question as also practically there is no clarity about these terms as shown by misleading lists of these system software in different databases. Authors hope that this paper will stimulate scientific discussion and further researches.

References

[1] Alter, L. (1980). *Decision Support Systems: Current Practices and Continuing Challenges.* Massachusetts: Addison-Wesiey Publishing Company.

[2] Belova, J. and Mickiene, R. (2008). Economic Efficiency Assessment Problems of Maritime Sector under Globalization Conditions. *Proceedings of 12th International Conference on Transport Means.* Kaunas, Lithuania, pp.75-77.

[3] eZassi LLC (2017). Pharma ROI Innovation Management Case Study [Online]. Available: https://ezassi.com/pharma-roi-Innovation-management-case-study.pdf

[4] Kazaka, J., van Hoofb, J. and Szewranskia, S. (2017). Challenges in the wind turbines location process in Central Europe – The use of spatial decision support systems. *Renewable and Sustainable Energy Reviews,* vol. 76, pp. 425–43.

[5] Kilelu, W. C., Klerkx, L. and Leeuwis, C. (2013). Unravelling the role of innovation platforms in supporting co-evolution of innovation: Contributions and tensions in a smallholder dairy development programme. *Agricultural Systems,* vol.118, pp.65–77.

[6] Klos, S., Skrzypek, K. and Dabrowski, K. (2016). ERP-Based Innovation Management System for Engineered-to-Order Production. *Proceedings of 28th International Business-Information-Management-Association ''Vision 2020: Innovation Management, Development Sustainability, And Competitive Economic Growth''*. Seville, Spain, vol. I - VII , pp. 3007-3016.

[7] Kolliker, A. (2012). *Globalisation and National Incentives for Protecting Environmental Goods: Types of Goods, Trade Effects, and International Collective Action Problems. A Handbook of Globalisation and Environmental Policy,* Second Edition, pp.127-166.

[8] Maier, D., Sven-Joachim, I., Fortmuller, A. and Maier, A. (2017). Development and Operationalization of a Model of Innovation Management Systemas Part of an Integrated Quality-Environment-Safety System. *Amfiteatru Economic,* vol. 19, no. 44, pp. 302-314.

[9] Mikelsone, E and Liela, E. (2016). Web-Based Idea Management Systems As A Tool To Solve Globalization Challenges Localy. *Proceedings of 16th International Scientific Conference Globalization and Its Socio-Economic Consequences.* Slovak Republic, Zilina, pp.1370-1377.

[10] Mir, M., Casadesus, M. and Petnji, L.H. (2016). The impact of standardized innovation management systems on innovation capability and business performance: An empirical study. *Journal of Engineering and Technology Management,* vol.41, pp.26-44.

[11] NOSCO (2015). Pentax [Online]. Available: http://blog.nos.co/pentax/

[12] Power, D.J., Sharda, R. and Burstein, F. (2015). Decision Support Systems. *Wiley Encyclopedia of Management 7*, pp. 1-4.

[13] Schwenninger, S. (2009). Redoing Globalization The economic crisis is caused by world trade, imbalances just as much as domestic problems. *NATION,* vol. 288, no. 2, pp. 30-32.

[14] Tian, M. and Dragsten, A. (2015). Study on Customer Community-Based Innovation System. *Proceeding of e-Business Engineering (ICEBE), 2015 IEEE 12th International Conference on e-Business Engineering*. Beijing, China, pp. 276-280.

[15] TIBCO Software Inc. (2016). CargoSmart Case Study [Online]. Available: https://www.tibco.com/resources/success-story/cargosmart-case-study

[16] Turban, E. and Watkins, P.R. (1986). Integrating Expert Systems and Decision Support Systems. *MIS Quarterly,* June, pp.121-136.

[17] Vieira, A. S., Lima, M. S., Bermejo, P. H. S. and de Souza, W. V. B. (2015). Idea Management: Notes of a Systematic Review. *Proceedings of the 14th European Conference on Research Methodology for Business and Management Studies.* Valletta, Malta, pp. 382-389.

[18] Westerski, A., Dalamagas, T. and Iglesias, C. A. (2013). Classifying and comparing community innovation in Idea Management Systems. *Decision Support Systems,* vol. 54, pp.1316–1326.

THE IMPACT OF GLOBALIZATION ON SOCIAL CRM

Renáta Miklenčičová[1,a,*]

[1]FMK UCM Trnava, Nám. J. Herdu 2, Slovak Republic

[a]rmiklencicova@gmail.com

*Corresponding author

Abstract. Nowadays, the buying process is no longer just about selling. Customers´ decision-making, behaviour and overall satisfaction are affected by a large number of global factors. The emergence of social networks has modified the way of communication and created new rules and conditions for building a customer relationship. Creation of a social CRM concept is the most fundamental change. The new concept is based on a different approach to customers, but its role is not to replace the traditional model, but to complement and shift customer relationship management to a higher level. The paper also focuses on comparing traditional and social CRM. The introduction of social CRM for society results in changing and adapting communication activities and relational marketing activities to the global environment of social networks, which was our priority when conducting a survey of the selected business entities. The survey was executed not only to obtain a comprehensive overview of the use of social CRM in the global space, but also that of phygital or crossline communication tools that were applied to improve customer communication or customer satisfaction with the main purchasing attributes. The paper describes the case study of a particular business entity to have been researched in more detail.

Keywords: Social CRM, customer, communication, shopping process, relationship marketing

JEL Classification: M31, O31, Q50

1. Introduction

Today´s market environment is defined by continuous evolution. Popularity of social networks has triggered a considerable change in the field of communication and created new rules and conditions for customer relationship management. Such an approach is based on understanding and satisfying customers´ wants and needs and therefore this field of knowledge has to be in permanent development in order to get adapted to changes in customers´ minds. (Máliková et al., 2015). Creation of the social CRM concept is considered to be the most significant change. (Malthouse et al., 2013), (Nadanyiova, 2013) The concept is based upon a completely diffent approach to a customer. Its main task is not to replace the traditional CRM model but to complement it and improve it. Despite certain differences, traditional and social CRMs have the same objective and that is focusing on satisfaction of customers´ wants and needs. They only differ in the number and the type of the selected methods the two approaches are using. (Šalgovičová & Klinčeková, 2015)

2. Social CRM

Social CRM is based upon direct communication with a customer. Current changes to customers´ behaviour are mainly influenced by social networks. The majority of customers are using social networking sites to obtain new information. Customers are using them to learn about new products, offers or sales. On the other hand, the company can get either positive or negative feedback from its customers. Social CRM makes use of online space and social networking sites to appeal to, interact with or manage customer relationships. (Cappuccio et al., 2012) It is highly important for a company to know what social networks its customers browse and adapt its strategy hereto. Therefore companies have to be active and attract its customers in an appropriate way. Customers are open to this form of communication as it is less demanding and much more personal. (Köteleš & Kusá, 2010), (Alt & Reinhold, 2012)

The ability to obtain swift information from customers and get quick feedback are one of the top advantages. Social networking sites provide sufficient relevant information for the company to meet customers´ requirements, expectations and motivation. (Morgan et al., 2010).

When comparing traditional and social CRMs we may assume that both approaches stem from the identical concept how to satisfy customers and build long-term relationships. Their individual approach differs considerably, though. The main difference lies in the way how data or information are obtained. In case of traditional CRM customer data are processed by a company or a service/product provider while in case of social CRM customer data are developed and updated by customers themselves. (Bednárik &Čapkovičová, 2015). Social CRM enables better understanding of customers´ behaviour by way of social networking sites. As far as traditional CRM is concerned, businesses can also ask customers about their opinions, but they can learn much more from their contributions on social networking sites because customers tend to express their opinions in a more detailed way when it comes to their personal feelings, attitudes to the company or its products. (Lobato et al., 2017) Therefore business can obtain much more detailed information on what customers or community think about its products, services, brands or the entity as such. (Pavlů et al., 2015).

Even though a new concept defines a brand new attitude to customers, it is not supposed to replace the traditional CRM model. Social CRM should complement the traditional model and shift customer relationship management to a higher level.

The traditional CRM concept focuses on communication and customer satisfation by way of various interesting ideas and activities, e.g. sale promotion techniques, bonus schemes, competitions, customer service or use of traditonal marketing tools. The above mentioned activities promote customer loyalty towards a company by offering a number of benefits and services beyond their expectations. Businesses are able to collect up-to-date and relevant information on its customers, their preferences and needs in a short time. Simultaneously, they are able to make their products more visible and appeal to potential customers. Traditional CRM improves customer relationship management processes and internal company processes or helps to build a positive company image. The company caring for its customers, permanently available and able to react to changes to their needs and requirements may become a market leader. A higher quality of internal and external business processes reflects on the company image and generates long-term and loyal customers. (Rybanský & Máliková, 2015).

The social CRM concept represents change and adaptation of communication activities or relationship management activities to the social networking environment. Preparation and implementation of social CRM methods consists of three pillars (Wang & Owyang, 2010):

- **Monitoring –** it is necessary for the company to understand the environment its business activities are to be implemented in. The business should monitor the functions of social networking sites, users´ activity and statistical data.
- **Mapping** – the business is using the monitoring data. It deals with processing of the data it had previously obtained to use them in further planning.
- **Management** – Data are used in planning of management activities. Without such management they would have no value. The management has to process the data and use them appropriately when selecting a corresponding strategy of social CRM.
- **Technology** – implementation of a new CRM concept requires technological changes. A business has to focus on appropriate selection of Middleware – the software to connect an operating system with Internet databases and social networking applications.
- **Measurement** – measurement and assessment of the outcomes is crucial in every phase of preparation and implementation of a social system. A business has to obtain and analyse the data in the phase of preparation, implementation as well as in its final stage.

The authors Wang & Owyang (2010) consider the following tools to be the most fundamental ones for social CRM:

- **Social networking sites** – they represent the fastest and the most effective way of customer interaction. Various businesses focus their marketing activities primarily on social networking sites. Their main advantages are: a quick interaction with either prospective or existing customers, effective feedback and low costs.
- **Applications** – mobile applications are really multifunctional. Their purpose and use depends upon their type and social interests. Producing companies can use special applications to complement an existing product or improve their customer service. Service providers can use them to obtain customer data and effective feedback.
- **Customer service** – in the field of customer service social CRM are linked with and complement traditional CRM. Tools of social CRM use the most sophisticated technologies to improve and facilitate communication and problem-solving. Implementation of new technologies of customer service accelerates, improves and completes traditional marketing activities of businesses.
- **Interconnection with other marketing tools of a business –** interconnection of social CRM with marketing tools is crucial for a synergic effect to be maintained within the whole business structure. Consequently, social CRM helps obtain customer data and follow their feedback (Wang & Owyang, 2010).

The main advantages of social CRM are as follows:

- **Improving customer relationship.** The main goal of CRM is to create and maintain relationships with customers. Social CRM enables businesses to orientate among its customers and target potential consumers in a much easier way. Tools of social CRM improve mutual communication between a business and a customer (Raynet et al., 2016).

- **Increasing customer service effectivity.** Social networking sites and other tools of social CRM enables a business to have access to all its accounts from one interface. A business´s reaction to feedback and problems from its customers is becoming much more effective and flexible (Raynet et al., 2016).
- **Higher productivity of sellers.** Social CRM is improving employees´ work quality. The systems customers are using are intuitive, swift and multi-purpose. By the research, social CRM is increasing employees´ productivity by 12% on average (Raynet et al., 2016).

The social CRM concept and its continuous implementation into business activities are considered as natural evolution of the market environment. Businesses are permanently following new trends and are adapting to changing market conditions. By integrating and using the CRM concept, a business is reacting to customer relationship management more actively and more effectively. At the same time, it demonstrates its flexibility and ability to react to changes coming from the external environment. (Šalgovičová & Klinčeková, 2016)

3. Outcomes of the research

The given reasearch was conducted in January 2017 by an online questionaire on a ransom sample of candidates. Its main goal was to define customer satisfaction and experience with the aspect of social CRM in a selected e-shop. The attributes of customer services and other activities in the framework of customer relationship management were examined from different viewpoints in order to obtain a complet overview of use of social CRM in e-shopping. The above mentioned aspects included: activity on social networking sites, customers´ experience with complaints, customers´ satisfaction with the goods and their prices, means of transport or a quality of communication. The paper states only a few of the outcomes we obtained. 350 questionaires returned in total. It contained 19 questions of which 1 open question and 18 close questions. The additional questions were related to demographic data of the respondents. The research focused on whether a business is offering sufficient space for communication with their customers by way of different communication platforms. An e-shop is available through a customer hotline, a contact form, online chat or social networking sites. We were trying to discover which of these possibilities is considered the most accessible communication form by its customers. For 140 respondents, an e-mail or a contact form are the most popular ways of communication. 106 respondents prefer social networking sites. 32 respondents, i.e. 6% mentioned online chat and 1% prefer communicating through a customer hotline. Professional communication is a basis for long-term customer relationships. The research also focused on how customers are satisfied with communication in a selected e-shop. 190 respondents said to be very satisfied with communication of a particular e-shop. 100 respondents were neutral while 60 were dissatisfied. The level of communication of a given e-shop is worsening due to insufficient functionality of online chat or a low-quality website. The e-shop launched the service in 2016. It is still facing serious technical difficulties as the service is often unavailable or the Internet connection is disrupted. The website says that online chat is unavailable even though the operator is connected. Therefore a customer is not able to use the service. Due to its non-functionality only 15% of customers use this service on a regular basis. Within a detailed analysis of the given company, one important fact was discovered: even though the e-shop has its regular and long-term customers, it is not offering any bonus scheme. Therefore the next question asked whether the customers would be interested in such a service. Up to 295 customers would welcome such a possibility while 55 of them were not interested in a bonus scheme. Based upon these results we can state that the e-shop has a wide choice of high-quality customer services. A proactive approach has to be applied in social networking sites to improve customer interaction and guarantee their satisfaction and loyalty.

4. Conclusion

Satisfied and loyal customers represent a key to succes for every prosperous company. Customer satisfaction is crucial because long-term relationships can be built and created only with those customers who feel satisfied. The process of understanding, acquisition and keeping of loyal customers is one of the most challenging tasks the companies have to face these days. Therefore CRM systems have become crucial. The appropriately selected and configurated CRM system enables the company to build and manage customer relationships in an effective and a profitable way.

Markets are permanently evolving as a result of swift technological development. Traditional marketing used to focus on a product while nowadays it mainly deals with a customer and the relationships herewith. The customer, the value a specific product is offering and communication between the customer and the company have to come first. Modern understanding of marketing is orientated on the customer while being closely linked with the concept of customer relationship management. The CRM process itself is based upon information on our customers, their needs, purchases, shopping frequency, satisfaction, etc. For proper functionality of CRM, these data have to be collected, stored, researched, classified and analysed on a regular basis.

In today´s fast-changing and turbulent times, traditional CRM does not need to be restricted or eliminated for the benefit of modern social media. On the contrary, traditional CRM can be equally incorporated in social CRM. It promotes communication with customers through social media and building trust and brand loyalty. Social media are not the only one element, though. Social CRM includes different sub-processes, e.g. customer analyses, mapping and other steps to measure whether the company is thriving or not. In today´s world, social media are extremely powerful and on condition that CRM is appropriately implemented, the company is not only able to enhance its brand loyalty, but also increase its main business goal - the earnings.

Those companies using social networking sites as channels to attract customers are creating new and interesting challenges for traditional CRM approaches. CRM strategies which are based upon processes and technologies are supposed to manage customer relationships. Social networking sites the businesses are currently using are not able to control and manage such a relationship. On the contrary, these are consumers who direct the conversation to promote marketing, sale or customer service. The basic concept of social CRM for businesses is to discover what their customers are interested in and generate positive experience from those social media providing such a value.

Acknowledgment

This paper was written as a partial output of the scientific project VEGA 1/0640/15 named *"Phygital concept and its use in sustainable integrated environmental management of businesses"*.

References

[1] Alt, R. and Reinhold, O. (2012). Social Customer Relationship Management (Social CRM) Application and Technology. *Business & Information System Engineering,* vol. 4, no. 5, pp. 287-291.

[2] Bednárik, J. and Čapkovičová, B., (2015). Digitálna krízová komunikácia a sociálne media. *Marketing Identity: Digital Life.* Trnava, Slovak Republic, pp. 19-32.

[3] Cappuccio, S., Kulkarni, S. and Sohail, M. (2012). Social CRM for SMEs: Current Tools and Strategy. *Contemporary Research on e-Business Technology and Strategy,* vol. 332, pp. 422-435.

[4] Kohl, B. (2017). Tradičné CRM sa mení na „sociálne CRM. [Online]. pp. 24-36. Available: http://searchsalesforce.techtarget.com/definition/social-CRM

[5] Köteleš, M. and Kusá, A. (2015). Aspekty online zákazníka v internetovom obchode. *Marketing Identity: Digital Life.* Trnava, Slovak Republic, pp. 184-195.

[6] Lobato, F., Pinheiro, M., Jacob, A., Reinhold, O. and Santana, A. (2017). Social CRM: Biggest Challenges to Make it Work in the Real World. *19th International Conference on Business Information Systems (BIS 2016),* Leipzig, Germany, pp. 221-232.

[7] Máliková, I. (2015). Spotrebiteľ a online nakupovanie. *Marketing Identity: Digital Life.* Trnava, Slovak Republic, pp. 196-203.

[8] Malthouse, E. C., Haenlein, M. and Skiera, B. (2013). Managing Customer Relationships in the Social Media Era: Introducing the Social CRM House. *Journal of Interactive Marketing,* vol. 27, no. 4, pp. 270-280.

[9] Nadanyiova, M. (2013). The Possibility of Introducing the CRM System in Railway Company Cargo Slovakia. *17th International Conference on Transport Means*, Kaunas, Lithuana, pp. 87-92.

[10] Pavlů, D. (2015). Possibilities and limits of digital communication in marketing communication. *Marketing Identity: Digital Life.* Trnava, Slovak Republic, pp. 229-246.

[11] Raynet, (2017). 3 největší přínosy, které získáte se social CRM [Online]. Available: http://www.crmportal.c. /redakcni/3-nejvetsi-prinosy-ktere-ziskate-se-social-crm.

[12] Rouse, M. (2017) Social CRM. [Online]. pp. 13-20. Available: http://searchsalesforce.techtarget.com/definition/social-CRM

[13] Rybanský, R. and Máliková I. (2015). Perception of the Value by Customers. *Proceedings of Conference* of *Globalization and Its Socio-Economic´15th*. Žilina, Slovak Republic, pp. 627-634.

[14] Šalgovičová, J. and Klinčeková S. (2015). Typology, trends and buying behavior of digital consumer. *Marketing Identity: Digital Life.* Trnava, Slovak Republic, pp. 107-115.

[15] Šalgovičová, J. and Klinčeková S. (2016). Globalization and its impact on values of information society. *Proceedings of Conference of Globalization and Its Socio-Economic Consequences 16th*. Žilina, Slovak Republic, pp, 1940-1945.

[16] Wang, R. and Owyanq, J. (2010). Social CRM: The new rules of relationship marketing. [Online]. pp. 6-20. Available: https://touchstonecrm.co.uk/wp-content/uploads/2013/09/socialcrmthenewrulesofrelationshipmanagement.pdf