

CENTRAL AND EASTERN EUROPE IN THE CHANGING BUSINESS ENVIRONMENT | 2016



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**University of Economics, Prague**

Faculty of International Relations, Department of International Business  
Faculty of Business Administration, Department of Marketing  
and

**University of Economics in Bratislava**

Faculty of Commerce, Departments of Marketing and International Business

16<sup>th</sup> International Joint Conference

# CENTRAL AND EASTERN EUROPE IN THE CHANGING BUSINESS ENVIRONMENT

Proceedings

Prague, Czech Republic and Bratislava, Slovakia

May 27, 2016



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The video-conference is jointly organized by the University of Economics, Prague (namely the Department of International Business of the Faculty of International Relations and the Department of Marketing of the Faculty of Business Administration) and the University of Economics in Bratislava (namely the Department of Marketing and Department of International Business of the Faculty of Commerce). The conference focuses on the whole region of the Central and Eastern Europe, since this region plays an increasingly important role within the economic development of the whole European continent. The main objectives of the conference are to identify and analyze the ways and strategies whereby globally operating businesses can maintain and foster their competitiveness in regard to their foreign competitors.

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## Table of Contents

Peter Baláž, Lukáš Harvánek, Michaela Královičová <b>Are the Changes in the Energy Market Caused by the Chinese Economy Development? (Dilemma for the Competitiveness of EU)</b> .....	1
Yilmaz Bayar <b>Stock Market Performance and Economic Growth in Turkey: Evidence from Borsa Istanbul</b> .....	12
Dana Benešová, Viera Kubičková, Miroslav Hušek <b>Impact of ICT in Service Enterprises on Their Economic Performance</b> .....	20
Djula Borozan, Mirjana Radman Funaric, Dubravka Pekanov Starcevic <b>Social Capital and Household Electricity Consumption in Croatia: A Regional Perspective</b> .....	34
Iveta Černá <b>The UAVs in International Trade – Current State of Play and Regulatory Issues</b> .....	49
Lidia Danik, Izabela Kowalik, Petr Král <b>The International New Ventures Originating in Poland and Czech Republic, A Comparative Study</b> .....	60
Ferdinand Daňo, Eva Hanuláková <b>Internationalization of Consultancy Services</b> .....	76
Anica Djokić <b>Changes in the Market Place vs. Nostalgia - Czech Consumer and Travel</b> .....	88
Peter Drábik, Peter Zámečník <b>Key Aspects of Logistics for Online Store and Multi-channel Distribution</b> .....	97
Mária Dzurová, Barbora Paholková <b>Consumerism as a Lifestyle</b> .....	112
Barbora Paholková, Mária Dzurová <b>Low-cost Marketing and Marketing Minimalism</b> .....	121
Petra Gundová <b>Prediction Methods of Financial Situation in Czech Companies in the Changing Business Environment</b> .....	133
Jaroslav Halík <b>Do We Desire Returning To The Old Orders?</b> .....	143
Tatiana Hlušková <b>Joint Ventures in Slovak Economy and the Development of Their Characteristics</b> ....	153
Mathieu-Claude Chaboud, Cornelia Caseau <b>Austrian Skills in East Africa: A Story of Knowledge, Expertise and Impact Investing</b> .....	163
Bogna Janik <b>Value-based Investing in Central and Eastern European Countries (CEECs) – Based on the Companies Reflected in Socially Responsible Indices</b> .....	172
Lujza Jurkovičová, Eduard Nežinský <b>Oil Price Enhancing Autoregressive Fuel Prices Nowcasting Models</b> .....	180

Lucia Khúlová, Lenka Šprochová, Ho Thi Thu Hoa	
<b>Importance of Intermodal Transportation (Slovakia vs. Vietnam) .....</b>	<b>187</b>
Jaroslav Kita, Pavol Kita, Marta Grossmanová, Veronika Kitová Mazalanová	
<b>Internationalization of Education of the Study Program in French Language the Sales Management from the Point of View of the Relation Student – Institution .....</b>	<b>202</b>
Zuzana Kittová, Dušan Steinhauser	
<b>Science, Technology and Export: Slovak Case .....</b>	<b>216</b>
Dagmar Kokavcová	
<b>Rapid Internationalization – Applying the Born Global Company Model in Slovak Companies .....</b>	<b>227</b>
Janka Kopaničová, Dagmar Klepochová	
<b>Purchasing Strategies of Low Income Households. A Study of Consumer Behaviour Specifics Among Low Income Segment .....</b>	<b>238</b>
Larisa Korganashvili	
<b>Georgia's Foreign Trade in the Changing Business Environment .....</b>	<b>246</b>
Paulína Krnáčová	
<b>Consumer Awareness of Food Labelling .....</b>	<b>258</b>
Dagmar Lesáková, Ferdinand Daňo	
<b>Food Shopping Behaviour in Older Consumers' Segment .....</b>	<b>270</b>
Fuat Man	
<b>The Nature of HRM and the Meaning of Wor: Turkish Case of HRM Practitioners.....</b>	<b>281</b>
Anna Micháľková, Monika Krošľáková, Iveta Fodranová	
<b>The Importance of Public Resources for Entrepreneurship and Development of Innovation .....</b>	<b>291</b>
Magdalena Myszkowska	
<b>The Performance of Services Exports in Central and Eastern European Countries ...</b>	<b>306</b>
Róbert Reháč	
<b>Electromobility in the European Union and in the Slovakia and Its Development Opportunities .....</b>	<b>316</b>
Agneš Slavić, Nemanja Berber	
<b>The Effect of Performance-based Rewards on Organizations' Outcomes in Serbia: Evidence from Cranet Research 2015 .....</b>	<b>327</b>
Edit Terek, Milan Nikolić, Jelena Vukonjanski, Bojana Gligorović, Katarina Zorić	
<b>The Impact of Corporate Credibility on Organizational Commitment of Employees and Financial Performances: the Serbian Case .....</b>	<b>338</b>
Dana Vokounová, Janka Kopaničová	
<b>Can I Be Opened? .....</b>	<b>347</b>
Besjon Zenelaj, Vusal Gambarov, Fahrettin Atıl Bilge	
<b>Using Social Media Communication as a Marketing Strategy to Generate Corporate Reputation: A Study in the Telecommunication Industry .....</b>	<b>356</b>

## Index of Authors

Baláž, P. ....	1	Kittová, Z. ....	216
Bayar, Y. ....	12	Klepočová, D. ....	238
Benešová, D. ....	20	Kokavcová, D. ....	227
Berber, N. ....	327	Kopaničová, J. ....	238, 347
Bilge, F. A. ....	356	Korganashvili, L. ....	246
Borozan, D. ....	34	Kowalik, I. ....	60
Caseau, C. ....	163	Král, P. ....	60
Černá, I. ....	49	Královičová, M. ....	1
Chaboud, M.-C. ....	163	Krnáčová, P. ....	258
Danik, L. ....	60	Krošláková, M. ....	391
Daňo, F. ....	76, 270	Kubičková, V. ....	20
Djokić, A. ....	88	Lesáková, D. ....	270
Drábik, P. ....	97	Man, F. ....	281
Dzurová, M. ....	112, 121	Michálková, A. ....	291
Fodranová, I. ....	291	Myszkowska, M. ....	306
Gambarov, V. ....	356	Nežinský, E. ....	180
Gligorović, B. ....	338	Nikolić, M. ....	338
Grossmanová, M. ....	202	Paholková, B. ....	112, 121
Gundová, P. ....	133	Pekanov Starcevic, D. ....	34
Halík, J. ....	143	Radman Funaric, M. ....	34
Hanuláková, E. ....	76	Rehák, R. ....	316
Harvánek, L. ....	1	Slavič, A. ....	327
Hlušková, T. ....	153	Šprochová, L. ....	187
Ho Thi Thu, H. ....	187	Steinhauser, D. ....	216
Hušek, M. ....	20	Terek, E. ....	338
Janík, B. ....	172	Vokounová, D. ....	347
Jurkovičová, L. ....	180	Vukonjanski, J. ....	338
Khúlová, L. ....	187	Zámečník, P. ....	97
Kita, J. ....	202	Zenelaj, B. ....	356
Kita, P. ....	202	Zorić, K. ....	338
Kitová Mazalanová, V. ...	202		



# **Are the Changes in the Energy Market Caused by the Chinese Economy Development?**

## **(Dilemma for the Competitiveness of EU)**

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**Abstract:** Development of the global economy confirmed grandiose changes in its functioning. The level of interdependency with the economy development of the PRC has grown not only regarding the export and import flows of the goods and services, but has significantly affected the raw materials with strategic importance as well. The global economy was not prepared for the demand growth specifically for the energy inputs what ultimately lead to growth of its prices, terms of delivery and territorial flows of FDI. PRC consistently apply its own comparative advantages in international trade and the growing impact on the developments in the international energy markets reflected in a strengthening market position. The abovementioned has significant impact the macroeconomic indicators of European Union, mainly the companies' competitiveness registering higher operating costs what threaten its business position and ultimately the overall economy stability of EU.

**Keywords:** Chinese economy, competitiveness, economic growth, energy resources, coal.

**JEL Classification codes:** B30, F1, F10, F 100.

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### **1 INTRODUCTION**

Rapid growth of the world economy, which is under increasing globalisation pressure of all economic processes, brought many differentiated and contradictory results for all of its territories, in the last decade. Simultaneously, there were still stronger efforts for broader cooperation under various forms of regional economic integration and creation of new trade blocks or another forms of interest groups with the aim of promoting global interests. This process became one of the decisive catalysts of international financial or protracted economic crisis. Its enormous "toxicity" is demolishing the existing protecting safety nets and, to a large extent, undermined many positive changes in the progress of the global economy, thus confirmed that there is no such a country or region that is immune to its consequences. The key assumption behind rapid and successful penetration to the global economy lies within the synchronization of the whole set of major strategic decisions and internal restructuring changes. It fully relies on an existing comparative advantages of the country and its ability to overcome "weaknesses" quickly and efficiently enough. From the beginning of new

millennium up until 2008, globalization of the world's economy was consistently affirming its positive effects, particularly when it came to GDP growth rates and export volumes. It had indeed the effect on increasing consumption of all types of material inputs including energy resources. Additional demand caused intensified mining and since the supplies in energy segment are highly capital intensive with global resources being limited, it is logical that, it was reflected in the growth of their prices. These trends were determined by existing extraction capacity, as well as by other commercial and non-commercial terms of delivery. The global market also recorded the increasing significance of reciprocity and therefore not even a prompt payment for energy supplies could ensure their real delivery. Post 2000 development has been increasingly influenced by GDP growth rates of PRC, which resulted in sharp increase of country's export volumes as well as its imports of material inputs. This tendency was most prominent in the commodity segment. PRC became the world's largest exporter of goods already in 2009, and subsequently, the world's biggest trading nation (imports and exports of goods) in 2013 (Bloomberg, 2013). Additionally, it became the second biggest economy in terms of produced GDP (PPP) at the same time. Sharp growth of domestic consumption was on par with increased "hunger" for all kinds of material inputs by companies, which had operations in PRC. The country has become the world's largest consumer of copper, aluminium, zinc, gold and silver and it was forced to acquire more and more additional resources from abroad. Thus, the expansion overseas has become the country's top priority. Particularly striking has become its global position regarding the consumption of energy resources, especially coal and crude oil. Back in 2000, PRC was the net exporter of crude oil, which has long been the barometer of the energy market, and it also exported electric energy. The country's share of world's imports of natural gas was marginal, with only its imports of lignite having some significance. Sharply increasing demand of PRC for imports of energy sources has evoked their intensified extraction abroad, that additionally lead to enhanced needs for new investments. Ultimately, this process has brought up growing demand for mining and transport equipment as well as new technologies. Related construction and infrastructure projects have increased the activity of other economic sectors and types of production. As a result, salaries and government revenues grew and subsequently helped fund the public spending. The world GDP growth and export was thus positively influenced by robust Chinese commodity imports. In parallel, when it came to business partners, PRC was focused on those countries that accepted domestic goods in form of cheap consumer and industrial goods, with various forms of government investment assistance being implemented. Thus, the world's GDP growth has been extensively becoming more and more dependent on

the active role of PRC. Although the Chinese economy has avoided consequences of the first wave of recent financial crisis by conducting extensive internal adaptation measures, and thus maintained its pace of GDP growth rate, later developments have pointed out that even these measures were not sufficient enough. In 2014, the first symptoms of crisis appeared in Chinese industry and its stock market, which has played role of increasing importance in refinancing of SOE. This situation repeated at the turn of year 2015/2016, with the world economy realizing that it has in the meantime, become heavily dependent on the growth and demand of PRC. This situation has been of strategic importance for energy sector because the sales of energy supplies constitute a significant proportion of national incomes for many monoculturally oriented exporters and therefore ultimately affect their ability to repay international debt obligations, as well as to maintain social peace and cover purchases of other types of goods from abroad. The entire process is "crosslinked and pipelined" under the growing pressure of globalization and thus enhances various international risks and poses a threat of new global discrepancies. The aim of this paper is to show increasing interdependency of global economy on the functioning of Chinese economy with regard to existing connections and subsequently to introduce the possible adaptation measures of EU to this new situation. Due to conduction of real research, the sector of energy supplies had been selected for further analysis, mainly the coal supplies, which are the dominant input for energy production of PRC, with the country being the world's biggest consumer and therefore having the absolute influence on the global terms of delivery for this commodity. Subsequently, the risks and consequences in terms of international competitiveness of the EU stemming from its dependence on the global energy market, which is also heavily dependent on the demand of Chinese economy, will be highlighted. The position of this grouping in the post-crisis period is very "fragile" and reliant on positive developments on the international markets and therefore determines its crucial strategic decisions.

## **2 LITERATURE REVIEW**

The development of the global economy and subsequent changes, which are resulting from the pressure of globalization, with the main focus on the energetic and raw material aspects of Chinese expansion is in focus of a number of internationally recognized experts: G. Chow, F. Fukuyama, E. Graham, Ch. H. Kwan, P. Krugman or J. Stiglitz, with respected experts also being M. Vošta or I. Bolotov. Of significant importance are also analyses published by renowned organizations and consulting firms, namely IEA, Euro, Goldman Sachs and McKinsey Global Institute. The relationship between energy prices and the Chinese economic

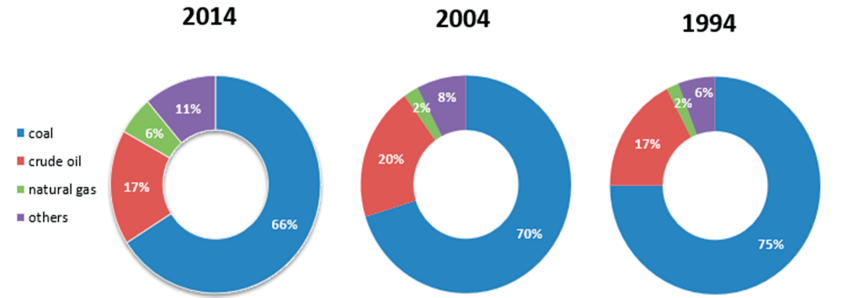
indicators has not been addressed by many authors yet. Among those already conducted, as one of considerable importance, is the research analyzing the relationship between the energy consumption in industry and the GDP development in Shanghai between 1952 and 1999 using modified version of Granger causality (Wolde Rufael, 2004). This research indicated that there is unilateral Granger causality of coal, electricity and overall energy consumption and GDP, but there had not been any research that would be dedicated to oil consumption and its relation to the real GDP of the country yet. However, there is study that examined the relationship between the electricity consumption and the real GDP in China during the years 1978 and 2004 by using cointegration theory. The estimated results indicated that the real GDP and the energy consumption in China are cointegrated and there is an unilateral Grange causality between the electricity consumption and the real GDP, but not vice versa (Yuan et al, 2007). Lin Mu (Chen and Hamori, 2009) pointed out what implication has the increase of energy prices on different sectors of the Chinese economy. He concluded that it not only influenced the economic growth, but accelerated structural changes in the industries. The impact of coal price development is two to three times higher than the same development of crude oil. This finding could also be applied to sectors requiring less energy inputs. According to other study (Lescaroux and Mignon, 2009), significant fluctuations in oil prices caused the increase of consumer and producer prices, and also lead to an increase of interest rates, which with a certain delay has a negative impact on GDP growth, investment and consumption.

### **3 KEY FINDINGS**

Energy security and sufficient supply of resources of all kinds of energy has become the key element of PRC's development strategy. Enormous and unprecedented pace of industrialization in a relatively short period of time increased the country's dependence on imports of most raw materials used in industrial production. In addition, an extensive transformation of industry towards the usage of higher technology with the aim of reduction of country's consumption of energy inputs have been well under way. However, it became clear that as PRC has become more dependent on imports of energy resources, the interdependence of the world economy on the demand from PRC has also increased. From this perspective, the development of the country's energy mix has become the important signal of potential changes of demand on the international commodity markets. PRC's energy mix consists mainly of oil, natural gas, coal, nuclear energy and rapidly growing share of renewable energy sources (RES). In 2014, coal contributed to the country's total energy

consumption by 66 %, crude oil by 17 % and natural gas by 6 %.<sup>1</sup> Fossil fuels covered over 90% of the country's energy consumption. This ratio confirmed the country's high dependence on fossil fuels, but also a low diversification of energy mix of the biggest air polluter in the world that China has become (Figure 1).

**Fig. 1: Development of Chinese energy mix over the last three decades**



Source: Processed by authors according to data from China Statistical Yearbook, 2015.

PRC economic expansion, through dynamic industrialization, is based on three key pillars, namely: a huge amount of available cheap labor, high inflows of foreign capital and technology and cheap energy, which is in the country yet available mainly due to the share of coal in its overall energy mix. Coal accounts for nearly 70 % of energy consumption, thus its good availability and low prices are critical to current and future economic growth and energy security. Coal market developments are not important only for the Chinese economy. Behavior of China, with implication on coal markets, is a decisive factor in the development on the global coal market ever since, with PRC consuming more than half of the total global consumption and importing nearly half of the global imports of this commodity. This significantly affects all actors of the global economy, especially coal exporters. It has the third biggest coal reserves in the world, however, with current robust production of 1.844 million ton of oil equivalent (46.9 % of annual global coal production); the reserves would be depleted in 30 years (Table 1).<sup>2</sup> China became a net coal importer in 2009, while before it even exported this commodity. The markets reflected these developments in growing prices and important coal exporters, mainly Australia and Indonesia (which cover half of Chinese coal imports), Russia and Mongolia significantly increased investments in its production.

<sup>1</sup> For example, the EU energy mix consists of oil and oil products (34 %), natural gas (23 %), solid fuels (17 %), nuclear energy (14 %), RES (11 %) and hydro (1 %). (In. DG Energy. 2015).

<sup>2</sup> The US has it at its present level of production for more than 266 years and Russian R/P ratio is 452 years (BP, 2014).



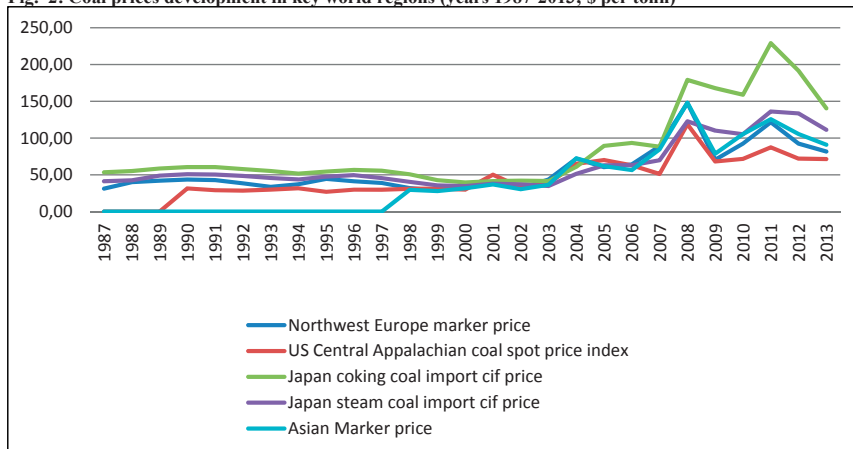
**Tab. 1: The share of the reserves, production, consumption and imports of fossil fuels of China on the global indices (2014)**

	Reserves*	%	R/P	Production	%	Consumption	%	Import	%
Crude Oil	2.5	1.1	11.9	211.4	5.0	520.3	12.4	309.2	6.1
Natural Gas**	3.5	1.8	25.7	134.5	39.0	185.5	5.4	58.4	5.8
Coal***	114500	12.8	30.0	1844	46.9	1962.4	50.6	118.4	25.0

R/P – reserves to production ratio, \*coal – mil. ton; \*\* bil. m<sup>3</sup>; \*\*\* mil. ton of oil equivalent

Source: Author's calculations based on data from BP Statistical Review of World Energy, 2015

**Fig. 2: Coal prices development in key world regions (years 1987-2013; \$ per tonn)**



Source: Author's calculations based on data from BP Statistics 2014

Since 2000, global coal prices were recording an increasing trend with a moderate consolidation of prices in 2007, which came as a reaction on the recent financial crisis, and caused the weakening of industrial demand for coking coal. However, there has been a downward trend since 2011 and this trend is especially important for our analysis. The development of coal consumption in PRC and global coal prices have a strong correlation. This should therefore continue to apply after 2011, when country constantly increases its consumption of coal, namely for home heating, electric power generation and industrial sectors. However, it can thus be said, that starting from 2011, the extent to which global prices of coal are determined by PRC's consumption of crude oil decreased, with global prices being affected by various other factors. The data (IEA Coal Energy Outlook, 2014) show that prices of coal used for heating decreased by half since the beginning of 2011, with even higher decrease of coking coal prices, which fell by two thirds, when compared with prices recorded during the top of the boom in 2007 (Reuters, 2013). One of the most crucial causes of this development is the oversupply on the market that stays high even despite increasing

demand from PRC and India. According to the fundamentals of economic theory, this problem should be solved by price. The producers are usually reducing their outputs as a result of decreasing price. Two largest producers of coal, Australia and Indonesia, on the other hand, have addressed price reduction by the means of costs reduction and increasing of sold volumes. Australian producers face the problem of “take or pay” contracts that oblige them to pay transportation costs, whether they deliver the coal or not. These contracts are typically up to the amount of 20 USD per tonne, which means that if the loss of the producer is below this level, it is cheaper for him to continue with production than to cease it. Thus, even despite declining prices, Australian exports of coal will remain relatively high, which will further inflate the supply on the market.

Due to a sharp fall in prices of coal, USA reduces its exports and several major American producers have already closed their businesses (e.g. Arch Coal). According to General Administration of Customs of PRC, coal imports from USA fell by 60% to 1.423 million ton during the first half of 2014. Furthermore, deliveries from Canada and Russia decreased by 46 % and 26 %, respectively.<sup>3</sup>

**Fig. 3: European coal prices development (2007-2015, in \$)**



Source: According to Bloomberg. 2015

## 4 RESULTS AND CONCLUSIONS

China's long-term development strategy and its ability to successfully assert its output on international markets, combined with significant number of short and long term cyclical changes resulting from developments in the global environment, greatly complicate the prediction of further developments of global economy. In 2015, PRC adopted a new development strategy “*Made in China 2025*” designed to transform China from a leading manufacturing giant into a world manufacturing superpower. It aims to promote

<sup>3</sup> China's imports from Australia, which accounts for nearly half of all coal imports of China, grew by 13.2% in the first half of 2015 to 15.02 million tons, and by 16.2 % to 7.53 million tons from Mongolia, which sends all its exports to China. However, the coal is sold at very low prices due to the overall decline in demand.

manufacturing and national competitiveness, to stimulate innovation and to mobilize every conceivable element rather than a single industry. One important ambition is to increase the share of high tech in total production and exports and to gain the dominance in selected disciplines by 2025 and therefore succeed on European and American markets. Overall shifts in PRC's strategic priorities and their implementation will have inevitable consequences for other parts of the global economy. Since 2014, analyses of developments of energy markets and other commodities confirm, that demand for them starts to decline steadily, which has far-reaching consequences, not only on the economies of their main suppliers<sup>4</sup>, but also on those countries that are major exporters of manufacturing, mining and transportation equipment. Thus, it subsequently influences the demand for finished products and the ability of companies and entire countries to repay their loans. Research confirms both, statistically and systemically significant rate of global economy independence on the Chinese economy. Unlike the previous decade, when this interdependence was important mainly because of the export of investments, sales of finished products and subsequent supply of cheap goods, EU and USA are currently dependent on PRC in almost all segments of their economies, both directly and indirectly. Sales of transportation equipment and technology in China keeps "operable" state of the whole European industry, with its dynamic growth having a direct impact on the prices of all kinds of commodities with significant share of energy inputs. The slowdown of economic growth in China thus means reduced sales of European products, services, and all kinds of raw materials, which in turn translates into a deterioration of economic and foreign trade positions of the majority of less developed countries and therefore their ability to reimburse their financial obligations to European banks. These countries must address the losses, and domestic firms and exporters are suffering as a result. The whole process thus creates a "vicious circle" and there is no doubt that its beginning and ending are both based in PRC. EU will have to quickly adapt to the new situation, not only in the world markets, but also within its own economy. It is necessary to reformulate new integration and development strategies in a relatively short time. The current situation suggests that governments in developed countries are aware of this risk, but nowadays focus more on their own particular policy issues, ignoring fact that this escalation is caused by in long-term underestimated and constantly deepening economic discrepancies, and resulting consequences thus require an urgent solution. The question of supporting the whole European

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<sup>4</sup> Australia lost approximately 15 billion USD during the first 7 months of 2015, as a result of decreased demand of PRC for commodities. This accounts for 1 % of Australian GDP. Indonesia, Brazil, Nigeria and Angola recorded similar losses (Tutková. J.).

competitiveness will become a condition "*sine qua non*" for prosperity in a relatively short period. In case that EU begins to lose this historical advantage, it can be assumed that European community will not fulfil its historical goals and this may also be the reason for its breakup. As a result, some countries would benefit from the loss of their "*community burden*", but on the other hand, they would also lose many positive multiplier effects that the integration has brought up until now. EU already pays the price for the decline in demand for energy commodities in all above mentioned respects. This grouping imports about half of its consumed energy inputs, and thus it experienced significant increase of expenditures in the period when prices of purchased inputs were high and prices of goods produced by EU members stagnated. When prices are declining, European countries are losing their revenues. It has to be pointed out that the subsidized energy prices, especially coal mining, and pricing mechanism of fuel, keep the prices artificially high. These measures ultimately act as a significant factor contributing to the reduction of the competitiveness of the European industry as a whole, especially for low and medium technology. Therefore, through evolution on international energy markets, dependence of EU economy to the demand factors of the Chinese economy will be even greater in the future. Recipes for an immediate solution of unfavourable development trends from an EU perspective are not available yet, but there is a general view that EU needs to fundamentally rethink its economic development strategy and look for ways how to not only reduce its dependence on development trends of international markets, but also develop an effective adaptation measures in order to restore its own competitiveness. Huge risk lies in the development of exchange rates and stems from the slump of commodity prices that is caused mainly by the slowdown of Chinese economy.<sup>5</sup> Although the drop of exchange rate by almost 30 % over the past year, was the result of several factors in the case of euro, its purchasing power when it comes to commodity purchases declines and thus influences the overall competitiveness of European exports. Paradoxically, the highest costs of falling prices are borne by net importers of energy. Development trends indicate that China will, even despite of the decline of its most important economic indicators, continue to determine the pace of global economic growth also in 2016. Due to this decline and the surplus of production and export capacities in China, the yields in various industries of other countries will be muted and competitiveness of their exporters will decrease. In the energy sector, this will mean that the low prices of raw materials that are resulting from the excess of supply over demand will be preserved. Paradoxically, this trend

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<sup>5</sup> Australian and Canadian dollar fell by 9 % and 7 % respectively, Russian ruble fell by over 20 %, etc.

will continue to accommodate strategic economic interests of PRC. On the other hand, it poses a huge dilemma for EU and its position within the global economy. The expected granting of the market economy status to PRC at the end of 2016, may mean full liberalization of its trade and lead to the release of huge internal savings of this country. Both factors may have fatal consequences for the economic interests of this grouping. EU has to prepare for this prospective development and create functional adaptation measures for various scenarios, otherwise it will be left only with the crisis alternatives, at the time when crisis hits in its full strength. If the latter would be the case, crisis can become the permanent phenomenon affecting not only grouping's competitiveness, but threatening its existence as such.

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# **Stock Market Performance and Economic Growth in Turkey: Evidence from Borsa Istanbul**

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**Abstract:** Stock markets are accepted as a leading indicator of economic performance in the world. This study examines the causality between economic growth and stock market performance in Turkey during the period 1999:Q1-2015:Q3 by using Toda and Yamamoto (1995) causality test. We found that there was bidirectional causality between stock prices and economic growth.

**Keywords:** Stock Prices, Economic Performance, Time Series Analysis.

**JEL Classification codes:** C32, G14, N24.

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## **INTRODUCTION**

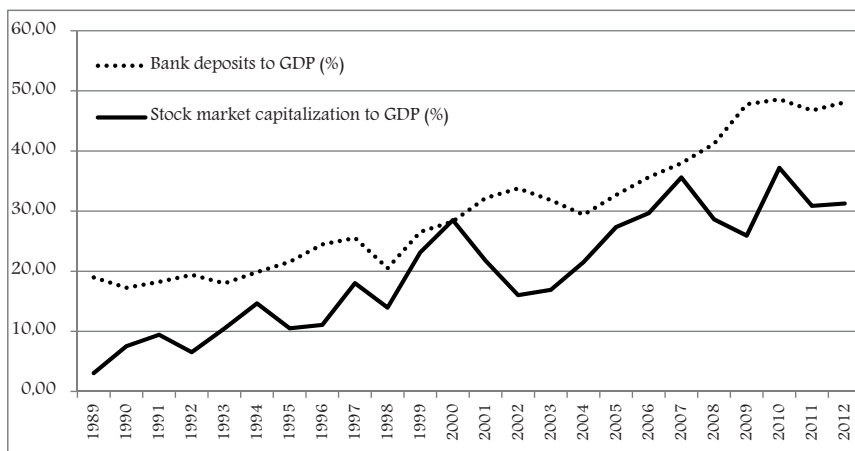
Stock markets are an important component of capital markets which implements significant functions in the economy such as mobilizing the savings, contributing to the capital formation, raising long term funds and enhancing production and productivity. Therefore, increases in stock prices performance indicate that the listed firms perform well and in turn overall economy do well. On the other hand sharp declines in the stock markets are generally preview of future contractions in the economy. So stock market performance is accepted as a leading indicator of the whole economy. However, stock market performance may be misleading about the prediction of future economic growth, because it is generally driven by the expectations rather than economic fundamentals and also sensitive to the changes in economic outlooks of the remaining countries (especially trade partners and major developed countries) in the world.

Borsa Istanbul (BIST) came into operation as of 26 December 1985, but could not make sufficient progress during 1990s and followed a very volatile course and stock market capitalization of BIST generally stayed below 20% of GDP during this term due to economic and political instability as seen in Figure 1. However, stock market capitalization began to increase and reached 35.59% of GDP in 2007 with economic and political stability by transition to the strong economy program in 2001 before outburst of global financial crisis.

This study investigates the relationship between stock market performance and economic growth in Turkey during the period 1999:Q1-2015:Q3 by using Toda and Yamamoto (1995)

causality test. The rest of the paper is organized as follows. The next section overviews the theoretical and empirical literature on the nexus between stock market performance and economic growth. Section 3 presents data and the econometric methodology; Section 4 conducts the empirical analysis and presents major findings. Finally, the study is over with the Conclusion.

**Fig. 1: Banking sector and stock market development**



Source: Beck et al. (2000)

## LITERATURE REVIEW

Dramatic changes in the stock markets generally have accompanied the economic downturns or economic expansions. For example during the global financial crisis, DIJA (Dow Jones Industrial Average) experienced a 18% decline in the first three quarters of 2008 and a 19% decline in the fourth quarter of 2008. On the other hand BIST 100 index experienced about 64% decline during the period mid-October 2007-November 2008 (Bayar, 2012). Therefore, many theoretical and empirical studies have been conducted on the interaction between stock prices and macroeconomic variables. Most of the studies have focused on the nexus between stock market performance and economic growth and these studies have reached mixed findings. Some studies have found that there was unidirectional causality from stock market performance to economic growth (see Olweny and Kimani (2011), Auret and Golding (2012), Athapathu and Jayasinghe (2012), PricewaterhouseCoopers (PwC) (2013), Chien et al. (2014)), while some studies have found that there was unidirectional causality from economic growth to stock market (see Liu and Sinclair (2008), Pilinkus (2009), Elmas et al. (2011),

Paramati and Gupta (2011)). Relatively few studies have found that there was bidirectional between stock market and economic growth (see Ikoku (2010), Pece (2015)).

In one of the empirical studies, Liu and Sinclair (2008) investigated the causality between stock market prices and economic growth in China during the period 1973:Q1-2003:Q2 for Hong Kong; 1967:Q1-2003:Q2 for Taiwan and 1992:Q2-2003:Q2 for mainland China and found that there was a unidirectional causality from economic growth to stock prices in the long run, while there was a unidirectional causality from stock prices to economic growth in short run. On the other hand Pilinkus (2009) investigated the relationship between stock prices and 40 macroeconomic variables in Lithuania during the period December 1999-March 2008 by using Granger causality test and found that there was a unidirectional causality from GDP to stock market index.

Erdem et al. (2010) investigated the relationship between economic growth and stock market performance in 6 emerging countries including Brazil, India, Korea, Malaysia, Mexico and Turkey by using ARDL cointegration and Toda-Yamamoto causality tests and found that stock market led economic growth in the short run. On the other hand Ikoku (2010) examined the causality among real GDP, stock market prices and industrial production in Nigeria during the period 1984Q1-2008Q4 by using Granger causality test and found a bidirectional causality between real GDP and stock prices.

Elmas et al. (2011) investigated the relationship between change of BIST 100 index and economic growth in Turkey during the period 1998:Q1-2010:Q3 by using ARDL cointegration and Granger causality tests and found that there was negative relationship between economic growth and stock market performance and there was a unidirectional causality from economic growth to BIST. On the other hand Olweny and Kimani (2011) examined the causality between economic growth and stock market performance in Kenya during the period 2001-2010 by using Granger causality test and found that there was a unidirectional causality from stock market performance and economic growth. Paramati and Gupta (2011) also investigated the relationship between economic growth and stock prices in India during the period 1996:Q1-2009:Q1 by using Engle-Granger cointegration test and Granger causality test and found that there was a unidirectional causality from economic growth to stock prices.

Auret and Golding (2012) investigated relationship among real GDP, real stock price index and real GDP in South Africa during the period 1969-2010 by using regression analysis and found that real stock price index was a preview of real GDP and industrial production. On the other hand Athapathu and Jayasinghe (2012) also examined the causality between stock

market performance and economic growth in Sri Lanka during the period 1997-2008 and found a unidirectional causality from stock market performance to economic growth.

PricewaterhouseCoopers (PwC) (2013) investigated whether stock market movements were a significant leading indicator of the future economic growth in the United States (US) and United Kingdom (UK) during the past 40-60 years by using regression analysis and found that stock market performance was a useful leading indicator of economic growth in these countries. On the other hand Masoud (2013) investigated the causality between stock market performance and economic growth in 8 developed countries (Australia, Canada, France, Germany, Japan, Switzerland, US, UK) during the period 1970-2000 by using correlation analysis and found that there was a positive relationship between economic growth and stock market performance.

Chien et al. (2014) investigated the relationship between stock market return after each Election Day and economic growth in the US during the period 1900-2008 by using correlation and regression analysis and found that after election stock markets predict the future GDP more accurately. Finally Pece (2015) investigated the relationship between stock market performance and economic growth in Romania during the period 2000:Q1-2013:Q4 by using Johansen and Gregory-Hansen cointegration tests and Granger causality test and found a bidirectional causality between stock market performance and economic growth.

## **DATA AND ECONOMETRIC METHODOLOGY**

We examined the causality between economic growth and stock market performance in Turkey during the period 1999:Q1-2015:Q3 by using Toda and Yamamoto (1995) causality test.

### **3.1 Data**

We used the real GDP growth as a proxy for economic growth and growth rate of Borsa Istanbul (BIST) 100 index as a proxy for stock market performance in the study. Our study period and sample were determined by data availability. The variables used in the econometric analysis, their symbols and data sources were presented in Table 1. We used Eviews 8.0 software package for econometric analysis.

**Tab. 1: Data Description**

<b>Variable</b>	<b>Symbol</b>	<b>Data Source</b>
Growth rate of real GDP	RGR	Turkish Statistical Institute (2016)
Growth rate of Borsa Istanbul 100 index	BIST	Borsa Istanbul (2016)



### 3.2 Econometric Methodology

First, we tested the stationarity of the variables by Augmented Dickey Fuller (ADF) (1981) and Phillips and Perron (PP)(1988) unit root tests and then investigated the causality among the variables by Toda and Yamamoto (1995) causality test.

## EMPIRICAL ANALYSIS

We examined the causality between economic growth and stock market performance in Turkey during the period 1999:Q1-2015:Q3 by using Toda and Yamamoto (1995) causality test.

### 4.1 Results of Unit Root Tests

We tested the stationarity of the variables by ADF (1981) and PP (1988) unit root tests and the results were presented in Table 2. The results showed that both RGR and BIST were stationary at the level, because the probability values in parentheses were lower than 0.05. Therefore, the null hypothesis (series has unit root test) was rejected for both tests and the variables were stationary at the level.

**Tab. 2: Results of ADF (1981) and PP (1988) Unit Root Tests**

Variables	ADF (1981)		PP (1988)	
	Constant	Trend + Constant	Constant	Trend + Constant
RGR	-4.01 (0.0025)*	-3.972 ( 0.0144)**	-3.21 ( 0.0238)**	-3.41 (0.0582)***
BIST	-6.12 ( 0.0000)*	-6.29 ( 0.0000)*	-5.97 ( 0.0000)*	-6.16 (0.0000)*

\*, \*\*, \*\*\* respectively denotes that it is significant at 1%, 5% and 10% significance levels

### 4.2 Results of Toda-Yamamoto (1995) Causality Test

Toda and Yamamoto (1995) causality test is a modified version of Granger (1969) causality test and investigates the causality among the variables without pretesting cointegration and thus avoids the possible bias resulting from unit root test and cointegration tests. In context of the test, first the optimal lag length  $p$  is determined in the VAR model, then the highest integration degree ( $d_{max}$ ) among the variables is added to the  $p$ . At the next stage VAR model is estimated with the level values of the variables for the  $p + d_{max}$  lag. The estimated VAR model is as follows:

$$Y_t = \alpha_0 + \sum_{i=1}^{p+d_{max}} \alpha_{1i} Y_{t-i} + \sum_{i=1}^{p+d_{max}} \alpha_{2i} X_{t-i} + u_t \quad (1)$$

$$X_t = \beta_0 + \sum_{i=1}^{p+d_{max}} \beta_{1i} X_{t-i} + \sum_{i=1}^{p+d_{max}} \beta_{2i} Y_{t-i} + v_t \quad (2)$$

At final stage the constraints are imposed on the coefficients obtained from the  $d_{max}$  and the significance of these constraints are tested by modified Wald test. The null hypothesis for the (1) numbered equation is that there is no causality from X to Y and the null hypothesis for the (2) numbered equation is that there is no causality from Y to X.

First, we estimated the VAR model with the level values of the variables to determine the optimal lag length and the results were presented in Table 3. We found that the optimal lag length was 3.

**Tab. 3: Determination of Optimal Lag Length**

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-439.8678	NA	6712.461	14.48747	14.55668	14.51459
1	-400.5074	74.84921	2105.941	13.32811	13.53574*	13.40948
2	-396.2274	7.858484	2087.899	13.31893	13.66498	13.45455
3	<b>-387.6150</b>	<b>15.24819*</b>	<b>1797.192*</b>	<b>13.16770*</b>	<b>13.65217</b>	<b>13.35757*</b>
4	-386.1437	2.508398	1957.059	13.25061	13.87349	13.49473
5	-380.6450	9.014256	1870.005	13.20148	13.96277	13.49984
6	-378.4221	3.498302	1992.722	13.25974	14.15946	13.61235

\* indicates lag order selected by the criterion

LR: sequential modified LR test statistic (each test at 5% level)

FPE: Final prediction error

AIC: Akaike information criterion

SC: Schwarz information criterion

HQ: Hannan-Quinn information criterion

In our study, the highest integration level of the variables ( $d_{max}$ ) was 0 and  $p$  was found to be 3. Therefore, the regression model with 3 lags ( $p + d_{max} = 3 + 0 = 3$ ) was estimated and the results of the Toda and Yamamoto (1995) causality test were presented in Table 4. The findings demonstrated that there was bidirectional causality from BIST 100 price index to economic growth at 5% significance level, while there was bidirectional causality among the variables at 10% significance level.

**Tab. 4: Results of Toda and Yamamoto (1995) Causality Test**

Null Hypotheses	Chi-Sq.	Prob.
BIST does not Granger cause of RGR	20.91631	0.0000
RGR does not Granger cause of BIST	4.605196	0.1000

## CONCLUSION

Stock market price index is accepted as an important status indicator of overall economy by both investors and economic policy-makers. In this study, we examined the causality between economic growth and stock market performance in Turkey during the period 1999:Q1-2015:Q3 by using Toda and Yamamoto (1995) causality test. Our findings indicated that there was bidirectional between stock market performance and economic growth and consistent with the findings of Ikoku (2010) and Pece (2015).

Stock prices are the reflection of future profits of the firms and economic fundamentals of overall economy. For this reason, changes in stock prices also may be accepted as a signal of economic growth. However, firms are one of the majors of economic growth and thus changes in economic growth also are a sign about firm performance. Consequently stock market performance and economic growth feed each other and are determinants of each other.

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# Impact of ICT in Service Enterprises on Their Economic Performance

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**Abstract:** Many authors attribute a crucial role in achieving economic results at the micro and macro level to technology innovation in the form of ICTs. The reason for these effects of ICT on economic results of service companies is the fact that they rationalise corporate activities in the field of marketing, enterprise resource planning, management of relationships with customers and suppliers and allow service companies to optimise their processes, create new products and increase their efficiency on the demand side. Economic performance in the field of service production is quantifiable by several traditional performance indicators, such as total turnover, gross value added, production value and others. The factor of efficiency expression is included in the indicator of labour productivity expressed as gross value added per employee. The contribution verifies the effects of ICT usage on economic performance in the environment of production of knowledge-intensive services in the Slovak Republic. At the same time, the relation between the use of ICT in the selected sections of services and achieved labour productivity is thereby a key criterion for observation. By applying the chosen methodological apparatus the positive relationship was confirmed only partially. Enterprises representing the M section demonstrate a mutual dependence of the extent of ICT utilization and achieving favourable economic effects in the service enterprises in the Slovak Republic, as opposed to companies belonging to section J, which did not confirm this relationship.

**Keywords:** information and communication technologies, performance indicators, productivity, service companies

**JEL Classification codes:** O31, O32.

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## 1 INTRODUCTION

Nowadays, the importance and contribution of information and communication technologies to the development of economies is unquestionable. It is known that investments into information and communication technologies have a significant impact on economic growth, job creation, and increase in labour productivity and production efficiency. The integration of ICT into business processes of services fosters the growth of new job opportunities in services, supports the cost reduction and increases their competitive advantage. Enterprise performance and productivity as a result of using the Internet and ICT in business processes is the subject of several analyses. One of them was the eBusiness watch initiative of the European Commission investigating the state of ICT usage, business information systems, e-

commerce and business solutions and their impact on internal and external business processes. In this study, based on analyses, Koellinger (2006) confirmed the hypothesis that the positive impact of ICT on productivity is indicated in those companies that use advanced ICT and complex e-business solutions. This finding was the starting point in preparing the feasibility study in this paper. We have considered the interdependence of the usage of ICT in selected sections of services and economic performance in Slovak Republic, measured predominantly by achieved productivity. The aim was to determine whether the implemented ICT positively affect the productivity in service companies in sections J and M.

## **2 LITERATURE REVIEW**

The positive impact of ICT on the economy of a country is proven by several studies and works of authors, including O'Mahony, van Ark (2003), Inklaar (2005), Denis (2004), Piatkowski (2004), Delina, Vajda (2005), Greenwood (1998), Powell (1997), Brynjolfsson and Hitt (2003) and others. The results of their works show that investments into ICT and their increased use significantly affect labour productivity growth and the enhancement of the overall competitiveness of economies.

The level of development of ICT in the individual countries is determined at the macro level through several indexes (ICT Development Index - IDI, The Networked Readiness Index – NRI, Index of digital economy and society - DESI and others), however, the micro level, i.e. the decision of companies to invest in ICT, is key in the implementation and use of ICT. To this decision may contribute a membership of enterprises in regional networks and clusters which offer because of various reasons a significant positive impact for the promotion of research, development and innovation as also their activities are supported by public funds. (Micháľková, 2011).

ICT investments contribute to the development of all economic sectors, especially services. The services sector is outperforming the manufacturing sector in recent years, in terms of investments in the software (McCredie & Bubbner, 2011). A prerequisite of ICT implementation is the development of a high-quality digital infrastructure and broadband Internet, which according to the World Bank, is a key factor affecting the competitiveness of services (ABAC, 2011). The subsequent integration of ICT into service business processes increases competitiveness and productivity (McCredie & Findlay, 2011, Kretschmer, 2012).

According Koellinger (2006), an important prerequisite bringing the effects of the implementation of ICT and an increased productivity is the use of more advanced technologies such as ERP (enterprise resource planning), SCM (supply chain management)

and CRM (customer relationship management) systems used to support knowledge management and transactions of online procurement and online sales. These can be characterised as follows:

ERP is a system for business activities supported by a multi-module application that helps enterprises to manage activities such as planning, purchasing, inventory, supplier relationships, customer service, order tracking etc. ERP can also include modules for the economic system of the company and human resources management. It is integrated with the corresponding database system of the company.

SCM systems are used to interconnect vendors with customers based on information and communication technologies. Their role is to manage and automatize supply chain processes or processes that enable effective integration of the organisation into the supply chain. This includes processes in sales, procurement and logistics processes.

CRM systems mediate the establishment, improvement and maintenance of customer relationships. They are integrated information systems to enable collection of information about the customer and their analysis and transformation to knowledge about the customer leading to an individual offer, increasing benefits for the customer and at the same time the efficiency of the company production.

Knowledge management systems support knowledge management (goal-oriented systematic approach focused on obtaining value-creating knowledge and their use to ensure the viability and company development).

## **2.1 Productivity in services**

Productivity is generally defined as the ratio of the output volume to the volume of inputs (OECD, 2001). In other words: "Productivity [...] is the relationship between [...] the value of production of goods and services and the value of the factors of production (labour, equipment, raw materials, etc.) (Djellal & Gallouj, 2008)."

In recent years, the interest of academia focused on a more precise definition of service productivity and the creation of a concept, which would be based on specific characteristics of services. It is primarily the intangibility of services, given by physical and also by immaterial intangibility when a customer does not know what the outcome or benefit from service will be, that complicates the creation of a universally valid definition of service productivity. It is also the variability resulting in the volatility of service provision and rate of customer involvement as an external factor in the process of production services. The customer thus participates in the service production, and hence can also influence the productivity.

Integration and customer involvement in the process of value creation is the main element in the production of services (Lasshof, 2006). The process of production and consumption takes place simultaneously, inseparably and requires interaction with the customer. Services are also not storable, which from the perspective of the service provider means that they are not able to produce services in advance, but on the other hand, must be prepared to provide the service at any time. Prediction of demand, or reconciling supply and demand is key for the service provider and greatly affects productivity. The authors Krošláková and Mečiar (2014) report that higher labour productivity is specific in knowledge-intensive services, which include services service companies in the observed service sections J and M.

Several authors such as Corsten (2001), Baumgartner, Bienzeisler (2006), Lasshof (2006) Grönroos, Ojasalo (2004), Johnston, Jones (2004) and others are of the opinion that the automatic transfer of the traditional concept of productivity measuring to the productivity measuring of services is misleading. The method of productivity measuring nowadays is being elaborated and is used for manufacturing production (Den Hartigh and Zegveld, 2011), where productivity is defined as the ratio of outputs of the production unit and its inputs. However, the quality of service production is defined and evaluated by the customer entering into the process of service production, but the traditional method of measuring the productivity does not take such approach into consideration. Once quality and customer satisfaction are integrated into the concept of productivity, service businesses can expect higher customer loyalty, increased profits and greater participation of customers (Grönroos & Ojasalo, 2004, 415). The problem of determining the measurability is thus quantification of quality and customer participation in the production of services.

A unified approach also does not exist in the question whether the quality and productivity are an inseparable element of the measurement of productivity (Grönroos and Ojasalo, 2004 Gummesson, 1998) or whether the productivity on the provider side is quantified by the traditional concept and the qualitative benefit evaluated by the customer can be measured separately (Lasshof, 2006; Nachum, 1999). Also, the institutions involved in statistical surveys of performance of the service businesses such as Eurostat still measure the productivity in a traditional way. As a consequence of the differing approaches to measuring service productivity stated above, since no uniform generally valid concept of measuring the service productivity exists, we use the Eurostat methodology in the paper, according to which the productivity is measured by value added per employee.



### 3 METHODS

The selected methodology respects the scientific intention of the article. It contains statistical methods to allow measuring the dependence of variables. Using descriptive statistics we first state of a set of relevant data obtained by analyzing the EUROSTAT database, which are shown using tables and a graph of the relationship between  $x$  and  $y$ . At the same time we implement analytical statistics, namely the base index, to detect changes in the indicators in comparison with a pilot year, and subsequently also the correlation coefficient (Pearson's correlation coefficient ( $r$ )), the coefficient of determination ( $r^2$ ) for expressing the dependencies of selected ICT systems and selected indicator and to demonstrate the results a dependency graph was used. This dependence is determined by a correlation coefficient, while productivity is in the position of a dependent variable ( $y$ ) and individual ICT systems act as the independent variables ( $x$ ).

Next, we used indicators that can be divided into two groups. The first group consists of indicators expressing economic results: sales, production, value added and productivity expressed in value added per worker. The second group consists of indicators that quantify the extent of the usage of various ICT systems in the enterprises of selected service branches (number of companies using the system). Given the limited scope of data processing, we have decided to take into account the data on the extent of utilization of the following corporate ICT systems in the analysis: ERP, online sales, online purchasing, CRM, SCM and the use of broadband Internet connection (fixed or mobile connection).

The object of the investigation were service companies in the section NACE J and M, which carry out their production in Slovakia.<sup>6</sup>

The observed period covers the years 2008-2013, while the data are not comprehensively processed in each monitored parameter.

Through correlations, we investigated the impact of selected ICT systems on productivity in the fields of "Information and communication" and "Professional, scientific and technical activities". The sub-division have not been analyzed individually, since the data within Eurostat are published only for complete sections. The results of the correlations interpreted and rationalised and justified in the article.

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<sup>6</sup> Section "J - Information and communication" consists according to the Statistical Office of the Slovak Republic (2008) of the following divisions: 58 - Publishing activities; 59 - Motion picture, video and television program production, sound recording production and publishing; 60 - Activities for radio and television broadcasting; 61 - Telecommunications; 62 - Computer programming, consultancy and related activities; 63 - Information services. Section "M - professional, scientific and technical activities" is made up of the following divisions: 69 - Legal and accounting activities; 70 - Activities of head offices; management consulting; 71 - Architectural and engineering activities; technical testing and analyses; 72 - Scientific research and development; 73 - Advertising and market research; 74 - Other professional, scientific and technical activities; 75 - Veterinary activities

Based on the presented findings about the positive effects of ICT usage on the economic performance of the service businesses we established hypotheses, which were verified using correlation analysis.

H 1: The scope of the usage of ICT systems in service enterprises of the section "J" positively affects the achieved productivity.

H 2: The scope of the usage of ICT systems in service enterprises of the section "M" positively affects the achieved productivity.

## 4 RESULTS

The developments of selected economic performance indicators for the period 2008-2013 in the observed section J documents an ongoing deterioration during the global economic crisis (2009, 2010). However, a quite progressive development of values can be concluded, while a reduced productivity value in 2013 is associated with an increasing number of workers as well as the decrease of the created added value.

**Tab. 1: Developments of selected performance indicators in the "J Information and communication"**

<i>Section/Indicator</i>	<i>2008</i>	<i>2009</i>	<i>2010</i>	<i>2011</i>	<i>2012</i>	<i>2013</i>
<b>J Information and communication</b>						
<b>Productivity (value added per employee) [thousands €]</b>	<b>54,7</b>	<b>69,7</b>	<b>62,4</b>	<b>61,5</b>	<b>66,1</b>	<b>58,5</b>
Base index	1	1,2742	1,1408	1.1243	1,2084	1,0695
<b>companies using broadband connection [%]</b>	<b>x</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>	<b>97</b>
companies using broadband connection [number]	x	907	11756	14080	14317	14784
Base index	x	1	12,961	15,524	15,785	16,299
<b>companies using the online sale service [%]</b>	<b>x</b>	<b>13</b>	<b>13</b>	<b>27</b>	<b>12</b>	<b>24</b>
companies using the online orders service [number]	x	122	1576	3919	1771	3658
Base index	x	1	12,918	32,123	14,516	29,984
<b>companies using the online purchasing service [%]</b>	<b>x</b>	<b>47</b>	<b>53</b>	<b>51</b>	<b>44</b>	<b>59</b>
companies using the online purchasing service [number]	x	439	6424	7403	6494	8992
Base index	x	1	14,633	16,863	14,793	20,483
<b>companies using ERP [%]</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>17</b>	<b>40</b>	<b>48</b>
companies using ERP [number]	x	x	x	2468	5904	7316
Base index	x	x	x	1	2,3922	2,9643
<b>companies using CRM [%]</b>	<b>23</b>	<b>38</b>	<b>44</b>	<b>x</b>	<b>x</b>	<b>x</b>
companies using CRM [number]	685	355	5333	x	x	x
Base index	1	0,5182	7,7854	x	x	x
<b>companies using CRM [%]</b>	<b>x</b>	<b>55</b>	<b>57</b>	<b>71</b>	<b>66</b>	<b>x</b>
companies using CRM [number]	x	514	6908	10306	9742	x
Base index	x	1	14,44	20,051	18,593	x

Source: Author's own elaboration according to Eurostat data, 2015.

Usage of the mentioned ICT systems recorded in the observed period in section J clear growth in all subsystems with the exception of the use of CRM systems in 2009.

The developments of performance indicators monitored in the section M is characterized by increasing volume of sales and production, but decreasing levels of value added in 2012 and 2013 accompanied by decreasing productivity. The use of the base index, however, shows an overall progress of values. A remarkable result was recorded by the comparison of achieved productivity between observed sections, where section J values are much higher than section M values. This finding complements the data – there is almost twice as many workers in the M section at the achieved comparable volume of sales, value added and production. This fact marks the ability of the section J to produce more efficiently also through a more consistent usage of ICT systems. Quantitative expression of the ICT usage cannot be regarded as a comprehensive evaluation criterion in relation to productivity. The quality of ICT usage is essential in reaching effects.

As well as in section J, in section M the use of selected ICT subsystems has also strengthened and experienced enormous growth, particularly in the categories of SCM and ERP.

**Tab. 2: Developments of selected indicators in the "M Professional, scientific and technical activities "**

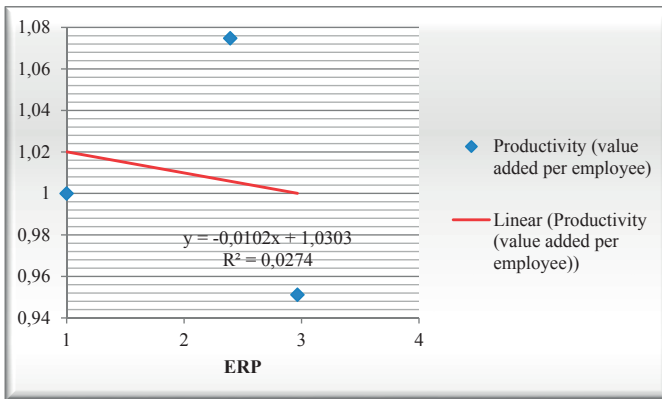
Section/Indicator	2008	2009	2010	2011	2012	2013
<b>M Professional, scientific and technical activities</b>						
<b>Productivity (value added per employee) [thousands €]</b>	<b>27,4</b>	<b>26</b>	<b>33,3</b>	<b>38,3</b>	<b>36,1</b>	<b>32</b>
Base index	1	0,948	1,215	1,397	1,317	1,167
<b>companies using broadband connection [%]</b>	<b>x</b>	<b>88</b>	<b>97</b>	<b>95</b>	<b>95</b>	<b>98</b>
companies using broadband connection [number]	x	9184	49412	49861	49898	53569
Base index	x	1	5,380	5,429	5,433	5,832
<b>companies using the online sale service [%]</b>	<b>x</b>	<b>x</b>	<b>2</b>	<b>9</b>	<b>13</b>	<b>13</b>
companies using the online orders service [number]	x	x	1019	4724	6828	7106
Base index	x	x	1	4,636	6,701	6,974
<b>companies using the online purchasing service [%]</b>	<b>x</b>	<b>21</b>	<b>28</b>	<b>29</b>	<b>24</b>	<b>41</b>
companies using the online purchasing service [number]	x	2192	14263	15221	12606	21865
Base index	x	1	6,507	6,944	5,751	9,975
<b>companies using ERP [%]</b>	<b>x</b>	<b>x</b>	<b>x</b>	<b>17</b>	<b>34</b>	<b>33</b>
companies using ERP [number]	x	x	x	8922	17858	18038
Base index	x	x	x	1	2,001	2,0217
<b>companies using CRM [%]</b>	<b>19</b>	<b>22</b>	<b>33</b>	<b>x</b>	<b>x</b>	<b>x</b>
companies using CRM [number]	1767	2296	16810	x	x	x
Base index	1	1,299	9,513	x	x	x
<b>companies using CRM [%]</b>	<b>x</b>	<b>47</b>	<b>55</b>	<b>47</b>	<b>56</b>	<b>x</b>
companies using CRM [number]	x	4905	28017	24668	29413	x
Base index	x	1	5,712	5,029	5,997	x

Source: Author's own elaboration according to Eurostat data, 2015

#### 4.1 Verification of established hypotheses H1 and H2

Expressing the relationship of dependency between the selected ICT subsystems and productivity achieved in the observed sections is a key step in the procedure of fulfilling the aims of the article. The reported theoretical background and partial practical findings assume a positive relationship of the specified parameters. The scope and method of use of the ICT subsystems in service enterprises may, however, be different, which is ultimately partially documented by the data in Tables 1 and 2. Despite the fact that all divisions of the observed sections J and M are characterised by similar traits bound to their knowledge intensity, the scope of the individual factors, and within them also the usage of ICT can be different. Production systems of the mentioned subsections utilise various production factors at different scales: human labor, creativity, work of mechanisms and facilities, design, ICT, and so on. This diversity in the usage of individual specific production factors may make cause that the usage of ICT may not in every observed case show a positive relationship with productivity.

**Fig. 1: Relationship of usage of ERP systems and achieved productivity in the "J" section**



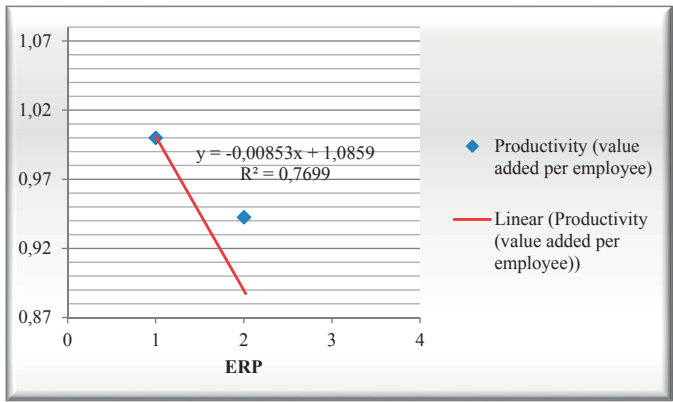
Source: Author's own elaboration

Correlation of ERP systems and productivity in both sections was demonstrated as negative, growth of companies using ERP systems therefore does not affect changes in productivity in the monitored sections. In the case of the section "M" the result is close to zero, which signifies that negative correlation is low, whereas in the case of the section "J" the result is significantly different from zero, reflecting a strong negative relationship.

The correlation of the online sales - productivity relationship within the section "J" has proved to be negative, however, within the section "M" it was positive. This means that growth of the

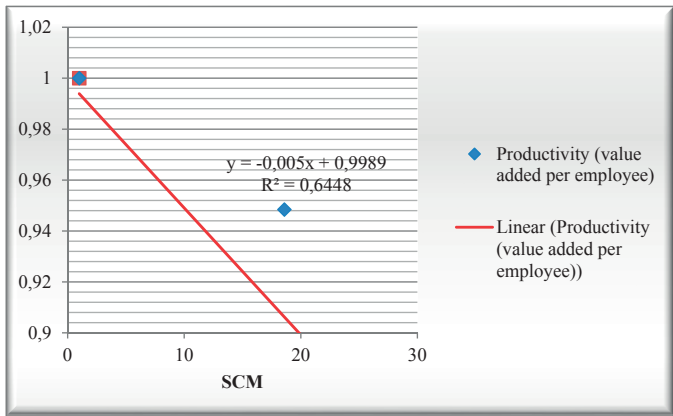
enterprises using the services of online sales makes positive changes in productivity under the section "M".

**Fig. 2: Relationship of usage of ERP systems and achieved productivity in the "M" section**



Source: Author's own elaboration

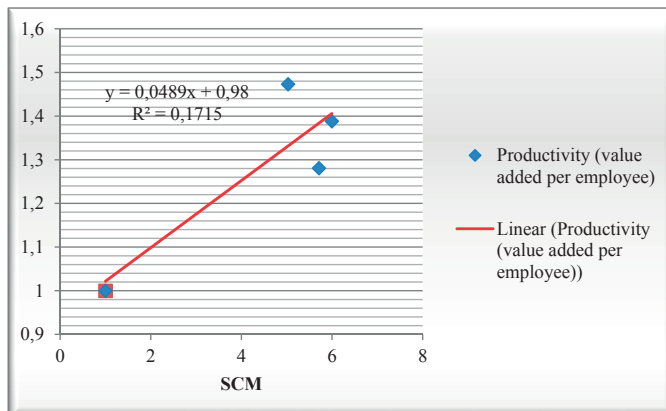
**Fig. 3: Relationship of usage of SCM systems and achieved productivity in the "J" section**



Source: Author's own elaboration

Online purchasing, SCM and broadband connection have proved to be negative in relation to productivity under the section "J" as negative. In the case of online purchasing and SCM there is a strong negative relationship, since the correlation coefficient is significantly different from zero. In the section "M", the relationship of the mentioned systems and the productivity was shown to be positive, in the case of SCM it was even strongly positive, as the coefficient of correlation is very close to 1 (0.9774), which means that we can talk of nearly perfect relationship.

**Fig. 4: Relationship of usage of SCM systems and achieved productivity in the "M" section**



Source: Author's own elaboration

**Tab. 3: Correlation of ITC systems and productivity**

Section J Information and communication	r (correlation coefficient)	r <sup>2</sup> (coefficient of determination)	expected relationship of variables
<b>Productivity (value added per employee)</b>			
companies using broadband connection	-0,7869	0,6192	(-)
companies using the online sale services	-0,8774	0,7699	(-)
companies using the online purchasing services	-0,9108	0,8296	(-)
companies using ERP	-0,1655	0,0274	(-)
companies using CRM	-0,0436	0,0019	(-)
companies using the SCM	-0,8030	0,6448	(-)
<b>Section M - Professional, scientific and technical activities</b>			
<b>Productivity (value added per employee)</b>			
companies using broadband connection	0,4797	0,2301	(+)
companies using the online sale services	0,0640	0,0041	(+)
companies using the online purchasing services	0,3868	0,1496	(+)
companies using ERP	-0,8774	0,7699	(-)
companies using CRM	0,9774	0,9554	(+)
companies using the SCM	0,4141	0,1715	(+)

Source: Author's own elaboration

Finally, the relationship of productivity and the CRM system has manifested itself as negative in the case of the section "J", but in the case of "M" as positive.

The extent of the ICT usage is a determinant of productivity in enterprises representing the section "M", but for businesses in the section "J" is this determinant with respect to the

employed methodology unconfirmed. Divisions 58, 59 and 60 are identified as a part of the creative industry. For production systems of this phenomenon the production factors capable of generating creative solutions (human labour, creativity) are essential. The extent of ICT systems usage as well as the dynamics of its developments in the observed period, expressed as the base index, are recorded in the section "J" at a higher rate than in the section "M" (Tab. 1 and 2). However, the extent of ICT usage in the enterprises of section "J" is not a key factor in achieving labour productivity.

## 5 CONCLUSIONS

Technological innovations are generally considered as a determinant of economic growth. At the enterprise level it is a phenomenon that positively affects production performance by optimising and rationalising processes. This concerns the processes of production, distribution as well as consumption. The distinct peculiarities of services and knowledge intensity of their production as sume extensive use of ICT. This fact is confirmed by several statistical indicators. However, does the extent of ICT usage the affect the performance of services expressed by productivity? The given section deals with the answer to this research question through testing of hypotheses:

H 1: The scope of the usage of ICT systems in service enterprises of the section "J" positively affects the achieved productivity.

H 2: The scope of the usage of ICT systems in service enterprises of the section "M" positively affects the achieved productivity.

The impact of ICT systems on productivity within the section "J Information and communication" and section "M Professional, scientific and technical activities" can be assessed as adverse for the section "J" and as significantly favourable the section "M". Correlations within the section "M" showed mostly positive relationship and beneficial variance. This means that in most cases, productivity grows if the number of enterprises using observed ICT systems is growing. The validity of the hypothesis H 1 in the light of the results of correlation analysis was not confirmed. The validity of the hypothesis H 2 in the light of the results of correlation analysis was confirmed. The reasons for the different results in the observed sections are related to the following facts:

- the quality of the ICT usage is not reflected in the observed parameters,
- the nature of the products in the observed sections is different,
- the existence of diversity in production factors, which operate with varying intensity,
- the existence of differences in production systems,

- the demandingness of production on human labour and creativity is different depending on the type of service,
- temporarily exhausted potential for further and/or more consistent use of ICT,
- the structure of the "value added" parameter may be different across service divisions.

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# Social Capital and Household Electricity Consumption in Croatia: A Regional Perspective

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**Abstract:** The paper aims to explore the relationship between relative per capita household electricity consumption and social capital variables in 21 Croatian NUTS-3 regions in order to gain a deeper understanding of social influences on electricity consumption behavior of the household sector. Thereby, social capital is defined as a multidimensional construct composed of social trust, participation and civism. The results obtained by using the stepwise regression method indicate that the perception of civism, i.e., the perceived absence of opportunistic, predatory behavior by fellow citizens, represents a strong direct predictor of relative per capita household electricity consumption across social capital dimension variables. Other particular social capital dimensions and subdimensions play a statistically insignificant role in the regression effect. The obtained results are briefly discussed in the context of social study findings aimed at encouraging energy efficiency and sustainable behavior of households.

**Keywords:** household, electricity consumption, social capital, Croatia.

**JEL Classification codes:** A13, D12, Q40.

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## 1 INTRODUCTION

In recent decades, electricity consumption has been steadily increasing consistently with the growing income. A higher disposable income of the population encourages lifestyle changes, and electricity has become a growing need of the population. Thereby, an increase in electricity consumption is not only a result of increased demand for various products in general, but also the result of an increase in energy consumption in households for lighting, heating, cooling, usage of household appliances, etc. However, at the national level, in line with the recommendations of the European Commission, different actions were taken in the form of appeals, advices, financial support and legislation to reduce energy and particularly electricity consumption. The efficient use of electricity is part of the overall efforts directed to reduce consumption of non-renewable sources in order to protect the environment and maintain decent conditions for living now and in the future. Energy conservation mitigates numerous adverse environmental and social impacts associated with energy production and consumption.

Final household electricity consumption accounts for approximately 30% of total final electricity consumption in the EU, and is usually the second largest electricity-using sector

(e.g., see Eurostat data, 2015). According to the Energy Institute Hrvoje Pozar (EIHP) data (2014), the average household electricity consumption in Croatia was 6,490.5 GWh in the period 2007-2013. The share of household electricity consumption in total final electricity consumption in Croatia was approximately 42% in the same period. Such a large share indicates that households are an important consumer sector and that their behavioral pattern should be understood, including the determinants that influence their decision making process. Moreover, there is an increasing awareness among electricity consumers of the need to develop and implement efficient and sustainable energy practices in order not only to lower energy bills, but also to decrease greenhouse gas emissions and slow down climate changes.

Energy insufficiency and especially the fear that households will have to deal with limited access to energy in the future have resulted in many discussions, debates and researches in this field, particularly in the area of electricity consumption determinants. When it comes to scientific researches, earlier studies on electricity consumption mostly related it to income (Dillman et al., 1983; Klein, 1987). Some of them demonstrate the incoherence between the attitudes on energy conservation and the actual behavior of consumers (Stutzman and Green, 1982; Brown and Macey 1983). However, some of them, such as for example Pfaffenberger et al., (1983), Dillman et al., (1983) and Klein (1987), stress that higher energy prices have a greater impact on low-income groups than the other groups, because the former do not have enough money to buy a better house or, e.g., to invest in better equipment. Recent studies on electricity consumption determinants emphasize not only the importance of household income but also other determinants. For example, Labanderia et al. (2006) highlight the place of residence (rural and urban households), household size, age, education and labor force participation as important electricity consumption determinants. Tewathia (2014) shows that household income, stock of electricity appliances in households, frequency of usage of appliances, dwelling size, family size, time spent outdoors by family members and a higher education level are significantly related to electricity consumption. However, according to Aune et al. (2002), although the recent researches make a significant progress toward a better understanding of energy consumption, they make only a minor contribution to developing a theoretical basis for social studies of energy consumption and users. In order to better understand the behavior of energy consumers, it is important to take a social view of energy use (see Wilhite et al., 2000).

Although electricity consumption is an important source of economic growth, there are only few empirical studies that evaluate the determinants of household electricity consumption, and particularly social determinants, and there are no such studies in Croatia. Bearing in mind

the above-mentioned issues, the main aim of this paper is to examine the relationship between relative per capita household electricity consumption and social capital variables in 21 Croatian NUTS-3 regions. The data on social capital variables are drawn from Borožan and Radman Funarić (2015a, 2015b). Their model of social capital is in line with Putnam's theory since it is composed of social trust, norms and participation, i.e., dimensions that Putnam et al. (1993) considers to be the main dimensions of social capital. Additionally, they added the new dimension – civism - bearing in mind the recent studies and reports that emphasize the importance of this kind of behavior for future economic growth and well-being. A stepwise regression method is used to determine the set of social capital dimension and subdimension variables that contribute statistically significantly to the explanation of the variability in household electricity consumption. This method, described e.g. in Hinkle, Wiersma, and Jurs (2003), is especially useful when there is little theory to guide the selection of determinants for a model. Although the shortcomings of stepwise multiple regression are well known, the use of this technique for that purpose remains widespread (see Whittingham et al., 2006). The paper is organized as follows: Section 2 brings out a brief review of relevant literature. Section 3 outlines the methodology and data used to run stepwise regression for household electricity consumption. Section 4 presents and discusses empirical results, while Section 5 gives brief summary and major conclusions.

## **2 A REVIEW OF SOCIAL STUDIES ON RELATIONSHIP BETWEEN SOCIAL CAPITAL AND ENERGY CONSUMPTION**

Besides the studies that found more expressed preferences of the population for comfort than for savings (Wilk & Wilhite 1985; Wilhite et al. 2000), some studies exploring consumer behavior in general are inspired by Bourdieu's (1984) theory of taste and lifestyles (Kuehn, 1998; Jensen 2002). As Bourdieu's theory initiates thinking and discussions on the establishment and lifestyle changes in social classes, within this theoretical framework, Kuehn (1998) shows that energy use is associated with a complex and deep-rooted social dynamics, and that energy use does not play an important role in everyday life of Danish households. She deems that changes in energy use require changes in lifestyle, and that there are significant differences within the population in terms of relations between different lifestyles and patterns of energy use. Similarly, Aune (1998) finds that everyday life takes place without thinking a lot about energy consumption in Norway, and traditional socio-demographic variables such as income and education cannot explain a lot of variations in energy consumption. She demonstrates that the energy consumption pattern is a reflection of

Norwegians' perceptions of comfort. According to Jensen (2002), income and education cannot explain a lot of differences in energy consumption unlike the size of the houses, age and the number of inhabitants, both between different residential areas and between people within the same area.

The difference between attitudes and behaviors that were expressed in these studies was confirmed in many other studies (for a review, see Fredericks et al., 2015). The findings show that consumers are far from only rational decision-making as traditional economic models assume. Namely, there is often a wide gap between human values and material interests, and people often behave in ways that are consistent with their knowledge, values, attitudes and intentions derived from maximization of their material interests. Consequently, consumer choice and behavior are largely predictably irrational. Ariely (2008) confirms that irrational behavior of people is associated with the invisible forces that govern their decisions. According to Fredericks et al. (2015), one should take advantage of these cognitive biases and motivational factors in order to bridge the gap between knowledge on pro-environmental values, attitudes and intentions, and the everyday energy-related behavior of consumers.

According to Bourdieu's (1986) opinion, and within certain classes, it is possible to notice the differences, i.e., the situations in which members of the same class receive various benefits of approximately the same level of cultural and economic capital. Trying to explain these differences, Bourdieu introduces the concept of social capital to the analysis. He defines it as the aggregate of the actual or potential resources that actors (including households) can mobilize on the basis of their membership in certain organizations or of social bonds the actors are involved in. Bourdieu argues that a network of connections that determines the volume of social capital owned by a certain actor is not naturally given, but sees its generation as a product of an investment strategy. He notes that maintaining the relationships requires an investment strategy aiming at transforming contingent social relationships (e.g., neighborhood relations or relations in the workplace) into social relationships that can be directly used in the short and the long term.

In order to encourage the behavior of electricity consumers in the direction of sustainable and renewable energy consumption, Fredericks et al. (2015) propose practical, cost-effective and mass-scalable solutions, some of which are consistent with social capital. They underline the importance of compliance with norms, what is also supported by research of Schultz et al. (2007), Goldstein et al. (2008), Allcott (2011) and Smith et al. (2012). Schultz et al. (2007) argue that the behavioral impact of social norms is greatest when the expected behavior is easy to follow and when it brings some personal advantages for someone who pursues such

behavior. In order to overcome the undesirable behavior, Goldstein et al. (2008) find that the localized code of conduct being present in a social group may have a greater effect on the individual rather than global norms, and according to Schultz et al. (2007), when descriptive messages for energy conservation promotion are in accordance with injunctive messages. Unlike economists and particularly energy policymakers who believe that prices and subsidies affect demand effectively, and thus save energy, based on: (i) feedback on previous energy consumption of residential utility customers and comparison of their energy use with that of their neighbors, and (ii) advices on how to conserve energy through aspects of injunctive norms, Allcott (2011) suggests that non-price interventions can make a much greater impact than energy consumption regulation. Thereby, Nolan et al. (2008) find that consumers that have received descriptive normative messages (e.g., information about energy consumption of neighboring households) use significantly less energy in the short term compared with households that received only advices on energy conservation.

Such researches corroborate earlier findings of researchers about the importance of trust, norms and common action to achieve the well-being of individuals and communities. Considering the importance of norms, Putnam et al. (1993) say that norms, such as those that strengthen social trust, develop because they reduce transaction costs and facilitate collaboration. Reciprocity is the most important type of these norms, which, according to Putnam et al. (1993), can be balanced, specific and generalized or diffuse. While balanced reciprocity refers to a simultaneous exchange of equivalent 'things', generalized reciprocity implies a constant relationship or an exchange that is without retribution at any given moment, but involves mutual expectations the current benefit will be back on in the future. Generalized norms of reciprocity have an important role in social capital; so Taylor (1982) clarifies that reciprocity consists of a series of cooperative acts each of which is short-term altruistic, but which together typically make benefits to each participant. For Ostrom (1990), this type of norms is a highly productive component of social capital, and the communities that respect them can be more effective in fighting against opportunism and solving problems of collective actions.

However, Grafton and Knowles (2003), who tested empirical relationships between national measures of social capital, social divergence and social capacity and national environmental performance, find very little empirical support for the hypothesis that higher levels of social capital and related variables improve national environmental performance. Bearing in mind different findings on the relationship between social capital and environment in general, and energy consumption in particular, McMichael (2007) concludes that although previous study

findings on the relationship between them are ambiguous, especially on the household level, they show justification for further research.

### **3 DATA AND METHOD**

#### **3.1 Data**

In the present study, we follow Borozan and Radman Funaric (2015a, 2015b), who define a social capital model as a hierarchical model or a path model with three main dimensions (social trust, participation and civism) and three subdimensions (generalized trust and reciprocity, institutional trust and trustworthiness measured by the level of an individual's civic commitment and moral principles) related to social trust. Thereby, social trust and social capital are considered as a second-order latent construct and a third-order latent construct, respectively. Moreover, each subdimension, including participation (which refers to a membership in various associations, organizations and clubs) and civism, i.e., the perceived absence of opportunistic, predatory behavior by fellow citizens (such as corruption, tax evasion or use of connections), is treated as an unobserved or latent construct, and measured only indirectly through the use of manifest variables. Manifest variables are measured directly.

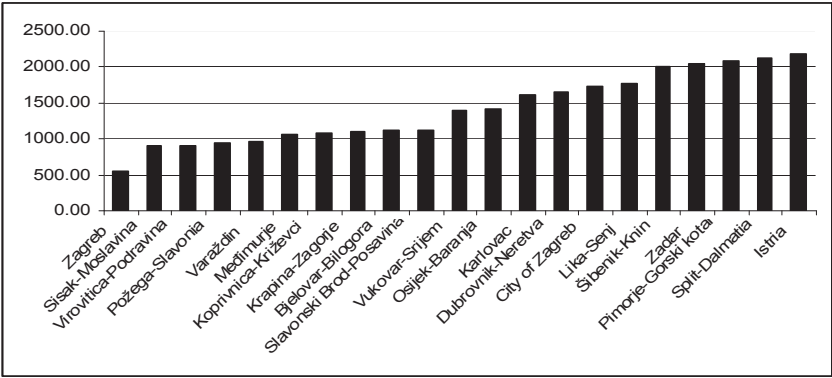
To collect the data for the estimation of social capital model parameters, Borozan and Radman Funaric (2015a, 2015b) conducted primary research through a questionnaire on a convenience sample ( $N = 1,695$ ) in the period from 20 June to 20 December 2012 in Croatia. The details on the questionnaire, the collection process and methodology are described in their papers. Based on their database, we calculated social capital dimension and subdimension indices for each respondent. Then, we clustered all respondents according to their residence by regions and finally calculated the social capital data for each of 21 Croatian NUTS-3 regions as the average value of social capital indices for respondents living in a particular region.

In this paper, the predictor variables refer to social capital dimension and subdimension variables, while the dependent variable refers to electricity consumption of the household sector in 21 Croatian NUTS-3 regions. The data on household electricity consumption in 2012 were obtained by Hrvatska elektroprivreda (HEP) database. They are related to 21 Croatian distribution areas that correspond to NUTS-3 regions. Household consumption covers the total usage of electricity for space and water heating, lighting and all electrical appliances. HEP is a leading Croatian electricity company engaged in electricity production, transmission and distribution for more than one century, as well as in heat supply and gas distribution for



the past few decades. To mitigate the effect of population, we use the per capita household electricity consumption data. The source of estimated population data is the Croatian Bureau of Statistics (CBS). Figure 1 shows per capita household electricity consumption by Croatian NUTS-3 regions in 2012 (in kWh per capita).

**Fig. 1: Household electricity consumption in Croatian NUTS-3 regions in 2012 (in kWh per capita)**



The average per capita household electricity was 1,519.95 kWh in Croatia in 2012, which is slightly below the EU-28 average in 2013 (1.6 MWh per capita; Eurostat data, 2015). An above-average consumption is recorded in nine regions, that is, in more developed and more tourism-oriented regions.

As suggested by Meng et al. (2013) and Mishra and Smith (2014), to mitigate the implications of possible cross-sectional shocks, for each region *i*, the natural logarithm of the ratio of per capita household electricity consumption (EC) relative to the average of all 21 Croatian NUTS-3 regions in the sample is given by the expression:  $REC_i = \ln(EC_i / \text{average EC})$ , where  $REC_i$  denotes relative per capita household electricity consumption in the region *i* in 2012. Now, as noted implicitly by Meng et al. (2013), the transformed series measure relative per capita household electricity consumption.

### 3.2 Method

This paper employs a stepwise regression method to determine what the best combination of social capital dimension and subdimension predictor variables would be to predict household electricity consumption in Croatian regions. For that purpose, three variable selection procedures were used: the forward selection, the backward elimination, and the stepwise selection. As usual, the threshold values for *F*-to-enter and *F*-to-remove are set to 0.05 and 0.10, respectively.

The forward selection procedure starts with no candidate variables in the model. Then, it selects the variable that has the highest  $F$ -to-enter statistic ( $R^2$ ). At each further step, it selects the candidate variables that have the  $F$ -to-enter test higher than the threshold value (increase  $R^2$  most). When none of the remaining variables are significant, it stops adding variables. During this process, once a predictor variable enters the model, it cannot be deleted. In the backward elimination procedure, all predictor variables are entered into the regression equation. Then, the regression procedure removes successively the variables with the smallest  $F$ -to-remove statistic, provided that this is less than the threshold value for  $F$ -to-remove. In the case of the stepwise procedure, that combines the forward and the backward selection procedures, the predictor variables are entered into the regression equation one at a time based upon the  $F$ -to-enter statistic. More precisely, a particular predictor variable that demonstrates the highest bivariate correlation with the dependent variable (i.e., the highest  $F$ -to-enter statistic) is entered first in the regression equation. The regression procedure then looks for the next significant variable, if any, at step two, and then produces regression results based on these two variables. This procedure is continued until all independent variables, having the  $F$ -to-enter statistics above the threshold, have been entered into the equation. It also examines whether the  $F$ -to-remove statistic of any variable added previously has fallen below the  $F$ -to-remove threshold. If so, it removes the worst of them, and then tries to continue. The procedure ends when no variables either in or out of the model have  $F$ -statistics on the wrong side of their respective thresholds. For more details on stepwise regression, see Hinkle, Wiersma, and Jurs (2003), or other textbooks on linear regression.

## 4 RESULTS AND DISCUSSION

### 4.1 Results

The following social capital variables are used in this study: social trust, participation and civism as the main dimensions of social capital as well as generalized trust and reciprocity, institutional trust and trustworthiness as the subdimensions of social trust. There is a statistically significant positive bivariate correlation between relative per capita household electricity consumption and civism (0.457;  $p = 0.05$ ), meaning that if citizens believe that predatory behavior is not present in their region, their relative per capita electricity consumption (registered by energy companies) will be significantly higher than in regions where, for example, there is a perception that electricity is stolen by some people or controllers are perceived to be corrupted. The dependent variable is not statistically significantly correlated with any other social capital variables.

To assess the effect of the main social capital dimensions on relative per capita household electricity consumption, stepwise regression with three different selection procedures (stepwise, forward and backward) was run. Its results, including the raw and the standardized regression coefficients of the social capital variables together with their t-statistics and significance, are reported in Table 1. It should be illuminated that the results are the same regardless of the selection procedures chosen, and there is no evidence of multicollinearity.

**Tab. 1: Stepwise regression results**

Dependent variable: relative per capita household electricity consumption					
Predictor variable	Unstandardized coefficient		Standardized coefficient	t	Significance
	b	SE	beta		
Constant	1.055	0.005		228.676*	0.000
Social trust					
Participation					
Civism	0.053	0.024	0.457	2.237**	0.037

Note:  $R^2 = 0.208$ ;  $F(1, 19) = 5.005$ ,  $p = 0.037$ . Forward (Criterion: Probability-of- $F$ -to-enter  $\leq 0.05$ ); Backward (criterion: Probability of  $F$ -to-remove  $\geq 0.1$ ); Stepwise (Criteria: Probability-of- $F$ -to-enter  $\leq 0.05$ , Probability-of- $F$ -to-remove  $\geq 0.1$ ). SE = Standard Error. \*, \*\* denotes statistical significance at the 1 and 5% level, respectively

## 4.2 Discussion

The prediction model is statistically significant,  $F(1, 19) = 5.005$ ,  $p = 0.037$ , and accounts for approximately 21% of the variance of relative per capita household electricity consumption ( $R^2 = 0.208$ ). Civism is the only social capital dimension variable that statistically significantly predicts the dependent variable. Thereby, the perception of civism is positively correlated with relative per capita household electricity consumption. The other social capital variable (generalized trust and participation) turned out to be insignificant. The findings of Borozan and Radman Funaric (2015a, 2015b) indicate that perception of civism, i.e., the absence of corruption and other forms of predatory behavior, proves to be the most important dimension of social capital. Moreover, institutional trust also plays an important role in its formation, and as part thereof, confidence in the parliament, government, legal system and local government.

To check the importance of social capital subdimensions in explaining the variability of the dependent variable, stepwise regression with the stepwise, the forward and the backward selection procedures, was run again. Thereby, generalized trust, institutional trust and trustworthiness failed to achieve significance on relative per capita household electricity consumption. Basing their analysis on the same data set, Borozan and Radman Funaric (2015a, 2015b) demonstrate that institutional trust and trustworthiness are weakly correlated with the perception of civism, meaning that if citizens believe that predatory behavior is not present in the region, their trust in institutions may be higher than in regions where, for

example, government is perceived to be corrupted. Hence, there may exist a possible indirect relationship between institutional trust and trustworthiness and household electricity consumption in Croatia, and this should be a subject for further research.

Narayan (2000) highlights the importance of the institutional environment in reducing corruption and Rothstein (2005) claims that the perception of corruption and its associated institutional distrust are the main sources of social distrust. According to Stulhofer (2004), confidence of citizens in the ubiquity of corruption erodes confidence and thus reduces the willingness to cooperate. As part of such thinking, it is interesting to consider whether personal financial or actual conformist interests may be above the long-term common interests. The framework for this issue can be found within the explored generalized trust, confidence in institutions and the presence of corruption in a wider community. Even in the early stages of studying social capital, Putnam et al. (1993) question how personal trust becomes social trust. To answer this question, they connect into a whole social trust, norms of reciprocity and networks of civic engagement and successful cooperation which, according to them, edified. They say that effective cooperative institutions require communication skills and confidence; but they are also instilled and strengthened by organized cooperation. March and Olsen (1989) explain the connection of trust with other dimensions of social capital, and stress that social trust in complex modern communities can be derived from two related sources - norms of reciprocity and networks of civic engagement. Similarly, Coleman (1990) states that private actors underestimate social capital and invest therein insufficiently compared with investment in other public goods. According to Fredericks et al. (2015), it is important that information and incentives stem from credible, trustworthy sources. To support this thesis, they cited Costanzo et al. (1986) who stress that credibility has a crucial role in the process of evaluation and reaction to information campaigns, messages and appeals related to energy conservation, and Craig and McCann (1978) who also stress that electricity consumers will save electricity more if messages are sent from a high-credibility source (e.g., a public service commission) rather than from a low-credibility source (e.g., a local electrical utility). Pretty and Ward (2002) suggest that well-developed social capital, which is a necessary part of collective action, can improve environmental outcomes and that local groups with locally developed rules and sanctions are able to make more of existing resources than individuals. Adger (2003) highlights the important role of government in utilizing social capital in order to encourage local initiatives for energy efficiency and sustainability.

A positive correlation between relative per capita household electricity consumption and civism found in the present paper is in line with the findings of Grafton and Knowles (2003),

who state that higher levels of corruption lead to more than optimal levels of pollution. Since civism is the key driver of social capital in Croatia, significant community efforts should be focused on combating corruption and other kinds of predatory behavior, in order not to have personal material interests blur long-term sustainability of the community and electricity use in the short-term. Furthermore, since Stulhofer (2004) found out that the effect of the perception of corruption in civic participation was not observed in Croatia, civil activism is a force that can contribute to bridging the problem, and, according to Pretty and Ward (2002), make progress toward sustainability, together with policy reforms, and therefore, among others, reduce electricity consumption.

## 5 CONCLUSION

The overall efforts to reduce energy consumption refer mainly to the efforts to reduce electricity use in households. The reasons for that are concrete, primarily related to a large share of this sector in total electricity consumption, the insufficiency of non-renewable energy sources and mitigation of negative environmental consequences resulting from inefficient consumption as well as social consequences arising from inadequacy of energy.

Financial or political constraints to access energy have provoked a number of studies pertaining to unveiling the state of energy consumption and the availability of energy as well as to contributing to its conservation and more equitable distribution. Earlier research on electricity consumption in households is related mostly to the population income. According to some, higher energy prices have a greater impact on low-income groups than other income groups. Recent research has also studied other determinants that influence energy consumption, and thus electric consumption. These studies provide a more comprehensive picture of the determinants of energy, and show that traditional demographic variables cannot explain a lot of differences in energy consumption. Furthermore, they show that consumer behavior is far from purely rational, including that there is a gap between attitudes on energy conservation and the actual behavior of consumers. Therefore, there is a demand for a more social view of energy use.

The scientific literature generally accepts that social capital is a necessary part of collective action; thus, investigations on the role of social capital and its relationship with the objectives of environmental protection were conducted in Europe and beyond. However, only a few of them considered the relation between social capital and energy consumption in households. Although many authors considered generalized trust as the main indicator of the level of social capital, the results of social studies on energy use showed that it is not a key variable of social capital connecting it to energy consumption and conservation. The most significant

positive relationship was observed between indicators of democracy, expressed low level of corruption and environmental sustainability. Hence, active involvement of citizens within non-governmental organizations (because they are significantly less affected by corruption) and the need to increase government and local initiatives at all levels of energy sustainability are consistent with the objectives of energy conservation.

In Croatia, there is no quantitative research on the relationship between electricity consumption and social capital variables. So, the main aim of this paper was to examine the influence of social capital variables on relative per capita electricity consumption per household in 21 NUTS-3 regions of Croatia. To that end, the stepwise regression method was used to determine the set of social capital dimension and subdimension variables that statistically significantly contribute to explaining the variability in household electricity consumption. The obtained results indicate that there is a statistically significant positive relationship only between civism and relative per capita household electricity consumption. Hence, civism turns out to be an important determinant of electricity consumption. However, further research may be directed to evaluating the relationship between institutional trust, trustworthiness and household electricity consumption since it seems that there is an indirect relationship between them.

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# The UAVs in International Trade – Current State of Play and Regulatory Issues

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**Abstract:** The UAVs (unmanned aerial vehicles) represent a promising yet controversial subject of trade. Over the past decade, they have become an important part of the interest of researchers and the volume of their trade dramatically increased. Yet security concerns call for strict rules and regulation of their operation in civil applications. The character of national regulatory frameworks varies significantly from country to country, even within the EU. The objective of this paper is to present current situation in international trade in UAVs and draw attention to regulation issues, with a special attention to the Czech Republic. In addition, the terminology related to UAVs is clarified.

**Keywords:** unmanned aerial vehicle, UAV, remotely piloted aircraft system, RPAS, drone.

**JEL Classification codes:** F13, F14, F52, L93.

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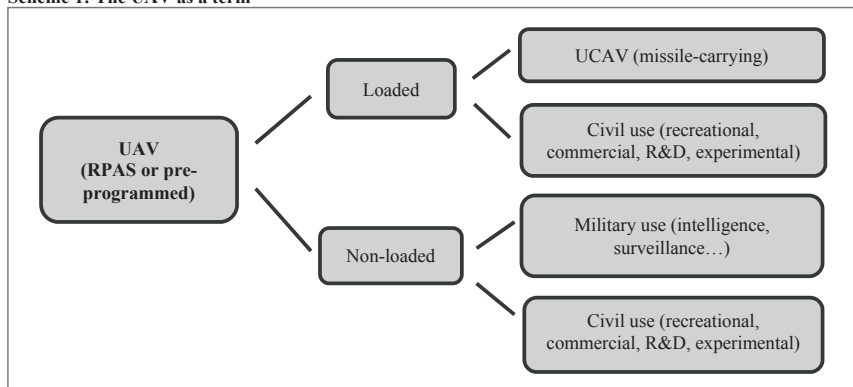
## 1 INTRODUCTION

The UAVs as a fast-growing industry have recently gained a lot of attention of both researchers and security experts. They are classified as double-use items. As such, they are subject to specific trade regulations.

Basically to date, the UAVs are predominantly used in a wide range of military applications such as intelligence, surveillance and combat operations. On the other hand, they are massively proliferating into civil, mainly commercial, recreational, research and experimental applications. They can serve as useful instruments in precision agriculture (e.g. spraying of insecticides or fertilizers), fire fighting, coastal surveillance, remote sensing, land mapping etc. They can relieve people from performing dangerous jobs. The scope of their use for commercial purposes is immense indeed. The high surge in demand for UAVs has raised airspace safety, privacy security and personal data processing concerns; hence the drone defence technologies are being developed to address them.

The terminology linked to UAVs is rather complicated and inconsistent. An UAV is referred to as “...*RPV (remotely piloted vehicle), drone, robot plane, and pilotless aircraft...*” (Yanushevski 2011, pp.1), while in the acronym UAV itself, the ‘U’ can stand for unmanned or uncrewed and ‘A’ for air, aerial, autonomous, aircraft or even airborne. To deal with this terminological mess, let us sum up the main types in Scheme 1.

**Scheme 1: The UAV as a term**



Source: (UVS-info 2015, pp. 7), (Yanushevski 2011, pp. 1), own elaboration.

Stockholm International Peace Research Institute (SIPRI) lists the types of weapons, the aircraft being defined as “*all fixed-wing aircraft and helicopters, including unmanned aircraft (UAV/UCAV) with a minimum loaded weight of 20 kg. Exceptions are microlight aircraft, powered and unpowered gliders and target drones*” (SIPRI 2016a). In other words, an UAV is a type of aircraft that is either remotely piloted (remotely piloted aircraft systems, RPAS) or pre-programmed; and loaded (e.g. combat with loaded missiles; UCAV) or without any load. European Council Regulation No. 1334/2000 in Annex I (European Council 2000, pp. 21) reads: “*Unmanned Aerial Vehicle (‘UAV’) means any aircraft capable of initiating flight and sustaining controlled flight and navigation without any human presence on board.*”

The RPAS can be divided into 17 groups, depending on their weight, endurance, flight range and flight altitude, see (UVS-info 2015, pp. 155). The acronym UAVS symbolizes an unmanned aerial vehicle system, which “*... is defined as a combination of an unmanned aerial vehicle and its launching, guidance, test, and handling equipment.*” (Yanushevski 2011, pp. 4)

## 2 LITERATURE REVIEW

The UAVs have been widely discussed in books and journals from the point of view of design, guidance control, drone defence and security, yet just very little has been written in economic literature about international trade in and trade regulation of UAVs. In fact, economic papers are orientated just towards arms trade in general and arms trade treaty. In (UVS-info 2015), we can find information on air traffic safety challenges.

The official specialized statistics concerning UAVs can be found in (SIPRI 2016a), covering exclusively the transfers of UAVs for military purposes, and UVS International data sources

(covering RPAS only). Yet certain limitations apply, because military UAVs trade (*i.a.* UAVs) involves national security issues and export and import licencing procedures have to be followed. More complex factsheets on national UAV markets and industry-leading companies can be found in the Global UAV Market 2015-2025 yearbook (Strategic Defence Intelligence 2015), although the amount of licence fee makes it out of reach of regular researcher and turns it into an information source that is worth buying in fact exclusively for companies on the respective market, which make strategic business decisions.

The commonly accessible trade statistics databases ran by WTO, EU etc. are of no use, since the UAVs represent a very narrow segment belonging e.g. within the EU combined nomenclature apparently to the aggregate code CN 8802.20.0010 (*Aeroplanes and other aircraft, of an unladen weight not exceeding 2 000 kg for civil use*) and CN 8802.20.0090 (*Aeroplanes and other aircraft, of an unladen weight not exceeding 2 000 kg - other*), (European Commission 2013). Within (European Council 2000), they belong to the Category 9 *Aerospace and Propulsion* and, more precisely, to the subcategory 9A012 '*Unmanned aerial vehicles*' ('UAVs'), *associated systems, equipment and components*. Theoretically, additional information on exports and imports of UAVs could be found in national reports on arms exports (SIPRI 2016b), but most countries do not publish information on export or import licences, detailing the description of goods, number of items, financial value, disaggregation by control list category etc.; (Bromley 2011) and (Weber, Bromley 2011). For instance, the national report of the Czech Republic for the year 2014 indicates that the UAVs belong to the military material group No. 10 including '*Aircraft*', '*lighter-than-air aerial vehicles*', *unmanned aerial vehicles ('UAVs')*, *aeroengines and aircraft equipment, related equipment and components, specially designed or modified for military use*. Specific information on trade is then available for the whole group No. 10, thus it is impossible to get data related to UAVs only.

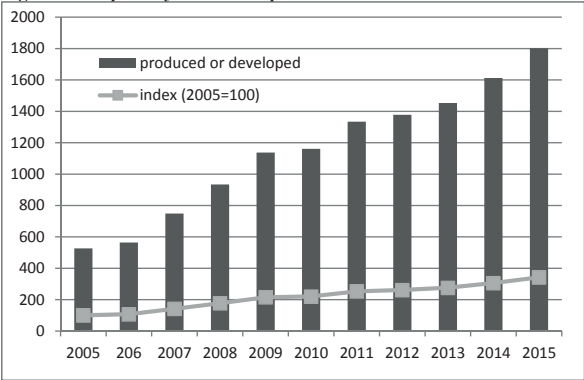
### 3 PRODUCTION AND INTERNATIONAL TRADE

The first attempts to use the pilotless airplane was made during the World War I, yet more considerable success was made not earlier than in Vietnam War, (Blom 2010, pp. 2-3). Since then, a gradual rise in production and development of UAVs has been witnessed. The number of RPAS produced or being developed more than tripled over the last decade, see Figure 1.

The military-purpose UAVs that are remotely piloted represented more than one-third of all officially developed or produced RPAS devices, although it is true that additional nearly 30%

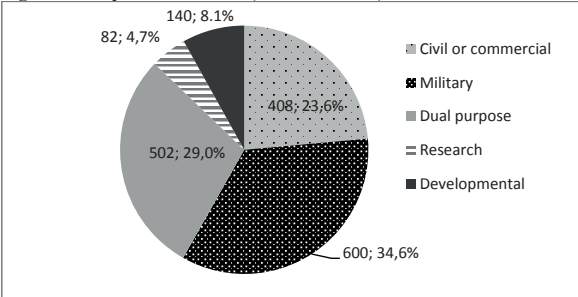
belong to dual-purpose vehicles that can be multi-mission, e.g. can serve for both surveillance and search-and-destroy missions; see Fig. 2.

**Fig. 1: Total quantity of RPAS reported over 2005-2015**



Source: (UVS-info 2015, pp. 157), own elaboration.

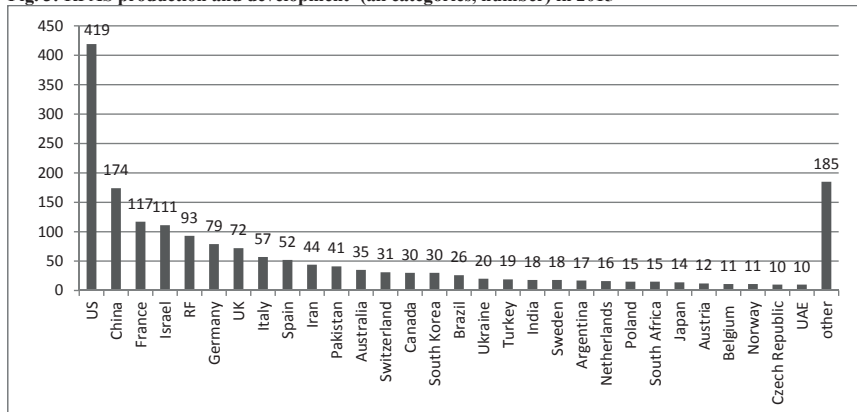
**Fig. 2: RPAS per class in 2015 (number and %)**



Source: (UVS-info 2015, pp. 159), own elaboration.

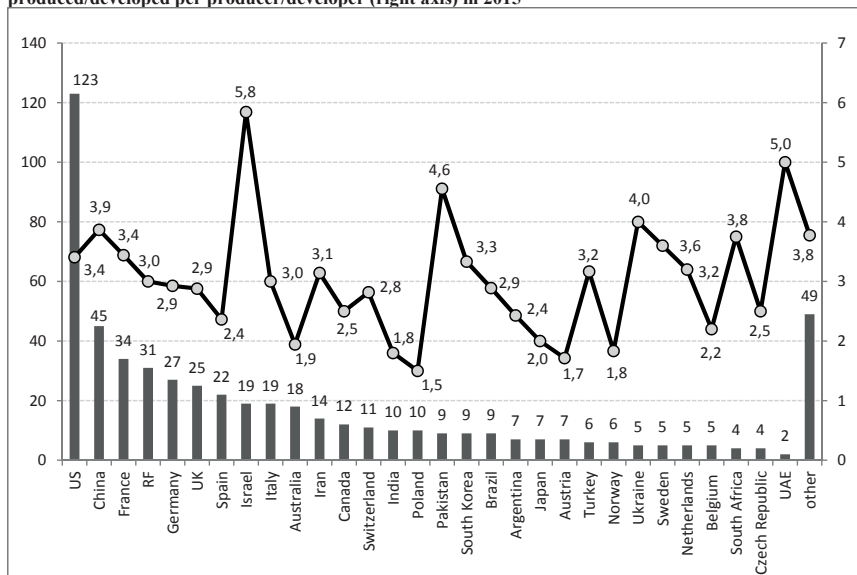
Irrespective of the RPAS category, the general production leaders are represented by the US, China and Israel; see Fig. 3. In 2015 globally, 1.802 models of RPAS were allegedly produced, out of which more than one third was represented by mini drones (i.e. less than 30 kg in weight). The Czech Republic occupies 29<sup>th</sup> position with 10 models produced/developed. Its production is limited to mini, short range and medium range RPAS. The highest number of producers/developers can be seen in the US, China and France, i.e. the TOP 3 countries in number of produced/developed RPAS; see Figure 4. In next positions, the country scoreboard slightly differs from the one in Figure 3. The most concentrated production/development can be seen in Israel, UAE, Pakistan and Ukraine, while in Poland, Austria, Norway and India the concentration ratios attain the lowest levels.

**Fig. 3: RPAS production and development<sup>7</sup> (all categories, number) in 2015**



Source: (UVS-info 2015, pp. 155), own elaboration.

**Fig. 4: Number of RPAS producers/developers by country<sup>8</sup> (left axis) and number of RPAS produced/developed per producer/developer (right axis) in 2015**



Source: (UVS-info 2015, pp. 161-203), own elaboration.

The trade volumes are indicated in Figure 5. The exact prices of contracts are rarely stated in the source; hence it is possible to indicate purely the numbers of sold, leased and ordered

<sup>7</sup> The figure related to China includes also Taiwan and Hong Kong.

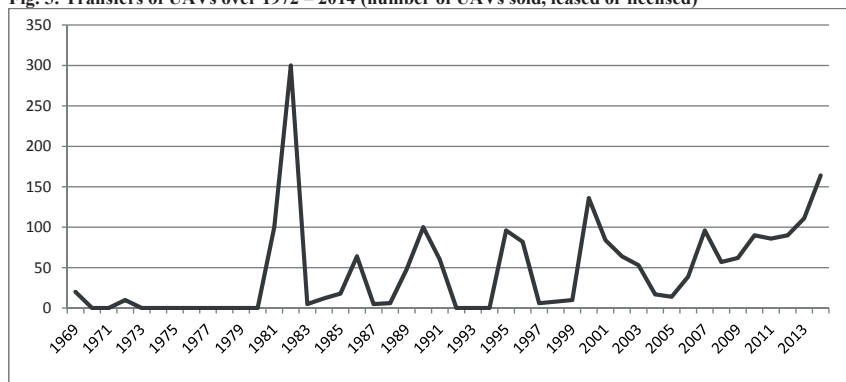
<sup>8</sup> The category 'other' involves producers/developers from 25 countries, yet it excludes international consortia composed of entities from more than one country.

UAVs by end 2014. In case of multi-year deals, the year of contract accomplishment is indicated. The database covers the military aircraft transfers over the period 1950-2014, though reportedly the first UAV deal was fully accomplished not earlier than in 1969. The total number of respective UAVs amounted to 2.113 vehicles. Quite surprisingly, the number of transferred UAVs peaked in 1982, which is due to 100-pieces-each Canadian sales to France, Germany and Italy. Additional data are not indicated by the source. Indeed, as the statistics concern purely military applications, the falls and rises are highly attributable to international conflicts and internal security threats. Given the contemporary international situation, it is possible to expect a further rise in transfers in years to come.

The main supplier of UAV is indisputably Israel, with more than 37% share, see Figure 6, followed by the US and Canada. The other countries hold only minor stakes.

Main recipient or licensor countries are India, the UK, France and the US; see Figure 7. The ‘unknown’ category embodies the cases, where only the region or even just continent was indicated<sup>9</sup>. The category ‘other’ includes also purchases of the UN for peacekeeping operations and NATO’s purchases. As reported (SIPRI 2015, pp. 79-91), as an answer to Ukraine crisis, the upsurge in demand for UAVs in Poland and indeed Ukraine itself was recorded. By the same token, given the trade sanctions imposed by Western countries, Russia seeks other suppliers of armed UAVs, which it does not produce itself. Chinese UCAVs are offered as purchase options; (SIPRI 2015, pp. 295). In addition, a large purchase contract of UCAVs from the US as part of Korea Air and Missile Defence system against North Korea was clinched in 2015; (SIPRI 2015, pp. 429).

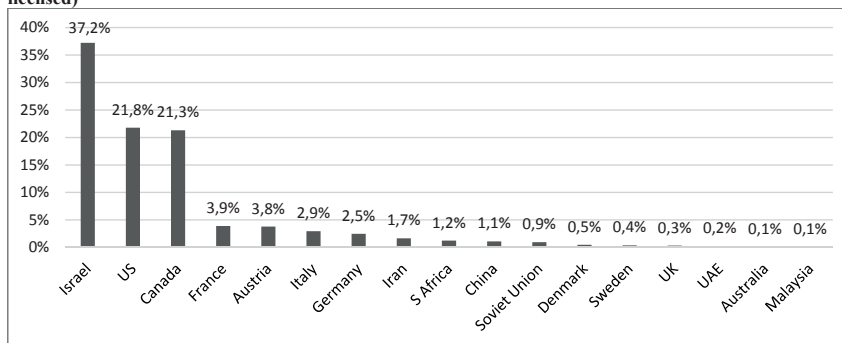
**Fig. 5: Transfers of UAVs over 1972 – 2014 (number of UAVs sold, leased or licensed)**



Source: (SIPRI 2016a), own calculations and elaboration.

<sup>9</sup> e.g. ‘unknown African country’ or ‘unknown Middle Eastern country’

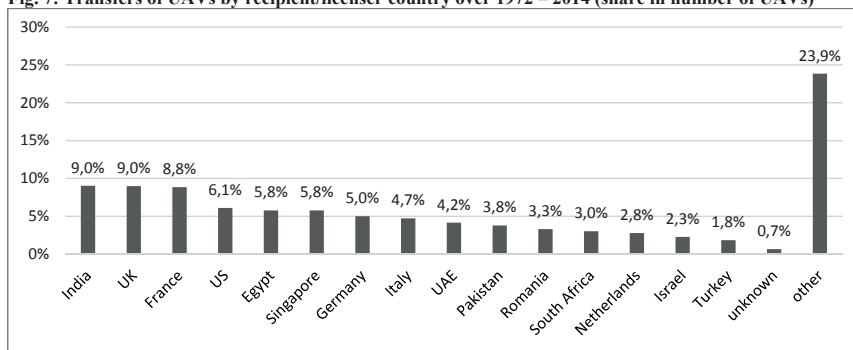
**Fig. 6: Transfers of UAVs by supplier country over 1972 – 2014 (share in number of UAVs sold, leased or licensed)**



Source: (SIPRI 2016a), own calculations and elaboration.

The UAVs as double-use items or even military equipment (in case of UCAVs) are subject to respective trade regulations implementing internationally agreed dual-use controls, non-proliferation agreements, international embargoes etc. For more details on arms trade regulation and barriers see e.g. (Balihar, Müller 2015) and (SIPRI 2016b).

**Fig. 7: Transfers of UAVs by recipient/licenser country over 1972 – 2014 (share in number of UAVs)**



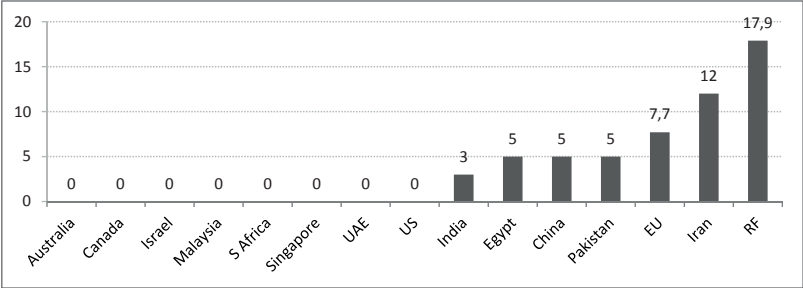
Source: (SIPRI 2016a), own calculations and elaboration.

Figure 8 states the MFN duty rates in key export/import countries of UAVs as referenced in Figs. 6 and 7. The Russian Federation, as an important producer, is mentioned as well. Given the existence of the EU common customs tariff and the EU-Turkey customs union, the MFN import duty of EU is stipulated as a representative for all said states. It is obvious that main importers tend to have non-zero import duty rates, while the TOP 3 exporters have 0% duty rates. An interesting situation can be seen in Russian Federation, which ranked among TOP 5 producers/developers of RPAS in 2015, but its involvement in foreign trade stays marginal. It reportedly does not export UAVs at all and its share in receipts/licenses amounts to less than



1%. Its stance in foreign trade in UAVs (Russian HS code 8802.20.0008) is rather protectionist, since the MFN import duty rate is worth nearly 18%, which is one of the highest rates for UAVs globally; (Pitney Bowes 2016). Quite similar situation can be seen in case of China as well.

**Fig. 8: MFN duty rates for UAVs in main importing and exporting countries (%) in 2016**



Source: (Pitney Bowes 2016), own elaboration.

#### 4 SAFETY CONCERNS, CHALLENGES AND PROSPECTS

Discussion has been made as to what extent the aviation market should be open to civil UAV aviation. Within the EU, the Czech Republic belongs to the handful of member states (namely Germany, the UK, France, Finland, Denmark, Sweden, Italy and Spain), where the small UAVs under 25 kg of weight, operated for commercial purposes, are authorised to fly, yet indeed specific conditions apply; (UVS-info 2015, pp. 8). The remaining 19 EU members states do not allow UAVs to fly for commercial purposes.

In the case of the Czech Republic, the UAVs are subject to special rules, see (Ministry of Transport 2014), implementing the requirements set by the Chicago Convention on International Civil Aviation into the Czech legislation. Civil UAVs are authorised to fly uniquely on the basis of special authorisation issued by the Civil Aviation Authority (CAA). The attention is paid to the UAVs technical specifications, purpose of the flight, operator’s previous experience, estimated performance, detect-and-avoid capabilities, payload information, and liability insurance, safety documentation regarding emergency procedures in case of failure, security procedures and in-flight protection; (CAA 2015).

Table 1 summarizes basic rules for operation of small UAVs in the Czech Republic, UK, US and Canada. Official information concerning regulation in Israel, Russian Federation and China as other important exporting and producing countries were unfortunately available in respective national languages only. As far as France is concerned, the categorisation of UAVs as well as the respective legislation are rather complex and cannot be briefly and concisely

summarized. In all observed countries, the UAVs flown for recreational purposes are subject to lesser rules. The national regulatory systems differ as to the strictness of operator's certification requirements, accident and incident reporting and detect-and-avoid capabilities.

**Tab. 1: Overview of basic regulation of small UAVs operations in selected countries**

	<b>CR</b>	<b>UK</b>	<b>US</b>	<b>Canada</b>
<b>MTOW<sup>10</sup></b>	20 kg	20 kg	55 lbs	25 kg
<b>Maximum altitude AGL<sup>11</sup></b>	300 m in G, 100 m in ATZ, 100 m in CTR	400 feet in both G and ATZ zones	500 feet in G and ATZ zones	300 feet in G only
<b>Compulsory UAV registration</b>	yes (commercial and R&D)	yes (commercial operations)	yes	yes (non-recreational operations)
<b>Compulsory operator registration</b>	yes (commercial and R&D)	yes (commercial operations)	certification required	yes (non-recreational operations)
<b>Distance-to person* limitations during take-off or landing</b>	50 m	30 m	Operations over any person (exc. operator) is prohibited, unless the person is under covered structure.	500 feet
<b>Distance-to person* limitations during flight</b>	100 m	50 m		500 feet

Source: (CAA 2015), (UK CAA 2015a), (UK CAA 2015b), (UK CAA 2015c), (FAA 2016), (Transport Canada 2016), own elaboration.

\* Except the person in charge of the UAV, i.e. the operator.

The international rules regarding EU members are indeed shaped mainly by the Chicago Convention Annex 2 (so-called 'Rules of the Air') and EUROCONTROL rules (stipulating among others criteria for airworthiness certification of UAVs), yet Baltic states are not with EUROCONTROL. At the EU level, the common stance and regulation principles are still lacking, although there are increasing efforts to establish a roadmap that would help to integrate the civil UAVs fully and safely into the aviation market; (European Commission 2015). The discussion concerns i.a. common rules for security and safety issues, including 'sense and avoid' and 'comment and control communication link' technologies, data protection and ethical risks.

## 5 CONCLUSION AND DISCUSSION

The international trade in UAVs is dominated by Israel as the leading exporter, followed by the US and Canada. As far as the importers are concerned, India, UK and France rank among the TOP 3. China and mainly Russian Federation as important producers are just marginally involved in UAVs foreign trade, yet tend to be rather protectionist in trade policy (when expressed by MFN import duty rates).

<sup>10</sup> Maximum take-off weight

<sup>11</sup> AGL = above ground level, ATZ = aerodrome traffic zone, CTR = control zone; see e.g. (CAA 2016). Number and width of classes used (set by ICAO airspace classification scheme) vary from state to state.

The future development in rules for commercial UAVs operations is crucial for international trade and production to genuinely expand in a massive manner. Common EU stance can contribute to immense yet safe proliferation of UAVs into European airspace system. The Czech Republic belongs to rather liberal group of EU members that allow civil UAVs to be flown in their national airspaces. The development in case of UAVs for intelligence, military or even combat operations depend, indeed, highly on national budget constraints and intensity of international conflicts and political tensions.

Follow-up work can be aimed at deeper insight into national regulatory frameworks for UAVs operations in EU member states as well as other important producing, exporting and importing countries and future development of common stance of EU toward UAV civil operations and their integration into the European airspace system.

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# The International New Ventures Originating in Poland and Czech Republic, A Comparative Study

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**Abstract:** The study goal is to compare the characteristics of companies following the Born global internationalization model, originating in Poland and Czech Republic. The introductory part of article provides description of this internationalization model and the International New Ventures traits (INV). It summarizes the recent studies on this topic conducted in Poland and Czech Republic. In the empirical part of study, the INVs from the two countries are compared. The Polish sample includes 105 companies surveyed with use of CATI method in Sept-Oct 2014, who fulfilled the criteria formulated by Knight et al. in 2004, concerning the born globals. The Czech sample includes 54 SME companies, surveyed with use of CAWI method in Nov 2013- Jan 2014, fulfilling the same criteria.

In the article descriptive statistics, cross-tabulation analysis and non-parametric tests are applied to answer the following research questions: Do the Polish and Czech International New Ventures differ in terms of internationalization path? What are the characteristics of their managers in terms of so-called “international vision”? Finally, the comparison of the Polish and Czech INVs’ innovativeness level is presented, as an indicator of entrepreneurial orientation in the international environment.

**Keywords:** International New Ventures, Born global internationalization, two-country study, Czech Republic, Poland.

**JEL Classification codes:** F23, M13, M16.

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## 1 INTRODUCTION

This study is an introductory analysis within the framework of a research Grant covering the SME exporters in Poland and Czech Republic. It provides an overview of the important phenomenon of quick and early internationalization of enterprises coming from those two countries. The main goal of the study is to compare the internationalization patterns of born global or INV companies originating from those countries and to identify some commonalities or national differences.

Both investigated countries share similar geographic location in the Central Europe, being the member of the V4 group, neighboring to the biggest European market (Germany) and also similar history (socialist regime in the second half of the 20<sup>th</sup> century followed by a transition stage which was successfully accomplished by the EU entry in 2004).

The literature review revealed that contrary to the situation in developed Western European countries, there is not much research on this topic that would analyze the situation in CEE countries and thus further research was needed.

## **2 LITERATURE REVIEW**

### **2.1 The early internationalization of small and medium-sized enterprises**

Internationalization of firms right after their inception observed in the last decades has challenged traditional internationalization theories and triggered the studies on the sources, characteristics and implications of this phenomenon (McDougall, Shane & Oviatt, 1994; Gabriellsson et al., 2008). In contrast to the firms internationalizing according to the Uppsala model (Johanson & Vahlne, 1977) the companies referred to as International New Ventures - INVs (McDougall, Shane & Oviatt, 1994), global startups (Oviatt & McDougall, 1995), instant internationals (Fillis, 2001) or born globals (Knight & Cavusgil, 1996; Gabriellsson et al., 2008) leapfrog some of the internationalization stages and are highly active in international markets from near the outset. The main traits of INVs are: the global vision, the international business competence of their managers and poverty of resources at the time of start-up (McDougall, Shane & Oviatt, 1994; McDougall & Oviatt, 1994; Knight & Cavusgil, 2004). They rather apply focus or differentiation strategy than the price leadership strategy (Knight & Cavusgil, 2009) and their internationalization is often facilitated by innovations (Rennie, 1993; Madsen & Servais, 1997; Knight & Cavusgil, 2004).

Till now, most of the studies on INVs were conducted on companies from developed countries (Lamotte & Colovic, 2015). The companies from emerging economies are still on the periphery of the scientific mainstream, although they tend to become stronger and stronger global players and entrepreneurship is one of the determinants of their success (Bruton, Ahlstrom & Obloj, 2008).

Internationalization in the rapidly changing conditions caused by the systemic transformation in Poland was studied by Cieslik and Kaciak (2009), according to whom the transition context affects the international operations of privately-owned enterprises. A longitudinal study on 158 000 Polish exporters in years 1989-2003 showed, that most of them started exporting within first three years of operation. The companies that focused initially on the domestic market did not engage in export later on.

The other study was conducted by Jarosiński, who identified 32 born globals among 84 Polish internationalized firms. They operated on average on 8.6 markets, having an average share of foreign sales in total sales of 63%. However, not all of them fully matched the born global

definition, as most of them operated mostly on psychically close markets (Jarosiński, 2013). Nowiński and Nowara (2010) and Przybylska (2010) also identified Polish companies fulfilling the definition of INVs or born globals, proving that Polish companies followed the INV model at the same time as the companies from more developed countries.

A qualitative study followed by two quantitative studies of Polish INVs was conducted by Duliniec, Baranowska-Prokop, Kowalik, Sikora and Danik indicating the specific traits of Polish INVs: their conciliatory approach, applying hybrid strategy to gain competitive advantage and lack of marketing planning (Baranowska-Prokop & Sikora, 2014; Danik & Kowalik, 2015).

A study on 23 577 firms from 27 countries in Central and Eastern Europe and Central Asia was conducted by Lamotte and Colovic (2015). Out of 1773 Polish companies in the sample 84 were INVs with an average share of foreign sales in total sales of 54.15%. The number of Czech companies in the sample was 808 with 69 INVs having 56.75% foreign sale share. The results of the analysis indicate some idiosyncrasies of the INVs from emerging countries, however the hypothesis were tested for the whole sample, not for single countries. Paweta (2013) analyzed the possible determinants of early internationalization of companies originating from Visegrad countries (V4) and concluded that the Born global internationalization model of was suitable for V4 countries due to the fact that all those countries are export- oriented and open economies which are relatively small in size (with the exception of Poland). They could use export opportunities in the euro-zone, and with the exception of Slovakia, still kept their national currencies whose depreciation helped them to react quickly on the economic downturn in 2008- 2009.

There are not many studies that investigated the INVs in the Czech Republic either. Surprisingly there is only one study that focused on born global companies while other studies investigated the internationalization process of the Czech SMEs in general, without specific focus on born global companies or INVs.

Zapletalová (2013) analyzed a representative sample of 204 internationally active Czech companies and found out that the Born global internationalization model could be relevant for Czech companies but the majority of the surveyed companies (98%) followed the stage approach to internationalization while only 2% followed the global approach. The study concluded that the main factor which influenced the decision to use the global approach to internationalization was the level of knowledge of foreign markets.

Pramod (2013) did not analyze born global companies specifically, but took a more general approach and investigated the internationalized SMEs in the Czech Republic and in Russia.

His findings clearly support the idea that internationally active SMEs perform significantly better than those who serve national market only. The survey also revealed the importance of international activities for Czech SMEs - 73% of the surveyed Czech SMEs were active outside their home country (Pramod, 2013).

Kubičková (2013) investigated the success factors of the internationalization of the Czech SMEs in the ICT industry (which is the industry that typically uses the born global approach to internationalization) and identified the top 5 success factors: existing contacts in foreign country, competitive advantage, high- skilled employees, foreign- market knowledge and good marketing strategy.

Thus, we can conclude that the literature review revealed the need of further investigation of the born globals and INVs in Poland and the Czech Republic, as the existing research is rather limited.

## **2.2 INV characteristics**

The definition of an INV, also applied in our study, was formulated by McDougall and Oviatt (2000), who stated that an International New Venture is “a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries”. To operationalize the International New Ventures traits we use the “classical” Knight et al. (2004) criteria, referring to firms generating at least 25% of total sales abroad, 20 years old or younger and internationalizing within three years from founding.

# **3 METHODOLOGY**

## **3.1 Sample description**

In the empirical part of this study International New Venures from two V4 countries were compared. The Polish sample included SME companies, surveyed with use of CATI method in Sept-Oct 2014. The Bisnode database updated at the end of 2013 and containing information about companies operating in Poland, served as a sampling frame. The firms were drawn out of the population of 19 594 existing and active Polish firms with 10-249 employees, belonging to the Industrial Processing (Manufacturing) section “C” of the Polish Classification of Activity. A randomized algorithm in the software for telephone surveying was used to select these respondents, by a qualified market-research agency. 233 SMEs were selected for study, out of which 105 fulfilled the criteria formulated by Knight et al. (2004), concerning the born global companies. Namely, they were Polish-based and owned SMEs,



founded after 1990, which had reached at least 25% share of export sales in the total turnover, internationalized within three years from founding and obtained a 25% share of exports in total sales volume during three years from internationalization beginning.

**Table 1: Mean employment and age vs. the origin of the studied companies**

Country of origin		No of employees	Company age at time of interview
Poland	Mean	44.1	10.5
	N	92	105
	Std. dev.	38.4	6.3
Czech Republic	Mean	60.8	18.9
	N	54	54
	Std. dev.	57.1	4.9
Total	Mean	50.3	13.4
	N	146	159
	Std. dev.	46.7	7

The Czech sample included companies of all sizes (in terms of turnover and the number of employees) from a commercial database MERK which provided contacts to more than 17.000 firms from all industries. The survey was conducted in November 2013 - January 2014 using the CAWI method (besides app. 10 interviews which were conducted in person in November 2013). Altogether 590 valid responses were obtained (response rate around 4%). Out of those responses only SMEs were considered for further investigation which fulfilled the above mentioned criteria of internationalization in early stage of development, Czech ownership and establishment after 1990. Thus a sample of 54 companies was analyzed further.

The mean level of employment in the Polish INVs was slightly lower than in the studied Czech INVs (44 pers. vs. 60 pers.; no significant difference in the variable's distribution). Moreover, the studied Polish companies were significantly younger (mean age of 10.5 years), than the Czech ones (18.9 years, difference significant at  $p=0.000$  - see tab.1 and 2).

**Table 2: Size and activity type of the studied companies vs. their origin**

		Origin of the company		Total
		Poland	Czech Republic	
Size of the company				
10 - 49 employees	No of answers	69	35	104
	% of sample	65.7%	64.8%	65.4%
50 - 249 employees	No of answers	36	19	55
	% of sample	34.3%	35.2%	34.6%
Activity type				
Manufacturing	No of answers	105	30	135
	% of sample	100.0%	55.6%	84.9%
Services	No of answers	0	24	24
	% of sample	0.0%	44.4%	15.1%
Total	No of answers	105	54	159
	% of sample	100.0%	100.0%	100.0%

Source: authors.

**Table 3: Classification of industries represented by the studied companies vs. their origin**

		Country of origin		Total
		Poland	Czech Republic	
low tech	No. of answers	37	4	41
	% of sample	35.2%	7.5%	25.9%
medium low tech	No. of answers	27	26	53
	% of sample	25.7%	49.1%	33.5%
medium high tech	No. of answers	19	20	39
	% of sample	18.1%	37.7%	24.7%
high tech	No. of answers	4	3	7
	% of sample	3.8%	5.7%	4.4%
n/a	No. of answers	18	0	18
	% of sample	17.1%	0.0%	11.4%
Total	No. of answers	105	53	158
	% of sample	100.0%	100.0%	100.0%

Source: authors.

Despite the differences in types of activity of the Czech and Polish companies, the non-parametric U-Mann Whitney test showed no significant difference in the classification of industries, regarding the technological advancement level, of the companies coming from different countries (tab.3,  $p=0.208$ ).

Among the Polish INVs the main activity types were: food production, metal goods production, machinery and tools (not classified elsewhere), rubber and artificial fiber goods production, furniture. Among the Czech INVs the main activity types were: manufacturing, construction, wholesale and retail trade, information and communication. Because of the two-tier structure of the Czech sample (i.e. split into manufacturing and services), we have checked for the differences in distribution of studied variables among the Czech manufacturers and service providers. The non-parametric tests showed that both types of Czech companies are similar, when it comes for the distribution of studied variables, apart from “experience of the managers” and “innovativeness level”. Thus, we ran additional comparisons of subgroups of Czech companies, to the Polish sample, for those variables.

### 3.2 Studied variables

“Global” or “International vision” comprising such traits as international experience, certain “mental model” relating to openness towards foreign markets and the ability to spot opportunities, are attributed to managers of the born global companies (Rasmussen et al., 2001; Andersson & Wictor, 2003). These managerial traits, have been associated with early and quick foreign expansion also in some recent Polish studies (Kowalik, 2014).

Therefore, we have decided to check if the companies coming from Central Europe in the presented study also display such traits. As indicators of international vision we have used the variables: “experience”, and “openness”, of which the second was measured slightly

differently in both samples. In the Polish sample the managers were asked to indicate their opinion on a 5-point semantic scale ranging from “Our company treats foreign markets as priority” to “Our company treats Polish market as priority”. As for the experience, in the Polish sample, the managers were asked to indicate their opinion on the 5-point semantic scale ranging from: “The management has considerable experience in doing business on international markets” to: “The management has no experience in doing business on international markets”. Whereas in the Czech sample the managers were asked to mention their attitude towards internationalization regarding the criteria as: “international openness” and “experience relating to international markets” on 5-point scales ranging from “very low” to “very high”.

In the second part of analysis, the internationalization path applied by the studied companies was studied. The internationalization path indicates the specificity of foreign expansion, in terms of its speed, scope, scale and in terms of the entry mode applied (Wach, 2014; Kuivalainen et al., 2012; Cieslik & Kaciak, 2009).

In the presented study, the scale of internationalization was measured as the percent of revenues coming from export activity. The speed of internationalization was measured as the time from establishment to first foreign market entry. The scope of internationalization was measured on the basis of geographical distance of export markets and the percentage of revenues coming from different regions.

Innovativeness is one of the key dimensions of entrepreneurship (Covin & Miller, 2014). Moreover, according to results of empirical studies (e.g. Mort et al., 2012) innovativeness of the INVs accompanies their success. In our study we have analyzed the Polish INVs’ innovativeness by asking (a) if they have introduced any innovations in their products or processes; (b) examples of such innovations (in distribution and promotion) were cited; and (c) the speed of innovation introduction was assessed. The Czech INVs’ innovativeness was measured by asking (a) if the company has introduced innovations in the last 3 years, (b) what type of innovations was introduced; and (c) what the degree (local, regional, national, global) of innovativeness was.

Taking into account the similar historical and economic background of the V4 countries, we assumed that the abovementioned variables and indicators of early internationalization model would be at similar levels in Polish and Czech enterprises. Thus we proposed the following research questions for study:

- 1 Do the characteristics of the Polish and Czech International New Ventures’ managers differ in terms of “international vision”?

- 2 Do the Polish and Czech INVs differ in terms of internationalization path?
- 3 Do the Polish and Czech INVs differ in terms of innovativeness level and type?

## 4 RESULTS

### 4.1 International vision

The characteristic traits of managers of the International New Ventures from the two countries were first compared (see tab.4 and 5).

Regarding first of the international vision dimensions – the international experience, the U-Mann Whitney Test showed that hypothesis about the same distribution of variable in Czech and Polish samples is rejected ( $p=0.000$ ). We have further checked that this variable's distribution differs among the CS manufacturing companies and service providers, therefore we additionally compared the experience levels of only the manufacturing companies from both countries, to find that they also differ significantly (the U-Mann Whitney Test showed differences significant at  $p=0.000$ ).

**Table 4. Experience of the INV companies' managers in dealing with international markets vs. origin of the company**

		Origin of the company		Total no. of answers
		Poland	Czech Republic*	
(1), „our managers have considerable experience in doing business on foreign markets”	No of answers	48	6	54
	% of sample	45.7%	11.1%	34.0%
„Rather first statement”	No of answers	35	30	65
	% of sample	33.3%	55.6%	40.9%
„Difficult to say”	No of answers	12	14	26
	% of sample	11.4%	25.9%	16.4%
„Rather second statement”	No of answers	7	3	10
	% of sample	6.7%	5.6%	6.3%
(2) “our managers have no experience in doing business on foreign markets”	No of answers	3	1	4
	% of sample	2.9%	1.9%	2.5%
Total		105	54	159
		100.0%	100.0%	100.0%

Source: authors. Note: for the Czech companies answers on a 5-point Likert scale ranging from “very low experience relating to international markets” to “very high experience” were recoded and analysed respectively.

Regarding the second of international vision dimensions – i.e. the openness to the foreign markets, the U-Mann Whitney Test showed that hypothesis about the same distribution of this variable in Czech and Polish samples is rejected ( $p=0.002$ ).

In case of the variable „Openness to the foreign markets”, the Czech sample was homogenous between manufacturing and service companies, so it was compared with the Polish sample as a whole.

**Table 5. Openness of the INV companies' managers to the foreign markets vs. origin of the company**

Statement		Origin of the company		Total no. of answers
		Poland	Czech Republic*	
„Our company treats foreign markets as priority”	No of answers	64	12	76
	% of sample	61.0%	22.2%	47.8%
„Foreign markets are rather our priority”	No of answers	20	34	54
	% of sample	19.0%	63.0%	34.0%
Difficult to say	No of answers	10	6	16
	% of sample	9.5%	11.1%	10.1%
„Rather Polish market is our priority”	No of answers	9	1	10
	% of sample	8.6%	1.9%	6.3%
„Our company treats Polish market as priority”	No of answers	2	1	3
	% of sample	1.9%	1.9%	1.9%
Total	No. of answers	105	54	159
	% of sample	100.0%	100.0%	100.0%

Source: authors. \*Note: for the Czech companies answers on a 5-point Likert scale ranging from “very low international openness” to “very high international openness” were recoded and analysed respectively.

Summing up, both elements of the “international vision” are significantly differentiated among the Czech and Polish International New Ventures. There are more Polish companies declaring that foreign markets are definitely a priority for them and that they have considerable experience in dealing with foreign clients. However, the numbers of companies in both samples declaring very weak “international vision” are similar.

#### 4.2 Internationalization path

Regarding the first dimension of internationalization - its scale expressed as the share of export revenues in total revenues, the U-Mann Whitney Test showed that hypothesis about the same distribution of variable in the Czech and Polish samples is supported ( $p=0.154$ ). However, as shown in table 6, there are slightly more “intensive exporters” (i.e. with an export share of 50% or more of total revenues) among the studied Polish than among the Czech INVs.

**Table 6. Share of export in revenue vs. origin of the company**

Share of revenues obtained from export in total revenues		Origin of the company		Total
		Poland	Czech Republic	
25-50%	No of answers	37	23	60
	% of sample	35.2%	42.6%	37.7%
51-75%	No of answers	18	15	33
	% of sample	17.1%	27.8%	20.8%
76-100%	No of answers	50	16	66
	% of sample	47.6%	29.6%	41.5%
Total	No of answers	105	54	159
	% of sample	100.0%	100.0%	100.0%

Source: authors.

Regarding the second dimension of internationalization speed, it can be seen from table 7. that 81% of the Polish INVs internationalized within the first year of existence, while in the Czech

sample the figure equals 55.6%. The U-Mann Whitney Test showed that hypothesis about the same distribution of this variable in the Czech and Polish samples is rejected ( $p=0.002$ ).

Regarding the third dimension of internationalization – its scope, the numbers of studied Polish companies internationalizing only within Europe (c.a. 49% of the sample) are much higher than among Czech companies (c.a. 24% of the sample). However, the distribution of revenues coming from these markets is quite different (tab. 8, hypothesis about the same distribution of this variable in the Czech and Polish samples was rejected,  $p=0.000$ ).

**Table 7. Export beginning vs. origin of the company**

Time of export beginning (no. of years from inception)		Country of origin		Total
		Poland	Czech Republic	
Up to 1 year	No of answers	85	30	115
	% of sample	81.0%	55.6%	72.3%
From 1 - 2 years	No of answers	12	18	30
	% of sample	11.4%	33.3%	18.9%
From 2 – 3 years	No of answers	8	6	14
	% of sample	7.6%	11.1%	8.8%
Total	No of answers	105	54	159
	% of sample	100.0%	100.0%	100.0%

Source: authors.

For the Polish-based INVs on average the revenues coming from V4 and CEEC markets constitute around 7.8% of all revenues, while for Czech INVs this rate is around 35.4%. Regarding the more distant, “old EU member” countries – on average the Polish-based INVs get two-thirds of revenue from them, while the Czech ones – less than one-third. Moreover, 18 of the Polish INVs are even more internationalized, as they get on average 40.7% of revenues from markets outside the EU. For the Czech companies the mean level of revenues from markets outside the EU is 13.7%.

**Table 8. Revenues from the target market vs. origin of the company**

Target market	Mean revenue level from the given market (in %)	
	Poland (n=105)	Czech Republic (n=54)
V4 markets	4.6	24.1
V4 and CEEC markets	7.8	35.4
other EU markets (non-CEEC)	62.7	28
non-EU markets	40.7	13.7

Source: authors.

Finally, regarding the chosen entry modes, we found that all the studied Polish INVs chose export entry (tab. 9 - almost 62% of companies prefer the direct export from home to the foreign client). On the other hand, the studied Czech INVs preferred more advanced entry modes – over 77% applied them.

Among the main advanced entry modes were the contractual modes (contract manufacturing – 28 companies), moreover 14 companies admitted they had a foreign branch or a wholly owned subsidiary. Other types of advanced entry modes (e.g. franchising or licensing) were represented sporadically.

**Table 9. Entry mode vs. origin of the company**

		Origin of the company		Total
		Poland	Czech Republic	
Most advanced entry mode chosen*				
Indirect export	No of answers	2	2	4
	% of sample	1.9%	3.8%	2.5%
Direct export from the country to the client	No of answers	65	0	65
	% of sample	61.9%	0.0%	41.1%
Direct export with intermediaries	No of answers	38	10	48
	% of sample	36.2%	18.9%	30.4%
More advanced modes of entry (contractual, hierarchical)	No of answers	0	41	41
	% of sample	0.0%	77.4%	25.9%
Total	No of answers	105	53	158
	% of sample	100.0%	100.0%	100.0%

Source: authors. \*Note: For companies applying more than one entry mode type at once, only the most advanced modes were included.

### 4.3 Innovativeness of the companies

Finally, the innovativeness was compared in both samples, i.e. both the declared level (intensity) and types of introduced innovations were analyzed.

**Table 10. Innovations intensity vs. origin of the company**

Innovations intensity		Origin of the company		Total
		Poland	Czech Republic	
No innovations declared	No of answers	19	9	28
	% of sample	18.1%	16.7%	17.6%
Low innovators (1 type declared)	No of answers	50	23	73
	% of sample	47.6%	42.6%	45.9%
Medium innovators (2 types declared)	No of answers	24	14	38
	% of sample	22.9%	25.9%	23.9%
High innovators (3 types declared)	No of answers	12	8	20
	% of sample	11.4%	14.8%	12.6%
Total		105	54	159
		100.0%	100.0%	100.0%

Source: authors.

As table 10. shows, there were similar percentages of companies with the same innovation intensity among Polish and Czech INVs (U-Mann Whitney Test,  $p=0.456$ ). In addition, because this variable was differently distributed in the CS manufacturing and service companies, we performed the comparison of the CS and PL manufacturing companies only. Again, there were similar percentages of companies with the same innovation intensity among Polish and Czech manufacturing INVs (U-Mann Whitney Test,  $p=0.517$ ).

Further, we found that similar shares of both samples introduced process innovations (tab.11), but in product innovations the Czech INVs are leaders (almost half of sample declared to introduce them), while the Polish INV companies are slightly better at introducing marketing innovations, than the Czech ones.

**Table 11. Innovation types vs. origin of the companies**

Innovation types		Origin of the company		Total
		Poland	Czech Republic	
Product innovations	No of answers % of sample	29 27.6%	26 48.1%	55 34.6%
Process innovations	No of answers % of sample	65 61.9%	33 61.1%	98 61.6%
Marketing innovations	No of answers % of sample	40 38.1%	16 29.6%	56 35.2%

Source: authors.

## 5 DISCUSSION AND CONCLUSIONS

In relation to the research questions posed at the beginning, the following main conclusions were drawn. Regarding question a) we found significant differences in the international vision dimensions, namely the Czech managers seem to have a lower experience and openness towards abroad than the Polish ones. However, the apparent differences may be partially due to different “response styles” among Polish and Czech respondents (i.e. the Polish ones are more willing to point to positive end of the scale, while the Czech ones-to the middle). This difference in response style was identified e.g. by Johnson et al. (2005) who suggested that countries with higher masculinity index and higher power distance index are more likely to select extreme answers when answering questionnaires. Poland scores higher than the Czech Republic in both dimensions; masculinity 64 vs. 57 and power distance 68 for Poland vs. 57 for the Czech Republic (Hofstede et al., 2010). This conclusion is also supported by the fact that there were almost equal shares of both samples displaying “low” or “very low” international vision dimensions. Even not taking into account this “response style effect”, these Polish and Czech companies’ results support the other empirical studies from highly developed countries, stating that INV managers have strong international vision, and it helps them in quick internationalization (Bell et al., 2003; Karra & Phillips 2004).

Regarding question b) - among the Polish companies there are much more “instant internationalizers” and the primary target for the Polish-based INVs are the “old EU members” markets. Besides, some of the studied Polish INVs obtain considerable shares of revenues coming from markets out of Europe (which according to some sources is an additional criterion to be named “born globals”; Gabrielsson et al., 2012). On the other hand,



the primary market for the studied Czech INVs in terms of highest revenue level are the CEEC markets. Such “expansion model” confirms the general export orientation of the Czech Republic, for which Germany is the most important export market, followed by Slovakia. Especially the position of Slovakia is worth mentioning because this country was just 23 years ago part of the same country as the Czech Republic (Czechoslovakia) and therefore, also due to similar language and still existent economic and personal connections, it is usually among the first markets considered for international expansion by the Czech companies. Similar ties exist also in relationship with Germany which is the most important foreign investor in the country. Czech companies are often fully integrated into production process of German companies.

On the other hand, Czech entrepreneurs, opposed to their Polish counterparts, could not take the advantage of the diaspora of their nationals at distant markets which could make their expansion to more distant markets more complicated.

Finally, regarding the research question c) - similar intensity of innovation activity was found in both samples, however the product innovations were more important for the Czech companies. There is evidence from previous studies on the Polish INVs, that they emphasize product quality as their success factor, however, they introduce less innovations than their counterparts (Danik & Kowalik, 2015). Also the available public reports show that the Czech companies are more innovative than the Polish ones (Innovative Entrepreneurship, 2015). The latest Global Entrepreneurship monitor for the Czech Republic suggests several reasons for the high innovativeness of the Czech Republic, such as the usage of newest technologies in companies, relatively high percentage of companies which operate in medium or high technologically advanced industry and also the relatively good protection of intellectual property (Lukeš & Jakl, 2011).

To conclude, we found some common traits, but also important differences within the Polish and Czech companies following the Born global internationalization model. The differences point out mainly to the different speed and scope of internationalization of studied INVs.

They show that rather there is no “regional” model of accelerated internationalization in the V4 countries. Czech and Polish managers seem to share the same level of international vision but, on the other hand, the Polish INVs expand to more distant markets while Czech INVs typically start their expansion in the neighbouring countries within the CEE region. The study also confirmed the results of previous studies that Czech companies are more innovative in terms of product innovation than the Polish companies but the general intensity of innovativeness was similar for companies from both countries.

The results of this study should be interpreted bearing several limitations in mind. The first limitation is that the study investigated two V4 countries only. The results proved that there are some differences comparing Poland and the Czech Republic and therefore one could expect that the results for other CEE countries could differ as well. Another limitation was caused by the relatively small size of the sample in both countries (159 companies were analysed). By increasing the size of the sample the research could deliver slightly different results. The last limitation was caused by the nature of the study which concentrated on quantitative results solely but did not study the motivations and did not aim to explain qualitatively the identified differences.

Thus further research should concentrate on investigation of other markets within the Central Europe. Also further research is needed to understand the reasons behind the differences of internationalization paths of the INVs in both countries from in detail.

### ACKNOWLEDGEMENT

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# Internationalization of Consultancy Services

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**Abstract:** Competitive and efficient consulting companies have to respect the trend of globalization and internationalization in their activities. The market for consultancy services is currently so developed, that it is on one hand able to support the creation of a comparative advantage and on the other hand, it may prevent companies, which do not provide consulting services on a high level of quality, from the realization of their intentions. The internationalization of consultancy services requires a thorough adaptation to the legislative, economic, social and cultural environment as well as to the market, where the consulting company wants to be active. Despite the globalization trends, the internationalization of consultancy services is a difficult process characterized by the numerous barriers, which obstruct the international development.

**Keywords:** consultancy services, internationalization, globalization.

**JEL Classification codes:** F20.

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## 1 INTRODUCTION

The expansion of economic activities of companies, which offer consultancy services outside of the national borders, has begun after the Second World War, therefore in a period, when a development of consulting and consultancy services in the European environment can be observed. This process was characterized by a different development in comparison to the USA, which was probably connected with a diverse understanding and approach to the utilization of external services as well as with the creation and growth of the American international trade after the Second World War and its expansion to the European continent. In the context of the expressions of the mentioned differences between the European and American approach to consultancy during the middle of the last century, it is necessary to mention mainly the belief of the European managers regarding their exclusivity of competences. The use of external help to solve corporate problems, especially for remuneration, was considered to be a demonstration of weakness and incompetence. The aim of this contribution is to clarify the internationalization of consultancy services with an emphasis put on their specifics and we are going to focus on this process from the perspective of Slovak consultancy subjects.

## **2 INTERNATIONALIZATION OF CONSULTANCY SERVICES IN THE CONDITIONS OF GLOBALIZATION**

### **2.1 Internationalization and its factors**

One of the most significant aspects which influence the development of consultancy services is globalization. The term globalization refers to the creation process of global, i.e. planet wide structures in specific areas of social life and human activities, the increase of their complexity (system difficulty) and the gradual interconnection of these partial global structures (Řezáč 2009). It means the introduction of labor division on a worldwide scale, the monitoring and utilization of comparative advantages from the perspective of raw materials, cheap work force, competent people and the effective demand within territories, which offer the best conditions (Veber et al 2009). Globalization has enabled a rapid development of international business in the area of production as well as in the area of services. The liberalization of international trade, the free movement of capital, the development of modern communication technologies, transport and logistics systems as well as other factors, have become an impulse towards the development of international corporate activities and they represented an increase in the competition on the world markets (Machková 2009).

Globalization is a qualitatively more advanced and complex form of internationalization, which refers to an increasing expansion of economic activities through national borders. Internationalization can be characterized as the multinationalization of economic and business processes, the creation of an internationally interconnected economic space. Internationalized, i.e. “multinationalized” are national economies, companies (the sphere of their influence, activities, ownership), banks and capital, specific economic and political problems, ecology (Baláž 2010). We regard an international firm as every company, which executes at least one of its operations, processes or activities abroad, i.e. an operation of a company crosses the national borders. According to this understanding, it is for instance almost every company or corporation, which just exports abroad or which utilizes foreign supplier services. It may be generally stated that a company enters an international process, if it aims to access an international market through a participation in one of the forms of external economic relations.

A result of the internationalization in the area of economics is the development of international economic relations, an increasing interconnection and interdependence of countries. The intensity and speed of this process is influenced by scientific and technical advancements and by the availability of information.

Internationalization offers new opportunities for companies. It enables on one hand to increase the turnover and profit, thanks to the sale of products and services also on foreign markets and on the other hand, it allows to achieve a decrease in the costs, thanks to economies of scale, the possibility to find offers on global markets and the opportunity to optimize company resources. The main influencing factors in the internationalization process are mainly social and cultural differences, the existence of global marketing networks and business policy conditions (Machková 2009).

## **2.2 Internationalization of consultancy services and its specifics**

The internationalization of economic life concerns all countries, industries and companies – consultancy services are not an exception. These are specific professional services, provided by qualified professionals and/or specialized organizations with the purpose of solving a specific problem.

Consultancy services belong to the category of business services. From the perspective of the effects of their influence which lead to changes in production systems, productivity and efficiency, consultancy services belong to the group of knowledge-intensive services. They are characterized by the application of a high degree of knowledge which leads to the solution of clients' problems related to entrepreneurial processes by highly qualified employees with a high degree of education and professional qualification – advisory, information technology related consultancy, legal, accounting, architectural-engineering, research-development, advertising, market research, marketing and personnel services. Consultancy services are very innovative, they utilize mainly internal and implicit resources of innovation activities and they have very strong contacts with suppliers and clients (Kubičková 2009).

The internationalization of consultancy services requires a throughout adaptation to the legislative, economic, social and cultural environment as well as to the market, where the consulting company aims to operate, which is called “nationalization” (Michalová 2003) and it is characteristic for the internationalization of consultancy services. It is based on the principle that the provision of consulting services requires a high degree of knowledge about the client and his or her needs as well as about the environment where the client is located. In contrast to the adaptation in other sectors (for instance in agriculture or the industry and so on), the nationalization in services and especially in consultancy services does not only mean a simple adaptation to the national differences. It requires a detailed adaptation to the legislative, economic, social and cultural environment and to the market, where the consulting company wants to be active. Consulting services cannot be provided without the

considerations of the uniqueness of each market. An opposite relation is obvious here as well – consulting companies as the providers of consultancy services flourish, if they are able to determine and utilize this uniqueness. It is especially the expansion of consultancy companies to international markets, which is significantly characterized by an increasing nationalization. The management of such companies is usually executed by a local directorate, often with a high level of autonomy and knowledge about the environment.

Another particularity which characterizes the internationalization of consultancy services is the need to relocate the client or the provider. This area is therefore typical for the application of a strategy which establishes branch offices and/or subsidiaries and affiliations in order to achieve proximity to the client. Internationalization of consultancy services is connected mainly with the movement of their providers.

The internationalization of consultancy services is supported by several factors. On the demand side, it is mainly the ambition of the clients to purchase services of higher quality, the creation of new markets resulting from new needs and the increase in partially satisfied needs, the economic development, incomes and the living standard of a country. On the supply side, it is the level of concentration, savings resulting from economies of scale or from the organization, transaction costs, the degree of standardization, the quality level, the connection with a multinational client and the requirement of resources and competition. A part of it is also the economic policy, barriers on the consultancy services market and other institutional and cultural factors.

Internationalization offers for subjects purchasing or providing consultancy services also several advantages:

- the identification of a comparative advantage: with lower costs, higher quality and innovations, which creates competitiveness,
- the benefits of the extension of the market size and business possibilities,
- the possibilities of variability and specialization of consultancy services.

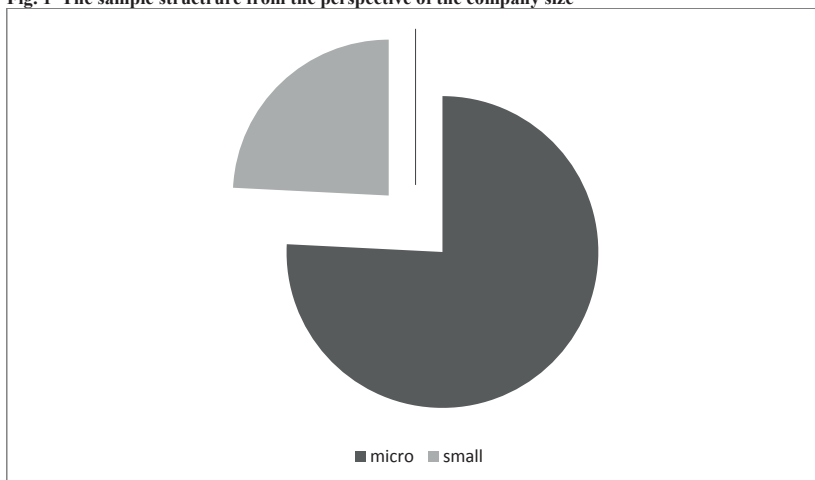
Internationalization of consultancy services is despite the worldwide trends of globalization a difficult process, characterized by several barriers, which obstruct the international development. These are mainly legal barriers (legislative and administrative measures), economic barriers (competition, limited access to information, the quality of services and so on and in the area of consultancy services it is also the problem of asymmetrical information), barriers within the industry (they result from the industry of consultancy services itself, from their dynamics and diversity in the methods, techniques, standards and regulations).



### 3 RESEARCH OF INTERNATIONALIZATION FACTORS FROM THE PERSPECTIVE OF SLOVAK CONSULTING COMPANIES

We conducted in reference to this topic an empirical research, which was focused on international entrepreneurial activities of Slovak consulting companies. Within this research, 200 consulting companies, which operate in Slovakia, were addressed. The sample was specified according to the criteria of the ownership, the head office and the character of offered consultancy services. Only those consulting companies participated in the research, which owners are solely domestic (Slovak) natural persons and/or corporate entities, with a head office in the Slovak Republic and which provide services in the area of economic, managerial and marketing consulting. Among the addressed Slovak consulting companies, 62 subjects participated in the research. The return rate of the questionnaires was 31 %. The respondents were represented by company owners, chief executive officers and directors.

**Fig. 1 The sample structure from the perspective of the company size**



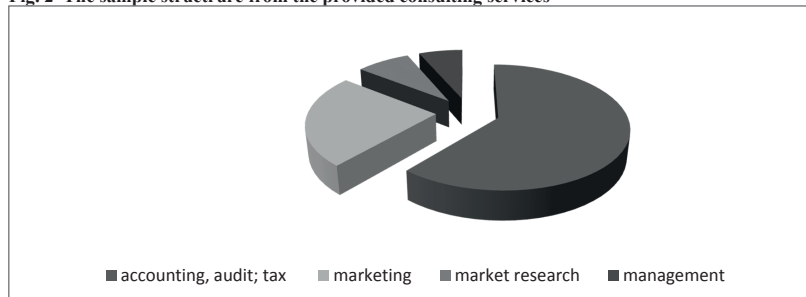
Source: own processing.

From the perspective of the company size, the sample (fig. 1) consisted of 47 (75,8 %) micro-enterprises (with a number of employees of 10 and less) and of 15 (24,2 %) small-enterprises (with a number of employees of 10 - 49). The sales of all research participants were in the range from 0,1 million to 10 million EURO.

From the point of view of the structure of the provided consulting services (fig. 2), we referred to the national statistical classification of economic activities SK NACE rev. 2 with a focus on the following consultancy services: accounting and auditing activities; tax

consultancy - 38 subjects (61,3 %), consultancy services in the area of marketing - 15 (24,2 %), market and public opinion research - 5 subjects (8 %) and consultancy in the area of management - 4 subjects (6,5 %).

**Fig. 2 The sample structure from the provided consulting services**



Source: own processing.

From the perspective of the legal form, all respondents were corporate entities.

### **3.1 Hypotheses of the research**

The aim of the research was to evaluate the situation in the area of the internationalization of consultancy services, provided by Slovak consulting companies. On this basis, the main research question was formulated: What risks are connected with the internationalization process of consultancy services from the perspective of Slovak consulting companies? Based on the main research problem, following partial descriptive research problems were formulated through a structured genesis: What are the motives for the internationalization of Slovak consulting companies?, In what way does internationalization develop in the context of the activities of Slovak consulting companies?, What problems are connected with the internationalization process of Slovak consulting companies?, What are the benefits of internationalization in the context of the activities of Slovak consulting companies?, What are the barriers to the internationalization of Slovak consulting companies?

The drawn conclusions referred to the hypotheses, which were set on basis of the assumption that consultancy services are active parts of internationalization. The removal of the obstacles and barriers to internationalization is the most important from the perspective of its development. Based on this, we set following descriptive hypotheses, which were formulated in relation to the mentioned descriptive research problems:

- H1: Slovak consulting companies are active participants in the internationalization process in the era of globalization.

- H2: The most significant benefits of the internationalization process for Slovak consulting companies are a larger market share, growth and development and a decrease in the costs.
- H3: The most significant obstacles to the process of internationalization from the perspective of Slovak consulting companies are economic, intrasectoral and socio-cultural barriers.

### 3.2 Summary of the research results

Among the subjects, which participated in the research (n = 62), only 12 Slovak consulting companies (19,4 %) perform active entrepreneurial activities abroad (tab. 1).

**Tab. 1: The structure of Slovak consulting companies with active international entrepreneurial operations**

Consulting activity	Number
Accounting and auditing activities; tax consulting	9
Consulting services in the area of marketing	2
Market and public opinion research	0
Consulting in the area of management	1

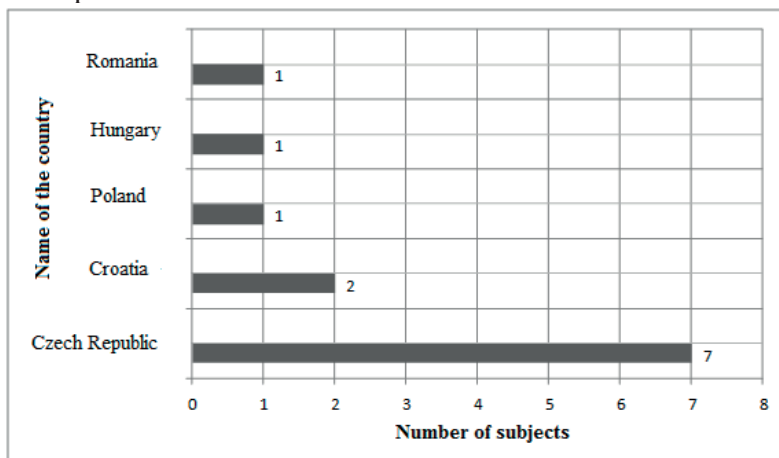
Source: own processing.

Domestic consulting companies, which declared foreign entrepreneurial operations, identified the Czech Republic – 7 (58,4 %), Croatia – 2 (16,7 %), Poland – 1 (8,3 %), Hungary – 1 (8,3 %), a Romania - 1 (8,3%), (fig. 1) as the countries of their activities (fig. 3).

The prevalence of internationalized consulting companies which provide services in the area of accounting and auditing services and tax consultancy is apparently based on the fact, that the consulting activity in this field is characterized by a much higher degree of standardization in comparison to other consulting services in economic and managerial areas, which causes also a reduction of some barriers to the internationalization of consulting services, especially of legal obstacles. Other barriers to an efficient internationalization are in this case not so significant as well, for instance in the area of marketing consulting (a detailed knowledge of the market, the client and the business environment) or in the area of market and public opinion research (an available infrastructure, for example a network of interviewers or the membership in an international professional association), which are moreover characterized by a high degree of interaction between the consulting subject and the client. However, it must be pointed out, that the mentioned cases contain solely those domestic consulting companies, which had successfully realized the internationalization process and which are established also in other countries, where they continuously perform their activities. The entrance to foreign markets had been however attempted by another 7 (11,3 %) of the researched consulting companies, but it was unsuccessful. We can therefore state, that 19

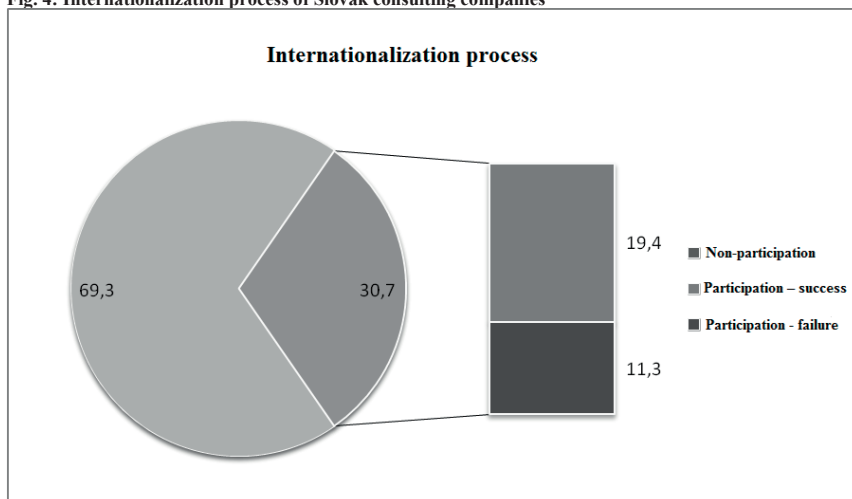
(30,7 %) of the researched Slovak consultancy companies underwent an internationalization process (fig. 4).

**Fig. 3: International entrepreneurial activities of Slovak consulting companies according to the countries of their operations**



Source: own processing.

**Fig. 4: Internationalization process of Slovak consulting companies**



Source: own processing.

As a way how to enter a specific foreign market in order to provide consultancy services, all internationalized Slovak consulting companies indicated an identical approach, which consisted of the creation and maintaining of a long-term cooperation with foreign clients, who

originate from the country of their further operations and the subsequent opening of a branch office in this country. The branch offices are in 3 cases managed by Slovak managers and all of them are located in the Czech Republic. This is probably connected to the significant proximity of the Slovak and Czech entrepreneurial environment, the socio – cultural closeness between these two countries and the virtual absence of a language barrier. In other cases, managers from the domestic environment were appointed. The employees come from a mixed domestic and Slovak environment in all of the cases. The relative proximity (geographic, socio – cultural and lingual) was according to the addressed internationalized Slovak companies mentioned also as one of the most significant criteria in terms of the selection of a country where they want to be present. Further criteria were according to the respondents the knowledge of the market and the interaction with the client.

All internationalized consulting companies mentioned as the key motives for the foreign market entrance the seizing of entrepreneurial opportunities, the need of a constant proximity to the clients and the support of the image on the domestic market. The increase in knowledge (7), a better entrepreneurial environment in comparison to the domestic one (6) and the creation of jobs (2) were mentioned by Slovak consulting companies as further motives for the foreign market entry (tab. 2).

**Tab. 2 The key motives for the foreign market entrance**

<b>Motive</b>	<b>Number</b>
Enterpreneurial opportunities	12
Proximity to the clients	12
Support to the image	12
The increase in knowledge	7
Better enterpreneurial environment	6
Creation of jobs	2

Source: own processing.

The addressed consulting companies, which are established abroad, identified likewise international experiences, more entrepreneurial opportunities, the growth and development of the company and a positive image on the domestic market as the biggest benefits of the internationalization process. It is therefore obvious that the expectations of the companies, which entered the foreign market, were met.

The consulting companies which attempted also to enter a foreign market, but without a success ( $n = 7$ ), congruently identified the recent financial and economic crisis and the consequent loss of clients/orders as the reason for this failure. In one case, the reason of the nonsuccess was attributed to the lack of financial means and in one other case to the problems with the employees (tab. 3). It is important to point out that all of the companies, which failed

in their internationalization attempts, did not enter an unknown entrepreneurial environment and that they had had also long-term contacts in the respective countries, before they decided to enter a foreign market through the opening of an own branch office.

**Tab. 3 The enter a foreign market without a success**

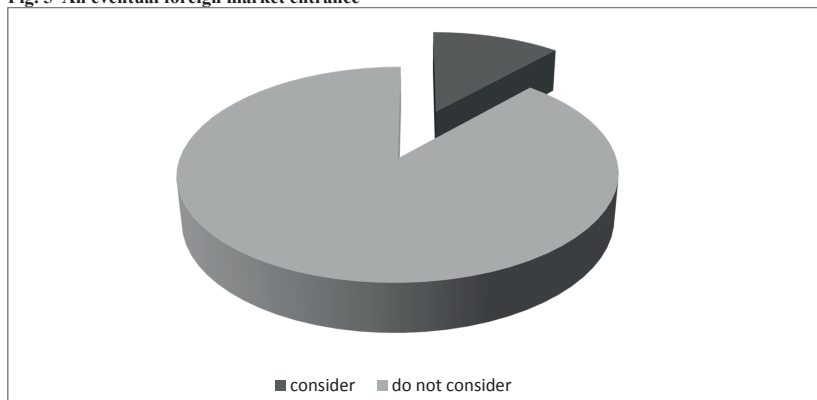
<b>Factor</b>	<b>Number</b>
The recent financial and economic crisis	7
The loss of clients	7
The lack of financial means	1
The problems with employees	1

Source: own processing.

Even those Slovak companies, which were able to establish, stabilize and provide active consulting activities abroad, faced in connection with this process several risks, which were related mainly to the start of their business activities abroad. Various legal and administrative barriers (11) and the financial requirements of this process (8) were identified as the most important problems. Similar answers, provided by successful as well as unsuccessful consulting companies, occurred also in relation to the main barriers and difficulties connected with the internationalization process. These companies experienced further problems associated with the foreign market entrance, which were represented by the domestic competition, the costs related to this process, the not functioning interaction with the client and by the insufficient awareness of the brand on the foreign market.

We were interested also in the reasons, why the Slovak consulting companies which participated in the research ( $n = 43$ ), did not try to enter a foreign market. The answers of the respondents were clearly consistent in the opinion, that they do not consider such an activity as real from the perspective of establishing, stability and long-term operations on a foreign market in connection to a consulting activity. Financial requirements and the participation of a consulting company in international professional associations represent also the reasons, why the respondents do not realize the internationalization process. Among these respondents, orders from foreign companies, which operate in the Slovak Republic, are received on a regular basis by 8 (18,6 %) and occasionally by 19 (44,2 %) of the consulting companies. An eventual foreign market entrance is considered only by 5 (11,6 %) of these companies, the remaining respondents 38 (88,4 %) do not consider such an option (fig. 5). None of the consulting companies, which attempted unsuccessfully to establish themselves on a foreign market, considers it anymore.

**Fig. 5 An eventual foreign market entrance**



Source: own processing.

The results of the survey partially confirmed the hypotheses H2 and H3, but they did not confirm the hypothesis H1.

#### **4 CONCLUSIONS**

If the results of the survey would be confirmed within a larger sample, it may be stated, that only for a limited number of Slovak consulting companies is the process of internationalization a successful strategic step which brings positive results. For the other subjects, it is usually a financially very difficult experience, which is not met with success and its impacts are often critical. It can be also observed that those Slovak consulting companies, which are successful on the domestic market and which have knowledge about the market, a tradition and a known brand, were in the internationalization process either unsuccessful or they had not realized it before and moreover, they do not even consider to enter a foreign market. We assume that this process requires having an elaborated, detailed, long-term and sustainable strategy for the foreign market entrance, supported by a stable interaction with the market, a flexible infrastructure and rich international experiences.

Due to the actuality of this topic, we expect an expansion of the research focus in cooperation with selected Slovak consulting subjects, with an emphasis on the motives and risks of the internationalization of Slovak consultancy companies. The research results are going to be used not only in the practice of consulting companies, but they are going to be transformed also into theoretical knowledge and they are going to be utilized as well in the pedagogical process within the course Marketing consulting and outsourcing, which is taught at the Faculty of Commerce of the University of Economics in Bratislava.

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# Changes in the Market Place vs. Nostalgia - Czech Consumer and Travel

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**Abstract:** Changes in the marketplace can be highly influential to the consumer behavior. Especially if the society has been through dramatic political and economical changes rapidly as it happened 25 years ago in the countries of Eastern Europe. Nevertheless, consumer is not always able to adapt quickly to the changes, if these are too painful, lets himself into the feeling of nostalgia. Experience of vacation is usually a very happy memory that can evoke nostalgic feelings. This paper is aimed at critical reflection of literature covering tourism market place in socialist and post-socialist society of the Czech republic. The aim is to better understand context of external forces driving tourism marketplace and consumer behavior in tourism. Furthermore, to put in the perspective emotion of nostalgia that could be emotion driving travel decisions in current post-socialist societies.

**Keywords:** Nostalgia, Consumer Behavior in Tourism, Postsocialist society, Marketplace

**JEL Classification codes:** M20, M30, N73, N94, P34, Z32 .

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## 1 INTRODUCTION

Last year marked 25 years anniversary since the major changes happened in the Eastern European countries/societies - as it is celebrated and evaluated in terms of democracy and politics, it might be time to evaluate and reflect from the consumer society perspective. Society in post-socialist countries, specifically in the Czech republic is nowadays fully integrated into dynamics of consumer society including the fast dynamics of online media and communication technology. Or, so it appears to be on the surface. Once we analyze trends and behavior in depth, we can see differences in perception and behavior of consumers of different age or cohorts. Some trends remain, one of which established current post-socialist societies as saving societies (Belk, Axelova, 2009), rather than easy spending consumer societies. The other trend, triggered by disappointment in current political or economical society, is emotion of nostalgia and reminiscence towards socialist times. Times when society was perceived more equal and classless, with many life securities, being much slower and with less confusing choices and need for more money. Emotion of nostalgia is awoken in hard times of crisis - in case of current times in the Czech republic expressed as the crisis of values and ethics and questioning of the capitalist society. Nostalgia for times past when ethics and values were seen as certainty or yet an illusion of it as part of communist political programme

that did not provide any other way. Values are part of our own identities (Belk, 1988) and psychological lens of constructing and reconstructing identities (Davies, 1979), longing for happy childhood times, yet recreation of memories and experiences with golden lining that was never there. Each generation of consumers in current post-socialist society has had a different experience and life in socialist times, and this life echo is present through strong nostalgia emotions evoked by the new wave of consumer behavior. It can be classified as a trend, if we see to what extend is popular book by Michal Petrov called “Retro CS - co bylo (a nebylo)za realneho socialismu” (Retro Czechoslovakia: what was (was not) in times of real-socialism), that was awarded as bestseller of the year 2013 on the book fair in May 2014. Publication is collection of photos and memories of consumer society within “real-socialism”, story of goods and services that were or not available in shops and how did consumers in the Czechoslovakia at the time overcome the lack of certain goods.).

## **2 LITERATURE REVIEW**

### **2.1 Perception of Leisure Time**

Time is the only thing that we truly own, even if we are not aware of it for the first 20 years of our life. Our awareness of it, as well as perception and decision how to spend it, develop with our education, maturity and awareness of society we will live in. Society system through family, educational institutions and laws teaches us how we should spend our time (Parsons, 1964, Bourdieu, 1984). Very few has the courage to rebel and use the time idly and by their own taste on spur of the moment. So, even in so called free, open and democratic societies there is a network of distinct social rules that we have to oblige to in terms on how do we spend our time (Bourdieu, 1984) and even take a great pride on leisure time spent (Veblen, 1899, 2007) as part of our image and status. If the society is state run socialism that is ruling by controlling its citizens, the situation becomes very tense and can significantly change their behavior. This paper is critical reflection upon usage of leisure time as distinction in the society of socialist Czechoslovakia in comparison to changes happened after 1989 based on literature review and state of marketplace. Reflection is based on Czech academic literature review, written and published between 1948 and 1988, that should provide with some picture of tourism market and consumer behavior that adapted to the change of rules. It is part of my research for doctoral dissertation, research of the context and tourism market place in the Czech republic, with aim to better understand and interpret changes in consumer behavior in the last 25 years, in terms of decision making process on where and how to spend the vacation. Since changes of the system were dramatic, it is expected to have a significant effect

on almost all generations of consumers, with the difference depending on what point of life were they observing the changes. Method of research is critical review of literature, published books, textbook and academic papers until 1989 that are currently available in libraries and archives in the Czech republic. Tourism at the time was not considered academic or economic discipline and the leisure time spent traveling always had to have a purpose. If there is a purpose, it has ideological perspective and it was considered part of socialist society ideology and state, and only state approved travel was fulfilling the purpose. Friendly states were recommended and the proper travel was supported with built logistics and even financial support (Kaplan, 1991). As such it belonged in the field of regional geography, so the few papers published were done by geography academics.

## **2.2 Socialist perspective**

In his overview of history of tourism Pachinger claims that in capitalism society, the working class had to fight fiercely for its leisure time, and that only in the socialist society can working class claim it as its right equally (Pachinger, 1983). Yet, the very same society he lived in, claimed the right to tell and control how and where will this leisure time be spent. He says that only in the socialist society, tourism could be real “mass tourism” available to all members of the society, and not only to the privileged few, and this is because of guaranteed 2 weekend days off, for the purpose of short rest, as well as guaranteed by the law (he says this is unique only for the socialist states “caring for their citizens”), furthermore because of guaranteed right to a certain number of days of vacation for the longer rest (Pachinger, 1983). He says that not only travel is available to all, but also that there are funds available to be used for this purpose from the state. Socialist state did support tourism and travel, yet he admits that there might be some demographic differences in how citizens would actually use these opportunities travel on their vacation (Pachinger, 1983), he does not explain what these differences are. However, the strongest demagogic theory of Pachinger can be seen in his claim that travel is in capitalist and all previous societies considered as a luxury, yet only in the socialist society it is going back to its original function. Travel and tourism is considered as activity helping people regenerate and truly relax - of course, all as part of the big goal - having more productive working force that would keep the socialist society in good shape. So, travel was important part of the socialist political agenda as well as of the control of leisure time, since work was obligation by law as well as working time, everybody had to be employed (unemployment virtually non existent) and in the work place, no matter of productivity and efficacy, everybody had to spend 8 hours of their day time. This 8 hours

were strictly controlled and it was made sure that each company had a manager that was member of the communist party or had at least one or two supervisors that are either members or ideologically close, part of their job was to maintain the ideology and follow if anybody in the work place is not obeying in any way - even in the way how they spend their outside activities - their leisure time. Part of this controlled leisure time was organised vacation - this was guaranteed and provided in a manner that companies would build or rent accommodation facilities (very simple cottages or camping facilities) somewhere outside of cities, near lakes, rivers or mountains (Kaplan, 1991). Workers were offered to spend their family vacations there for free or with very special financial support (Kaplan, 1991). Sometimes this would mean also so called “collective vacation” factory or company would close for 3 - 4 weeks in July or August and all employees would go for vacation at the same time and sometimes to the same place. This “mass tourism” had a big growth in the 1960-ties, once the society was sufficiently built up and stabilized, so that people had free time as well as disposable income to spend on travel. This period have seen the first wave of foreign visitors incoming to the Czechoslovakia, in 1963 non-visa travel agreement was signed with socialist friendly countries of the Warsaw Pact, not only from socialist friendly states, but also from “non-socialist states” (Pachinger, 1983) and this is how statistics to support the “mass tourism” part of political programme were made too. In 1972, the growth of tourism pushed legislators to protect domestic consumer by allowing hotels and restaurants to charge two different set of prices - prices for foreign tourists (that was based on market conditions and very flexible) and domestic tourists (that were based on category and state regulated pricing) (Kaplan, 1992). Pachinger, nevertheless, goes even further stating that dynamic growth of tourism was in part of negative trends of preferring foreign tourists and seeing tourism as highly commercial activity, that was than “corrected” in 1969 and brought back tourism to its original function of relaxation and to its grounds of domestic travel as foundation of socialist society tourism. So, commercial side of tourism as industry making money was considered as something negative and probably unexpected. Another geographic academic, many years later, prepared overview - the last publication before the Velvet Revolution - Vykoupil confirms this with statistics on tourism in the Czechoslovakia, that is based on 95% domestic travel and in the year of 1988, forecasts further growth in this area (Vykoupil, 1988). Since the tourism and travel is considered as that part of leisure time that should be used to benefit citizens rationally to relax and grow as socialist individuals, in the aim for society growth of course, it is very important where this leisure is to be spent - therefore the best form of tourism is domestic tourism or alternative in friendly socialist states. So, in order to allow such spending of leisure, the

society provided the structure in form of possibility to spend vacation state funded - as part of membership in the party or associations, as part of medical stay in spas that was fully paid upon recommendation of the doctor, as part of company organized vacation and lastly only approved travel agencies. Travel agency's market was very small - and all of them were owned by state and specialized towards different target groups (Pachinger, 1983; Kašpar, 1986): Čedok, the oldest travel agency (established in 1928 to offer tickets and trip by Czech Railways) with the largest network of travel agents all around the country. This agency had exclusivity and monopoly on all organized tours within the Czechoslovakia moreover rights to offer and organize tours abroad, CKM, travel agency for young people and students, works for University and High School students and has rights to organize foreign exchange stays (with approved countries), Rekrea, travel agency of associations, organized tours for members of these associations, Balnea in the Czech Republic and Slovakotherma in Slovakia - travel agencies specialized in spa medical programs and only for medical stays with doctors recommendation, partially or fully funded by the state, Sport tourist and Slovako Tourist specializing in sport tourism organizing sport tours domestically and abroad, only again for members of sport teams and associations. (Kaspar, 1986)

Accommodation facilities were organized and structured if not owned by factories, companies or municipalities, as part of two main state hotel chains - Interhotels or Javorina, there was one state own airline company (Ceskoslovenske Aerolinie), one railway company and one associated bus company including all country network owning also stations and road network (Kaplan, 1992, Kaspar 1986). So, from the point of view of socialist theoretics and politics, in socialist Czechoslovakia consumers had plenty of supported (read controlled) choices how to spend their leisure time. Yet, even if it was promoted as part of the program of the socialist society - this organized and stated supported tourism accounted only for 15 % of all tourism activity (Kaspar, 1986), majority of travel was actually independent of the state support. Furthermore, travel abroad independently was strictly controlled - it was necessary to obtain special permission to travel abroad and obtain foreign currency (Kaplan, 1991). So, if somebody would want to travel and see countries that were not on friendly terms at the time, he or she would have to overcome significant obstacles and prove to the authorities that he or she will remain loyal to the state and return from their vacation home. In some cases this meant that one of family members would not be allowed to travel, but stay at home and in a way guarantee the return of the rest of the family. Country that had provided halfway independence and was used in many cases not only as vacation destination, but also road to the Western Europe, was at the time Yugoslavia that had some friendly agreement with the

Czechoslovakia, so rules for its citizens were somewhat relaxed and transportation connection was available. Nevertheless, still this was available to a very few who had patience, energy and income enough to pass through all obstacles and treat their families with possible one or two in life time trip to the seaside in Croatia. The rest of the years vacation choice was limited and controlled by state. So, the 1960-ties is decade of two new trends that are now part of family traditions: students at the time, not having too much money or freedom of choice, started going for mini-breaks or week long breaks in free nature, with tent and backpack calling it tramping (in Czech cundr), this was the space and time where they could be free (outside of organized or state supported travel, or even registration in accommodation facilities) and enjoy their leisure time (Petru, 2007). The other alternative that came with regular and guaranteed income, availability of cheap real estate or building is trend of building second homes - cottages or cabins in mountain regions, or lake regions or just near small rivers in small villages, outside of the cities (Petru, 2007). These cottages were than considered as guaranteed place to spend winter or summer vacation, family holidays or any other gatherings freely, in nature and without fear of neighbors listening. Tradition of spending the time with family and friends in cottages, since as real estate is durable and stayed through generations, is currently one of most vivid traditions that stayed from the socialist times. In a society that was rebuilt after the Second World War from developed capitalism into socialism controlled by the state, since everybody had to be employed, 81% of population was working for the state owned or controlled companies, there was minimal opportunity to earn extra money (Kaplan, 1991). Wages were kept on similar levels, everybody equal in poverty or income, independent travel or possibility of second home symbolized silent rebellion, piece of freedom and escape from strictly controlled everyday reality. Shopping tours to Eastern Germany or Hungary were considered as 'escape from shady everyday's' (Petrov, 2013).

### **2.3 New Marketplace**

After the Velvet revolution in 1989, the market opened and completely changed. Political changes allowed economic changes, entrepreneurship was possible again with market open to its own forces without state control. Tourism suddenly became industry rather than just natural phenomena, with different dynamics. Prague became top attractive city to visit as new Paris and the inflow of foreign tourist was significant (Petru, 2007). Outgoing tourism also had its own growth, since borders were wide open. The attractiveness and hunger of consumers on the market could be seen in sudden boom of travel agencies that appeared in

thousands. From just a few state owned agencies that were highly controlled and each focused on special segment, market has suddenly grown into few thousands of agencies, trend that is continuous up today: currently there are more than ten thousand travel agencies on the market (source Czech statistics office report, 2013). Legislators could hardly follow such a fast development with consumer protection laws, so in 1995 and 1996 many of agencies went bankrupt, yet this did not produce any fear among consumers or slow down the traveling. All the world was suddenly open to travel, destinations there inviting through media, trade-shows, travel agencies as well as friends and families. It was almost difficult to choose where to travel first. Consequently, there is a dynamic growth in international travel: while in the 1989, with highly controlled international travel there was 8.9 mil participants in international travel (probably most of it to the “friendly” states), in 1990 already this number is 21 mil growing up to the 36.2 mil in 2005 (Petru, 2007). Hunger for the international travel is great and anybody who managed to earn extra money travelled abroad. Nevertheless, preference of destinations, as it seems, had a lot to do with the habit and tradition, rather than availability or price. For the purpose of understanding and confronting information, data from tourist boards and statistics offices of different countries from the list of UN World Travel Organisation were taken and figure 1 shows the main destinations choice in the last few years.

**Tab. 1: Number of guests from the Czech Republic**

Destination Period	Number of Guests from CZ			
	2009	2010	2011	2012
Croatia	578517	605732	636684	647211
Austria	556,073	569,279	603,581	619,287
Italie	540417	584478	612930	639847
Slovakia	425,414	433,321	477,159	491,136
Hungary	250000	271000	315000	334000
Spain	165205	163097	197688	196883
Greece	152101	167117	154061	166828
Tunis	101953	89086	71565	85215
Turkey	89050	114182	124979	190104
Poland	78,700	79,700	89,600	97,600
Slovenia	52417	53205	58817	63077
Switzerland	40060	42106	42803	43921
Bulgaria	34565	36361	44259	58249
Netherlands	28200	32600	36100	37800
Romania	19902	18804	17221	20086
Cyprus	15637	16330	19240	14421
Montenegro	11309	11735	14321	16390

Source: author collected from the Statistics offices of stated countries in 2014.

There are some limitations to given data - Slovakia was not considered or tracked as international travel until 1993. Since than the traffic was high, but most of data would not be

registered since very strong family and friends ties, many of travelers went to visit them and probably did not stay in accommodation facilities that submit their statistics. USA and Russia statistics on Czech visitors are not available, in the first case probably because it does not represent high percentage of overall arrivals and in the second case due to the lack of transparency of data.

The trend is going back to close and friendly countries, given by the distance, familiarity of the destination or tradition. In the later category we can estimate countries of ex Yugoslavia that get significant number of Czech guests - Croatia, Slovenia and Montenegro. Adriatic sea was the treat that was available in the socialist times, families went there full of joy and most probably the route and tradition stayed throughout generations despite the instability of the region.

### **3 DISCUSSION**

#### **3.1 Vacation Nostalgia**

The market place changed significantly, the question is to what extend has consumer changed the behavior. It is not equally easy for all generations to accept the change of the market place. New young generations who have not felt the strength of the control of the socialist system see open borders and no limitations of travel as something natural and taken for granted. Yet, the values and traditions of travel are transmitted from the generation who lived through the controlled system. So, we can estimate that these generations decide and teach young generations on what they feel and find as best based not only what is currently available on the market, but also what is familiar, known and maybe evoking the feelings of happy days in the past. The choice to spend most of vacation days in Slovakia or Croatia could be directly influenced through generations as part of nostalgia. If, we are to consider distance as factor, than the destinations of choice should also be neighboring Germany, Poland or Austria. They certainly do have a lot to offer and are familiar destinations - yet many more Czechs like to spend their vacation in Croatia further away. Emotion of nostalgia that is awoken by the current crisis of values in the Czech society is highly influencing their consumer behavior and decisions. Trend of keeping the travel habits throughout generations is visible through statistical reports - number of cottages per inhabitant, number of room nights spent in the Czech republic, Slovakia and Croatia. This literature review is part of my thesis in aim to better understand the historical context of tourism market place as external force shaping the consumer behavior in the Czech republic. In that regards it did achieve its purpose. Generations of consumers were living in different societies with different external



influences and constrains, some studies on this have been done based on cohort theory (Schewe, Meredith, 2004), even comparing the different development of consumer preferences throughout decades. We can see on example of vacation decision making that generations of consumers are influenced deeply and the change in their behavior is slow and long term.

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# Key Aspects of Logistics for Online Store and Multi-channel Distribution

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**Abstract:** Forms of retail and an approach to meeting the customer's needs change and it leads to new challenges in the logistics process. Due to this development, a number of permanent stores must consider the possibility to sell their goods and services through online distribution channels. Parallel on-line and off-line distribution channels integrate and form one multi-channel system or omni-channel system. Multi-channel distribution and the use of alternative retail forms emphasize demands for the logistics complexity. Therefore, modern distribution and logistic systems must follow innovative marketing approaches. In terms of methodology, by analyzing logistic solutions and focusing research on the e-commerce, we define the key aspects of logistics for multi-channel distribution or for online stores. Logistics plays a key role in the multi-channel distribution. Integration of physical and informational flows of on-line and off-line channels is one of the key elements to achieve successfully functioning multi-channel business operation. Presumably, logistics is one of the key elements in creating value for the customer, so its role in the multi-channel distribution is of great importance. Perfectly coordinated logistics helps maintain or expand the business competitiveness on the B2C market.

**Keywords:** e-commerce, multichannel, omnichannel, logistics.

**JEL Classification codes:** M21

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## 1 INTRODUCTION

The continuous growth of e-commerce raises on one hand the expectations of consumers regarding the level of e-fulfillment services and it represents on the other hand also an opportunity for subjects in B2C e-commerce, which are able to achieve a competitive advantage thanks to efficient logistics operations. Multichannel and omnichannel distribution have gained over the previous years an important position within e-commerce, because they offer to customers the benefits of both - online and offline distribution. The connecting element in this process is logistics which needs to seamlessly coordinate the corresponding information and physical flows in order to provide the required level of consumer experience. The aim of this contribution is to highlight the importance of logistics in the context of multichannel distribution, with a focus on innovative last mile solutions, such as of same day deliveries. The paper refers to the results of a research, which collected available data from e-

shops, which included information regarding the distribution form as well as other elements of e-fulfillment.

## **2 THE SIGNIFICANCE OF LOGISTICS IN E-COMMERCE AND MULTICHANNEL DISTRIBUTION**

### **2.1 Specifics of logistics in e-commerce**

A central challenge for the distribution logistics is the emergence of additional packets. It is defined by a clear tendency towards fast packets, divided into small sections. This “atomization” of the parcel scale represents high requirements on the flexibility and the speed of transport. Also, the number of returned goods is increasing significantly. The time slots for the supplies, especially for direct deliveries are becoming more important. The big challenge is in the adjustment or in the new creation of distribution systems in light of the requirements arisen by e-commerce (Vahrenkamp & Kotzab, 2012).

Logistics play a crucial role in multi-channel distribution. The integration of physical and information flows of online and offline channels proves to be one of the key tasks in order to successfully run multichannel sales operations. Logistics are presumably one of the key-elements in creating additional value for customers within e-commerce; hence their role in multichannel distribution is of great significance.

From a logistics and supply chain management perspective, the multi-channel revolution has a number of implications. Ideally all channels should be served by the same logistics infrastructure, e.g. sharing distribution assets such as distribution centres, vehicles and, in particular, inventories. If this can be achieved then significant benefits can be obtained through gaining incremental revenue greater than the additional cost (Christopher, 2011). In light of the above, warehouse systems and related processes are crucial in order to efficiently operate a multichannel system.

The design of the warehouse structure in multichannel systems differs from a one-channel system. Control, respectively coordination costs stand here in the foreground, because they increase with the number of warehouse levels or the number of specific warehouses. The goal here is usually to reach significant efficiency potentials by the tightening or “pooling” of the warehouse systems for all sales channels. But also factors such as time, especially delivery, transport or waiting times play in multichannel systems a special role, especially due to the increasing (customer) expectations regarding flexibility and speed in the integration of online channels. This reflects on the warehouse capacities, which have to be held available within the specific warehouse levels. Even though the goal is to minimize the overall inventory

through an integration of warehouse systems of all sales channels, the specific requirements for flexibility of certain channels may lead to higher safety inventory. The warehouse structure in multichannel systems is influenced strongly by the assortment structure of the companies. Firstly, the overall assortment is of significance. In multichannel systems with a wide range of an assortment exists often a tendency towards central warehousing for all sales channels, because in this case the safety inventory is held just once centrally and not specifically for each sales channel. Therefore, lower inventory levels are (usually) in total sufficient, so that the costs of bounded capital may be reduced (Hertel et al, 2011).

The logistics of the “last mile” describes the question, how the goods reach the final customer. The last mile delivery service is, as the term suggest, delivering to the final consumer of the product, the last part of the chain from manufacturer through the distribution system to the point of use. In most cases, when discussing last mile logistics, the concern is reaching private individuals in their home (Johnsen et. Al). The solutions of the last mile logistics play a central role in e-commerce. It is an area, which is crucial in terms of the overall level of the e-fulfillment quality.

The final flow of physical goods and information, which concludes the e-commerce transaction in regards to the final consumer, is e-fulfillment. Service providers offer electronic order fulfillment services in e-commerce, which range from the electronic order entry and processing, the warehouse management and packaging, to after-sales services, such as the management of returns (Klaus et al, 2012).

## **2.2 Characteristics of multichannel and omnichannel distribution**

The potential of e-commerce as a distribution channel has been increasingly recognized also by traditional brick and mortar shops, which have to be able to adapt to the changes of consumer behavior, characterized by a continuous shift towards electronic and mobile commerce. Despite this development, the role of stationary retail structures is not going to diminish. On the contrary, brick and mortar shops represent a significant element within the further evolution of e-commerce, represented by multichannel and omnichannel.

Multichannel fulfilment is a term used to describe the distribution of goods that have been sold through a number of different sales channels. The term is used particularly in retailing in relation to the delivery of goods sold through retail stores (i.e. shops), catalogue orders and internet orders. It is the rapid expansion of the latter that has made this a major issue for many companies. In recent parlance, many “bricks-and-mortar” retailers (i.e. selling solely through shops) have become “bricks-and-clicks” retailers (i.e. selling through shops and the internet).

Internet orders now compromise “e-commerce” (e.g. order via personal computers) and “m-commerce” (e.g. ordering via mobile telephones) (Rushton et. al, 2014). Omnichannel is an evolution of multichannel retailing. It is when retailers provide multiple channels for customers to shop in – and the channels are seamlessly integrated at certain parts (Thain & Skey, 2015).

An increasing number of “brick and mortar” shops has been implementing multichannel distribution, in order to benefit from the advantages of other distribution channels, especially the internet. The decision in favor of multichannel distribution may be based on various reasons, however it has to be made after a throughout analysis of all real and potential advantages and disadvantages of this step.

The first and most obvious advantage is the possibility to increase the total turnover, because the decision to sell online allows targeting much more customers, exceeding the geographical limits of a physical store. The second advantage is the ability to target a specific group of customers through the utilization of various online marketing tools, whether they are paid or based on organic traffic and hence, to achieve a potential increase in the efficiency of marketing tools. The third reason lies in the fact, that brick and mortar shops have already an operating logistics infrastructure, such as a warehouse and eventually an own fleet of vehicles as well. The adjustment to multichannel distribution can be therefore done relatively quickly under the condition, that the physical and informational logistics flows have been sufficiently interconnected, allowing a seamless operation of both – the online and the offline distribution channels. The potential of higher sales offers also the opportunity to increase the stock turnover of specific product groups, or eventually to better utilize previously unused space in a warehouse by extending the range of the offered products, which are distributed through online sales channels.

Multichannel distribution may include also several risks for brick and mortar distributors. The first risk lies in the costs of the implementation of advanced informational systems, required to manage all logistics processes within multichannel distribution. These systems may be, especially for smaller shops, rather expensive. Another factor is the requirement to create a reactive website for desktop as well as mobile users, which has to include a list of products with corresponding pictures, an ordering system, payment solutions and other systems required to operate an e-shop. Such costs may be again high for some retailers and they may therefore represent the first barrier to multichannel. Another disadvantage lies in the fact, that online and offline sales may interfere with each other. This is for instance the case when consignment of online orders is required to be done until a specific point of time, eventually

immediately on one hand and on the other hand, simultaneous sales operations have to be managed in the local store, causing a bottleneck in the available capacities of the personnel. The extension of the personnel capacity leads again to higher costs. Small brick and mortar retailers are also not able to compete against big internet sellers with lean and efficient logistics and information systems which allow them to benefit from economies of scope as well as economies of scale.

### **3 RESEARCH OF THE CURRENT EXTENT OF DISTRIBUTION FORMS AND AVAILABLE E-FULFILLMENT SERVICES OF SLOVAK E-SHOPS**

In order to determine the current share of multichannel distribution in conjunction with the state of the offered e-fulfillment services in e-commerce within in the Slovak Republic, a research was conducted from the 27th of July till the 31st of August 2015. The research collected available data from the respective webpages, on a total sample of 1116 e-commerce subjects. The information had been collected from the respective terms and conditions, the section of frequently asked questions and on basis of a simulated shopping process.

#### **3.1 Current extent of multichannel distribution in Slovak e-commerce**

The first goal of the research was focused on the ratio between multichannel distribution and the exclusive distribution via the internet. E-shops which offered a wide assortment were assigned into a specific group based on the dominant share of a specific product category in their offer, in order to prevent a multiple collection of data from the same e-shops. The research was focused on subjects, which sale the most common assortment online.

The research identified three main types of distribution. The first one was represented by “pure players”, i.e. e-shops, which offered their products solely through online channels; followed by multi-channel retailers, which operate brick and mortar shops as well as online distribution systems. The final group of the researched e-shops was specific due to the offer of an additional delivery option located in various company assets, such as offices or warehouses; however, these places are not brick and mortar shops, so customers are not able to do any purchases there, without any prior orders placed online. This group contains attributes of pure players as well as of multichannel distributors, depending on the point of view. The main aim of this specific distribution is to achieve a certain proximity to local customers, who are able to collect the purchased products by themselves in order to save the time required to deliver the goods and the corresponding postage.

From the view point of the pure players, it may represent just an additional delivery option within the last mile and not an additional sales channel per se. From the multichannel

perspective, it may be argued that this solution utilizes usually assets linked with the e-shop and moreover, if possible, the given premises used in this delivery option may be turned into a regular shop. It may be even considered as a transiting stage between the two distribution solutions above, where the pure players may consider the establishing of a regular branch of their shop.

**Tab. 1 Type of distribution within the sample of e-shops**

Assortment	Sample	Distribution exclusively via the internet		Multi-channel distributors		Pick-up in a stationary branch (offices, warehouses and assets other than shops)	
		%	No.	%	No.	%	No.
Fashion (apparel, shoes, accessories and other fashion-related items)	361	39,7	143	41,5	150	18,8	68
Electronics (household electronics, mobile phones, PCs and other)	156	25,65	40	45,51	71	28,84	45
Groceries (food-supplements, wine, coffee and other)	203	30,54	62	33,99	69	35,46	72
Perfumes, cosmetics, gifts	81	43,22	35	22,22	18	34,56	28
Toys, books, video games, music CDs, DVDs, BRs	98	24,49	24	47,96	47	27,55	27
Office supplies, cartridges	78	24,35	19	34,62	27	41,03	32
OTC drugs	31	12,9	4	87,1	27	0	0
House accessories	72	18,05	13	52,78	38	29,17	21
Tires	36	38,9	14	27,77	10	33,33	12

Source: Own processing

According to the research results, the assortment of perfumes, cosmetics and gifts has a relatively strong share of exclusive internet distribution represented by 43,22 % e-shops in this category. This can be considered as an unexpected result, especially in the case of perfumes, because the fragrance of a perfume cannot be substituted by a product description or a picture, thus the physical presence of a customer is required in order to determine the product of choice, especially in the case of nonexistent previous experiences of the buyer with the product. The sole distribution via the internet was also prominent in the category of tires with 38,9 %.

The results of the research show that multichannel distribution has the most prominent share of 87,1 % in the assortment category of OTC drugs. This result is attributed to the fact, that drugstores have been traditionally operating physical branches. However, the large share of multichannel distribution can indicate also the fact that this option may be attractive to implemented by existing drugstores. House accessories, which included in our survey only non-bulky furniture, accessories and house decorations, had the second highest share of

multichannel distribution with 52,78 %. This result can be again attributed to the nature of the assortment and the preferences of the consumers, who usually need to review purchased goods such as furniture in real life. Smaller decorative elements or other house accessories represent an additional assortment for such brick and mortar retailers and the online sale of such goods is convenient for them. This category is followed by the assortment of toys, books, video games, music CDs, DVDs and BRs with 47,96 %. Digital distribution has been systematically expanding and we may thus expect a decrease in the share of multi-channel retailers in this category, because the operation of a stationary shop is going to be too expensive and even unnecessary in case of fully virtual and downloadable goods. Multi-channel is also dominant in the category of electronic devices with 45,51 %. Surprisingly, pure internet players have a relatively low share in the category of electronic devices, represented just by 25,65 % of the sample.

In the category of office supplies and cartridges, the distribution with the possibility of a pick-up in the non-retail premises of an e-shop was represented by 41,03 % of the sample. A relatively equal share of all three distribution possibilities was present in the category of groceries.

The apparel assortment belongs internationally as well as in Slovakia to one of the most purchased products online. The difference between multichannel and exclusive online distribution was within the sample relatively close, but in favor of multichannel distribution with a share of 41,5 % in comparison to a 39,7 % share of the pure players.

All in all, multichannel distributors were represented by 41 % of the subjects, pure online players by 32 % of the e-shops and 27 % of the researched subjects offered the possibility to pick-up the ordered products in company premises such as offices and warehouses, i.e. assets not serving the primary purpose of a shop.

### **3.2 Available delivery options**

The implementing of such delivery options, which match the preferences of customers, is one of the most crucial decisions in regards to outbound logistics. It is the realization of the last mile, which concludes the business transaction of an online purchase, because it is the only tangible element (in case of physical goods) within a previously virtual experience. Thus, the offer of last mile solutions is from the perspective of the customer crucial in terms of time, costs and his or her overall convenience.

However, due to the significance and complexity and the pressure put on costs and time, last mile solutions are in the vast majority of cases subject to outsourcing. E-commerce sellers



should therefore place specific requirements on third-party logistics service providers however; these should be not only focused solely on costs, but also on attributes such as their logistics infrastructure, flexibility, the state of the implemented technology and the approach to ecology. Multichannel retailers have to be also able to operate seamlessly online and offline-related sales operations from a logistics point of view. This is especially important within the handing over processes of the prepared orders to third-party logistics service providers, which realize the last mile.

**Tab. 2 Delivery options within the researched sample**

Assortment	Sample	"Click and collect"		Delivery by a parcel service		Delivery by the Slovak post		Delivery to a pick-up point	
		%	No.	%	No.	%	No.	%	No.
Fashion (clothes, shoes, accessories and other fashion-related items)	361	51,24	185	85,59	309	55,1	199	7,75	28
Electronics (household electronics, mobile phones, PCs and other)	156	71,53	111	97,44	152	35,9	56	9,62	15
Groceries (food-supplements, wine, coffee and other)	203	64,04	130	78,32	159	39,4	80	5,41	11
Perfumes, cosmetics, gifts	81	54,32	44	91,35	74	54,3	44	25,92	21
Toys, books, video games, music CDs, DVDs, BRs	98	70,4	69	81,63	80	65,3	64	19,38	19
Office supplies, cartridges	78	67,95	53	85,9	67	43,6	34	8,97	7
OTC medicine	31	83,87	26	90,32	28	74,2	23	12,9	4
House accessories	72	69,44	50	81,94	59	25	18	6,94	5
Tires	36	52,77	19	100	36	2,77	1	2,77	1

Source: Own processing

Delivery by a parcel service is the most common available delivery option with a total share of 86,38 %. This delivery mode is offered mostly in the tires category by 100 % of the e-shops, in the electronics category by 97,44 % subjects, followed by the category of perfumes, cosmetics and gifts with 91,35 % of e-shops and by OTC medicine with 90,32 % drugstores. The wide availability of parcel services results from their speed and convenience and it can be stated, that they are the most significant solution of the last mile within e-fulfillment. On the other hand, within the category of groceries, only 78,32 % of the subjects offer a delivery via parcel service.

Deliveries by the Slovak post are considered as a more flexible alternative by the group of consumers, who do not wish to be bound by parcel service deliveries and who rather pick up their ordered goods at their local post. The Slovak post has had traditionally a rather extensive network of branches. This delivery option was offered by 46,5 % of the e-shops within the

total sample. The delivery by post is offered mostly by 74,19 % of drugstores selling OTC medicine, followed by the category of toys, books, video games with 65,31 %. The delivery by post was offered just in one case of tire sellers and only for accessories. The absence of this delivery mode in this product group is logical, due to the volume of these products, which is not suitable for handling at the local post.

Deliveries to pick-up points were the least commonly offered option, with a share of 9,94 % on the total sample. The category of perfumes, cosmetics, gifts offered this possibility most frequently from all other product groups, i.e. in 25,94 % of the cases. Pickup-up points have several advantages. The customers are not restricted to wait for the parcel service or they do not have to be limited to the opening times of the local post office. Logistics service providers benefit also from this solution, because they are able to reduce the rejections, which occur especially in cases, when it is not possible for a customer to receive his or her delivery according the time indicated by the parcel service provider. Another advantage is the possibility to bundle various orders into one delivery to the pick-up points, which reduces the number of individual delivery trips, saving time, costs and the environment. The low share of this delivery method reflects probably the low popularity of pick-up places. Logistics companies, which favor this last-mile solution, should identify the reasons for this situation. They should focus on the question regarding the location of pick-up places as well as on the way, how to improve the corresponding payment/handling processes.

**Tab. 3 Last mile realized by own transportation**

Assortment	Sample	Own transport	
		%	No.
Fashion (clothes, shoes, accessories and other fashion-related items)	361	0,27	1
Electronics (household electronics, mobile phones, PCs and other)	156	1,9	3
Groceries (food-supplements, wine, coffee and other)	203	20,69	42
Perfumes, cosmetics, gifts	81	4,94	4
Toys, books, video games, music CDs, DVDs, BRs	98	0	0
Office supplies, cartridges	78	46,15	36
OTC medicine	31	0	0
House accessories	72	6,94	5
Tires	36	2,77	1

Source: Own processing

The click and collect option was offered by 61,5 % of the subjects within the sample, irrespective of multichannel distribution or the distribution via the pick-up in a stationary branch, which does not serve the purpose of a shop. It must be however noted, that several retailers did not offer a click and collect option, despite having physical branches. The reason may lie in the technical process of the order integration from various distribution channels, as

well as in the separate focus on each sales channel assuming that customers, who visit the physical shop, do not order their purchased goods online before. The click and collect option was offered mostly by OTC drugstores in 83,87 % of the cases, followed by the electronics category with 71,53 %. The click and collect option offers several advantages. First of all, the customer is able to save the postage if he or she is ready to pick up the ordered goods. The customer is also able to try or to review the purchased products. The goods can be therefore immediately returned back in case of dissatisfaction, without any occurring costs.

Despite the dominance of the outsourcing of last-mile services, several e-shops offered their own transports within the last mile.

Based on the above, we can state that the possibility to deliver the orders via own transport capacities is most frequent in the category of office supplies and cartridges, which is offered by 46,15 % of the subjects. The reason for this may lie in the fact, that these products are used especially within the B2B area. Flexibility and quick reaction times are therefore required in order to meet the requirements of these customers. Another category with prominent deliveries via own means of transportation are groceries, with 20,69 %. This is simply based on the fact that most of the food categories are perishable and they require special transport conditions as well as fast delivery times.

### **3.3 The role of postage in e-commerce**

Postage can be considered to be one of the deciding factors in the purchasing process of customers.

The calculation of the average price for each delivery mode took into account the differentiated postage pricing policy of Slovak e-shops, which offer different delivery prices in the case of cash on delivery and for prepayments via bank transfer or credit/debit cards. This has several reasons. First of all, the e-shops obtain money in advance before the delivery itself and on one hand and on the other hand, rejections are reduced, because the customers have paid already for their purchased goods. However, this puts also pressure on logistics, because the customers expect the delivery of their already paid goods without any delays or other problems.

A comparison of the several delivery options shows different pricing not only among the specific delivery modes, but also within the product groups itself. This is caused by the nature of the delivered goods, especially by their weight and volume.

Free postage is also a significant marketing tool used to motivate the customers to place an order with a specific value, allowing them to benefit from a free delivery. The calculation of

such a threshold has to respect several aspects such as logistics costs; otherwise may each delivery cause a potential loss for the company. It can be stated, that the threshold for free postage is different for each category, reflecting mainly the value of the sold goods.

**Tab. 4 Postage for specific last mile solution and thresholds for free postage**

Assortment	Sample	Delivery by a parcel service	Delivery by the Slovak post	Delivery to a pick-up point	Threshold for free postage	No postage at all	
		Avg. Price €	Avg. Price €	Avg. Price €	Avg. Price €	%	No.
Fashion (clothes, shoes, accessories and other fashion-related items)	361	4,1	3,13	2,36	66,47	5,27	19
Electronics (household electronics, mobile phones, PCs and other)	156	4,6	3,96	2,61	202,47	5,12	8
Groceries (food-supplements, wine, coffee and other)	203	4,65	3,41	2,93	77,13	0,96	2
Perfumes, cosmetics, gifts	81	3,88	2,96	2,51	77,92	4,93	4
Toys, books, video games, music CDs, DVDs, BRs	98	4,36	3,01	2,21	56,74	1,02	1
Office supplies, cartridges	78	4,67	3,04	2,87	70,76	5,12	4
OTC medicine	31	4,59	3,13	1,62	51,84	0	0
House accessories	72	5,09	3,67	2,78	123,5	2,7	2
Tires	36	8,14	3,2	8	-	8,33	3

Source: Own processing

Another option how to utilize postage for marketing purposes is the case, when the selling subject fully subsidizes the whole amount of the postage, so that the customers have a higher motivation to order without bearing delivery costs. However, this step can be considered as quite risky. Customers may place on one hand frequent but diffuse orders, however of lower value. It may cause them also to purchase more impulsively, so this may reflect negatively on the returns rates as well. Unless there is a significant markup on each product, or a very high frequency of orders, this step should be undertaken with great care. It could be however provided to specific customer groups which display a desired consumer lifetime value in order to further increase their loyalty or frequency of orders. From the marketing point of view, it is advisable to perform an analysis, which compares the costs per order achieved through paid online marketing tools and the increase in the frequency of orders of new and/or existing consumers on basis of a general free postage.

### 3.4 The significance of delivery times

The table beneath shows the delivery times of Slovak e-shops according to the data obtained via the price comparison and e-shop review portal heureka.sk. The data were collected within the same time frame of the primary research. The indicated delivery times for each e-shop are

a result of consumer reviews. It must be however noted, that not all e-shops, which were part of the research, are present on this platform.

Based on the data provided in the user reviews, the average delivery times in Slovakia exceed two days within the researched product groups. These results show that there may be still potential in e-fulfillment areas in order to decrease the delivery times. The reasons for the longer delivery times may lie in the fact that not all goods offered in an e-shop are directly on stock, but they are instead located in the warehouse of the supplier. It may be also a sign of inefficiencies in consignment processes, in the overall coordination of logistics activities and in the interaction with third-party logistics service providers.

**Tab. 5 Delivery times based on user-reviews on the page heureka.sk**

Assortment	No. Of reviewed subjects	Average delivery time in hours
Fashion (clothes, shoes, accessories and other fashion-related items)	103	77,04
Electronics (household electronics, mobile phones, PCs and other)	107	65,52
Groceries (food-supplements, wine, coffee and other)	56	54
Perfumes, cosmetics, gifts	40	65,64
Toys, books, video games, music CDs, DVDs, BRs	40	72,6
Office supplies, cartridges	18	56,64
OTC medicine	11	60
House accessories	13	93,6
Tires	19	62,16

Source: Own processing according to user-reviews on heureka.sk

The expansion of same day deliveries may lead also to a decrease in the delivery times, caused by the expectations of the consumers. Even if the consumers do not opt in for same day deliveries, they are going to expect at least next day deliveries. These consumer expectations regarding delivery times may therefore lead to a higher share of the offered goods which are available directly on stock as well as to decentral warehousing.

Same-day deliveries are currently one of the most discussed last mile solutions. They represent a benchmark in terms of delivery speed and they do not aim only to compete for e-commerce customers, their main target is also the group of consumers, who visit brick and mortar shops. For these consumers, same day deliveries represent an alternative to the visit of a stationary shop. However, they have to be ready to bear currently a higher price for same day deliveries in comparison to longer delivery times, thus the preference of short delivery times must be higher than the reluctance to pay for higher delivery costs.

We can state based on the results above, that same-day deliveries are being offered by 2,87 % of the e-shops within the sample in Slovakia and by 7,28 % of e-shops in Bratislava. Out of the 32 e-shops in Slovakia, which offer same-day delivery, 14 of them offer this service via their own transport. We can expect a significant growth of same day deliveries in the future, because logistics is going to be one of the key differentiators in terms of competitiveness in e-commerce in Slovakia as well. However, this depends on various factors. First of all is the corresponding demand for this service and moreover, the readiness of the Slovak customers to pay more for faster delivery. The second factor is represented by the available logistics solutions of third-party logistics providers; however they have to operate these services on basis of a sufficient demand in order to reach economies of scale which decrease the price for same day deliveries and which in turn create more demand.

**Tab. 6 Availability of same day deliveries in Bratislava and Slovakia**

Assortment	Sample	Subjects in Bratislava	Same-day delivery within Slovakia		Same-day delivery within Bratislava	
			%	No.	%	No.
Fashion (clothes, shoes, accessories and other fashion-related items)	361	82	0	0	0	0
Electronics (household electronics, mobile phones, PCs and other)	156	50	4,48	7	12	6
Groceries (food-supplements, wine, coffee and other)	203	73	6,89	14	15,06	11
Perfumes, cosmetics, gifts	81	19	0	0	0	0
Toys, books, video games, music CDs, DVDs, BRs	98	43	2,04	2	4,65	2
Office supplies, cartridges	78	27	7,69	6	11,11	3
OTC medicine	31	16	6,45	2	12,5	2
House accessories	72	28	1,38	1	3,57	1
Tires	36	5	0	0	0	0

Source: Own processing

One of the main advantages of multichannel or omnichannel distribution in the context of same day deliveries is the possibility of decentral warehousing, which allows the covering of a specific area within a given time. Therefore, multi-channel retailers may gain a specific advantage for same-day deliveries, in contrast to pure internet players, who eventually need to build or outsource warehouses within or close to metropolitan areas. Same-day deliveries may therefore significantly contribute towards the integration of brick and mortar stores and e-commerce, merging them literally together, thanks to the short delivery times. Local retailers may therefore increase their sales radius within an urban region, provided there is enough demand for this kind of deliveries and under the condition, that they master the implementation of a seamless same day delivery system.

#### 4 CONCLUSIONS

Based on the results of the conducted research, which collected data from 1116 Slovak e-shops, it can be stated that multichannel plays an increasingly important role in the conditions of the Slovak conditions of e-commerce. The significant share of multichannel distributors shows that Slovak retailers have been increasingly adopting this concept and we therefore expect a further growth of this distribution type in the upcoming years. The increased share of multichannel distribution within e-commerce sales is going to require also improved logistics operations, which are one of the key aspects in regards to competitiveness on the market. This development is going to be reflected in a wider spread of same day deliveries, where speed, cost efficiency and ecology are going to be the main areas which have to be mastered in order to provide logistics operations, which meet the highest criteria of e-fulfillment.

The emergence of same day deliveries is going to result in many cases also in a higher share of goods on stock and decentralized warehousing. Multichannel retailing offers therefore a platform, which meets these requirements and it can be therefore expected, that there is going to be an interconnection between the further expansion of multichannel distribution as well as same day deliveries, which is going to result in a fully integrated omnichannel experience of the customer.

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# Consumerism as a Lifestyle

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**Abstract:** Consumerism is a current lifestyle. Sociologists describe consumerism as an ideology. In addition, consumerism is an economic phenomenon in the society. The needs of a human are no longer the priority, but the profit is. An individual's goal is to achieve personal happiness through the accumulation of money and goods. Consumerism is the subjective and objective increase of consumption. A person without consumer goods can no longer exist. A "spiral" of rising cost of welfare is created around each person. Consumerism as a movement of consumers against marketing practices. Development and changes in consumer buying behavior lead up to the addiction to shopping or to the creation of models of buying behavior.

**Keywords:** consumerism, increase in consumption, consumer goods, trends in purchasing behaviour.

**JEL Classification codes:** M31.

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## 1 INTRODUCTION

The current trend in the behavior of individuals and of the whole society can be considered now as a consumer lifestyle. Have a good life, enjoy pleasures, take advantage of everything that can be used mostly to get material goods. It means maximizing survival and hedonistic behavior in every aspect of our lives. Consumption as a role model for youth, such as style, the only way of life, regardless of whether it is right, makes consumption the meaning of life. Money is a fetish with which you can get anything. Other ways of life are disregarded, knowledge is not necessary when the media push "celebrities", that have no life success behind them, but in the media they are successful and "withdrawn" from the common environment.

## 2 LITERATURE REVIEW

Marketing these days is sophisticated in terms of psychology and it influences consumers through senses and emotions - it is based on excessive and hardly justifiable waste. Eating, consuming all that is "good", but not favourable to the health of the human body. This means that the consumption society spends all funds to give an appearance in front of his neighbourhood, to prove that he can afford it - foods, clothes, car, etc.

Consumerism is continually increasing the consumption and that subjectively and objectively. The consumer is getting used to drinking and persuaded that he cannot live without some goods. The growth in consumption can speak of an eternal spiral of cost increases in consumer welfare. Consumerism - consumption - may be forced upon the development of the company or enforced. FORCED consumption is given by the general pattern of actual companies and look at the way of life. Everyone wants to be successful, wealthy; everyone wants to appear that can afford it in front of the "world". Consumerism means that people are identified with the products and services that they consume.

## **2.1 Marketing and consumer lifestyle**

Sociologists argue that consumerism is an ideology. The beginnings of consumerism can be identified since the mid 50's, (American territory). Overproduction after World War II led to the fact that consumers have become 'the consumer'. They have become a target for advertising and marketing of new ware objectives. The consumer does not affect the manufacturer of the product by his desire, but manufacturers themselves create artificial demand and desires for their products.

Consumerism is always a subjective and objective increase in consumption. You get used to consumer goods and in time cannot live without them. Objectively increasing consumption is an endless spiral of rising costs of welfare. Consumerism is considered to be an automatic unconscious consumption. It is both forced objectively and subjectively.

Consumerism is an economic phenomenon in the modern society. The foundation is not human needs, but profit growth. Media - advertising emphasizes personal happiness through the accumulation of products.

There are two approaches to consumerism and therefore two types of consumers. The first type of consumers buys goods and services that, through the very act of buying some satisfy their natural needs. The second approach is that the individual acquires through consumption goods, and thus establishes himself in the society. While the first group is the one, which buys goods not for their quality but for the quantity, the second group buys goods purely for their utilitarian value, some added value. In the 50s, the first group prevailed, characterized by full shopping bags. The image of the second group is to focus on brand and "consuming lifestyle" brands represented. Branding is a key element of consumerism. This is a unique method of operation of the brand, which builds and creates a long-term brand image to its associated products. A mark (brand) is artificially created and its added value is added intentionally since the very beginning of its establishment. A brand binds people together by message, which

itself is hidden. There are efforts to market the brand not only for the brand itself, but also as a symbol. Brands create communities of people with like-minded or position and way of life. Today, consumption is more important than production. There are three main concepts of consumerism, economic, sociological and psychological. Each is based on a different point of view. In principle, they do not exclude, but rather complement each other.

The first theory can be described as economic. This theory is about the growth of the collection of material goods and the emergence of shopping venues and centres. As a general rule, the increase of free time results in the growth of consumer activities. The objective of manufacturing companies is that people spend so much free time buying their products. It supports the construction of shopping centres as places for leisure and various activities where you can spend a whole day with family. Manipulation tools become mass media, advertising, marketing and PR. Multinational corporations apply through the medium of their objectives to continuously improve sales of their own products. This creates purely promotional media, where information is targeted for consumption. These feeds are focused on creating purchase behavior in society.

The second theory can be described as sociological. It deals with consuming lifestyles. People are taking goods to create social boundaries. Based on consumption they create affiliation or difference within their social group. The main task for marketing is to create brands with which an individual can be identified and remain faithful to them. With the help of marketing manipulations, goods have a different, inner meaning, which brings together users of the brand into groups. Consumerism creates this way new social groups. Marketing is not aimed to foster new groups, but its aim is to create the widest range of permanent consumers of the brand. Creating social groups is a secondary aspect. The identity of the consumer society reflects a lifestyle that generates labels indicating the products, the place where a person buys, ways of purchase, which is how to dress and what to buy. Other factors acting on the life of the consumerist society are income, social class and other economic indicators. To improve the brand image, charity and compassion with others is commonly used. With purchases of goods of that brand, the consumer gets the feeling that his purchase did more someone in need, and so on. A third theory of consumerism is focused on the psychology of the individual in consumer society. It addresses the issue of emotional pleasure deriving from consumption. Everyone has their own desires and needs. In a consumer goods environment, it has its meaning which it is to give publicity and distinguish it from visually identical products. Consumerism consists of finding new impressions and experiences. People always crave more satisfying existences as they have. So when a man becomes a consumer, it is not enough to

satisfy his needs, there must be a real possibility that it will happen. The individual must be given the means to enable him to become a consumer. Therefore, consumerism is often associated with money and dream jobs.

Nowadays people do not know what exactly they desire. Freedom, which is the result of consumer style, is just a kind of illusion, because a person is sentenced to choose what has already been chosen for him. Consumers don't delay the satisfaction for the later future, but try the product or service in the present.

The way of life, consumption, lifestyle and life goals of the Slovak consumer have changed in recent decades. We soon got used to it, that money represents the life goal of many people. Think about them, looking for the meaning of life is difficult. We overtake life patterns of "celebrities" and their way of life, style of dress, consumption. For many people is consumer lifestyle an ideology and life fulfilment. The consumer society is focused on the collection, possession and consumption of material goods. The ability to consume is an important criterion for assessing social prestige of the individual, as a measure of social success. Only consumption is "the right thing" when it constitutes remuneration for work, it is the purpose and objective.

Consumerism as a phenomenon of modern society based on ownership, money, the other in imitation of behaviour and consumption, is for a large part of the population happiness, based on the accumulation of goods.

The criterion of success, a symbol of human happiness is money, material things. Success is in value of assets, and experiences that are appropriate to admire. Consumption is the symbol of everyday life. It is crucial for life, the primary, becomes a lifestyle, value, necessity, regardless of the circuit consumption - clothing, holiday, home, leisure.

Consumer - consumer, consumerist man exists solely because of the things, ownership of things. It's quite the opposite when things own "drinking man." Consumers to purchase goods and services, through purchase meet their natural needs.

The second group are consumers who buy "image" products. They are the basis for successful integration into relevant social layer. For image products, communication and especially advertising play a basic role. Orientation on brand and "consuming lifestyle" represented by brands. Trademarks are part of consumerism. Brand formed by groups of people with similar positions and ways of life. Consumerism is based on seeking new experiences. Consumerism is based on money and dream jobs.

Consumerism as a movement state, government institutions, and independent organizations intended to protect consumers from practices that violate consumer rights. It is a fact that

critics of marketing warn consumers against misleading business practices. They are forcing consumers to buy and buy. Generally, critics' marketers focus on unfair commercial practices, misleading pricing, packaging information. Consumerism as a movement represents a counteroffensive against the practices of marketing, which warns consumers.

Consumerism is a movement that aims to protect and strengthen consumer rights; it helps protect consumers in relation to traders in general. The reason was the violation of the rights of consumers, rising prices, aggressive advertising, various deficiencies in relation to consumers.

## **2.2 Consumerism than happy lifestyle**

After the Second World War after the 1990s, manufacturing and product concepts aimed at maximizing the lack of first production. There was also marketing, primarily focused on customer needs and requirements, which were in the first two levels of Maslow's pyramid (Basic physical and physiological needs and safety and security).

From 1990 to 2007 there was a re-orientation of marketing. It began to focus on other priorities such as health, safety and state of self-realization as the highest priority of man. Since 2007, the modern company focus on new Value category -Happy.

### **What is happiness?**

People want to be happy during their life and marketers are looking for individual markets, demographic and social segments to identify what these people perceive as their happiness. An important question is how to make a value of goods and services, which would bring in a sense of happiness and satisfaction to customers. Marketing indulges happiness, it is a new work for marketers. When asked what is happiness, there is no easy answer. For some, happiness is health, for other family or professional success; the second is a short-term success, power, strength, wealth. The strength of money can be demonstrated on how easily people succumb to it.

"It's a different time, modern, with lots of opportunities that we have to use ..." We often hear it from the new generation. To meet marketing goals these are often used: the vulnerability of young children, the vulnerability of the elderly, the abuse of disabled. Even with such marketing tools work and unfair marketing practices.

Lindstrom in the book *Truth and lies about why we buy*, lists several examples of how to attain happiness, look young, pretty, attractive. It states: Big shops of branded clothing for young people use huge posters to communicate with the youth market. They display enlargements showing semi-naked models. Young people, these models meet real or in

groups outside the shop. They are dressed in the real brand, in particular colour, all perfectly fitting. And of course, they look at that fantastic young people and tend to compare with models that are dressed to the real brand, in particular colour, all perfectly fitting. And of course, they look at that fantastic. Young, sexy, healthy and ridiculously pretty, who passed around. Therefore come to the shop and buy this or that brand. Changes occur when a shy young man who purchases goods gains confidence. Imagine yourself in the centre of the action, as requested, popular. It also designs the business environment and is therefore suited to young people. The environment is noisy like a dark club in which they work and all are perfect; they are those from the posters. These aspects not only cause an increase in self-confidence, attraction, sexy appearance and attitude, but also happiness. This marketing tip is successful especially among young people. The essential aspects are the collection of payment and the typical aroma in this shopping environment. At the checkout young people have increasing dopamine level. Product is packaged in just the right bag, which is typical of the "right" products that must be seen all around - hence the street. Feelings are amazing, it's worth it (Lindstrom, 2009).

The world revolves around brands that have become symbols of a kind that we can have them and that we are up to the latest fashion. But unfortunately our children absorb and are distorted by consumption. Marketing professionals know us. They seek and find ways to engage and meet the objectives. They creep into our subconscious and we have certain things we take for granted. A suitable target group have become children who are easily influenced, always seeking something new. It is not just about how to give a child a nice toy, color, and so forth. Many times it comes to inappropriate promotion, low quality products, wrapped in a suitably chosen facades. But nothing is accidental. Traders have hired psychologists and teams of people who work for them and those have tested reactions of children. Everything is an innocent form of research, it monitors the child's bias for the particular product, color, shape, then managed to take and sell more. Children are a suitable group, as every parent longs to please its child and buy him anything he desires. The company uses this parents' characteristic and earn. Children today have a tremendous overview of technical innovations, after which they obviously crave. Just try a little experiment - let the child choose the product from among several, for example in food. Automatically he chooses the product with his favorite characters on the packaging and is convinced of its quality. Even after repeated warnings and respondents whether those flakes right with a high content of vitamins are not better, the child even without prior experience is convinced just about his products, because it

is „cool”, because all the kids on TV eat it and so on. Children cannot decide by themselves, parents' opinions are suppressed.

Determinants which are essential for happiness are: personal financial situation, mental health and job / career. The aim of the consumer society cannot satisfy human needs through goods and services, but it raises unjustified or repeated consumption. The starting point of consumerism is the notion that a person can find fulfillment only through materialistic satisfaction and tangible orientation for consumption. The meaning of life and happiness. Even small things make people happy. Odds for which it is worth living.

Happiness, which causes consumption, is unrelated to the fulfillment of needs. It arises in our heads and in our imagination. And because the human imagination is boundless, it can not say how much it really needs. Clothing and cars are not calories, to be able to determine the optimal daily dose for survival. Over economic laws such as the law of decreasing usefulness, today's woman just shakes his head. Shoes, pink handbags and yet never enough.

Consumer lifestyle as the engine of capitalism for 15 years has fully rooted in Slovakia too. Consumption, consumption, consumption - without it we would not go forward. Need to work and have money. Then you need to spend money. Shopping. Work and shop. By chance you are not working? Borrow and it goes on. Ruthlessness, selfishness, hypocrisy, increase with consumption and additionally it changes character and humanity is disappearing. Someone said that consumption is actually fear of scarcity, looking for the acknowledged ideal. It's fear and distrust of life itself. Fear initiates cruelty, malice and feelings of threat.

We fill the void with information, we shout over the music with things such as drugs, alcohol, shopping, the illusion of a virtual world. And new problems are emerging with the psyche of people, drug addicts, the Internet, and electronic mail, as well as for shopping. With shopaddiction we can talk about the obsession of spending (compulsive overspending), compulsive shopping (compulsive shopping) and addiction to shopping (shopping addiction). But that is the area of psychiatry. There is not a lot of time for the family, there is no time for relationships. You think you're always in the company of others. In fact, you are often alone. Chasing for something that still eludes you. And when the essentials you'll want to grab again, it is too late. Lindstrom states marketers are persistent in the use of psychological factors in order to for us to buy a products- Addiction to brands and shops does not represent a threat such as alcohol or drug abuse however they are very real if taken into extreme it can do significant harm. The study of Stanford university estimates that approximately 6 % or 17 million people in the US suffers under a shopping addiction (Lindstrom, 2012). Persistent urge to shop is called Oniomania. The real addiction can be defined as a permanent and

uncontrollable fixation to a specific behavior or substance whether alcohol, a specific food, chocolate, medicine, smoking, gambling, shopping or even. Due to the fact there no real information about shopping addictions available. Czech and Slovak experts in this area were contacted. The written statements are as follows. Doctor Benkovič states “Some of the characteristics of shopping addiction were described in my papers: The recent addictions which are not based on substances (Psychiatria pre prax) or in social prevention casuistic addicted shopper who switched addiction to drugs to shopaholic behavior. I cannot that determine whether addictive shopping increases in the Slovak Republic because our institution treats only patients, who have substantial financial problems. We have treated 8 patients with this condition since year 2000 thereof 2 patients were men” (Benkovič, 2009). The Czech doctor Nešpor describes the existence of the shopaholic disease in Germany where this addiction affects are about 6,9 % women and about 6,8 % men in the US are estimated occurrence in the population by 2-8 %. Others have reported higher rates in women. Nešpor states the shopaholic addiction expresses in case of men as collecting, however in both sexes is the same problem (Nešpor, 2010). Nešpor further states in the paper: **Shopping like a problem Oniomania** (shopping addiction) describes other problems with related shopping addiction for example indicates the causes of individuals: Mental deprivation or sub deprivation in childhood, sexual abuse disorders and self-esteem (low self-esteem, narcissism). “Unlimited shopping often occurs after the initiation of the treatment for Parkinson's disease (e.g. Weintraub et al., 2010). This would indicate a possible link with the action of dopamine. With some exaggeration, that the individual is trying to buy self-confidence, sense of security and similar values. These are but they are not for sale. Inevitably, it takes the frustration, anxiety and depression ”(Nešpor, 2010). Benkovič quotes Donald W. Black (2007) indicated lifetime prevalence in the United States about 5,8%. The data for Slovakia are not available.

### 3 CONCLUSION

Consumerism causes not only joy but also addiction. The reaction of the consumer is crucial. It is nice to be rich, handsome, young and successful. It is nice to have a lot of money, but that's not all. Build a sense of life based on consumerism is misguided. But who will explain this to children and young people?

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# Low-cost Marketing and Marketing Minimalism

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**Abstract:** The crisis can become an opportunity. Marketers who want to find a gap in the market must actively use new and particular marketing tools. Currently marketing is pushed to different dimensions. Marketing and web itself as such are completely changing and increasingly used as low-cost marketing tools. It mainly uses social networking as a tool. Elements of low-cost marketing are based on the use of social networking and all the possible applications for smart phones called smartphones. It is essential to achieve the desired effect with a minimum of costs. This causes significant savings, reduces costs. Everything points to simplification, so to minimalism. From a marketing point of view and from the point of view of long-term lifestyle perceived communicated simplification.

**Keywords:** marketing minimalism, low-cost marketing, social media marketing.

**JEL Classification codes:** M31.

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## 1 INTRODUCTION

Marketing today is built on low costs. Reducing costs, limit spending, restructuring, redundancies were the beginning of a solution to the crisis. All this is a mean to cut costs and keep the firm in the market. It's a short-sighted approach. After all, one crisis is not over and there is a second. Economic performance is built on car production, which, however, must sell. On the other hand the growth of taxes, levies, and prices are an easy way to bring into the state budget more money from the population and to cover the state debt.

Low-cost marketing uses the principle of "little money for a lot of music". This power saving mode does apply to marketing, marketing strategy and communication so that the cost of individual elements of marketing mix, communication mix are minimized. If the company cut spending on marketing it can happen that will disappear from the market. This cannot be accepted by any manager. However, it is happening. Then comes the serious problem of how to go back to the market. It is very hard and at great cost. It is important to look for efficient solutions and reduce costs because market competition is high. A large number of surveys are focused on the identification of customer loyalty. However, the results are alarming. Since any customer cannot resist for long to an advantageous offer, lower prices and well communicated information.

## 2 LITERATURE REVIEW

The essence of marketing is to use low-cost potential technical and communication tools to obtain the necessary rapid market information, buying behaviours, moods of consumers through surveys, advertisements, menus and so on. The essence is that it is more at-hand and cheaper information than paid market researches by research agency. The development of marketing minimalism has begun primarily due to the crisis of 2008. As co-author of several papers with prof. Cichovský I state that we have not had the chance to conduct surveys among businesses or among consumers in this area, to find out the real state of the use of marketing minimalism with an impact on the consumer. We complete the picture from the beginning of this publication on marketing minimalism:

Čichovský (2012) states: "The basis is obtaining information on three areas, namely on market opportunities, competition and innovation". Low-cost marketing has in times of economic recession, a number of suggestions for practice. It uses techniques that are not expensive and helps to achieve the aims on the Internet through interactive communication, advertising on the Internet, e-commerce and online shopping, internet and relationship marketing, measurement of effectiveness, websites can all be used systematically to replace classical elements of marketing communication. The essence is information spreading and finding incentives for market supply, identifying the needs, views, opinions, averting negative information polemics on blogs and so on.

This is also reflected in the commonly used techniques such as digital marketing, viral marketing, guerrilla marketing, mobile marketing. Technological progress, the status of the customer puts it into a new position. The passive receiving person becomes the decision maker on the sources, width, and depth of information that is the basis for purchasing decisions. Forms of communication with the end user are individualized, personalized. They address narrower segments. Consumers cease to be the object of marketing communication, becoming its subject - a form of brands and products and the way we communicate. The concept of experiential marketing pushes the importance of communication to a new dimension - integration and interactivity offer to the customer the opportunity to try and decide. In the media sector there is a new balance between traditional and "alternative" media. New media determine the approach to market communication; communication becomes electronic, digital, mobile, viral...etc.

Labská (2014) introduces new ways of communication. The basis for all applications of the Internet environments: mobile marketing, viral marketing, guerrilla communication, Word of Mouth, Buzz marketing, marketing fragrance, digital in-store media, digital Out Door form,

Product Placement. These new resources highlight the characteristics of new media that has to be seen: interactivity, individualization, integration, internationalization, speed, and timeliness, own choice, a sense of control. The media, with which today we can count, divided into internal and external resources. Indoor - in store media: LCD shelving, shopping carts, floor stickers, safety stand, treasury strips, dividers goods, hanging banners and 3D objects. Outdoor: Classic: poster, billboard. Alternative: big board, mega board, laminated board, walls, gables houses, advertising pillars, hours (revolving, solid), inflatable advertising, advertising platforms, aerial advertising, neon signs, advertising space.

## 2.1 Internet communication

Frey (2011) identified current trends in marketing communication as follows:

1. **Guerrilla marketing** uses unconventional marketing campaigns to maximum effect with minimum means.
2. **Viral marketing** is a planned activity that encourages users to share advertising message that the recipients of the message multipliers. "Bacillus" the name of the technique is based on the principle of how this advertising message spreads. Through inspiring and imaginative design, content, activities. (Triad, 2010)
3. **Digital - mobile - marketing** is an interactive campaign on the Internet or through mobile operators focused on real products, services. However, it is necessary to take into account the approval or disapproval of the recipient of advertising message. It is not always so and there are violations of consumer rights.
4. **Product Placement** is a paid branded product in audio-visual works with the aim of advertising (cars, beverages, tobacco products, which can be seen in movies).

Internet can be considered as a new "interactive media" with a dominant position and it differs from traditional communication media in the style of communication, control of customer contact, content security, and social aspects (Frey, 2011). Internet enables build brand awareness and product, and provides detailed information, stimulates the answers - you can purchase information, speed up transactions - on line purchase, maintain customers. This is the amount of usage that would otherwise be expensive in personnel, equipment, customer communication, documentation for classical forms of trafficking.

The essence of Internet communication is to be visible on the Internet. It means that the writing on maps online and catalogue business card represent an alternative to a single web page. This means that the search engines on the internet search field of activity, according to real search term. The quality of the website is a key success factor. Site preparation is

important and must be good - belongs to the "online marketing", which is crucial for search engines. When the fair offers quality services and developing websites professionals need to rethink how it will operate Internet Marketing, Internet communication in order to hit your content, potential customers and offer, sell your goods or services. Website is usually first contact with company. Important concepts are the Web Domain: address on the Internet, basically a virtual mailing address. Web hosting, hosting, virtual server is needed to save the web presentation. Web Development can be realized with the help of experts alone or by yourself through the instructions for processing. Address, page layout, visual, easy orientation is key. Search to find the page by entering a keyword.

According to Pelsmacker et.al (2003) efficiency of the web site can be assessed by a group of three indicators, these success factors are: page properties, characteristics of visitors, judgment, acceptance of visitors, productivity content, effectiveness in browsing, interaction design, level interactions, emotional appeal, performance of the web site: satisfaction, repeated visits, visits intensity, image (ibid, p. 496). The effectiveness can be measured by the number of visits during the day, turnover, number of customers, and the content, repeated visits, all of which affect the site's image, the intensity or the duration of visits.

Woods (2014) added ten principles of effective web design. It is follows:

1. **Purpose** – good web design always caters to the needs of the user. Are your web visitors looking for information, entertainment, some type of interaction, or to transact with your business? Each page of your website needs to have a clear purpose, and to fulfill a specific need for your website users in the most effective way possible.
2. **Communication** - people on the web tend to want information quickly, so it is important to communicate clearly, and make your information easy to read and digest. Some effective tactics to include in your web design include: organising information using headlines and sub headlines, using bullet points instead of long windy sentences, and cutting the waffle.
3. **Typefaces** - in general, Sans Serif fonts such as Arial and Verdana are easier to read online The ideal font size for reading easily online is 16px
4. **Colours** - a well thought out colour palette can go a long way to enhance the user experience. Complementary colours create balance and harmony. Using contrasting colours for the text and background will make reading easier on the eye. Vibrant colours create emotion and should be used sparingly (e.g. for buttons and call to actions). Last but not least, white space/ negative space is very effective at giving your website a modern and uncluttered look.

5. **Images** - A picture can speak a thousand words, and choosing the right images for your website can help with brand positioning and connecting with your target audience. If you don't have high quality professional photos on hand, consider purchasing stock photos to lift the look of your website. Also consider using infographics, videos and graphics as these can be much more effective at communicating than even the most well written piece of text.
6. **Navigation** - navigation is about how easy it is for people to take action and move around your website. Some tactics for effective navigation include a logical page hierarchy, using bread crumbs, designing clickable buttons, and following the 'three click rule' which means users will be able to find the information they are looking for within three clicks.
7. **Grid based layouts** - placing content randomly on your web page can end up with a haphazard appearance that is messy. Grid based layouts arrange content into sections, columns and boxes that line up and feel balanced, which leads to a better looking website design.
8. **„F” Pattern design** - Eye tracking studies have identified that people scan computer screens in an “F” pattern. Most of what people see is in the top and left of the screen and the right side of the screen is rarely seen. Rather than trying to force the viewer's visual flow, effectively designed websites will work with a reader's natural behaviour and display information in order of importance (left to right, and top to bottom).
9. **Load Time** - Everybody hates a website that takes ages to load. Tips to make page load times more effective include optimising image sizes (size and scale), combining code into a central CSS or JavaScript file (this reduces HTTP requests) and minify HTML, CSS, JavaScript (compressed to speed up their load time).
10. **Mobile friendly** – it is now commonplace to access websites from multiple devices with multiple screen sizes, so it is important to consider if your website is mobile friendly. If your websites is not mobile friendly, you can either rebuild it in a responsive layout (this means your website will adjust to different screen widths) or you can build a dedicated mobile site ( a separate website optimised specifically for mobile users) (Woods, 2014).

## 2.2 Advantages of use social networks in marketing

Social networks like Facebook, Twitter and LinkedIn are part of the online marketing activities and online communication with customers. And those social networks represent a

communication platform through which business can interact with the customer, find out their needs, preferences, and opinions. Company obtains customer feedback and so it is able to respond flexibly and efficiently to adjust the marketing strategy.

Internet intervening in marketing has given rise to online communications and broadened the possibilities of marketing communication. Phenomenon of modern times, however, a permanent network of social relations. In these days, social networking sites are used not only by their users, but many business owners and marketers. Their primary use in business lies in the presentation and the advertising business, product or service, which is the marketing and communication with customers

Social networks have a vital place in marketing which provide an interactive communication platform with customers. Regular communication can detect needs and wishes of users. Based on market needs the elements of the marketing mix can be edited and the benefit of direct contact. Social Networking is typical and the number of its users grows rapidly, operating costs are low, creating a group of supporters of the brand. Fetching feedback is also an incentive for creativity - viral marketing. This leads to a situation where advertising can be targeted directly. Allow oral administration of communicated ideas (WOM-word of mouth).

Social networks have their supporters from acquired companies with lower costs, the possibility of communicating with consumers; creative usage and popularity of the users. Social networks represent a significant interference with the privacy of individuals. The negative is the loss of privacy and building of dependence on the usage of social networks, causing loss of time and isolation from real life. Today, young people especially, sit at a computer, surf and communicate on the network endless hours, make friends, look for love, look for work, chat with a lot of strangers. Often they disclose personal information that can be and often are misused.

On the other hand in terms of marketing, social networks are a source of information, where they present their individual needs, respond to different stimuli, present their own opinions, polemics. In communication the two-way communication allows a flexible reaction in marketing strategy which changes based on the needs, preferences, and opinions.

### **2.3 Marketing tools of social networks**

Social networks offer a variety of tools. Marketers may use the communications business, goods or services. The classical instruments commonly used for marketing purposes, are fan sites, advertising. Tools have different functions and uses. Like any tool, these have advantages that can be used in a marketer marketing strategy. As tools we present a Plugin

API. API (Application Programming Interface) enables application programs to be directly linked to the social network. The idea is that you publish the information (text, video, images). Likewise, you can obtain basic information about the user application (profile information about friends, photos). These are needed for direct mailing associated with the offer. The plugin is used to connect the site with social networks for building relationships between the company / brand and its customers / fans. The tool is the "like" button, a positive opinion for real goods, services, positive expression of opinion. Users express their opinions and recommendations to friends through LIKE.

Concomitant use of social networks for marketing in the Slovak Republic according to the results of research by the Institute for Public Affairs, elaborated in 2011 entitled Social network in Slovakia. Information from the report is shortened, modified, supplemented.

Active Social networks connect people with the same or similar interests. Social networks are increasingly used by companies to present themselves as well as marketing managers in direct contact with clients. So the use of the networks not only for private communication, but for business purposes, namely for the marketing activities of companies. In the Internet environment there are a lot of social networks, the most famous and most used are Facebook, Twitter and LinkedIn.

In Slovakia, Facebook has currently about 1.8 million active users and the audience size can be compared with the biggest Slovak portal. The world popular networks like Twitter or LinkedIn Slovakia are less and less used and known among consumers. They may thus represent for marketing in the Slovak business a still great untapped potential. "Twitter is a micro blogging service which the world gained enormous popularity in the business sector. LinkedIn turn belongs to a group of professional social networks, as it serves to joining co-workers, classmates and business partners.

The total number of Facebook users in Slovakia is currently 1,864,400, representing a 34.08 percentage of the country's population and 45.88% of internet users. Based on these statistics, more than 1/3 of the population uses the services of the most famous social network in the world, and this share is constantly increasing. In just the last six months, the number of Facebook users in Slovakia has increased by more than 101,020 people. From a demographic point of view, the most active group to form social networks users aged 18-34 years. The following are user groups aged 13-17 and 35-44 years. It can be stated that at present only a few users over the age of 45 years use this form of communication. In terms of gender slightly more women than men at a ratio of 52:48 are registered on Facebook, The survey and its results: in the population aged over 14 using social networks on the Internet to 54% of



respondents. In other words, the real contact or experience with them has been 25% every second person in Slovakia. On the other hand, the social network is not used by a total of 46% of the population. A quarter of the population is those 54% who do indeed know it, but do not use yet and another fifth are those who do not know it at all. Do not know what it is 21 % as the proportion of women. On the contrary, quite strongly it differentiates the age of the respondents. While among 14-24-year-olds is "social networks" more than 90% of them, the increasing age of users are rapidly decreasing. For example, users aged 45-54 years social networks have used only 45% of cases and for older users, such as 60 years, it is only 8%.The commercial use to marketing campaigns on social networks Facebook or Twitter, is mainly put by banking institutions. As well as telecommunication services of mobile operators is a useful service for communication on social network. These entities spend large sums on marketing funds in print, on television and on the internet media. A large share of the marketing activities through social networks also represents online stores that use paid PPC advertising and company profiles.

Some entrepreneurs have created fan pages. Or have a corporate profile or paid advertising on at least one social network. The possibilities offered by social networks, are not yet fully utilized. In the absence of relevant information on the use of social networks can be used for the presentation of the experts who deal with these issues and provide efficient use of social networks. Lack of marketing through social media is the lack of use of SEO optimization in the case of accounts on social networks. The amount of companies and brands with a quality SEO optimization for search their web pages, but hardly anyone uses this technique for the division of the Company account for top positions in search engines. Applying the logic of SEO and social media accounts at one of the newer trends that have been marketing online are gaining ground. Based on current demographic distribution of social networks, it is clear that this form of marketing cannot yet be effective for every business, product or brand. Maximum efficiency can be achieved by companies whose target customers are aged 18 to 34 years. Here, however, shows great future potential marketing on social networks, and provided that the computer literacy of the population gradually increases that results in constantly increasing number of social network users. In about 30 to 40 years the vast majority of the population will be part of an online social network.

Online environment offers space for competing social network. Globally it comes to Facebook, Twitter and professionally oriented LinkedIn. Google offers a competing social network Google+. The competition between social networks allows changes and developments in marketing tools. Social marketing is a popular and effective way to

disseminate and receive information on products and services. This is not just about networks such as Facebook and Twitter. Slovaks use social networks especially for the promotion of products and services.

Field collection for the sample of 1,135 respondents provide on the basis of personal (face-to-face) interviews recorded by questionnaires FOCUS agency, respondents over 14 years. Main research areas: the proportion and intensity of use of social networks in the Slovak population, socio-demographic profile of users of social networks, share and intensity of use of specific types of social networks (Facebook, Twitter, chat, LinkedIn, MySpace ...), the most commonly used terminal equipment (hardware) for the access to social networks, the purposes for the use of social networks, digital literacy - the skill level of the Slovak population and various socio-demographic groups in the use of social networks.

They can be defined as an interconnected group of people maintaining communication through various means. In a narrower understanding of offering a social networking site allows users to create a private or public profiles. Through these profiles, users can communicate, share information, photos, video content, and any other activities. Sometimes they are regarded as social network and internet discussion forums where users exchange views and knowledge on selected topics. Communication between users of social networks can run either privately between two users, or (most often) in bulk, between users and groups affiliated with other users.

One of the most famous, most cited definitions consider social networking services based on the web sites that allow individuals to: 1) create a public or semi-public profile within a closed system, 2) establish a list of other users with whom they are related, and 3) to see and explore connections created by other users within the system. The nature and distribution of these connections may differ from web site to web site. Increasingly sophisticated technologies have developed a second generation of web communities and provided services such as social networking, wiki system (allowing for immediate editing of the contents of the relevant pages), Bit Torrent system (file-sharing), blogs, virtual worlds, etc. Typical examples may serve service offered by Facebook, Wikipedia, YouTube, Yahoo!, Google+, MySpace, Twitter, Windows Live, LinkedIn, Flickr, ORKut, Hi5, last.fm, Second. It gives users the option to choose media and influence it. Who does not believe the newspapers can be informed through news sites, creating thousands of civil reporters. Who is bored television, can spend hours watching video ads on YouTube. But above all - who interferes can himself contribute anything. The possibility to co-create media content motivates so the actors who are willing to participate in collective works without any financial reward. Economically

anomalous behaviour is associated with the expectation that the work done will be freely accessible to all Internet users. It is understandable that such activities are attractive for large communities.

Differences in social networks describe at best the purpose of their use. According to them, social networks can be divided into:

- a) Profile targeting - i.e. those which are organized around the user profile, such as Facebook or MySpace.
- b) Content-based - where the user profile has only a secondary role and focus of the content. An example is the Flickr photo sharing, video sharing YouTube or Last.fm for music sharing.
- c) Virtual - those that are based on on-line virtual environment (virtual world) where the individual communication represents his "avatar". As Second Life or World of Warcraft.
- d) Micro blogging - those that allow users to publish short messages such as Twitter and Jaiku.
- e) "White-label" networks that allow users to create their own version, t. j. a kind of mini community that offered, for example People Aggregator or Ning.

Slovakia has two dominant networks. The first one, Facebook, is used by a total of 49% of the Slovak population – which means every second person over the age of 14 years. Up to 70% of the population using the Internet forms a group of users of social network Facebook. The second place belongs to the Slovak Network Chat (company Azet) which is used about by one third of the population. On the Internet - it is 45%. There are other networks - after a relatively large gap – on lower places in the ranking. For example, Windows Live is now used by a total of only 6% of the population, micro blogging network Twitter is used by 4 %, the community site MySpace or 4% network for professionals LinkedIn 0,5 % of the population. Almost every tenth respondent contends, however, other types of networks or social media such as Badoo, or YouTube (now defunct) Google Buzz, which replaced the network Google+. Almost up to 83 % of users use the social networks daily - it is a higher intensity of use compared to last year. It applies also on MySpace, Twitter and Windows Live. On the other hand, Facebook or Pokec uses intensively only about 40 % of their users (even in those cases the strongest group of intensive users).

A survey by the Institute for Public Affairs processed and published a report on digital literacy, which is a prerequisite for the use of social networks. The report is for the year 2011

- Digital Literacy and the labour market. The report lists the following indicators of digital literacy. (from the report are selected and modified some parts)

Indicators of digital literacy

- a) Control hardware - Working with PC (desktop) - working with laptop / handheld - print documents on a PC printer - working with the scanner - write data to removable media - installation of equipment (hardware) to PC - transferring / copying data on the LAN .
- b) Control software - word processing - Working with spread sheets - Work with database software - Working with graphic editors - work with multimedia programs - working with a web browser - software installation and setup functions PC.
- c) Work with information - information search services on the Internet - Registration of access to information and services on the internet - use of internet - buying goods or services over the Internet - searching various information in the LAN - search for information stored in databases and archives - download files, data, via Internet.
- d) Ability to communicate - sending and receiving e-mail via PC - communication via chat - your mobile phone - making calls via the Internet (VoIP) - sending messages from a mobile phone (SMS, MMS, e-mail) - communicate in discussion forums and social networks.

Despite the dominance of Facebook Messenger in our "latitudes", a considerable part of the population uses more than one social network. Only 20% of the population uses only one network, i.e. every fifth inhabitant of Slovakia. Conversely, a total of one third of the population uses more than one network, 21 % uses two and 12 % uses three or more social networks. It can therefore be concluded that the use of social networks in "single" mode is the case of a minority in Slovakia.

### **3 CONCLUSION**

Marketing minimalism has become a new trend in marketing following simplicism in many shapes and forms of simplification and also low-cost marketing and business. During the writing of this publication it was proven how closely this problem is linked to consumers, their needs, requirements, wishes and desires that marketing minimalism must uncover and use in the offer, consumer literacy and consumer education that are addressed by the team of the Marketing Faculty of the University of Economics in Bratislava, led by Assoc. Ing. M. Dzurová, PhD, in the framework of the research project VEGA 1/0178/14 Common EU consumer policy and its implementation in Slovakia with an impact on the education of

consumers. The result of the combination of both tasks is an education leading to consumer marketing minimalism, when the consumer with a minimum of effective tools and ideas needed in smart mobile applications can be targeted with marketing ideas and decide what, when, how and how much he will buy to live a healthy and organic life by using values for his joyous life. "(Čichovský, 2016). Changes in marketing trends and in marketing communications should be inextricably linked to the use of social networks. A number of tools that offer social networking enable consumers to be creative and create their own views and opinions. Consumers themselves identify and choose exactly what interests them. This function is active media. Despite the changes in behaviour, social situation, it is a trend that needs to be actively used.

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# Prediction Methods of Financial Situation in Czech Companies in the Changing Business Environment

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**Abstract:** This paper focuses on prediction methods of financial situation in Czech companies. According to literature the aim of prediction methods is to point out in advance the factors which could in future endanger the existence of businesses or could even end in its bankruptcy. The aim of this paper is to present the results of empirical research focused on identifying the current situation in using of the prediction methods in Czech companies. In the paper are formulated two partial goals. The first partial goal is to define main reasons why Czech companies do not use prediction methods. The second partial goal is to identify the most used prediction methods in Czech companies. Following the aim of this paper we formulated 4 hypotheses. The validity of hypotheses was verified by statistical software programme SPSS on basis of primary data gained in questionnaire research. Thanks to 100 questionnaires received from business entities we were able to verify and evaluate the current state of using of prediction methods.

**Keywords:** bankruptcy, financial analysis, ex-ante financial analysis, prediction methods.

**JEL Classification codes:** G30, M21.

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## 1 INTRODUCTION

Prediction of financial situation is a serious research task since 1960's. Financial managers and analysts have the possibility to use a range of simple and complex prediction methods to determine a future situation. The scientific discussion about appropriate explanatory power of these prediction methods is usually reopened by serious shocks and changes. One of the latest has started because of the last global economic crisis (Čámská, 2015). The importance of the methods is conditioned by correct results of their prediction efficiency, which are, especially in current conditions, more than polemic and controversial. The aim of this paper is to present the results of empirical research focused on identifying the current situation in using of the prediction methods in Czech companies.

## 2 LITERATURE REVIEW

The first studies focused on the prediction of failure were based on univariate analysis of ratios. These works dealt with a simple analysis of financial indicators, comparing the values of variables of failing and successful businesses (Mičudová, 2013). The most well-known univariate method is probably study by Beaver published in 1966. He was the first to list

indicator-base analysis among bankruptcy prediction techniques. In his work, he compared the indicators of bankruptcy companies one by one to those observed in a carefully selected sample of successful companies. The groups included 79 companies each. He found differences between the financial indicators of companies heading for bankruptcy and those of survivors. He detected symptoms as much as 5 years before actual insolvency, proving that indicator analysis can be useful in bankruptcy prediction (Beaver, 1966).

Since Beaver a variety of prediction methods have been developed in the academic literature using techniques, such as multiple discriminant analysis, logit and probit models, neural networks etc.

Discriminant analysis has been the dominant method in failure prediction, it is a statistical method commonly used in classification (Altman, 1968; Deakin, 1972; Altman, 2002; Bombiak, 2010; Fetisovová & Nagy, 2010; Checkley & Dickinson, 2010; Zalai et. al., 2013). Multiple discriminant analysis performs well if the variables in the group follow a multivariate normal distribution and each group covariance matrices are equal. Altman was the first in predicting corporate bankruptcy by using the classical multiple discriminant analysis technique. Altman introduced his multivariate linear discriminant model in 1968. He compared 33 medium-sized American companies (their registered capital amounting to USD 1 – 25 mil.), which ceased to exist with the same number of adequate booming companies (Altman, 1968). At first, Altman included 22 financial ratios in this model. Then he reduced them only to the five most important. By means of this analytical method he got the following formula known as the Altman's bankruptcy model, which is used for companies listed at the capital market (Altman, 2002):

$$Z = 1.2 * x_1 + 1.4 * x_2 + 3.3 * x_3 + 0.6 * x_4 + 1.0 * x_5,$$

where  $x_1$  = working capital/total assets,

$x_2$  = retained earnings/total assets,

$x_3$  = profit before interest and tax/total assets,

$x_4$  = market capitalization/book value of debts,

$x_5$  = revenue/total assets.

If Z score is above 2.99, the company is healthy. If it is below 1.81, the company is viewed as failing. Values ranging from 1.81 to 2.99 represent the so-called grey area, when there is no clear prediction.

The main advantage of multiple discriminant analysis technique is exactness. One disadvantage of using discriminant analysis is that the required assumptions are fairly restrictive (multiple discriminant analysis requires an assumption of a normal distribution of

predictors, suffers from the arbitrary nature of identifying non-failed “matching” companies, group covariance matrices is equal etc.) (Wang & Campbell, 2010).

Ohlson (1980) uses a logit model, which uses less restrictive assumptions than those taken by the multiple discriminant analysis approach. Logit model uses logistic regression. Logistic regression is a type of regression function which is suitable for a relation in which the dependent variable has a dichotomous character. This variable can be coded as binary. In the case of models predicting financial distress it means that bankrupt companies are coded as 0 or 1 and financially healthy companies conversely. Logistic regression has some serious advantages as no assumed linear relation between dependent and independent variables and it can work with presence of heteroscedasticity (Čámská, 2015). Zmijewski (1984) adopts a probit approach that is also based on accounting data but uses a different set of independent variables.

Research studies on using neural networks for bankruptcy prediction started in 1990, and are still active now. There are a number of reasons why a nonlinear approach would be superior to a linear approach. It can be argued that there are saturation effects in the relationships between the financial ratios and the prediction of default. Interest in bankruptcy prediction by neural networks has long been confined to academics. With the wide spread use of personal computers and internet, the utilization of neural networks is now practical and available to all companies, but we can deduce that neural networks are used especially in large companies.

### **3 METHODOLOGY AND RESULTS**

Following the main and partial goals of this paper we formulated 4 hypotheses. The validity of hypotheses was verified by statistical software program SPSS (significance value  $\alpha = 0.05$ ) on basis of primary data gained in questionnaires. In the first hypothesis we assumed that more than 50% of Czech business entities, regardless their size, do not use prediction methods. We have verified hypothesis H1 by exact binomial test. In the second hypothesis we assumed that the level of implementation of prediction methods corresponds to the size of company - large companies use the methods of financial prediction more than small companies. In hypothesis H2 we assumed correlation between size of company and using of prediction methods. We have verified hypothesis H2 by correlation analysis. In statistical software program SPSS we decided to apply Fisher exact test and for intensity of correlation we used two correlation characteristics, i.e. Pearson coefficient and Spearman correlation coefficient. In the third hypothesis we assumed that main reason for non-using of prediction methods by Czech businesses is their missing knowledge. We have verified hypothesis H3 by



parametric test about relative size of sample. This statistic test was applied in hypothesis H4. In the fourth hypothesis we assumed that in Czech business practice the most frequently used prediction methods analysis are methods of scoring assessment (Tamari Risk Index or Quick Test).

We gained primary data by questionnaire research. Questionnaire research was realized from September to December 2014. Questionnaires were distributed electronically (via email) to all type of Czech companies according to their size (small, medium size and large companies) and questionnaire was created through program Google Docs. Businesses with a registered office in the Czech Republic were primary sample. According to Statistical Office of the Czech Republic there were 357 704 businesses with a registered office in the Czech Republic to date 31.12.2014. Thanks to 100 questionnaires received from business entities (chosen sample) we were able to verify and evaluate the current state of use of prediction methods. Chosen sample of 100 businesses is representative according to Chi-squared test (regional representation p-value = 1). In table 1 we can see more detailed information according to regional classification.

**Tab. 1: Regional classification of chosen sample in Czech Republic**

NUTS2	NUTS3	Companies
Praha	Praha	44
Střední Čechy	Středočeský	8
Jihozápad	Jihočeský, Plzeňský	7
Severozápad	Karlovarský, Ústecký	7
Severovýchod	Liberecký, Královohradecký, Pardubický	8
Jihovýchod	Vysočina, Jihomoravský	13
Střední Morava	Olomouc, Zlín	6
Moravskoslezsko	Moravskoslezský	7
<b>Total</b>	-	<b>100</b>

Source: Own preparation, 2015.

Praha region is the economically most powerful region in Czech Republic, therefore according to the regional classification companies from Praha region have the largest representation (44 companies, in relative terms 44%). Numbers of companies from another regions were relatively balanced, from 6%, i.e. 6 companies from Střední Morava region to 13%, i.e. 13 companies from Jihovýchod region. In chosen sample there were especially companies from industry (31 companies), wholesale and retail (26 companies) and transport (9 companies). Small companies with maxim number of 49 employees represent the largest number of companies (44 companies, in relative terms 44%). In chosen sample there were 35 medium size companies and 21 large companies with 250 employees and more.

For the purpose of meeting the main aim, a mix of research methods are used from which the most important is analysis, synthesis, induction, deduction, abstraction, comparison and generalization.

The aim of the first question was to determine if companies (in their practice) realize financial analysis for evaluation of financial situation. 68 Czech business entities (68%) realize financial analysis regularly. Group of 68 companies consists of 23 small companies, 24 medium size companies and 21 large companies with 250 employees and more. All large companies in chosen sample realize financial analysis regularly. This fact is logical because large companies establish their own economic or finance departments with competence of preparing of financial analysis. In chosen sample there were 19 companies which realize financial analysis irregularly (only when they need) and 13 Czech companies do not realize financial analysis. Czech business entities do not realize financial analysis regularly because it is time-consuming (46.88%), because of the insignificance of the financial analysis (31.25%) and they are missing knowledge about financial analysis (9.37%). Answer about time-consuming is polemic, because strength of financial ratios (financial ratios are one of the methods of financial analysis) is speed and simplicity. But on the other side, in small companies the owners of the business often solve financial issues themselves. In this case financial analysis could be time-consuming.

Czech business entities specified indicators for evaluation of financial situation (they could specify more than one indicator). For diagnostics of financial situations nowadays Czech companies use profit/loss (68 companies), financial ratios, i.e. liquidity ratios, operating performance ratios, debt ratios and profitability indicator ratios (65 companies), Economic Value Added (20 companies), prediction methods (15 companies) and Balanced Scorecard (4 companies). We can declare that Czech businesses do not prefer the prediction methods. Average number of indicators for diagnostic of financial situation is 1.73 indicator. Czech companies most recently use 2 indicator (modus) and value of median is 2. We evaluate all these results as low number of indicators.

Term “prediction methods“ is not known in Czech business practice, because only 19 companies (19%) know this term and these companies use prediction methods in their business practice. In this case we can see disagreement with previous question, in which only 15 respondents use prediction methods for diagnostic of financial situation. 60% respondents have not heard this term before and 21 companies heard term “prediction methods”, but they do not have more knowledge and information. In table 2 we can see more detailed information according to size of companies, which know and use prediction methods.

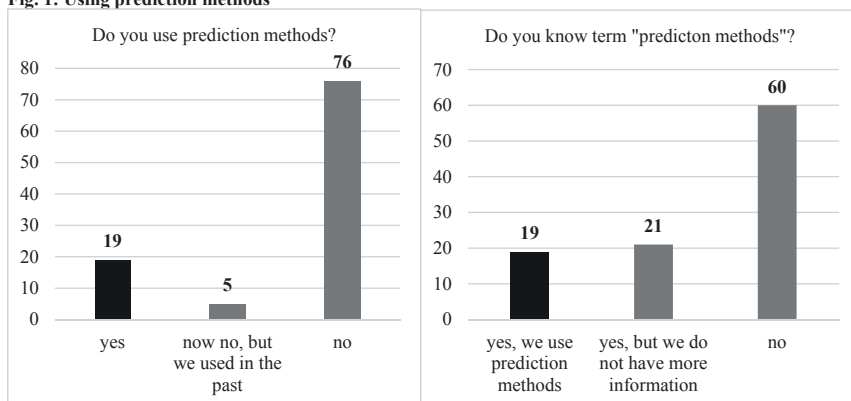
**Tab. 2: Knowledge of prediction methods according to size of companies**

Knowledge of prediction methods	Type of company			Total
	Small	Medium size	Large	
Know and use prediction methods	1	7	11	19
Know, but do not have more information	13	7	1	21
Do not know prediction methods	30	21	9	60
Total	44	35	21	100

Source: Own preparation, 2015.

Results of questionnaire research confirmed our assumption that prediction methods are used especially in large companies. Also absence of information and knowledge about prediction methods is evident in small companies (30 companies).

In the next question Czech business entities answered the question whether they said if they use prediction methods for prediction of future financial situation. There were three answers – yes; no; no, but we used prediction methods in the past. This question was control question. Because if respondents completed questionnaire correctly, number of positive answers (companies use methods of ex-ante financial analysis) should be 19 answer. In figure 1 we present results of both questions. We can see that 19 Czech business entities use prediction methods in their practice.

**Fig. 1: Using prediction methods**

Source: Own preparation, 2015.

In first hypothesis we assumed that more than 50% of Czech business entities, regardless their size, do not use prediction methods for prediction of future financial situation. We verified this hypothesis by statistical software program SPSS, exact binomial test was chosen as test statistic ( $H_0: \pi = 0.5$ ,  $H_1: \pi > 0.5$ ). On basis of the results gained from binomial test we refuse null hypothesis, because p-value (0.000) is less than significance value  $\alpha$  (0.05). The results

confirmed our assumption formulated in the first hypothesis and the hypothesis H1 was not rejected.

In the second hypothesis we assumed that the level of implementation of prediction methods corresponds to the size of company - large companies use the methods of financial prediction more than small companies. We used correlation analysis for verification of validity of hypothesis H2. Correlation analysis measures the relationship between two items (in this article between using of prediction methods and size of company). The resulting value (called the "correlation coefficient") shows if changes in one item will result in changes in the other item. We decided to use Fischer exact test. In the first step of correlation analysis we applied Chi-squared test. We formulated null hypothesis ( $H_0$ : using of prediction methods does not depend on size of company) and alternative hypothesis ( $H_1$ : using of prediction methods depends on size of company). P-value was less then significance value  $\alpha$  and we could refuse null hypothesis  $H_0$ . Because using of prediction methods depends on size of company, we decided to use Pearson coefficient (0.474) and Spearman correlation coefficient (0.463). The results of correlation coefficients showed moderate dependence between using of prediction methods and size of the company. Thus the second hypothesis was confirmed.

In the third hypothesis we assumed that main reason for non-using of prediction methods by Czech businesses is their missing knowledge. In this hypothesis we want to point to absence of knowledge of prediction methods in Czech companies. The third hypothesis was verified on basis of results gained from an open question in the questionnaire (we divided respondents into categories). Table 3 presents the main reasons for non-using of prediction methods.

**Tab. 3: The main reasons for non-using of prediction methods**

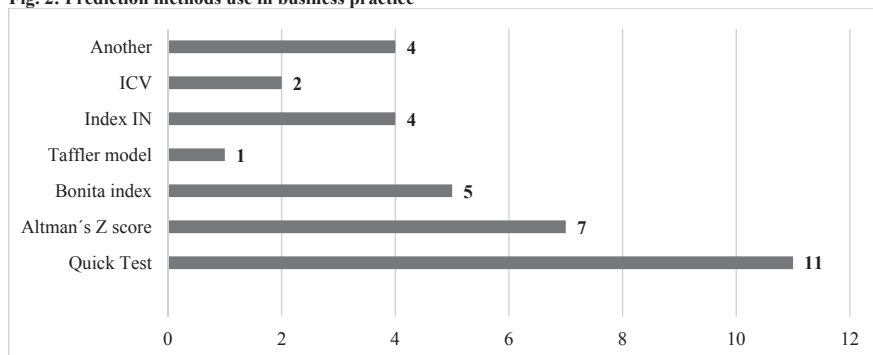
Reason for non-using of prediction methods	Number of company	Percentage (%)
Missing knowledge	28	34.57
Size of company (too small company)	9	11.11
Own prediction methods	8	9.88
Time-consuming	1	1.23
Absence of qualified employees	4	4.94
Prediction methods are not important	22	27.16
Not answer	9	11.11
Total	81	100.00

Source: Own preparation, 2015.

Because of low number of companies, which do not use prediction methods, we did not verify hypothesis H3 by parametric test about relative size of sample in statistical software program SPSS. By Friedman test we would reject the agreement of answers for this question, but post hoc analysis would not show a significant difference between the most numerous category

(missing knowledge) and the second numerous category (prediction methods are not important). We decided to use only descriptive statistics. The weakness of open question is unwillingness of respondents to answer. 9 companies (11.11%) did not answer this question. The main reasons for non-using of prediction methods in Czech companies are: missing knowledge (34.57%), prediction methods are not important (27.16%) and size of company (11.11%). The results confirmed our assumption formulated in the third hypothesis, and therefore the hypothesis was not rejected.

**Fig. 2: Prediction methods use in business practice**



Source: Own preparation, 2015.

Czech business entities (19) specified prediction methods used in their practice (they could specify more than one prediction methods). On the basis of the advantages of Quick Test and Tamari Risk Index in the fourth hypothesis we assumed that in business practice the most frequently used prediction methods are methods of scoring assessment.

The results of the questionnaire research showed that most respondents (11 respondents) use Quick Test for prediction of future financial situation (figure 2). Nowadays small and medium size companies start to use Quick Test because of its strengths (speed and simplicity). Therefore we analysed group of 11 companies used Quick Test according to their size. This group includes 1 small companies, 7 medium size companies and 3 large companies. According to business activity group of 11 companies contains 5 companies from industry, 4 companies from wholesale and retail and 2 companies from building and construction. Altman's Z-score was the second most frequently used prediction method, because 7 respondents use this method in business practice. Mr. and Mrs. Neumaier created indexes IN for Czech companies, the last one called IN05 was published in 2005 (Neumaierová, Neumaier, 2005). Index IN was the third most frequently used prediction method. For verification of hypothesis H4 we used only descriptive statistic (by Friedman test we would

reject the agreement of answers for this question, but post hoc analysis would not show a significant difference between the most numerous category – Quick Test and the second numerous category – Altman's Z-score). The results of descriptive statistic confirmed our assumption that the mostly used prediction methods are the methods of scoring assessment.

#### 4 CONCLUSIONS

This article presented results of questionnaire research in Czech companies. According to the results we can dedicate current state of use of prediction methods in businesses. We can conclude that using of prediction methods and knowledge of prediction methods absent in Czech companies. Results of questionnaire research showed that the mostly used prediction methods are the methods of scoring assessment, small and medium size companies start to use Quick Test and the results of correlation coefficients showed moderate dependence between using of prediction methods and size of the company.

Nowadays significant problem of prediction methods is that their prediction reliability decreases. From the results of several previous empirical research we can deduce that prediction reliability of methods decreases significantly if methods are applied in another area, another time or another business environment as on which were constructed. In recent years we can see significant economic and legislative changes. These changes have a direct impact on the business entities what is cause of decreasing of prediction reliability of used prediction methods. We assume that in the case of prediction methods they are made on the basis of current economic information and legislative conditions and they can be an important instrument in company decision-making and management for the needs of financial management (Grice & Dugan, 2001; Nieman, Schmidt & Neukirchen, 2008; Wu, Gaunt & Gray, 2010). At present academic community use new consideration and prediction methods (logistic regression, conditional trees, random forest, neural network etc.) for prediction of business financial development.

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# Do We Desire Returning To The Old Orders?

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**Abstract:** The aim of the paper is to disprove the argument, that prosperity, social equity, and protection of national interests can be achieved only by the return to times of centralistic planning, total economic regulation, and establishing of big economic monopolies tightly interconnected with their governments. For that purpose, the author reveals a retrospective view on government regulation of foreign trade in the former Czechoslovak Socialist Republic. Article explains how all-powerful socialist government converted the market categories as price, exchange rate, interest, cost, tax, etc., into the administration tools of re-distribution of wealth in the society, and substituted free market choice by total control over supply and demand. The text was created as a response to the numerous debates with young people, which slowly lose their faith in the free market principles.

**Keywords:** foreign trade, price, regulation, socialism, monopoly, Czechoslovakia.

**JEL Classification codes:** H13, N4, P21.

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## 1 INTRODUCTION

We live in times of continuing consequences of the financial crisis. We think how national debts can convert our standard of living. We are afraid of price fluctuations associated with migration and conflicts in the Middle East, etc.

Some people call for more regulation of the economic systems, more protective measures, or even, they want governments to take the reins of the markets back to their hands, they want the socialism again. The red line of their arguments is the economic equity, protection of national interests and return to the overall prosperity.

This article brings a retrospective view on government regulation of foreign trade in the former Czechoslovak Socialist Republic. Its aim is to disprove an argument about all-powerful centralized government that could be able to convert the market categories as price, rate of exchange, interest, cost, tax, etc., back into the „administration tools“ of re-distribution of wealth in the society, and in this way to substitute free market choice by total control over supply and demand. Such a “retro journey” is important especially for young generation that has not experienced the economic commanded system, and that might be dewy-eyed to what really the socialism was.



## **2 LITERATURE REVIEW**

In times of socialist Czechoslovakia, a lot was written about centralized economic systems that tied countries - members of The Council for Mutual Economic Assistance – had to accept under the reins of Moscow. The theory of Marxism-Leninism and so-called Political Economy was widely spread all over the school textbooks, e.g. Rypota, J. (1980). Political Economy of Socialism, and Vojtišek, J. (1983) Political Economy of Capitalism. Students had to study also from original/translated books of Karl Marx, e.g. The Communist Manifesto (1848), The Capital (1867), and Vladimir Iljitch Lenin, e.g. What is to be Done? (1902), Imperialism: The Highest Stage of Capitalism (1916), or The State and Revolution (1917). People were grown under the ideology of “a class division of the society” where only two groups of people exist - bourgeoisie and proletariat. The owners of the means of production – the capitalists – force the workers to sell their labour in a labour market, and at the same time, they keep that part of a surplus that de facto belongs to the workers. In this respect, they provide the exploitation of the working class. The capital is understood by Karl Marx as a phenomenal form of a social relationship between capitalists and workers. Lenin added a Bolshevik revolution, in which means of production must be taken away from capitalists in a violent way, and equally divided among the working people. Based on these premises a new system of commanded economy was established. The principles of private ownership, free market choice, liberal development of supply and demand, and after all, majority of human rights and civil liberties were overturned. A single national plan, few monopolies and centralized political power started managing the society.

### **2.1 Foreign Trade in the Socialist Czechoslovak Republic**

The state monopoly on foreign trade was established in Czechoslovakia shortly after the events of February 1948 (communist putsch led by Klement Gottwald) by adopting State Law No. 119/1948 Coll. on the State Organisation of Foreign Trade and International Forwarding, and State Law No. 107/1953 Coll. on the State Monopoly of Foreign Exchange and Czechoslovak Currency. It was the time when the process of nationalisation and expropriation of privately owned assets of companies and people had just finished, and when events in South Korea had caused the first round of the so-called “Cold War” between the East and the West.

It was decided that only special state Foreign Trade Companies will be given the exclusive rights to undertake foreign trade activities, and that the foreign exchange will be exclusively controlled by the government so that no physical or legal person will have access to it.

Producers and distributors operating in the domestic market were completely divorced to the exporters and importers. All economic subjects were driven by one powerful plan determining the volume and prices of production. The plan was issued at differing levels: the whole economy (usually 5-year plan), the level of the economic sectors, particular branches, and ended at the level of companies.

The accounting models were completely different from those in the West. Instead of the known structure of assets, liabilities and equity so called “socialist enterprise funds” were defined. They looked like constant enterprise accounts strictly separated according to their allocations and the system for their drafting was planned beforehand by the supervisory authorities of the governmental bodies. Each enterprise was given, at the beginning of a particular planning period (usually one year), the specification of how much there is in this or that fund and was ordered to use all the allocated means.

In the Western model, balance sheet assets and liabilities represent ‘two sides of one coin’. On the contrary, socialist enterprise funds were independent, each had its income side and expenditure side, and to switch money from one fund to another was not allowed.

As all the possessions in private ownership were nationalised after the Second World War, the government became the only owner of property in the country. In terms of the Western balance sheet model, the socialist government owned 100 % of every firm's equity. Figure 1 shows the difference between the balance sheet and socialist enterprise funds.

The pricing policy in the country was based on total price control by the government. Conceptually, the price mechanism changed from a former market value to an administrative tool used by the state for the redistribution of national wealth, and for hidden support of those economic sectors, which had its main priority. Two price levels were adopted – wholesale and retail.

The wholesale price was calculated as an aggregate of the costs of production and the planned profit.

The companies firstly proposed their costs and profits to the appropriate state authorities, and the government (State Planning Commission, Ministry of Finance and the State Bank) agreed them as a part of the state plan. Because the Central Committee of the Communist Party was compounded mostly from the communist directors of the companies, officers from the ministries and other central governmental bodies as well as important personalities in public life, it is more than clear where the “party” was deciding about prices and their preferences.

Fig. 1: The Finance of an Enterprise – Differences West and East

Balance Sheet Model	Socialist Enterprise Funds
<b>ASSETS</b>	<b>FUND OF PRODUCTION ESSENTIALS</b> (compared to fixed assets + inventory over 5,000 CSK)
Current assets	<b>FUND OF VARIABLE ESSENTIALS</b> (compared to inventory = raw material and fixed assets = tools and instruments up to 5,000 CSK)
Cash	
Accounts receivable	
Inventory	
Fixed assets	<b>INVESTMENT FUND</b> (generally compared to long-term debt; money assigned for new investments in a current planning period, if not used returned to the state budget)
Net plant and equipment	
<b>LIABILITIES AND EQUITY</b>	<b>WAGE FUND</b> (no equivalent – strong wage regulations according to the income categories)
Current liabilities	
Accounts payable	
Notes payable	
Long-term debt	<b>FUND OF THE GOODS IN STOCK</b> (compared to inventory = goods in stock and semiproducts; in the 1980's the whole volume of goods in stock was twice as large as annual national income)
Stockholder's equity	<b>FUND OF THE SOCIAL AND CULTURAL NEEDS OF WORKERS</b> (no equivalent, money counted in accordance with profit margin, kept in cash, used for social support of employees – recreation, allowances, loans)
Common Stock and paid-in surplus	
Retained earnings	<b>RESERVE FUND</b> (no equivalent, created by the surplus from other funds; could be used almost for everything; had to be spent by the end of the current planning period)

Source: Processed by the author.

The retail prices were determined by adding a turnover tax and a relevant retailer's commission to the wholesale price. The turnover tax was nothing more than the net fiscal income to the state budget. It had no other economic rationale.

Besides this artificial structure of prices, the government developed a system of open and hidden subsidies. Open subsidies were given in the form of not returnable cost support or lower turnover tax. In some branches, the turnover tax was even negative, e.g. the food industry (meat and milk products, eggs, poultry and vegetable), the fossil fuel industry (products from coal and oil), the production of electrical power and heat, and the printing industry. The hidden subsidy was realised through preferred credit conditions (postponed or free of interest) or through price interventions. Figure 2 illustrates the structure of wholesale and retail prices in the Czechoslovak economy.

The key instrument of managing economic processes in socialist economy was a Central Government Plan. The Plan for Foreign Trade was a part of it and was based on volume tasks (pieces, kilogrammes etc.) assigned for exports and imports.

Financial means were allocated according to those volume tasks.

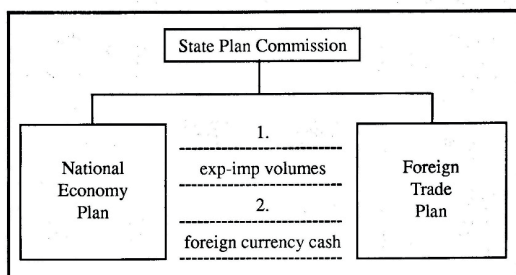
**Fig. 2: The Process of Government Price Determination**

Calculation Formula	Example	Comment
<b>COSTS</b>		
Material Costs	30 CSK	raw materials, semiproducts
Wage Costs	40 CSK	counted according to the wage-work type tables issued by the state
Depreciation	20 CSK	strictly governed and controlled by the state
State subsidy	10 CSK	many variants
NET PROFIT	50 CSK	assigned beforehand in accordance with the state plan
<b>WHOLESALE PRICE (WP)</b>		
Turnover Tax	40 CSK	net income for the state budget
Retailer's Commission	5 CSK	retailer's income
<b>RETAIL PRICE (RP)</b>		
195 CSK		
Note: – Division of the NET PROFIT: – tax – redistribution processes within industries – allocation to socialist enterprise funds – debt financing – other (unpredictable state orders) – The state always decided about the final wholesale price.		

Source: Processed by the author.

It was completely opposite system to known Western practices, where the financial decisions determine future flows of physical goods. Figure 3 shows the relation between the National Economic Plan and the Foreign Trade Plan.

**Fig. 3: The Relation between NEP and FTP**



Source: Processed by the author.

The volumes were recorded separately for domestic producers and export-import companies via particular ministries and special government agencies.

The government in those times disposed with very low level of IT equipment. Within the scope of hundreds of thousands of planned items of products, the government authorities were causing many mistakes so that the two parts of the plan had never matched. Many difficulties were also coming due to obligations fixed by international commercial treaties and trade

agreements among Comecon countries. If the state plan was established for the next year in January, the Comecon engagements surely were signed in March, but required overwhelming priority over national plans. Other imperfections were coming due to the fact, that that government owned companies were changing their own tasks within a planning period. If, for instance, some of the monopolistic suppliers dropped out of the chain, the others could not automatically fulfil their plans. Finally, it can be said that no real State Export-Import Plan existed, and the statistical figures about Czechoslovak foreign trade were only formally registering what was spontaneously going on.

As the prices in socialism did not reflect world prices the government rate of exchange policy had to be established. After the Second World War the official rate of exchange between CSK and USD was defined as 50 CSK/USD and the Czechoslovak Crown was not set to the gold standard. The role of a rate of exchange was understood in a passive way; as a conversion coefficient without any active function in the economy.

The currency reform of May 30, 1953 (State Law No. 41/1952 Coll.), realised by Klement Gottwald's regime, defined the gold standard of the Czechoslovak Crown as 0.123426 gramme of pure gold. The official rate viz a viz the US Dollar was set at the assigned parity of 7.20 CSK/USD. The real exchange rate at that time was 10 CSK/USD, and it led to the external revaluation of the national currency unit. Thus imports became cheaper, and exports more expensive. This was considered as a breach of international currency arrangements and Czechoslovakia was excluded from The International Monetary Fund (although it was a founding member since 1945).

During following years, a state monopoly on foreign trade was established. Domestic prices went different way than the prices in the world markets (as described above). The official rate of exchange less and less reflected real value of goods and services, and this encouraged isolation of domestic producers from Western countries.

Because the two tier price level system existed in the economy (wholesale and retail), it was decided at the beginning of 1960's to introduce a two tier rate of exchange system as well (it was valid up to 1989). The first rate was used for payments of export-import goods in foreign trade (being compared with the wholesale price level). The second rate of exchange was assumed for non-business payments, defined in general as expenses of tourists coming to the country or travelling out of the country (related to the retail price level). The system of preferential coefficients was established. Its purpose was to discourage citizens to travel abroad and to subsidize state owned companies which were not very successful in exporting or importing.

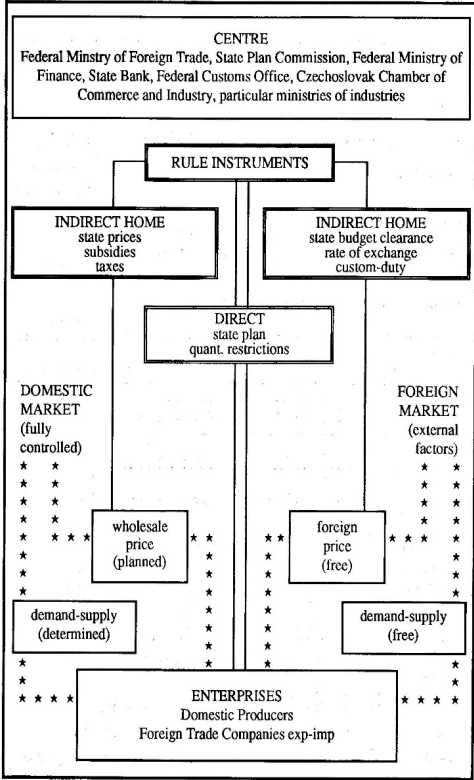
Foreign trade in the totalitarian economy had a protective function against all “negative influences” coming from the Western markets. The government had two types of controlling instruments: direct and indirect.

The direct instruments (plan and quantitative restrictions) influenced the volume of production that was to be manufactured, imported or exported.

The indirect instruments (clearance with the state budget, rate of exchange and custom-duty) influenced the final price of the production.

Figure 4 illustrates the system of planned foreign trade in Czechoslovakia as it operated within the period 1948-1989.

Fig. 4: Direct and Indirect Controlling Instruments



Source: Processed by the author.

Domestic producers were almost totally protected by the socialist government. Local prices were fixed (usually for 5 years) and if their economic results deviated from the State Plan, they received “help” in the form of higher subsidies, lower taxes or increased sales prices

and/or decreased purchasing prices. That was a typical client arrangement where government could encourage its friends and punish its enemies whenever it wanted.

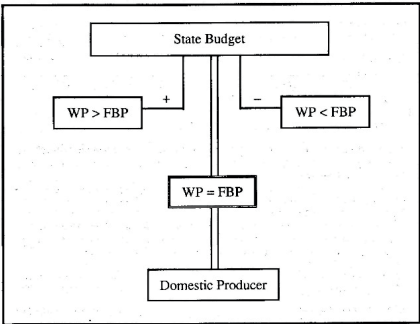
The same system was applied towards exporters and importers. Whatever price they reached in the foreign markets, government always adjusted it to the level of domestic equivalent price. It either increased or decreased customs duties, or provided a Foreign Trade Company with preferential exchange rates.

The state in its effort to protect domestic goods producers developed sophisticated systems of “Price Difference Clearance”, where all differences between domestic (wholesale) prices and foreign (reached abroad) prices were automatically subsidised from the state budget in order to equal them each other. Home producers thus never recognised the difference between exports and supply to the domestic market. This consequently caused a loss of interest of Czechoslovak producers to compete against their foreign rivals. The “Green House” riskless system had provided them with such a comfortable working conditions that they lost motivation and their productivity, efficiency and profitability fell down on the historical minimum.

Figure 5 shows the system of state budget clearance based on the differences between domestic price (Wholesale Price) and price reached in foreign markets (Foreign Business Price).

Foreign Business Price always reflected the actual developments in the foreign markets, while Wholesale Price was always fixed by the government at least for 5 years. In 1981, a new motivation instrument was adopted within the state planning system – so called the Differential Coefficient. The relevant amounts of subsidy were provided to companies according to this measure.

Fig. 5: The Clearance System between WP and FBP



Source: Processed by the author.

The Differential Coefficient was calculated as a ratio of the amount of exported goods appraised in FBP Price to the same amount appraised in domestic Wholesale price, within one planning period, usually one year.

$$\text{Differential Coefficient} = \frac{\text{FBP Price}}{\text{Wholesale Price}}$$

If the company fulfilled the State Plan in volume figures and reached the coefficient FBP/WP > 1, it could keep and use all subsidies balancing the price differential.

If the company did not fulfil the volume figures, but reached FBP/WP > 1, the state decided to help the company with a subsidy but only amounting 20 % of the original differential.

However, if the company reached the coefficient FBP/WP < 1, it lost all rights to receive subsidy from the government budget, even if the planned volume figures were reached.

### 3 CONCLUSIONS

The previous text presented a general picture of how commanded economic system operates and how former Czechoslovak socialist government tried to protect domestic producers and export/import activities behind national borders.

It has been more than obvious that economic over-regulation in the form of socialist planning leads to lower productivity, efficiency, demotivation of managers and client arrangement practices. On the other hand, big economic monopolies, tightly interconnected with their governments might show up a stronger resistance to the fluctuations in the foreign markets.

The question that remains, however, sounds as following. Is the price paid for totalitarian protection of domestic businesses worth giving up the economic and human freedom? Is the total nationalization the right way? Is a small country like Czech Republic ready to such a step?

To have the picture complete, we should also ask the questions: And what about thinking globalization? Don't we face some new forms of population control: government corporatism, global branding, fiat money, military superiority, perception management, consent engineering, social surveillance, etc.? The answers might become a theme of further research papers.

### ACKNOWLEDGEMENT

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# Joint Ventures in Slovak Economy and the Development of Their Characteristics

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**Abstract:** The main aim of the research presented in this paper is to assess the development of international joint ventures with Slovak participation from the fall of the Iron Curtain to the present times and also to point out the importance of these business entities in the transformation of the Slovak economy. International joint ventures are an integral part of the Slovak economic history. They were the most frequent type of foreign investment after the fall of the Iron Curtain and establishment of sovereign Slovak Republic. Nevertheless, the evaluation of their characteristics is rather difficult: many of them have become wholly-owned affiliates of the foreign partners. On the other side, these affiliates are often still functioning and can be counted among the biggest and most important companies in Slovakia.

**Keywords:** international joint ventures, Slovak companies, foreign investors, input contribution.

**JEL Classification codes:** L24, F21.

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## 1 INTRODUCTION

The basic aim of strategic alliances and their specific types (joint ventures including) is to gain competitive advantage and increase competitiveness of the firms. However, the meaning of the term competitive advantage varies in time and also from company to company, based on the conditions of internal and external environment and their changes. International joint ventures with Slovak participation represent a proper example of how the changes in country's business environment and evolution of the companies themselves in the market economy influence the nature of the partners' cooperation. The time span between the current research and previous studies on this type of business entities is more than a decade long. Slovak economy has undergone major changes in that period, with European Union (EU) entry and euro adoption being the most important. Nevertheless, the attention paid by foreign and domestic authors to joint ventures or strategic alliances in general in Slovakia is still minimal. The evidence presented in this paper shows that the international joint ventures (IJVs) with Slovak participation have undergone significant development since the introduction of market economy in Slovakia.

## 2 LITERATURE REVIEW

International joint ventures with Slovak participation have gotten only little to no interest by foreign and Slovak economists as well. There are thus only a few studies on this topic, the latest one (except research presented in this paper) is dated back to 2001. All of these studies have limited research scope, either in terms of research sample size or foreign partner's country of origin. As the main aim of this paper is to assess the development of international joint ventures with Slovak participation since the fall of the Iron Curtain, the literature review is focused on the previous studies of IJVs with Slovak participation.

Study by Hošková and Šestáková (1993) is the first attempt to map IJVs in Slovakia in more detail. The authors made visits in several Slovak-foreign joint ventures in 1991 and 1992. The companies were operating in machinery, food and other light industries. Results of their research can be divided into outcomes valid in all cases and issues observed only in several joint ventures. As for the generally valid information, all IJVs benefited from the increased technical level of production and subsequent higher quality of products. The qualification of employees has also risen, as did (to some extent) the wages. However, qualified and relatively cheap labour force was one of the main motives of foreign partners to create an IJV. This factor is important mainly in production with high labour intensity.

All the visited companies had agreed that they would not be able to achieve this higher level without partner's inputs; they would not have enough of their own innovation resources. The inputs of foreign partners varied from cash (to a lesser extent) through machinery (not necessarily state-of-the-art) to know-how and licenses. Another important aspect is the effectiveness of production. It can be achieved either via higher-quality products (as mentioned before) justifying the higher product price or economies of scale, decreasing the costs. They are connected with higher sales, mainly dependent on market expansion outside Slovakia or the Czecho-Slovak Republic at that time, respectively, facilitated by the well-established distribution networks of foreign partner.

Concerning IJV effects valid only in specific cases, they are mainly the market expansion in terms of Slovak market entry (dependent on the level of domestic consumption in particular industry in Slovakia) and intra-industry cooperation in Slovakia (mainly among medium-sized and large firms).

Nevertheless, there were also several inhibitive aspects of joint venture creation. In the beginning of the 1990s, foreign investors often preferred investment in companies with state ownership – they were thus limited by the pace of their privatisation. Another barrier was the hesitation to invest their capital in companies which show profits in non-convertible currency.

Finally, non-existence of capital market in Slovakia and the subsequent inability to estimate the market capitalisation were also impeding the entry of foreign investors.

Besides the aforementioned factors of external and Slovak business environment, there were also some internal issues, mainly on the side of Slovak partner. First of all, it is the unclear vision of the IJV's future, or different expectation of the respective partners. Next, they are inexperience and incompetence of the domestic managers along with the instability in company's management. Šestáková (1994) states also insufficient work discipline and identification of the managers with company, low quality of production, absence of basic managerial knowledge or problems with logistics as factors which rather disappointed the foreign investors.

The research conducted by the consulting company Neumann among the local and foreign managers in the Czech Republic, Hungary, Poland and Slovakia about their experience in IJVs established in these countries in the beginning of 1990s showed that Western managers emphasized the need to pay more attention to local mentality and environment, as well as to problems in communication with local managers. The reasons, besides the language barrier, were mainly different traditions and organisational culture. All of these aspects posed possible threats for the IJV effectiveness. As for the macroeconomic point of view, regional imbalance was a serious problem, because majority of the companies were headquartered in Bratislava or Prague respectively, speaking of the Czecho-Slovak Republic as a whole. However, Slovak partners were often dissatisfied with the quality of cooperation with foreign companies, as they often tried to suppress or outright destroy the manufacturing base of the Slovak firm. The distribution channels and the whole marketing also tended to be under the auspices of the foreign partner. (Šestáková, 1994)

Four case studies in research by Ferenčíková (1997) - BAZ-Volkswagen, Tatramat-Whirlpool, Samsung-Calex and BC Torsion - show that even though the foreign investment had significant transformational effect on particular companies, impact on the whole Slovak economy was only limited. As for the employment, the transformation often led to layoffs. None of the four IJVs used the highly-qualified labour force for the research and development, which stayed in the sole competence of the foreign investor. In three of the four cases, foreign partners used IJVs as a tool to gain control over the Slovak company, which had rather weak bargaining position. Nevertheless, in some cases financial problems of the Slovak parent company eventually led to the sale of its shares in the IJV (Ferenčíková and Smith, 1997).

In another study by Ferenčíková (2001), the examples of Volkswagen-BAZ, Alcatel SEL-Tesla, DIRICKX-PSB, Whirlpool-Tatramat, Henkel-Palma and Hoechst-Biotika joint ventures show that foreign investors had positive effects on higher product quality, technology improvement and contributed knowledge about foreign markets.

Results of two studies on Slovak-French IJVs conducted by Kita (1997, 1998, 1999) show similar benefits of cooperation: introduction of new technologies to produce new or improve the quality of the existing products, possibility of the goods' exports or easier transition of Slovak companies to the market economy. 41 and 50 IJVs respectively participated on these two surveys. The goals of these companies were mainly development of the new products by using competences of the foreign partner, technology modernisation, sharing of costs and risks, time-saving and economies of scale in production and commercialisation of goods, know-how transfer or entry to the foreign markets via distribution channels of the French company.

IJV was the most used form of foreign investment in Slovakia throughout the first half of 1990s. Even in the middle of 1996, there were 9 419 business entities with foreign capital in Slovakia, 5 626 of them (60%) were joint ventures, with foreign investment worth 411 mil. USD (Ferenčíková, 1996).

### **3 METHODOLOGY**

The paper presents selected results of the research conducted on the sample of 45 Slovak-foreign joint ventures - for the purpose of the research, it is a company formed by at least two entities from different countries and at least one of these entities (Slovak company) was established in Slovakia. It is the first detailed research of this type of companies since aforementioned studies in 1990s. The information has been gained by the means of questionnaires addressed to IJV partners. The questionnaire itself has aimed at three areas of focus: background information and structural characteristics of the international joint ventures; international joint venture relationship characteristics; and finally ownership changes and performance-related issues.

The companies were sent the questionnaire only if they met one of these conditions: a) the company established in Slovakia is a partner in an international joint venture established and conducting business in Slovakia, or b) the company established in Slovakia is a partner in international joint venture established and conducting business in country other than Slovakia. It can be assumed that more than two decades of market economy existence, which significantly changed the state of the Slovak economy as a whole had also impacted features

of the Slovak-foreign IJVs. The research hypothesis is therefore as follows: the characteristics of the Slovak-foreign joint ventures in terms of dependence of the Slovak partners on the foreign partners and of the inputs provided by the Slovak partners have changed in favour of the Slovak partners since 1990s.

#### 4 RESEARCH RESULTS

It is very difficult to determine the exact number of Slovak-foreign IJVs operating in Slovakia. The estimation can be made using the data available in the Global Slovakia database (2016), which does not, however, provide a comprehensive list of all IJVs. There also has to be paid close attention to the fact that some IJVs might be formally owned by two or more companies, but their ownership structure shows that the equity share of certain partner does not enable this company to influence the decision-making process or operations of the joint venture to a significant extent – this is the case of IJVs where the partner owns less than 10% of equity. Another case of formal IJVs is formed by several daughter companies of foreign investor, established in various countries. These two types of entities are, in fact, not joint ventures in the original sense, as they lack the basic attribute of these alliances: cooperation among the partners.

However, data in table 1 illustrate the development of number of foreign-invested companies in Slovakia. On the present, the vast majority of these companies are fully-owned affiliates; IJVs represent only about one fifth of the total number. It is in contrast with the situation after the fall of the Iron Curtain, when IJVs prevailed over affiliates of foreign companies. There are two main reasons which might explain this shift. The first one is the strategy of foreign investors to turn the IJV into their affiliate as soon as possible, which was a frequent case in Slovakia in 1990s. Another cause might be lower risk of investment in Slovakia compared to situation two decades ago, due to either higher awareness of foreign companies about Slovak environment or the environment stability. It is also very important to mention the accession of Slovakia into EU in 2004, which facilitated the process of investment and also made it less risky.

**Tab. 1: Number of foreign invested business entities in Slovakia**

Foreign-invested companies	30. 10. 1990	1. 10. 1991	1. 7. 1992	30. 6. 1996	19. 4. 2016
Total	776	5 921	9 741	9 419	44 027
Affiliates	117	2 308	3 757	3 793	35 527
IJVs	659	3 613	5 984	5 626	8 500

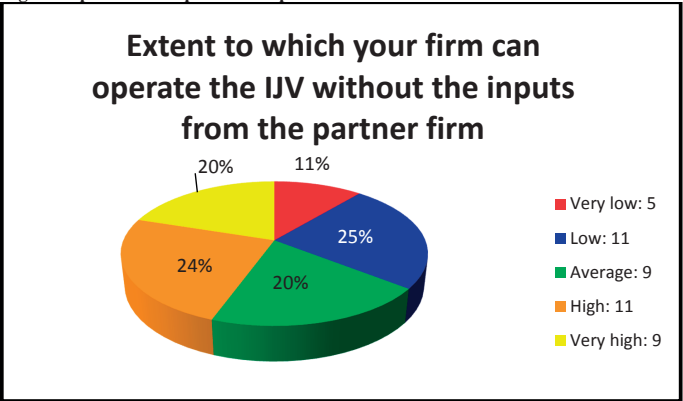
Source: Hošková and Šestáková (1993); Ferencíková (1996); Global Slovakia (2016)

As for the regional distribution, the situation is virtually the same as in 1990s (table 1): 3 503 out of 8 500 IJVs are headquartered in the Bratislava region. Other regions are far behind in this comparison, with the Trnava region in the second place (889 IJVs).

Doing business in 1990s was quite difficult for majority of Slovak companies. They had to cope with the loss of their export markets in former Council for Mutual Economic Assistance member countries, as well as with the influx of goods from Western countries, which were often of higher quality and also more attractive for domestic consumers. IJVs were thus a must for many Slovak companies, if they wanted to stay competitive.

The situation has significantly changed, as shown in figure 1. 44% of respondents think that the extent to which they can operate the IJV without the inputs from the partner firm is high or very high, compared to 36% of respondents who state this extent is low or very low. 20% of companies have evaluated this extent as average.

**Fig. 1: Dependence on partner's inputs**



Source: own research

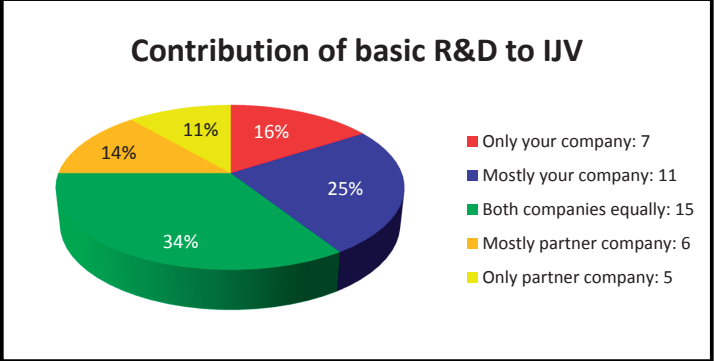
This fact points out that Slovak partner firms are less dependent on their foreign counterparts than they were in 1990s. It could be explained by the fact that the Slovak companies have amassed experience of operating in market economy and are self-confident enough to think they will stay competitive without cooperation with foreign partner.

Another reason of perceived lower dependence on foreign investors might be that the Slovak companies themselves provide important inputs to IJV. In 1990s, research and development and technologies were among the resources the Slovak companies were seeking the most in foreign investors. As mentioned, lower quality of Slovak products compared to products from market economies was a major barrier of their competitiveness in Slovakia and also abroad.

Research and development and state-of-the-art technologies as their outcomes were seen as means to overcome this barrier.

However, the situation is radically different nowadays (figure 2). Only 25% of respondents stated that mostly or only the partner company contributes the basic research and development to IJV (1 company did not answer this question). On the other hand, 41% of Slovak partners have answered that only or mostly their company contributes these inputs to IJV. 34% of respondents think that both companies are contributing equally.

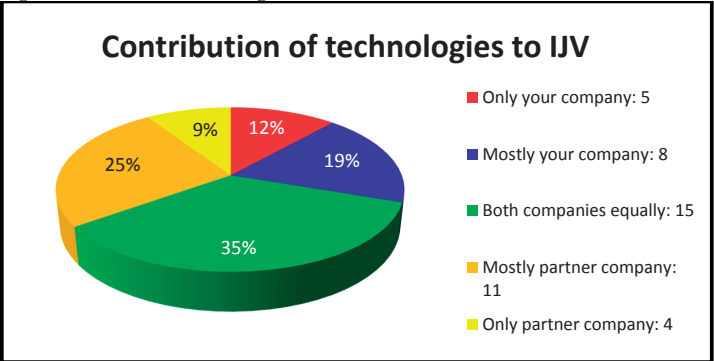
**Fig. 2: Contribution of basic research and development to IJV**



Source: own research

Speaking about technologies (figure 3), the results are slightly different.

**Fig. 3: Contribution of technologies to IJV**



Source: own research

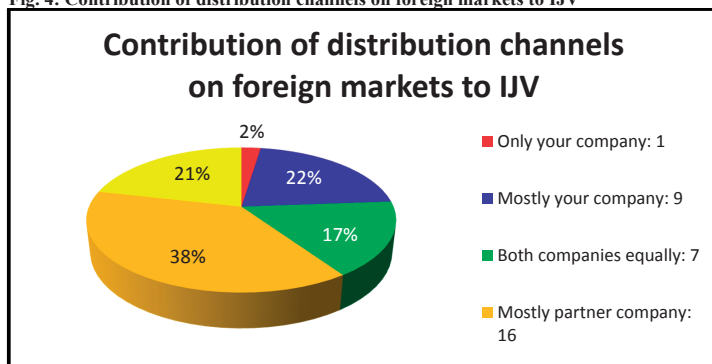
34% of Slovak partners admit that mostly or only the partner company contributes the technologies to IJV, whereas 31% state that it is mostly or only their firm contributing these inputs. Percentage of respondents who think that both companies contribute equally is nearly



the same compared to basic research and development – 35%. Nevertheless, gaining access to new technologies is still the second most important motive of IJV creation for Slovak companies (Hlušková, 2014).

Gaining access to distribution channels of the foreign partner in order to expand abroad was one of the most important motives of IJV creation in 1990s, along with transfer of technology and know-how.

**Fig. 4: Contribution of distribution channels on foreign markets to IJV**



Source: own research

The situation has not significantly changed since that time (figure 4): 59% of survey respondents state that mostly or only the foreign company contributes distribution channels on foreign market to IJV. In 17% of the cases, the contribution of both companies is equal and only 24% of the Slovak companies contribute mostly or only the distribution channels abroad. Gaining access to the distribution channels of the partner is the third most important motive of IJV creation for the respondents (Hlušková, 2014).

## 5 CONCLUSIONS

The development of Slovak-foreign IJVs resembles the development of the whole Slovak economy. More than two decades of market economy, along with the EU accession and adoption of Euro currency have made Slovakia not only an attractive place for foreign investment, but also have helped Slovak companies to gain crucial knowledge of functioning in the markets home and abroad. Improved bargaining position of Slovak companies face to foreign partners can be seen also in the research results on the extent to which Slovak firm can operate the IJV without the inputs from the partner firm – 44% of respondents evaluated this extent as high or very high. Another factor supporting the statement about bargaining position is that 41% of Slovak partners have answered that only or mostly their company contributes

basic research and development to IJV – inputs which were among the most sought by Slovak companies in 1990s. It means that Slovak companies are less dependent on their foreign counterparts to provide these vital inputs and they are also becoming attractive partners not only for efficiency-seeking investors, but also for investors searching for strategic assets, which research and development undoubtedly are.

Nevertheless, some aspects are still the same. Despite the overall attractiveness of Slovakia for foreign investors – the best example is the Jaguar Land Rover investment, the largest in Europe since 2008, regional imbalance – mainly among the western part of Slovakia and central and eastern regions on the other side - still remains an issue, with Bratislava region far exceeding the rest in the number of IJV headquarters. It is understandable given its status as the country's capital city, but the extent of this dominance is not beneficial in order to decrease the differences between the levels of economic activity in other regions. However, missing infrastructure (e.g. highway between Bratislava and Košice, the largest city in the eastern part of Slovakia) poses limits for further regional expansion of foreign investment.

The positive shift can be seen in the perceived dependence on foreign partner to continue the IJV operations. Slovak partners tend to be more self-confident that they are able to manage the IJV without their foreign counterparts. As mentioned, higher level of inputs' contributions by the Slovak partners might explain this fact, as well as knowledge of business operations and access to information significantly better than in the 1990s, mainly due to the Internet, but possibly also because of institutional network aimed to promote entrepreneurship and foreign expansion of Slovak companies (e.g. Export-Import Bank of Slovakia or Slovak Investment and Trade Development Agency).

Another change can be seen in the contributions of research, development and technologies of the respective partners to IJVs. Slovak companies are contributing these inputs on their own, which is a major development compared to 1990s, when they were largely dependent on foreign investors and the access to know-how and technology of the partner was among their main motives of IJV creation. It means that the Slovak companies themselves have their own assets to offer to potential foreign partners, which also improves their bargaining position in the process of IJV creation and existence. However, the interest of Slovak firms in partner's distribution channels on the foreign markets was and still is one of the most important motives of Slovak-foreign IJV establishment. Given the openness of Slovak economy and its dependence on exports, this factor will certainly be among priorities of Slovak companies in the future as well.

Based on the research results, it can be concluded that the research hypothesis - the characteristics of the Slovak-foreign joint ventures in terms of dependence of the Slovak partners on the foreign partners and of the inputs provided by the Slovak partners have changed in favour of the Slovak partners since 1990s – is valid in terms of dependence on the foreign partner and basic research and development inputs of the Slovak partner. Less significant positive development may be seen in technology inputs, where the extent of Slovak and foreign partners' contributions are very similar. As for the distribution channels in foreign markets, they are still provided by the foreign partners in majority of cases, the change compared to the situation in 1990s is thus the least visible in this indicator.

In today's rapidly evolving world economy facing the challenges of automation and the fourth industrial revolution, IJVs are certainly a proper tool to keep or increase the competitiveness of the Slovak companies.

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# Austrian Skills in East Africa: A Story of Knowledge, Expertise and Impact Investing

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**Abstract:** Impact investing is developing in countries where the lack of credit availability implies that poor people borrow at very high rates of interest. Web based micro-credit platforms tended to retain mostly intermediary roles, preventing peer to peer engagement but this situation seemed to change since the end of the XXth century toward a more bottom-up approach. As a work in progress, this paper aims at complementing the literature on micro-credit and impact investment through the study of a recent operation mixing both approaches by Oikocredit, a famous international impact investing organization, in Austria, a country enjoying a specifically high level of charity involvement, involving both impact investing and direct contact with East-African project bearers.

**Keywords:** Africa, Austria, charity, developing countries, impact investing.

**JEL Classification codes:** G21.

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## 1 INTRODUCTION

Impact investing, broadly defined as the act of investing with a specific social or environmental aim in mind (Bugg-Levine & Emerson 2011), is developing in countries where the lack of credit availability implies that poor people borrow at very high rates of interest, generally doing so to meet short-term consumption needs, not to make long-term productive investments (Morduch 1998). Non-profit organizations have had a long history of working from a top-down perspective, projects mainly emanating from northern countries, as the locations from which charity organizations and donors were the most present, and were proposed to developing country would-be entrepreneurs. At the same time, Web based micro-credit platforms retain mostly intermediary roles, preventing peer to peer engagement (Ashta & Assadi 2010), even centering their policies on the absence of such contacts, which explains their refusal of the use of social networks as opposed to their extensive use by most crowdfunding platforms.

This situation seemed to change since the end of the XXth century toward a more bottom-up approach (Ghatak & Guinnane 1998), developing-country entrepreneurs becoming increasingly the source of such projects. As a work in progress, this paper aims at

complementing the literature on micro-credit through the study of a recent operation mixing both approaches by Oikocredit, a famous international impact investing organization, in Austria, a country enjoying a specifically high level of charity involvement. The operation in question, involving a continuing education effort happening with farmers and agricultural managers in Austria, is directed toward African entrepreneurs in order to empower them for future impact-investing related local projects. Not a direct operation from Oikocredit, this operation is still destined to serve as a pioneering way to offer to developing country based Oikocredit operations a number of people capable to serve as impact investing project 'multipliers' for this sustainable development oriented NGO.

## **2 LITERATURE REVIEW**

### **2.1 SMEs and funding**

Business have endured a severe decline in finance since the 2008 financial crisis. Traditionally funded by banks, in the Western world, small and medium sized enterprises (SMEs) in particular have faced an abrupt decrease in the availability of financing from financial institutions as the financial crisis increased the risk aversion of such institutions (European Central Bank 2014). Under these conditions of reduced supplies of fund, even for companies originating from rich economies which may force them to scale down production and investment (Klein 2014), it is inevitable that less favored projects such as extremely small ventures in developing countries, which are representing additional levels of uncertainty and increased risks of generating bad debt in a weak legal environment under subpar macroeconomic conditions, are even more impacted by this shortage (Owusu-Manu, Afrane & Donkor-Hyiaman 2014).

### **2.2 SME financing in Africa**

In such a situation, economies which are mostly based on a large number of SMEs, and even micro-enterprises, tend to suffer the most from this drastic reduction of bank originated financing (Klein 2014). This prevalence of SMEs is especially real in Africa, with for example an estimated 70% of the GDP of Ghana created by SMEs which are constituting 92% of Ghanaian registered companies (Asare 2014). The existence of these SMEs is at the same time often related to poverty, a situation known for creating even greater needs for exogenous capital in order to break the vicious circle of poverty and engage in normal business (Ashta 2012).

In the context of Africa, financing small companies usually involves multiple methods including business angels, venture capital and general capital market, but also more prominently family relatives and friends as well as various local fund promoters. Globally, even before the financial crisis, their main sources of capital are unpredictable and not secure as being in the form historically of retained earnings and informal savings as well as loan associations (tontines) (Kaufman 2005). Interestingly in our case, funds are also coming in the form of loans by a number of actors less present in the Western context, including universal banks, NGOs (non-governmental organizations), NPOs (non-profit organizations) and microfinance (Asare 2014).

As mentioned earlier, outside of traditional local solutions, potential solutions to the pressing financing needs of African ventures and SMEs, have mostly involved donations and microfinance, both being strongly associated with adverse effects in terms of money employment, responsibility and control (Morduch 1998).

### **2.3 Impact investing in this context**

The African Development Bank Group noted in his 2013 report that there were strong needs for improvement in food productivity, under rather positive conditions (including the availability of lands and of agricultural workforce), pointing at sustainable growth as a necessity for the years to come (AfDB 2013). The recent development of impact investing, a solution being related to traditional investment (including legal means of control) and taking into account the environmental and social impact of such an investment, seems to offer several positive solutions to the question of the effects of external sources of funds for African SMEs and the concerns for sustainability of African policy makers. These solutions, fundamentally originating from the nature of impact investing itself (Nilson 2008; Bugg-Levine & Emerson 2011), allow and impose at the same time a series of conditions supposed to generate a virtuous circle (Ghatak & Guinnane 1999). Among these conditions are notably the existence of a real value chain linking investors and entrepreneurs and the actor's consciousness of how this value chain would positively impact society (AVCA 2014). On the more macro scale, impact investing was found to have a potentially high impact in the African context on, notably, inclusive business development (Ngoasong, Paton & Korda 2015). This linkage between charity, funding, responsibility and monitoring is to be connected with continuous efforts from the world of NPOs to engage in capacity building to better perform on their core missions (Minzer et al. 2014).

In the next section we will describe a project led in Austria by a NPO named Oikocredit, specializing in social investment, which exemplifies these dynamics of financing, responsibility, and the engagement of peers in an operation mixing impact investing, Internet based funding and real-world exchanges between participants.

### **3 OIKOCREDIT, AUSTRIA AND EAST AFRICA**

Oikocredit is a worldwide cooperative and social investor, founded in 1975 in the Netherlands under the name Ecumenical Development Cooperative Society (EDCS). It is engaged in the provision of funds toward socially oriented businesses, including fair trade organizations, cooperatives, SMEs and the microfinance sector in general, in nearly 70 countries. As a global impact investor, Oikocredit counted in 2015 a total portfolio progress of 23%, passing a historic €1 billion milestone in total assets (Oikocredit, 2015). Oikocredit focuses mainly on local capacity building through on-site training, technical assistance and consulting, in order for funded entrepreneurs to be able to sustainably benefit from micro-credit operations. Agriculture has been part of Oikocredit operations since the foundation of the NPO, as this sector is often synonymous of survival in developing countries. In 2015, disbursements amounted €419 million, of which €158.1 million for investments in Africa, East Africa becoming a priority region for the cooperative (especially for agricultural enterprises and financial institutions). Oikocredit recorded an exponential growth on this continent, in diversifying particularly in renewable energy

Concerning investor's side, the development cooperative is notably present in Austria which is one of the countries with the highest capital inflow and the biggest invested amount by member worldwide (€2560 per investor, compared to Germany's €2334 in 2015), figures which are well in line with the national Austrian cultural identity featuring high levels of participation to charity (Caseau 2015). Despite its small size, Austrian contribution to Oikocredit operations was the third largest in the world in 2015 (Oikocredit 2015). People investing in Oikocredit projects are mainly not donors, they generally obtain a return on investment of 2%, except for operations linked to major crises where dividends are limited to 1%. They do not have the choice of the specific projects their contribution will finally fund or support. In order not to influence the charitable intentions of investors (several of them don't even reclaim their dividend) Oikocredit does not wish to link participation and returns in its communication. The idea of obtaining a return on investment seems in this case more a matter of philosophy than investment. We could say that in this specific case, the notion of charity is contained in the goal and intentions of each contributor. Formally, in this sense, such

operations pertain to the concept of charity as “a system of giving money, food, or help free to those who are in need because they are ill, poor, or have no home” (Cambridge Dictionaries Online).<sup>12</sup>

The operation we are investigating in this paper happened in one region of Austria in the summer of 2015, with eight participants from four different East African countries (namely Rwanda, Tanzania, Kenya and Uganda) coming for two months to receive training in a joint programme conducted by Upper Austrian authorities and Oikocredit.

The concept of these training sessions located in Europe rather than in Africa, as they would normally be for more classical Oikocredit organized operations, originated from the project initiator and Oikocredit representative of Upper Austria, Viktor Leutgeb. The choice of East African countries was made extremely rapidly from the enthusiastic response of an East Africa regional official who embraced the project and directly proposed to send people. As the participants were only university graduates, all of them lacked agricultural business practical skills. They therefore were trained in Upper Austria at various Agricultural colleges to acquire or broaden their knowledge of agricultural management, including business management, production, sales and various corporate competences. Additionally to these theoretical skills, all participants were instructed in practical domains at various local Austrian businesses, among others, notably farms, a tannery, and sustainable energy companies. As offering an opportunity of cross-cultural contacts with the local population, this project was also the occasion to expose participants to local cultural events including theater and village festivities. This particular condition is interesting, as reversing the classical tendency of prosocial projects in developing countries. In this sense, usually, "Oikocredit aims to provide farmers with ways to improve their lives, by providing support to agricultural partners" (<http://ea.oikocredit.coop/agriculture>), whereas in this specific operation, local actors were selected according to their organizing capacities rather than their technical skills. The training sessions on agricultural skills in Austria are therefore aiming at turning them into efficient relays for a future increasingly higher number of more classical participants (i.e. local farmers).

Indeed, the participants themselves were selected by Oikocredit under various conditions, namely the design and production of concrete small scale agricultural projects in the form of business plans. These projects featured for example rabbit, pig or goat breeding, meat and hide processing, cheese production, and fruit growing and processing. Most projects additionally

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<sup>12</sup> <http://dictionary.cambridge.org/fr/dictionnaire/anglais/charity>



were focused on value chains purely local to the country of each participant, respecting local specificities in terms of social, economic, and environmental conditions.

To date, participants are still in contact with Oikocredit which closely monitors the effective achievement of projects, how is the acquired knowledge transferred to other local participants in various African regions. In their countries of origin, some of the project participants have started to work as consultants for Oikocredit partner organizations, notably directly in the context of training and micro-loans granting appraisal. No replication of the project is planned for 2016, as a full evaluation of the impact of the 2015 operation has to be conducted first.

#### **4 LESSONS FROM THIS CASE**

Although happening through the engagement of a large crowd on the Internet for the provision of funds, Oikocredit projects are not pertaining to the world of crowdfunding per se, a point representatives of the organization specifically insist on. The origin of this international NPO in charity, as defined above, made it turn toward impact investing rather than organizing mere donation campaigns. Differences between these two close concepts, crowdfunding and impact investing as it is organized nowadays, lies in the responsibility and monitoring actions in place. The peculiar nature of Austrian charity, NPO organizations and donors/funders, a mixture of generosity in relationship with strong demands in terms of responsibility, may also be one of the element enabling the design and realization of such a project. The specific operation described above exemplifies several elements seen in the literature studied in this paper such as the positive effects of impact investment management on personal engagement and project monitoring from inception to completion. Outside of the financing classically associated with impact investing, this project additionally featured two main elements. The first one is training outside of the local context with the establishment of links with foreign business and technical practices, in liaison with project funding organization. The second one is the willingness to spread the effects of the project, notably capacity building, through a small scale project by using participants as disseminators of the acquired knowledge in their respective countries toward local actors.

Oikocredit's type of solution, by involving stakeholders seem to additionally at least partially solve the peer engagement deficit associated with classical microfinancing operations happening through the Internet (Ashta & Assadi 2010), offers hints at solutions to the missing link between investors and project bearers which foster problems of fund employment and social impact in operations which do not feature person to person links between foreign investors and local actors in contexts of poverty.

These elements positively combine with other points deemed essential for impact investing success in making a difference in African countries. Indeed, the physical presence of participants at events, including most of the project training operations, offers value chain linking investors and entrepreneurs and the actor's consciousness of how this value chain would positively impact society (conditions necessary to the success of impact investing from Ghatak & Guinnane 1999). By turning project bearers to stakeholders in the social impact dissemination of their newly acquired knowledge and positions, this operation allows to materialize the promises of both effectively linking geographically and institutionally separated stakeholders and offering direct elements allowing the said participants to acknowledge their responsibility and impact inside the project they manage and society at large.

## **5 CONCLUSION AND AVENUES FOR FUTURE RESEARCH**

This study is a part of a work in progress on both this specific project in East Africa and on the links between organizational forms, person to person engagement, and impact investing success in developing countries in liaison with international funders. At this stage it offered new insights on how such organizational features could fill gaps in the literature, as well as in practice, about the distance, notably in the context of Internet based finance calls, between donors, funders, and NPOs, on one side, and local developing country project bearers and participants on the other.

As part of an ongoing research project, studying operations and phenomena which are still not over, this paper is certainly not closing fully the multiple questions raised on the links between impact investing and specific project traits. To the opposite, it opens a whole range of questions about the possibilities and power of engaging more directly individual funders and project bearers, outside of the exposure of the latter to the cultural and societal context of the former. To investigate such links, the projects featuring these links would offer invaluable hints about the effectiveness of these practices. A second limitation, common to any case based study, is the peculiarities involved in this project by the individuals which both organized it and participated to it. Inevitably, surveying a greater number of conditions and participating organizations would without doubt offer much richer insights about the relationship between modes of organization, participant profiles and the conditions of maximized social effects of impact investing in developing countries. Finally, as mentioned earlier, the fact that the full assessment of this particular project has not been possible to date because it is not still completed, probably prevented the observation of both difficulties and

positive side effects originating from the specific organizational arrangement at play. Yet, the fact a complete reversal of the nature of the selected individuals, business and project management capable persons from university rather than farming backgrounds, was chosen, clearly indicates lessons from both the past and modern conditions are taken into account. Indeed, this case exemplifies at the same time new requirements in terms of responsibility and monitoring as well as a redefinition of the roles of each actor and new conceptions of involvement, knowledge, and expertise from the donor's country of origin in impact investing projects.

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# Value-based Investing in Central and Eastern European Countries (CEECs) – Based on the Companies Reflected in Socially Responsible Indices

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**Abstract:** The main objective of the study is to analyze value-based action indices listed on the stock exchanges of CEECs. Both value changes of these indices (passive portfolios) in respective years and the attempt to find determinants of these changes were analyzed. The scope of the analysis encompasses sustainable companies included in the CEERIUS, VONIX and RESPECT indices. Central and Eastern European socially responsible indices are relatively new on the market, therefore the study sample was limited to this three indices only. Consequently, not only was the composition of these indices analyzed but also their profitability and efficiency were measured. The rate of return and Sharpe ratios as well as modified Sharpe ratios, Sharpe – omega ratios, Sortino ratios, Omega ratios, RoVar for daily and weekly returns were also calculated. The consciousness of the processes influencing the effectiveness of socially responsible companies may be useful while considering the investment decision-making process. If socially responsible companies are ‘rewarded’ by achieving higher rates of return, then market mechanisms would have to be supported together with social awareness rather than strengthening legal and regulatory frameworks referring to sustainable development..

**Keywords:** value based investing, socially responsible investing, Central and Eastern European socially responsible indices, effectiveness of value based financial investment, value based portfolios.

**JEL Classification codes:** G11, M14.

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## 1 INTRODUCTION

The idea of the profitability and risk of such companies which are aimed at not only increasing their market value but also at setting higher social or ecological standards has been widely discussed in various publications. It was touched upon by M. Jensen and M. Meckling [Jensen, Meckling 1976<sup>1</sup>, M. Bertrand and S. Mullainathan [Bertrand, Mullainathan 2003] and A. Barnea and A. Rubin [Barnea, Rubin 2006] who are the advocates of the ‘*doing good but not well*’ thesis according to which the costs of socially responsible activities outnumber their advantages, which is further reflected in the increase of the company’s value measured by the increase of its market value. Whereas A. Edmans [Edmans 2008], B. Lev, B. Sarath and T. Sougiannis [Lev, Sarath, Sougiannis 2005] opt for another thesis, i.e. ‘*doing good while doing well*’, which means that all the activities undertaken for social responsibility are the result of the company’s policy or legal regulations (e.g. environmental risk assessment in

automobile sector companies etc.) and the effect of increased market value of such a company is an unplanned reward. There may also be encountered the third thesis, namely '*no effect*', which means that socially responsible activities do not cause any changes in the company's market value.

The publications discussed also the characteristics of socially responsible assets portfolios (shares, bonds). There have been identified three theses concerning the behavior of such portfolios. The first and the second refer to ROI whereas the third - risk exposure. The first thesis says that socially responsible portfolios have lower rates of return than conventional portfolios. The research in this field was conducted by: Ch. Geczy, R.F. Stambaugh, D. Levin [Geczy, Stambaugh, Levin 2005], R. Bauer, R. Otten, A. Tourani-Rad [Bauer, Otten, Tourani-Rad 2006]. The second thesis is quite contradictory and discusses higher ROI in socially responsible portfolios than in conventional portfolios. The third thesis refers to risk exposure and it is said that socially responsible portfolios have risk exposure different than conventional portfolios.

In the economic practice investment portfolios are realized on the basis of earlier identified strategies. They are both to meet the criteria of social responsibility and also to give investors a chance to select the level of investment risk. The strategies include:

- „thematic strategy” (of the highest risk– they are usually investments in one sector, e.g. clean water, clean energy etc.).
- “the best in the class” strategy which means choosing out of the group of companies using ESG integrations (Environmental, Social, Governance) these ones whose expected rate of return will be the highest. There is also another approach connected with this strategy which takes into consideration ESG factors as well, namely HIP (Human Impact + Profit) investments [Herman 2010]. The HIP investor message is „Make Bigger Profits by Building a Better World”. It is an interesting approach since it discredits those who claim that social responsibility in investment is based only on the feeling of implementing changes for better only in social, economic or environmental sectors without income expectations. It means that social factors are more important than financial factors.
- Another strategy means the selection based upon legal and custom standards. It is an example of a negative selection but on the basis of legal norms and standards.
- The strategy of considering ESG factors in the financial analysis called also a positive selection mentioned hereabove.

- The strategy of „engaging in sustainable development” is also called a preliminary action for the development of ESG factors meaning certain suggestions for the companies, aid in the implementation process of ESG factors connected with observation and taking the perspective of entering as a full family member of socially responsible companies.
- „impact investing” strategy where the effect of social responsibility is realized first and later on purely income factors are taken into account.

The investors' interest in particular strategies depends on many factors. Some will be focused only on income growth whereas others on diversifications of their own assets, which means for them the increase of their security, others will search for an innovative approach and, undoubtedly, there are also those for whom environmental protection will be the highest value and priority for them even with reference to their own assets portfolio. Without a shadow of doubt, when investors resign from income factors and move on to ideological factors, these are investors with abundant portfolios who, according to Maslow's pyramid, have secured all their basic needs (physiological and safety).

## 2 METHOD

The methodology of composing VBA portfolios has been developed by the Global Reporting Initiative (GRI - G4)<sup>13</sup>. Entities eager to adjust to international standards apply this methodology widely though modified in some cases. The reason lies in the difficulties to meet the requirements often due to macro-economic surrounding the companies operate in. It is observed in the companies qualified to the RESPECT index (companies listed on the Warsaw Stock Exchange). The selection process is not a subject of such high environmental requirements, which is next reflected in the index components.

In order to compare the analyzed indices (see Table 1, Table 2), daily and weekly log returns were calculated. To measure effectiveness, classical equations were used such as the Sharpe ratio and the modified Sharpe ratio.

The Sharpe ratio was defined as:

$$SR = \frac{\mu - r_f}{\sigma},$$

where:

$\mu$  – average logarithmic rate of return,

$\sigma$  – standard deviation of logarithmic rate of return,

$r_f$  – average logarithmic risk-free rate of return, defined as follows:

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<sup>13</sup> The forth modification of the methodology.

$$r_f = \frac{\sum_{i=1}^n \ln(1 + r_{free}^i)}{k},$$

where  $r_{free}^i$  is the risk-free rate of return in  $i$  – this period, and  $k$  stands for the number of base periods in a year. The improved Sharpe ratio was calculated by replacing the standard deviation with a standard semi-deviation.

Apart from classical methods of measuring effectiveness, there were also applied alternative measures which use lower partial moments – LPM – to measure risk or the Value at Risk - *VaR*.

The lower partial moment was derived from the equation:

$$LPM^n = \frac{1}{n} \sum_{i=1}^n \max(MAR - r_i, 0)^n$$

where  $n$  is the order determining the type of a lower partial moment,  $r_i$  is the rate of return on investment in  $i$ -this period, and *MAR* is the *minimum acceptable return*, which may equal 0 or may be equal to the risk-free rate of return or may have any average rate of return on a standard investment. In the paper, *MAR* is the risk-free rate of return. The order  $n$  is interpreted as the level of investor's aversion to loss, and the higher the loss is, the higher the order is [Perez 2012].

The following ratios applying the lower partial moment were used in the paper as well:

- Sortino ratio,
- Omega ratio.

The Sortino ratio was calculated as follows:

$$Sortino = \frac{\mu - MAR}{\sqrt{LPM^2}}.$$

whereas the Omega ratio was proposed by Shadwick and Keating [2002] and was calculated as follows:

$$Omega = \frac{\mu - MAR}{LPM^1} + 1.$$

The value at risk (*VaR*) is a defined number in such a way that the possibility of loss higher than *VaR*, in a given time horizon, is equal to the given in advance number  $\alpha$ . Assuming that the rate of return on a given investment has a regular *VaR* distribution in a given  $t$  – time, it can be calculated as follows:

$$VaR = \mu - c \cdot \sigma,$$

where  $c$  is the constant whose value depends on the adjusted level of  $\alpha$  significance and is equal to:



- $c = 1.645$  for  $\alpha = 0.05$ ,
- $c = 2.326$  for  $\alpha = 0.01$ .

The *RoVaR* is the relevant expected return divided by the *VaR*. The *RoVaR* provides the information to choose the investment portfolio with the highest expected rate of return over *VaR*. This measure was proposed by Dowd [Dowd, 2000]:

$$RoVaR = \frac{\mu - r_{free}}{VaR}.$$

The following risk-free rates were applied in the analysis: for daily returns EONIA (EUR) and WIBOR ON (PLN), and for weekly returns EURIBOR SW (EUR) and WIBOR 1W (PLN). These rates were simultaneously treated as the minimal value accepted by the MAR investor.

### 3 EMPIRICAL STUDIES

#### 3.1. Descriptions of data

There were three stock exchange indices included in the analysis, i.e. the VBA of the companies listed in CEECs (CERRIUS, VONIX and RESPECT). The research period which was chosen for the analysis encompasses the years 2010-2015. Such a short research period results from a short period the indices hereabove are listed on the stock exchange (see Table 1, Table 2). VBA indices of the companies were compared to the classical indices of the companies listed on the Vienna Stock Exchange.

#### 3.2. Results

Table 1 and Table 2 below presents the characteristics of the VBA companies' indices and classical indices of the companies listed on the Stock Exchange in CEECs.

Both daily and weekly rates of return for the RESPECT index are significantly higher than other indices, i.e. CEERIUS and VONIX, and have positive values. Respectively, risk measured by the standard deviation is the highest for the VONIX index whereas risk for the RESPECT index is lower than for the CEERIUS but higher than for the VONIX. It may be due to a greater spectrum of available investments caused by the modification of qualifying the companies to the RESPECT index. Simultaneously, it is not confirmed by the behavior of the indices of conventional companies listed within CEE indices since the results are worse than for the RESPECT index. Rates of return (daily and weekly) for the indices of conventional companies are negative and, additionally, all of them present a higher risk measured by the standard deviation than the RESPECT index (therefore this portfolio is better diversified). It should be mentioned here that in the same period WIG20 Index recorded negative values for daily returns, which equaled  $r_s = -0,0186\%$ .

**Table 1. Profitability and effectiveness measures from standard indices versus sustainability indices (daily returns) 2010-2015**

	CEERIUS	VONIX	WBI	ATX	ATXPrime	ATX five	CECEX	NTX	RESPECT
Mean return	-0,0216	-0,0043	-0,0005	-0,0027	0,0032	-0,0033	-0,0177	-0,0137	0,0174
sigma	0,9803	1,2805	1,1942	1,3824	1,3050	1,6684	1,2201	1,2175	1,1685
semi_sigma	0,7156	0,9405	0,8757	1,0036	0,9505	1,2021	0,8965	0,8865	0,8619
SR	-0,0228	-0,0040	-0,0011	-0,0025	0,0019	-0,0024	-0,0151	-0,0112	0,0076
SR*	-0,0312	-0,0054	-0,0015	-0,0034	0,0026	-0,0034	-0,0206	-0,0154	0,0103
LPM1	0,3718	0,4679	0,4298	0,5124	0,4787	0,6249	0,4458	0,4395	0,4191
LPM2	0,5284	0,8892	0,7673	1,0101	0,9005	1,4490	0,8200	0,7985	0,7349
Sortino	-0,0307	-0,0054	-0,0015	-0,0034	0,0026	-0,0034	-0,0204	-0,0161	0,0103
HPM1	0,3495	0,4628	0,4285	0,5090	0,4812	0,6208	0,4273	0,4251	0,4280
Omega	0,9400	0,9892	0,9970	0,9933	1,0051	0,9935	0,9586	0,9673	1,0211
Sharpe-Omega	-0,0580	-0,0108	-0,0030	-0,0067	0,0051	-0,0065	-0,0414	-0,0327	0,0414
Var	1,6342	2,1108	1,9650	2,2768	2,1435	2,7478	2,0247	2,0165	1,9048
RoVar	-0,0137	-0,0024	-0,0007	-0,0015	0,0011	-0,0015	-0,0091	-0,0071	0,0046

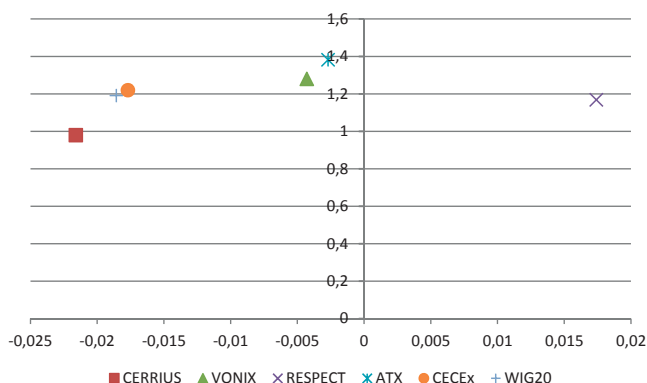
Source: The author's own analysis

**Table 2. Profitability and effectiveness measures from standard indices versus sustainability indices (weekly returns) 2010-2015**

	CEERIUS	VONIX	WBI	ATX	ATXPrime	ATX five	CECEX	NTX	RESPECT
Mean return	-0,1197	-0,0226	-0,0041	-0,0197	0,0084	-0,0231	-0,0880	-0,0681	0,0898
sigma	2,3244	3,1493	2,9378	3,3521	3,2021	3,9093	2,6895	2,8083	2,5499
semi_sigma	1,7307	2,3579	2,2412	2,5194	2,4155	2,9342	2,0001	2,1110	1,9293
SR	-0,0563	-0,0107	-0,0052	-0,0092	-0,0009	-0,0088	-0,0369	-0,0282	-0,0104
SR*	-0,0757	-0,0143	-0,0068	-0,0123	-0,0012	-0,0117	-0,0496	-0,0376	-0,0137
LPM1	0,9410	1,1959	1,0960	1,2650	1,1973	1,4623	1,0482	1,0882	0,9767
LPM2	3,2326	5,6400	5,0564	6,4247	5,8414	8,7089	4,2030	4,6256	3,7612
Sortino	-0,0728	-0,0142	-0,0068	-0,0122	-0,0012	-0,0116	-0,0484	-0,0369	-0,0137
HPM1	0,8101	1,1621	1,0632	1,2341	1,1945	1,4281	0,9491	1,0089	0,9502
Omega	0,8608	0,9717	0,9701	0,9756	0,9977	0,9766	0,9054	0,9271	0,9729
Sharpe-Omega	-0,1392	-0,0283	-0,0140	-0,0244	-0,0023	-0,0234	-0,0946	-0,0729	-0,0271
Var	3,9434	5,2032	4,8368	5,5339	5,2590	6,4538	4,5122	4,6878	4,1048
RoVar	-0,0332	-0,0065	-0,0032	-0,0056	-0,0005	-0,0053	-0,0220	-0,0169	-0,0065

Source: The author's own analysis

**Figure 1. The level of average rate of return and standard deviation for the analyzed indices (for daily returns)**



Source: The author's own analysis

#### 4 CONCLUSION

The analysis of the portfolios belonging to the companied qualified to the VBA type requires paying a lot of attention since there are many factors which influence increasing or decreasing their values. Certainly, numerous analyses conducted so far may well confirm this fact. However, they do not provide the answer if such portfolios are more preferable by investors or not. Undoubtedly, investors are looking for profits and will not invest in undertakings which generate loss even if the companies included in the portfolio represent acceptable and promoted by investors values. Therefore, without any doubts, fundamental factors determine investments in VBA companies. The conducted analysis indicates higher profitability and effectiveness of one of VBA indices, namely the RESPECT Index. Nevertheless, it cannot be unambiguously confirmed if it is caused by increased interest investors have in this idea or if it is due to the components of the index and its considerably higher diversification which results from qualifying companies operating in high-emission sector to the index. Additionally, the short period of analysis due to still young VBA indices may lead to an erroneous deduction. Within the analyzed five-year-long period, the RESPECT Index recorded a positive rate of return, whereas the rest of the indices, including both VBA and conventional ones, recorded a negative rate of return.

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# Oil Price Enhancing Autoregressive Fuel Prices Nowcasting Models

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**Abstract:** The article statistically investigates the predictive power of oil price as incorporated in autoregressive description of fuel price time series. Based on the quarterly data ranging from 1996Q1 to 2014Q2, it examines short-run forecasting properties of the oil prices in predicting fuel prices in developed European countries and the United States. In the course of the analysis, first the required stationarity properties of the time series are achieved by differentiating. Afterwards, two prediction models are compared – ARIMA and the model with oil price incorporated into the autoregressive structure. The findings of these extended model show as an increase in the prediction accuracy in the short-term forecasting of fuel prices based on data of oil price development. The results show that the relationship between the oil and fuel price are interdependent. We present a rather simple approach which can be used for quick assessment for short-term development of fuel price.

**Keywords:** Oil price, fuel price, short-term prediction, ARIMA.

**JEL Classification codes:** C53, G17.

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## 1 INTRODUCTION

The strategic importance of oil as an irreplaceable energy source and importance of forecasting oil price movements is emphasized not only by scientific authorities in economic and technical sciences but by the market himself as well. To this day, no other easily available source has been discovered which would contain so much energy per unit volume.

Since the establishment of OPEC (1960), the price of oil is formed on the world market and depends on the situation on the markets of the three commodity exchanges NYMEX (New York Mercantile Exchange), where it trades with US oil WTI (West Texas Intermediate), unleaded gasoline, fuel oil and natural gas, the ICE (International Petroleum Exchange) trades Brent and Dubai (Arab Light), diesel fuel and unleaded petrol and last SYMEX (Singapore International Monetary Exchange) which trades crude oil Brent and Dubai (Fateh) and fuel oil (Baláž, 2011).

There is a massive body of literature investigating determinants of fuel prices and forecasting methods as Baláž (2001, 2008, 2011 with co-authors Margan, Ružeková, Zábojník), Coppola

(2008), Fernández (2006), Chevillon and Riffart (2009), Lanza, Manera and Govanni (2005), Obadi (2006, 2012, 2016 with co-author Korček), Wei, Wang and Huang (2010), Xie (2006). Predicting fuel prices involves tackling the problem of complexity and a large number of possible explanatory variables. Long-term projections mostly deal with crude oil price as the determining component of fuel prices. Standard quantitative methods comprise econometric ARIMA or GARCH time-series models as in Fernandez (2006) or Wei et al. (2010), financial models investigating the relationship between spot and futures prices (Coppola, 2008) and structural approach with a collection of fundamental explanatory variables (Chevillon and Riffart, 2009) along with non-standard artificial neural networks or support vector machines approaches. In quick short-term predictions – nowcasting – of fuel prices, concentrating on autocorrelation structure and the crude oil, price appears to be sufficient for the sake of simplification. A pre-crisis study of Lanza (2005) estimated the relationship between 10 heavy crude oil price series and 14 petroleum product price series in Europe and the US finding naïve models marginally outperformed by error-correction models in Europe. In this study, we concentrate on easily exploitable forecasting models based on freely accessible data in the developed countries of the EU and USA. According to Fernandez (2006), a naïve ARIMA benchmark models are preferable in a very short run while sophisticated techniques perform better in longer-term forecasts. The question arises whether a natural benchmark of the ARIMA model can be improved upon by structural part only consisting of crude oil price variable utilizing the data of after-crisis period as well.

The wholesale price of fuel is based on the price of crude oil which constitutes approximately 34% while cost of processing and distribution of crude oil makes up around 7% of the total fuel price. Exchange rate EUR/USD can also affect the final price of fuel. Long-term growth of the EUR/USD pushes prices downwards whereas EUR/USD fall tends to have the reverse effect.

## **2 DATA AND PRELIMINARY TESTING**

We carry out the analysis on diesel prices data referring to them further as fuel prices (using gasoline prices would not change the findings substantially). The data analyzed come from EIA database ranging from 1996Q1 to 2014Q2. Original monthly data on world oil and fuel prices were used to compute quarterly averages and thus obtain time series subject to further analysis.

To avoid spurious relationships, seasonally adjusted time series were used in regressions. We thus obtained variables for fuel prices in Belgium (be), Germany (de), France (fr), Italy (it), Netherlands (nl), United Kingdom (uk), and United States (us).

Generally, fuel price  $y$ :  $y \in \{be, de, fr, it, nl, uk, us\}$ . World price variable is denoted  $w$ . Preliminary testing results ( $p$ -values) for original time series are displayed in Table 1.

**Tab. 1: Preliminary ADF tests of time series**

	be	de	fr	it	nl	uk	us	w
ADF	0,736	0,666	0,613	0,771	0,674	0,429	0,799	0,690
KPSS	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000

Source: The authors' calculations based on the EAI (2014) data

We used augmented Dickey-Fuller test (with an intercept and the null of a unit root) and alternatively Kwiatkowski – Phillips – Schmidt – Shin test (with an intercept and the null of a stationarity of the series around the deterministic trend). The results showed that all considered time series  $y$  as well as  $w$  are not stationary and requires detrending for further use in the regression analysis.

We thus repeated tests for a unit root for first differences labeled  $dy$  and  $dw$ . The results for detrended series are exhibited in Table 2. Both ADF and KPSS proved stationarity of all differenced time series. Reported probabilities suggest that the original series are integrated of order 1.

**Tab. 2: ADF tests of detrended series**

	dbe	dde	dfr	dit	dnl	duk	dus	dw
ADF	0,000	0,000	0,000	0,000	0,000	0,000	0,000	0,000
KPSS	0,399	0,421	0,438	0,333	0,419	0,367	0,244	0,223

Source: The authors' calculations based on the EAI (2014) data

To support the suggested usefulness of oil price as an additional explanatory variable to fuel price autoregressive model, we tested for causality between  $dy$  and  $dw$  series based on Granger (1969) approach. Two hypotheses were tested: (i)  $dw$  causes  $dy$  and (ii)  $dy$  Granger causes  $dw$ . We do not actually test whether fuel prices could affect crude oil price. The test could only reveal Granger type statistical causality. In our test, we examine whether predictions of the value of one variable –  $dy$  based on its own past values and on the past values of  $dw$  are better than predictions of  $dy$  based only on its own past values. The similar analysis is carried out for the two variables in the reverse order.

The results shown in Table 3 present  $p$ -values of the null hypothesis of no Granger causality between  $dw$  and  $dy$  suggest that for all countries under examination, oil price appears to affect fuel price (in the Granger sense) but not the other way round, warranting the use of  $w$  as an explanatory variable in the further regression analysis.

**Tab. 3: Granger causality tests**

	be	De	fr	it	nl	uk	us
dw GC dy	0.003	0.005	0.003	0.004	0.002	0.002	0.000
dy GC dw	0.157	0.213	0.172	0.277	0.328	0.429	0.940

Source: The authors' calculations based on the EAI (2014) data

### 3 FORECASTING MODELS

As the first, we examine individual time series  $y$  and possibilities of ARIMA forecasts. Detrended differentiated series  $dy$  were used to apply Ljung-Box test. Correlograms based on  $Q$ -statistic reveal white noise properties of all  $dy$  series. The only exception was *dus* (United States) requiring an additional AR(4) term to capture the autoregressive pattern. Thus, except for *us* series, the first way of forecasting  $dy$  would be best done by its previous value  $dy(-1)$ . Forecast based on **Model 1** are then given by

$$\hat{y}_{t+1} = 2y_t - y_{t-1}.$$

*us* series forecasts are based on the estimated (4,1,0) ARIMA model. These models feature rather low predicting accuracy, mean absolute percentage error reaching up to 8%. The question arises, whether the predictive accuracy could be substantially improved by an additional explanatory variable. We explore  $w$  acting as an auxiliary predictor. Based on the results of unit root and Granger causality tests from Section 1, we employ differenced series  $dw$  in the models.

The second forecasting model (**Model 2**) regresses  $dy$  on  $dw$ . Serial correlation of the residuals requires augmenting the model by a MA(1) term. In such a way, the final form is (0,1,1) ARIMA with the  $dw$  additional regressor. Lags of  $dw$  proved to be of no help in the supposable increase of explanatory power. Table 4 displays the statistical results of the Model 2.

In the Table 4, coefficients and standard errors in brackets are reported as well as the standard errors of regression and common measures of fit (adjusted coefficient of determination and Akaike criterion). Model 2 features a considerable explanatory capacity judged by the  $R^2$ . The question is how this translates into the forecasting accuracy measure.

To explore predictive properties of the models, we compare them employing Diebold-Mariano test (DM test) (Diebold and Mariano, 1995). We test the models by carrying out the following procedure. First we determine a testing subsample. We chose to focus on the period of 2009Q1 to 2014Q2 leaving back the biggest spike in the data which could unnecessarily distort the forecasting errors. We generate two series of forecasts based on Model 1 and Model 2 as well as the forecast errors given by the difference of actual values and the forecasts. Subsequently square errors (SE) series SE1 and SE2 are calculated. By the DM test



one can determine whether the two SEs are significantly different, i.e. whether one of the models produces significantly better forecasts (lower errors and SE).

**Tab. 4: Model 2 estimation results**

	be	de	fr	it	nl	uk	us
dw	0.183	0.183	0.183	0.192	0.187	0.196	0.124
	(0.013)	(0.016)	(0.015)	(0.017)	(0.016)	(0.017)	(0.006)
MA(1)	-0.743	-0.615	-0.666	-0.599	-0.660	-0.738	-0.759
	(0.078)	(0.094)	(0.090)	(0.097)	(0.093)	(0.077)	(0.086)
R <sup>2</sup> <sub>adj</sub>	0.643	0.608	0.617	0.585	0.614	0.570	0.715
SE	4.198	4.635	4.476	4.955	4.716	5.709	1.914
AIC	5.734	5.932	5.862	6.066	5.967	6.349	4.164

Source: The authors' calculations based on the EAI (2014) data

In the Table 5 we report DM statistics. Coefficients are obtained as a result of regressing difference SE<sub>2</sub>-SE<sub>1</sub> on a constant. We thus get an estimate of the expected value of the difference as well as *t*-statistics enabling statistical inference. To get around inadequate *t*-statistics due to heteroskedasticity of the residuals, we employ Newey-West residuals option in the OLS estimation.

**Tab. 5: Diebold-Mariano test statistics**

	be	de	fr	it	nl	uk	us
coeff.	-3.612	-4.376	-3.647	-3.658	-4.088	-5.158	-12.016
prob.	0.038	0.067	0.067	0.176	0.116	0.043	0.040

Source: The authors' calculations based on the EAI (2014) data

The results in the Table 5 reveal the most significant difference in square errors between the models in case of Belgium, UK, and US (at 5%) followed by Germany and France (10%). Differences in favour of the augmented model suggest that its predictive accuracy outperforms the simple ARIMA approach.

No proof against the statistical indifference can be furnished for Italy and the Netherlands. In the latter two cases the augmented model brings no additional accuracy to forecasts based on the augmented model.

## 4 CONCLUSIONS

The analysis statistically approved that oil price can be safely used in nowcasting in favor of the models only exploiting a pure autoregressive structure. This applies for all the considered developed Western economies though the statistical support may vary from the 5% significant distinction to no argument against the naïve benchmark. The improvement of the augmented model rests in (i) fit of the proposed model which appears to be considerably better and (ii) forecasting accuracy for most of the analyzed countries. It is worth pointing out that the

improved explanatory power of the model measured by conventional fit measures should not imply improvement in the accuracy of the forecasts. This issue has been addressed by DM testing.

The analysis could be easily extended to the prices of other processed oil products (gasoline etc) which would expectedly give the similar results. The results of our study indicate that incorporating world oil price into a forecasting model significantly increases forecasting accuracy rendering the model useful whenever a quick forecast of development of fuel price is required.

In the petroleum industry as well as in other sectors, monitoring the development of feedstock and relation to the retail price of the final products, is necessity of further production planning and sales. The suggested model is easily exploitable and the analysis can be extended to the time series of any other national economy maintaining the world oil price a main determining factor of fuel prices. Required data are freely accessible and the model can be possibly used when planning the production of fuel or deciding on the volumes of inventory by fuel producers or wholesalers.

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# Importance of Intermodal Transportation (Slovakia vs. Vietnam)

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**Abstract:** The aim of the paper is to specify the importance of intermodal transportation in international trade with a focus on Slovakia and Vietnam. The approach of the article is characterized by two levels, the theoretical level which defines basic terms such as combined, multimodal, intermodal transportation and then practical levels, that means characterize specifics of chosen countries and the role of intermodal transportation on the market. A potential of solutions to the problem will be to compare opportunities for this type of transportation in chosen EU (Slovakia) and non EU country (Vietnam).

**Keywords:** intermodal, transportation, infrastructure, transport modes.

**JEL Classification codes:** L91, R49.

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## 1 INTRODUCTION

The role of intermodal transportation is very important. Nevertheless there are still several obstacles that are lying in front of the smooth development of this potential type of moving goods. In the field of scientific research we need to define basic terms regarding the intermodal transportation. The aim of the paper is to specify the importance of intermodal transportation in international trade with a focus on selected countries from and outside European Union (EU), conc. Slovakia and Vietnam. Slovakia presents with its strategic location the potential of becoming important point of crossings among EU countries and other European countries. Vietnam also presents important crossing in terms of maritime transport and inland transport. Comparison between these two countries with big potential presents the possibility of cooperation between these two remote countries.

## 2 LITERATURE REVIEW

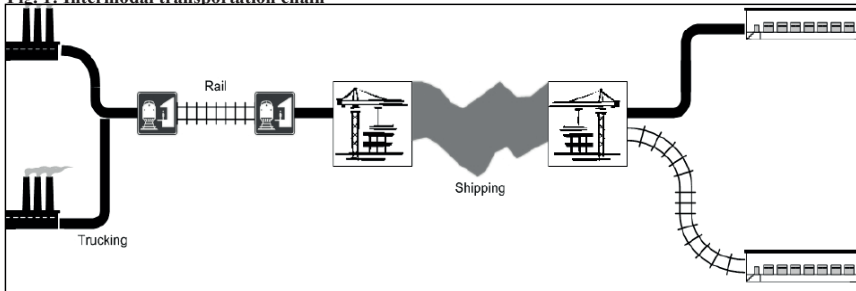
Intermodal and combined transportation are a special type of transportation. It is very important to distinguish the following terms:

- Multimodality (combination of modes without any special requirements on partial transportation modes or package),
- Intermodal transportation (by various modes in one loading unit or vehicle based on three main premises: road + TEU, FEU or ULD container + rail),

- Combined transportation (main part of the trip is made by train and the legs carried by road are as short as possible and „according to EU Directive 92/106/EC the road distance - measured as the crow flies - should be less than 100 km for road-rail transport and 150 km for road-inland waterway or sea” (Glossary for Transport Statistics 2009).

Intermodal transportation means the movements of freight from one transportation mode to another such as: Origin – Road – Rail – Sea – Destination (see the following figure).

**Fig. 1: Intermodal transportation chain**



Source: own proceedings according to: Bektas & Crainic 2007

We can find another definition of intermodal transportation, that means it is a network, which is „a logistically linked system using two or more transport modes with a single rate. Modes are having common handling characteristics, permitting freight (or people) to be transferred between modes during a movement between an origin and a destination. For freight, it also implies that the cargo does not need to be handled, just the load unit such as a pallet or a container.” (Rodrigue & Slack 2013)

Many transportation systems are multimodal, which support the effective combination of transportation modes (rail, road, inland waterway, maritime and air transportation). The transshipment point is called intermodal terminal that means the place of transfer from one mode to the other.

„The fundamental idea of intermodal transportation is to consolidate loads for efficient long-haul transportation (e.g. by rail or large ocean vessels), while taking advantage of the efficiency of local pick-up and delivery operations by truck.” (Bektas & Crainic 2007)

The network and specifics of intermodal transportations depends on the infrastructure in each country. It is very important to determine the possibilities of movement of freight, competition, legislation, congestions effects of each transportation mode. Efficient use of intermodal transport is based on two basic conditions for functioning of the transport market:

a) the price level and b) quality of infrastructure. Infrastructure of intermodal transportation consists of railway lines, hubs for traffic transport modes, terminals, ports, loading units (for example containers, swap bodies, road trailers). (IPC 2016)

### 3 METHODS

A theoretical overview of research problems was obtained mainly by the literature research method to define the basic terms such as intermodal and multimodal transportation. In article the authors used logistics performance index and comparative method focusing on selected statistical data, which specify the transport network in Slovakia and Vietnam. Using this method it is possible to identify the potential and importance of intermodal transportation in selected countries.

**Tab. 1: Comparison of basic data**

Basic data of selected countries		
	Slovakia	Vietnam
total area (km <sup>2</sup> )	49 035	331 210
of this land	48 105	310 070
of this water	930	21 140
land boundaries (km)	1 611	4 616
border countries number	5	3
coastline (km)	0	3 444
population	5 445 027	94 348 835
GDP (bln. \$) in PPP	153	513
GDP per capita (\$) in PPP	28 300	5 700

Source: own proceedings according to: The World Factbook, CIA, 2015

### 4 RESULTS AND DISCUSSION

#### 4.1 Specifics of intermodal transportation in Slovakia

The strategic location of Slovakia is particularly relevant by delivering the shipments from Ukraine to the West, or from West to Balkan. Based on the currently available statistical data of the Ministry of Transport, Construction and Regional Development of the Slovak Republic the largest share of freight transport performance should also still have a road (see the following table).

The total length of motorways, motorway feeders and road was 17 963,254 km in 2014. The total construction length of administered railway lines was 3627,1 km in 2014 (of which the total construction length of operated railway lines were 3581,6 km). For inland waterway transportation are important rivers such as Danube with 131,8 km length of navigable inland

waterways and Váh 81,4 km. In Slovakia are available 14 public airports (of which 8 international public airport) and 13 private airports. For intermodal transportation the important role has active intermodal terminals, in Slovakia are ten and during last years the total transport of goods in gross tonnes was increased (see the following table). (Statistical office of the Slovak Republic 2016)

**Tab. 2: Comparison of freight transport modes**

Transport of goods total (thous. tonnes)	1995	2000	2005	2010	2012	2013	2014
<i>Railway transport</i>	60 776	54 177	49 310	44 327	42 599	48 401	50 997
<i>Road transport</i>	203 918	188 901	195 405	143 071	132 074	128 855	142 622
<i>Inland waterway transport</i>	1 661	1 607	1 526	3 109	2 472	1 920	1 838
<i>Air transport</i>	1,280	0,697	0,230	0,011	0,004	0,007	9,116

Source: own proceedings according to: Statistical office of the Slovak Republic 2016

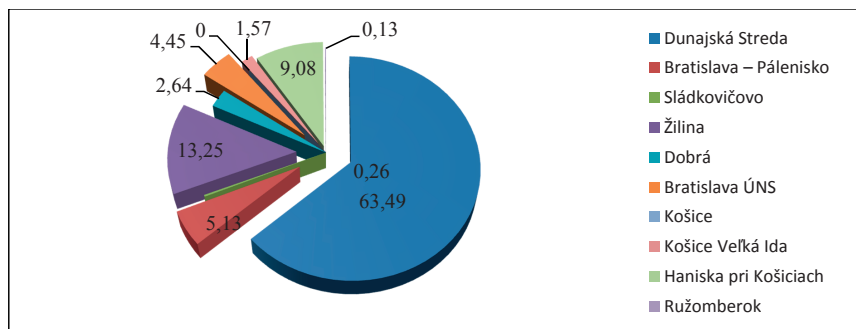
**Tab. 3: Number of active intermodal terminals and transport of goods in intermodal transport in Slovakia**

Year	1995	2000	2005	2010	2012	2013	2014
<i>Number of active intermodal terminals</i>	11	8	7	7	9	10	10
<i>Transport of goods total (gross tonnes)</i>	220 301	564 228	1 256 000	2 779 126	3 618 763	4 416 806	4 828 627

Source: own proceedings according to: Statistical office of the Slovak Republic 2016

In 2014 the highest performance according to the amount of transported goods have the intermodal transport terminals in Dunajská Streda (63,49%) and in Žilina (13,25%). The performance we can see on the following figure.

**Fig. 2: Performance of intermodal transport terminals in 2014 - Amount of transported goods (%)**



Source: own proceedings according to: Statistical office of the Slovak Republic 2016

The most important mode of transportation for intermodal transportation in Slovakia is rail and road infrastructure. The opportunity for increasing the intermodal transportation in Slovakia represent the part of Trans-European Transport Network (TEN-T) and also the

position within the three Core Network Corridors which crossing the country as follows: (European Commission 2015):

- The Baltic-Adriatic Corridor (from the Polish ports Gdansk and Gdynia and from Szczecin and Swinoujscie via Czech Republic or Slovakia and through eastern Austria to the Slovenian port of Koper and to the Italian ports of Trieste, Venice and Ravenna),
- The Orient/East-Med Corridor (from the German ports Bremen, Hamburg and Rostock via Czech Republic and Slovakia, with a branch through Austria, further via Hungary to the Romanian port of Constanta, the Bulgarian port of Burgas, with a link to Turkey, to Greek ports Thessaloniki and Piraeus and a "Motorway of the Sea" link to Cyprus),
- The Rhine-Danube Corridor (from Strasbourg and Mannheim via two parallel axes in southern Germany, one along Main and Danube, the other one via Stuttgart and Munich, and with a branch to Prague and Žilina to the Slovak-Ukrainian border, through Austria, Slovakia and Hungary to the Romanian ports of Constanta and Galati).

#### **4.2 Specifics of intermodal transportation in Vietnam**

The specifying of the intermodal transportation in Vietnam depends on quality of infrastructure in the country. So we indicate the overview of transport system according to transport modes.

- *Maritime transport*

In January 2014, the world fleet reached a total tonnage of 1.75 billion deadweight tonnage (DWT), in which bulk carriers account for 43.5 per cent of the total tonnage, followed by oil tankers (28 per cent) and container ships (13 per cent) (UNCTAD 2015). Currently, Vietnam's fleet (ranked the 30th in the top 35 ship-owning countries) consists of 878 ships with total 8 038 284 DWT (account for 0.46% total world's fleet DWT) including national flag and foreign flag with 6 527 639 DWT and latter with 1 510 645 DWT (account for 18.79% total national fleet DWT) (UNCTAD 2015). The current status of Vietnam fleet in the comparison of top 20-30 fleets in the world is in the following table.



Tab. 4: Ownership of the world fleet, as of 1 January 2015 (dwt)

Rank (dwt)	Number of vessels			Dead-weight tonnage					
	Country/territory of ownership	National flag	Foreign flag	Total	National flag	Foreign flag	Total	Foreign flag as a % of total	Total as a % of world
20	Russian Federation	1 291	448	1 739	5 920 435	12 403 644	18 324 079	67.69%	1.06%
21	Islamic Republic of Iran	157	70	227	3 986 804	14 093 340	18 080 144	77.95%	1.04%
22	Switzerland	47	291	338	1 403 668	16 492 768	17 896 436	92.16%	1.03%
23	Indonesia	1 504	153	1 657	12 908 577	4 120 935	17 029 512	24.20%	0.98%
24	Netherlands	775	445	1 220	6 589 901	10 415 708	17 005 609	61.25%	0.98%
25	Malaysia	466	142	608	8 430 359	7 707 526	16 137 885	47.76%	0.93%
26	United Arab Emirates	95	684	779	472 967	14 845 550	15 318 518	96.91%	0.88%
27	Saudi Arabia	86	155	241	2 004 631	11 358 349	13 362 980	85.00%	0.77%
28	France	180	277	457	3 517 344	7 636 312	11 153 656	68.46%	0.64%
29	Cyprus	141	179	320	3 811 947	6 858 661	10 670 608	64.28%	0.62%
30	Viet Nam	786	92	878	6 527 639	1 510 645	8 038 284	18.79%	0.46%

Source: UNCTAD secretariat, based on data supplied by Clarksons Research. Note: Propelled seagoing vessels of 100 GT and above.

With a coastline of 3,260 kilometres, Vietnam is ranked of the 27th in the world (VienDong 2014) and the 4th in the ASEAN in term of coastal length. Currently, Vietnam has 44 main seaports allocated along the coastline. Based on the purpose, the significance and scale, these seaports are divided into three main categories with 166 terminals (see the following table).

Tab. 5: Categories of seaports in Vietnam

Countries	Characteristics	Numbers	Note
Seaports, ranked 1	Very important for the social-economic development of the country and trans-region	14	11 seaports ranked at the 1 <sup>st</sup> , seaports ranked at the 1A (international transit seaports)
Seaports, ranked 2	Very important for the social-economic development of one region or one province	17	
Seaports, ranked 3 (offshore ports)	Specialised seaports	13	

Source: The Decision No 70/2013/QĐ-TTg dated 19 November 2013 signed by the Prime Minister.

- *Inland waterway transport*

According to the statistics of Vietnam inland waterways administration (2014), Vietnam rivers system has the total length of 41900km including 2360 rivers and canals. This advantage has formulated inland waterways network between local regions and plays an important role in the Vietnam social-economic development. At the present, inland waterways transport (IWT) has been sharing approximately 17% total transport volume of the country, especially, in the south-western region of Vietnam, inland waterways transport is the main mode of transport with the share of 70% transport volume in the region. The ASEAN has

approximately 51 000 km of navigable rivers. One of the most important rivers in this region is Mekong River. Mekong is the largest river in Southeast Asia and the 12th longest river in the world, it runs 4,800 kilometres from its headwaters on the Tibetan Plateau through Yunnan Province of China, Myanmar, Thailand, Cambodia, Lao PDR and Vietnam, and into the South China Sea, draining an area of 795,000 sq. Km. The Mekong River is an important gateway to trade centres in the Southeast Asia region and beyond. The river forms the border between Laos and Myanmar and most of the border between Laos. With 65 170 km<sup>2</sup> of Mekong basin (19.6% total square), Vietnam has the potential to utilise IWT to connect regional transport network with local transport system, especially between the south-western of Vietnam with Cambodia and Thailand.

- *Road transport*

The total length of Vietnam road network has 251.887 km with 17.395 km of national road, 23.138 km of province road including 2585 km of Asian highway network (a cooperative project among countries in Asia and Europe and the United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), to improve the highway systems in Asia.

- *Rail transport*

Currently, total length of Vietnam railway network is approximately 2600 km connecting important economic centres, excluding the south-western region of Vietnam. Vietnam railway's international routes (only 1% shared in total volume) have two links to China railways from Lao Cai province to Yunnan province and from Lang Son province to Guanxi province. There are big potential to connect Vietnam railway with the ones of Cambodia, Thailand and Malaysia to Singapore and Laos PDR. Some Asian railways have been considered to build up including the route from Vietnam to Cambodia, Thailand and Laos PDR.

- *Air transport*

In the coming years, Vietnam continues to strengthen the bilateral aviation relationship with its tradition regions such as North-East Asia, ASEAN, Europe, Middle-East, North America, establish aviation cooperation with countries in the South Asia, Africa, South America and SNG countries and further modernize the existing ASAs toward more liberalization on market access and strengthening of aviation safety and security standards in the form of revisions, amendments or renewal of these ASAs. In the multilateral framework, Vietnam continues to actively participate in the cooperative mechanism, - 5 - ATConf/6-IP/22 including CLMV (Cambodia, Laos, Myanmar and Vietnam), ASEAN and ASEAN with Partners (including Japan, South Korea, India, China, Russia, EU), WTO and APEC. Vietnam encourages foreign

airlines to operate to Ho Chi Minh City, Ha Noi, especially to the six (6) new-brand or upgraded airports namely Da Nang, Hue, Nha Trang, Can Tho, Da Lat và Phu Quoc with following privileges are given to the airlines operating to the six (6) abovementioned airports (i) Charges and fees incentive are given to those airlines operating to these airports; (ii) and liberalization of the 3rd, 4th and 5th freedom traffic rights and in some specific cases the 7th traffic right may be exercised for all-cargo services. (ICAO 2016)

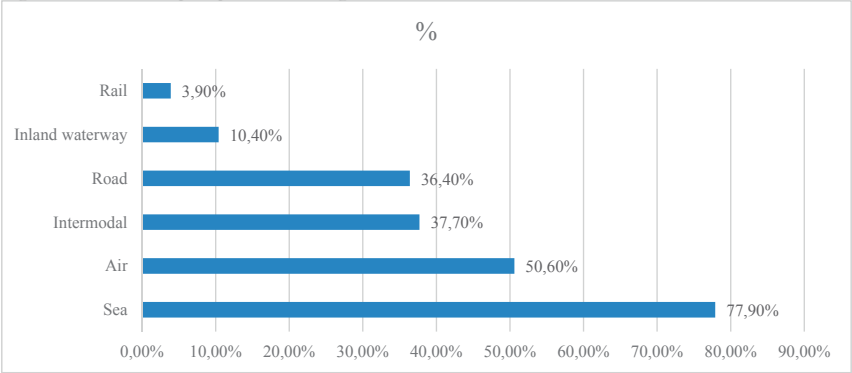
- *The usage of modes of transport in Vietnam*

In order to evaluate the reality of Vietnam logistics and transport sector, a questionnaire-based survey conducted by the author from April to May 2014 with some results as follows:

- + *Main modes of transport are used in domestic routes for logistics service users*

For domestic routes, almost logistics companies provide road (84.1%), sea (53.7%) and intermodal (45%) transport services (see following figure).

**Fig. 3: Modes of transport provided for logistics users in domestic routes**



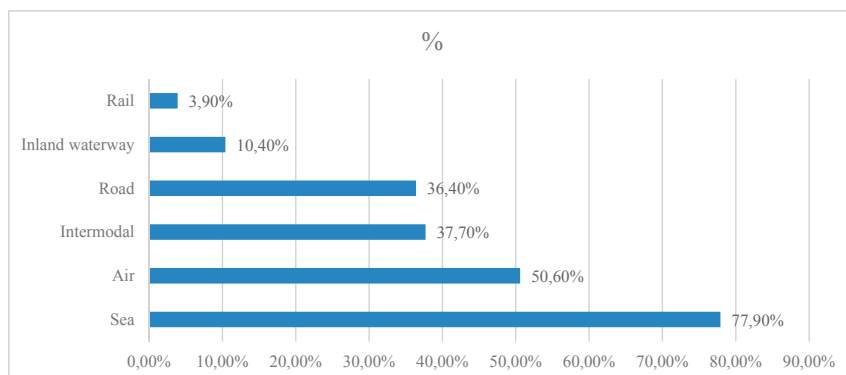
Explanatory Note: Respondents could give more modes of transport modalities that use by their business.  
Source: own proceedings according to: Hoa Ho 2015

- + *Main modes of transport are used in international routes for logistics service users*

In international routes, sea and air transport are the main modes of transport to be used for export goods (77.9% and 50.6% respondents), intermodal (37.7%) and road transport (36.4%) are the second transport groups selected for export cargo (see following figure).

In the year 2009, Master Plan for Vietnam transport development till 2020, orientation to 2030 was approved by the Prime Minister with the objective to decrease the market share of road transport and increase the role of rail transport for both international and domestic routes (see following table).

**Fig. 4: Modes of transport provided for logistics users in international routes**



Explanatory Note: Respondents could give more modes of transport modalities that use by their business.

Source: own proceedings according to: Hoa Ho 2015

**Tab. 6: The detail objective for market share of modes of cargo transport up to 2020, orientation to 2030**

Modes of transport	Targeted market share in 2020 (%)			Targeted estimated market share in 2030 (%)		
	International transport	Domestic transport (trans-provinces)	Domestic transport (intra-province)	International transport	Domestic transport (trans-provinces)	Domestic transport (intra-province)
Road transport	4.13	54.39	94.33	3.28	51.20	95.56
Rail	1.27	4.34	0.75	2.08	7.93	1.19
Inland waterway	0.43	32.38	4.92	0.36	30.87	3.25
Sea	94.03	8.85		93.99	9.94	
Air	0.14	0.04		0.29	0.06	
<b>Total</b>	100	100	100	100	100	100

Source: Ministry of Transport of Vietnam “Master plan of the development of Vietnam transport sector up to 2020, orientation to 2030” (The Decision 35/2009/QĐ-TTg).

With the approval of TPP agreement (Trans-Pacific Partnership) in October 2015 as well as the establishment of AEC (ASEAN Economic Community) in the end of 2015, the growth rate of international freight transport will be increasing the next years. It will bring not only the opportunities but also the challenges for the Vietnam transport sector, especially the selection of appropriate modes of transport as well as the development of transport system infrastructure to ensure two main objectives such as the market requirements and sustainable development with green transport.

#### **4.3 Potential of international trade and the challenge for international transport between Vietnam and Slovakia**

Trade between Vietnam and Slovakia hit over 1.2 billion USD and Slovakia is currently the biggest Central East-European investor in Vietnam. In 2016, the two countries will organise the second session of the Intergovernmental Committee on Economic Cooperation in Bratislava. In the summit on 4th November 2014 the Slovakian Deputy PM said Slovak republic would continue to promote its relationship with Vietnam. Praising the important contributions of the Vietnamese community in Slovakia, he suggested the two countries increase high-level relations, people-to-people exchanges and co-operation in art training. Vietnam and Slovakia have agreed to promote bilateral trade ties by expanding investment in infrastructure, railways, renewable energy, environmental technology and food processing. However, international transport between Vietnam and Slovakia has one challenge is that sea transport cannot be used directly because of the landlocked position of Slovakia. A landlocked country is one that has no coastline and no direct access to sea or ocean. The Danube is one of resources so that landlocked countries in Europe such as Austria, Hungary, Czech Republic, Slovakia and others could have access to the sea. Radelet and Sachs (1998) compared transport costs for 97 developing countries and estimated that the costs of freight and insurance for landlocked developing countries were on average 50% higher than for coastal economies. The higher shipping costs reflect several factors, including the higher proportion of transit by land, which tends to be more expensive than maritime transport, the extra cost of transshipment between intermodal transportation modes; the bureaucratic costs of crossing at least one additional border; and the absence of coordinated road infrastructure and customs facilities among the countries concerned.

The improvement of intermodal transportation and collaboration between Slovakia and Vietnam represent the potential for increasing the business. For export into Vietnam are interesting the raw materials needed in manufacturing, such as substances, plastics and further equipment, electric motors and generators. And from Vietnam are imported mainly clothing, footwear, coffee, furniture, fish and seafood, mobile phones and their parts, computer and electronic components. (MZV SR 2015)

#### **4.4 Importance of intermodal transportation (example: Slovakia – Vietnam)**

The term intermodal transportation was for the first mentioned in 1960 with the aim to integrate separate transport systems through intermodalism. According to statistical data about

transportation in Slovakia and Vietnam we can say, that the importance of intermodal transportation (IIT) is a result or function of the following attributes:

- O – origin and D – destinations (distance between the place of origin and place of destination)
- T – transportation time and C – costs (the aim of intermodal transportation is to optimize the transportation time and minimize the delivery costs with regard to environment)
- S – shipment (the value of the cargo, that means the shipment with low price and height weight are the most convenient for intermodal transportation)
- E – environment (the influence on minimising the carbon footprint during the transportation).

According the mentioned factors, which influenced the importance of intermodal transportation, we can characterize the potential collaboration between Slovakia and Vietnam using the specific quantitative parameters as a part of function:

Increasing Importance of Intermodal Transportation ( $\Delta IIT$ ) = eco friendly and cost minimizing transportation

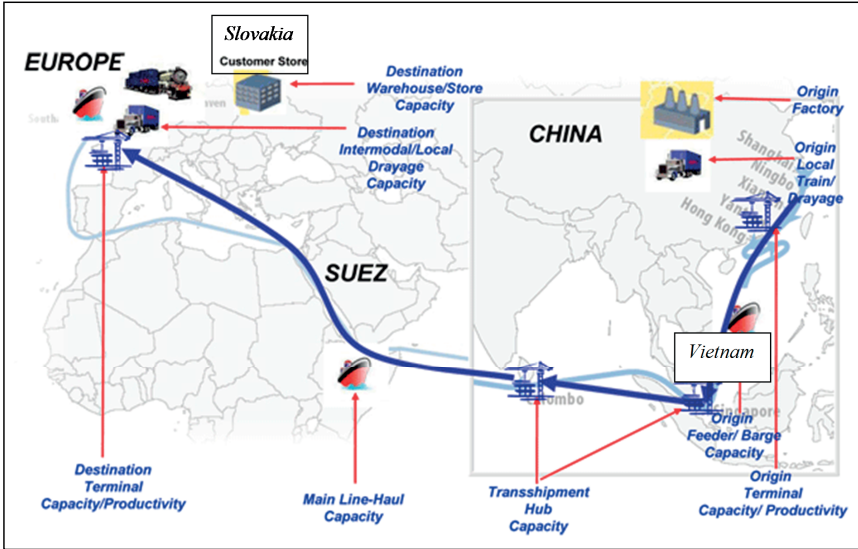
$\Delta IIT = f [\uparrow D\text{-}O \text{ kilometres}, \downarrow T \text{ days}, \downarrow C \$, S (\downarrow \text{value}, \uparrow \text{weight}), \downarrow E \text{ (emissions pre km)}]$

The following figure shows the potential and opportunity to increase importance of intermodal transportation between Slovakia and Vietnam using port facilities around the world that means for Vietnam maritime transportation and for Slovakia road – rail transportation as a part of intermodal transport network.

For Slovakia the unique challenge represent the position within the Europe Intermodal Network and be a part of pan-European transport network connecting all relevant ports, rail terminals. How we can see on the following figure, Slovakia can be not only an important point for transit (Hamburg – Vienna – Budapest – Kiev) but also as a transshipment point.

The opportunities for improving or increasing the intermodal transportation represent also the logistic performance of country that means quality of infrastructure, delivery times and so on. We can compare the Slovakia and Vietnam through Logistics Performance Index (LPI). We can see in the following table the quality of logistics conditions in Slovakia is better than in Vietnam (except tracking and tracing).

Fig. 5: Importance of Intermodal Transportation (Slovakia, Vietnam) - using port facilities around the world



Source: own proceedings according to: World Shipping Council 2016

Fig. 6: Rail Network in Europe with chosen corridors



Source: own proceedings according to: World Shipping Council 2016

The importance of intermodal transportation in each state (for example Slovakia, Vietnam) depends not only on current infrastructure but also on finding the potential of strategic position of country in the world transportation network with the aim to support the business and international trade within the European and non-European countries (world trade). Economic and ecological trends suggest a strategy of combination transport modes, so the importance of intermodal transportation in each country is high, while represent most efficient

delivery on long distances, eco-friendly shipping and safety during transport by using one loading unit.

**Tab. 7: International Logistics Performance Index in Slovakia and Vietnam**

<i>LPI Score / LPI Rank</i>	3,25 (43 rank)	3,15 (48 rank)	Germany (4,12)
<i>Customs</i>	2,89 (52 rank)	2,81 (61 rank)	Norway (4,21)
<i>Infrastructure</i>	3,22 (37 rank)	3,11 (44 rank)	Germany (4,32)
<i>International shipments</i>	3,3 (38 rank)	3,22 (42 rank)	Luxembourg (3,82)
<i>Logistics competence</i>	3,16 (46 rank)	3,09 (49 rank)	Norway (4,19)
<i>Tracking and tracing</i>	3,02 (63 rank)	3,19 (48 rank)	Germany (4,17)
<i>Timeliness</i>	3,94 (30 rank)	3,49 (56 rank)	Luxembourg (4,71)

Consideration: The efficiency of customs and border management clearance (Customs) / The quality of trade and transport infrastructure (Infrastructure) / The ease of arranging competitively priced shipments (International shipments) / The competence and quality of logistics services—trucking, forwarding, and customs brokerage (Logistics competence) / The ability to track and trace consignments (Tracking and tracing) / The frequency with which shipments reach consignees within scheduled or expected delivery times (Timeliness).

Explanatory Note: The LPI index is a comparisons across 160 countries and based on a worldwide survey of operators on the ground (global freight forwarders and express carriers), providing feedback on the logistics of the countries in which they operate. The LPI consists of qualitative and quantitative measures.

Source: own proceedings according to: The World Bank Group 2016

## 5 CONCLUSIONS

The aim of the paper was to specify the importance of intermodal transportation in international trade with a focus on selected countries from and outside European Union (EU), conc. Slovakia and Vietnam. These two countries are very different in terms of potential of transport development. Slovakia is overall seven times smaller than Vietnam, six times smaller in land area and 23 times smaller in water area. This fact influenced also the mode of transport more developed in these countries. In the case of Slovakia the most developed is road and rail transport, while in case of Vietnam is maritime and inland waterways transport. Besides this fact both countries recognize the importance of intermodal transportation. Slovakia thanks to the strategic location lays on several trans-European corridors not only in rail and road transportation but also in inland waterways transportation. Vietnam thanks to the sea access presents important point in terms of maritime transportation but also in inland transportation. Both countries strongly support cooperation among the border countries in terms of infrastructure construction plus cooperation also among wider than border countries. Direct connection among Slovakia and Vietnam is possible through Suez Canal using several transport modes (from road – rail – sea – river), where the role of intermodal transportation is more than necessary. Finally we recommend to support the collaboration between Slovakia and Vietnam not only at micro level (export / import) but also at macro level and to emphasise the implementation of intermodal transportation into logistics strategies by creating the positive external environment (for example legislation) and effective infrastructure.



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# **Internationalization of Education of the Study Program in French Language the Sales Management from the Point of View of the Relation Student – Institution**

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**Abstract:** Increasing the quality of educational activity and science requires an open approach of

educational process to the relationship to the universities abroad. Creation of the strategy of permanent increasing of quality includes also the system of monitoring the students' opinions on offering the student programs in foreign languages, which the universities abroad participate in. With increasing global competition in the education market the research of the problem requires the knowledge of the task of student as a client, which represents a new element of functioning of universities. The aim of the article is presentation of internationalization of education in the sphere of Francophone education on the example of the Study Program in French Language the Sales Management offered within the study specialization Trade and Marketing of the Faculty of Trade of the University of Economics in Bratislava and acknowledging its attractiveness from the point of view of relation student – institution. The article consists of three basic parts. The theoretical part deals with the basic aspects of the issue researched, i.e. the dimensions of cooperation with French institutions and development of the Study Program in French Language the Sales Management. The second part of article presents the methodology of research of students' opinions. The third part including the discussion and results characterizes and analyzes the results of research of students' opinions on the study programme. In the conclusion of the article the connections between the issue of the article with the European Social Fund and the Strategy Europe 2020 as well as the connections of academic values and commercial aspects of the relation student–institution within the study program are identified.

**Keywords:** internationalisation of higher education, study program, relation student–institution, research of opinions, cooperation.

**JEL Classification codes:** I 123.

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## **1 INTRODUCTION**

Education of high quality is a precondition of economic development (British Council, 2012), innovation, competitiveness and employment. The European Union creates room for cooperation in creation of new student programs, which lead to orientation at business and employment. One part of increasing the quality of education in Slovakia is support of an open approach of Slovak educational institutions to the world, making them attractive for foreign

countries and development of mobility of students, pedagogical and scientific workers. As far as universities are concerned it means deepening internationalization of their activities – scientific, research, and educational ones in the sphere of innovative undertaking.

The strategy of internationalization as a relatively new phenomena (Witt et al.,2015,41) is a process of integration of international dimension in educational and research functions. It is connected with worldwide systems and global competitiveness (Teichler, 2004, 8-20). In recent world this strategy is reaching great boom. For this reason the aim of the article is presentation of internationalization of education in the sphere of Francophone education on the example of the Study Program in French Language the Sales Management offered within the field of study Trade and Marketing at the Faculty of Trade of the University of Economics in Bratislava and acknowledging its attractiveness from the point of view of relation student–educational institution.

## **2 LITERATURE REVIEW**

The issue of relations client – institution is becoming more and more frequent subject of consideration in the university environment as well. These considerations concern the ways of approach towards students, knowledge of their opinions on educational process, functioning of the institution and its educational function. The problem of exploring students' opinions on the offered study programs is connected with the more and more intensive presence of commercial elements in the traditional mission of university and commercialization of educational services (Charles and Delpech, 2015). The limited scope of the article is the reason of selective approach and analysis of the issue. Its research is based on the hypothesis that the offer of the study program in French language meets the requirements and expectations of target customer. Permanent evaluation and monitoring of this problem is a natural part of management of an educational institution. There is enough evidence that the institutions which neglect this evaluation:

- are not market orientated,
- their aim is not orientation at the needs of their target clients,
- they are in a permanent danger of crisis.

In spite of the status of the University of Economics as a non-profit public institution it can be seen that in the education market within the Slovak Republic there is a competition for clients – the students in the education market. The reasons are as follows:

- the system of financing universities is related to the results of scientific–research activity and the number of students,

- the number of students at the university indicates the demand and possibility of employment of graduates.

Globalization of the market of educational institutions (Varghese, 2013, 9-18), mobility of labour force within the European Union and development of the knowledge based economy are strengthening the international and worldwide aspects of pedagogical activities of Slovak universities. International experience and intercultural knowledge are the criteria put on managers, who must communicate in foreign languages. Following the strategy of the University of Economics in Bratislava, the Faculty of Trade offers the opportunities of study in French language within the bachelor study as well as accredited master program at the second level of education. Internationalization in the sphere of Francophone education includes several basic aspects, i.e. dimensions of cooperation with French educational institutions and development of the Study Program in French Language the Sales Management.

### **2.1 The dimension of cooperation in the sphere of Francophone education at the University of Economics**

Openness of Slovakia towards the world market and especially to the European Union market at the end of the eighties led to the orientation of the Economic University in Bratislava to development of education in foreign languages. French language as an important working language of the European Union has confirmed its presence in the trading sphere of the Slovak Republic, in which France represents an important partner. France is also an active partner of Slovakia in the sphere of education. Openness towards France at the University of Economics in Bratislava is characterized by the following dimensions:

1. contacts in the research sphere by means of international scientific-research network PGF (countries of the Vysegrad Group) established in the year 1994 at the University Pierre Mendès France in Grenoble, which associates the university research workers dealing with the research of European socio-economic dynamics (Martin, 2015, 47) . Regular cooperation with the scientific-research network PGV was a basic motivation of origination and development of the Francophone study and remains one of its driving forces.
2. On the basis of cooperation with the international scientific-research network PGV the education in French language at the University of Economics was first offered spontaneously to the students of the summer term of the academic year 1993/1994 as an optional subject Case Studies in Marketing in French Language. In the context of internalization of economy and its adaptation to the world market, the offer of

individual subjects to the students of the University of Economics gained a systematic form of „partly Francophone study“ on the basis of an agreement with the University of Economics and the Cultural Department of the French Embassy in the year 1996. Thus this study officially became a pioneer of education in foreign languages at the University of Economics and part of its educational system.

Since the year 2000 the University Technological Institute IUT2 (The Institut universitaire de technologie) of the University Pierre-Mendès France in Grenoble granted the students of partly Francophone study a certificate in cooperation with the University of Economics in Bratislava. By the year 1999 there were 103 students who took part in the partly Francophone study in individual years of study. In the years 2000-2015 there were 250 students who graduated and got a certificate in the partly Francophone study.

3. One of the stimuli of development of the Francophone study was also a remarkable development of relations between the Slovak and French enterprises. The development of economic relations with France was also reflected in the requirements for human capital, which represented the scope of expertise and skills embodied in the labour force of the country, which is a result of education but also of increasing the qualification of employment (Ondrejko, 2011). Organizing the stays of students in the Slovak and French enterprises was realized also thanks to the cooperation with the Slovak-French Chamber of Commerce.
4. In that period an important role in the development of partly Francophone education was played by the FNEGE (Fondation nationale pour l'enseignement de la gestion des entreprises). In the years 1993-1998 the activities of FNEGE made it possible for all Slovak Francophone lecturers to participate in education of managers in cooperation with French universities and take part in the stays organized by the French Embassy in Bratislava and FNEGE aimed at preparation of educational process.

## **2.2 Development of the Study Program in French Language the Sales Management**

The concept of Francophone study is characterized by its flexibility and adaptability within the institutional frame, which corresponds with the Bologna Declaration of the year 1992. It is a dynamic, reliable and innovative one, because it provides students with the knowledge about the activity of French and Slovak enterprises as far as the requirements of the labour force market are concerned. By educating future European managers as part of the strategy of the University of Economics in Bratislava in the years 2005-2008 the Francophone study became

the subject matter of two projects of the European Social Fund aimed at support of education in foreign languages:

- the project “Internationalization of Education of Economists and Managers“ (2005-2008),
- the master Study Program in French Language the Sales Management (2006-2008).

Elaboration of the accreditation materials in the years 2006-2008 and involvement of lecturers of the University Pierre Mendès France made it possible to open the study program in the academic year 2008/2009. At the same time there was a change in the system of Francophone education. Partly Francophone program is concentrated to the first three years of study at the University of Economics and having completed this study the students get a certificate of the foreign and home universities. This study is realized by the Francophone lecturers of the University of Economics as well as by the host lecturers of different partner French universities. Since the academic year 2014/2015 the certificate on completing the partly Francophone study has been granted by the university in Cergy-Pontoise and the University of Economics in Bratislava. The Study Program in French Language the Sales Management, which is studied at the second level of the higher education is realized by French and Slovak lecturers.

The activities of the Slovak-French University Institute, which was established in the year 2011 on the basis of a common will of the Embassy of the French Republic in the Slovak Republic and the University of Matej Bel in Banská Bystrica have led to extension of the study program Sales Management by the European dimensions. Since the academic year 2015/2016 the students of the program have had an opportunity to get a diploma of MBA of the University of Economics in Bratislava and a diploma of M1 of European Studies, specialization “Management“ or M2 of European Studies, specialization “Financial Management and European Space“ of the Lotrin University. Other possibilities of development of Francophone education are enabled by the access of the University of Economics in the university agency the Agence universitaire francophone (AUF)

### **3 METHODS**

The system of research of students’ opinions on the Study Program in French Language the Sales Management can be judged from three viewpoints, which are mutually related (Wiktor, 2015, 223):

- with entering the system – before starting the study, within the recruitment campaigns

- with the process of study – research of the quality of didactic approaches and organisation of the study

- with leaving the system – graduate employment.

The students' opinions on the issue of the study program in French language are based on the authentic and instrumental values. The opinions of students are part of realization of university missions, they make identification of the relation student–educational institution possible and at the same time they can be made use of for actual needs of the management of the study program and management of the university in the process of creation of an attractive image of the university as a community of the taught and the teaching.

The research made in the form of questionnaire was orientated at the graduates of the Study Program in French language (81 graduates – 65 females and 16 males), who had got a Slovak diploma of MBA in the study field Trade and Marketing, in the Study Program in French language the Sales Management at the University of Economics. 74 of them had completed the study of the common study program and gained besides the Slovak diploma also a French one in the study field Marketing, specialization Sales and Distribution at the University Pierre Mendès France in Grenoble. The research was participated by 62 graduates – 55 females (88 %) and 7 males (12%) of the age 24 to 34 years.

#### **4 RESULTS AND DISCUSSION**

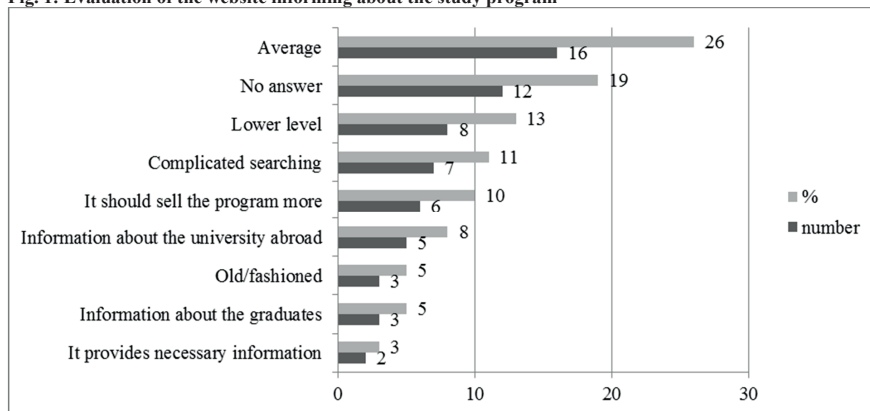
The research concerning entering the study program is based on the students' opinions on the offer of the study program issues and their evaluation on the part of students. The results are a valuable source of knowledge of students' motives in choosing the study program in French language and preference of students in choosing a suitable study program, improving marketing communication in the sphere of recruitment of students, providing high quality services of the study department and mainly beginning intellectual adventure, gaining knowledge, forming standpoints and skills.

Students can learn about the opportunities to study in French language within the recruitment campaigns at the University of Economics during their study. Apart from that the information about the possible Francophone study is provided by the Slovak-French University Institute in the form of:

- information material about the Francophone study,
- conferencies and round tables (e.g. meetings students–enterprises),
- discussion workshops (e.g. workshop on bilingual sections, the Forum Students–Enterprises)
- meetings of the graduates of Francophone study, meetings of former students, scholars, etc.



**Fig. 1: Evaluation of the website informing about the study program**



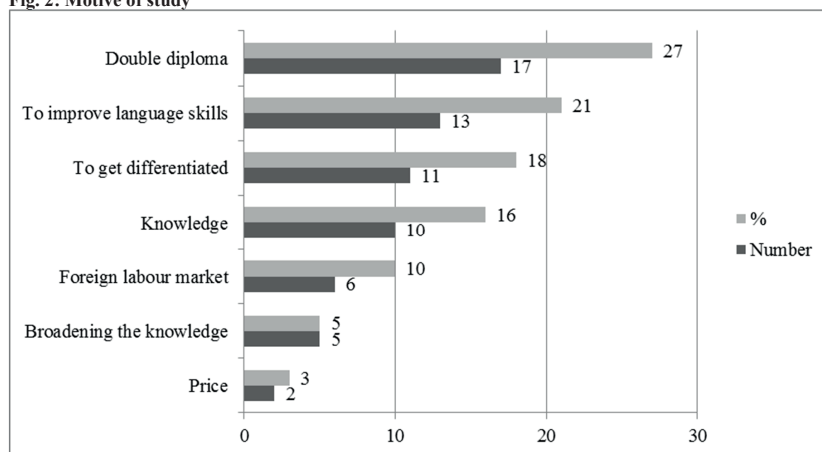
Source: own processing

Students can also get information about the study program on the website of the University of Economics. The respective website providing information about the program was evaluated as follows (Graph 1): 26 % of students evaluated the website concerning the study program as an average one, 13 % as a poorer one, 3 % as an old-fashioned one. 7 % of the inquired emphasized the complexity in searching the information about the study program in French language and the opportunities of study trips, study stays, etc. Apart from that 8 % of the inquired claimed the website did not provide information about the partner university abroad and cooperation with enterprises (5 %), neither the information about the graduates or providing training courses (various ones as far as the contents as well as the forms are concerned) for the graduates but also for other potential clients (5 %) or the publicity program and public relations of the educational institution by means of activities with graduates were of low level. Only 3 % of the inquired were satisfied with the website. 19 % of the students had no knowledge of it.

Creating a common European market has changed the conditions for managerial education of the students of the University of Economics, which must respond to the new professional and technological requirements. For this reason the main motive of the study of the common study program was getting a common diploma as well as the curiosity of knowing the French educational system (27 %). Improvement of language skills was a motive only for 21 % of the inquired graduates. Instead of a traditional mass program, the study of the program remarkably different by its character from other programs offered by the University of Economics, was a motive for 18 % of the inquired. 16 % of the inquired wanted to gain knowledge in the sphere of sales management. For 10 % of those interested in the program it

was an opportunity of participating in the foreign labour market after finishing the program. With regard to the fact that the program was offered to the students of all faculties of the University of Economics as well as other interested, who had not studied trade issues before, the main motive was to broaden their knowledge by the new field of study. As in the years 2008-2013 the program was offered only on the basis of payment of the entrance fee for study at the university, the motive for some students was the price of the study program (3 %). The motives of the study are illustrated in the figure 2.

**Fig. 2: Motive of study**



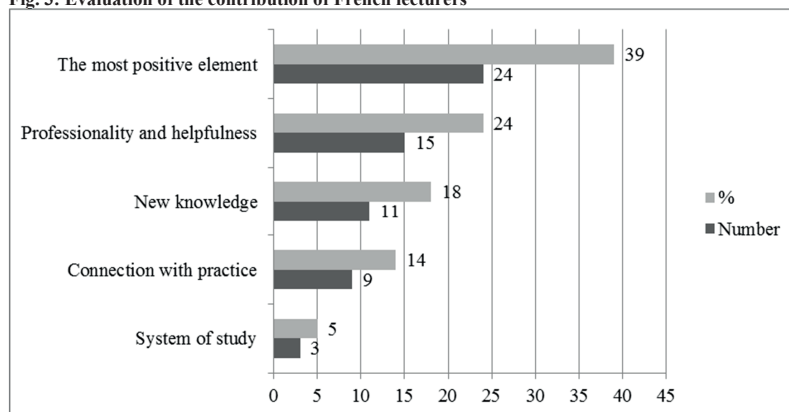
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The research of students' opinions on the quality of educational process is only one of the elements of quality evaluation. In a wider sense evaluation of the educational process includes creation of the study program, procedure of the educational process and evaluation of the results reached. Each of these elements requires a wider concern. As far as this article is concerned we are emphasizing only the selected aspects of evaluation of the educational process quality. For this reason we have been interested only in the students' opinions on the engagement of French lecturers in the program, organization of the study, work of the study department and arguments, which would give reason for recommendation of the program to other students.

By means of knowing the students' opinions on the management of educational process some conclusions about the study program can be formulated. We were interested in the students' opinions on that part of the educational process, which was conducted by the French lecturers and managers of French enterprises (figure 3). 39% of the inquired have evaluated the

participation of French lecturers and managers as the most positive element of the study program. The lecturers were highly professional, helpful enthusiastic and kind (24 %). They created opportunities for getting new knowledge in the field of sales management (18 %) and put emphasis on practical application of the subjects being taught (14 %). The way of teaching and students' evaluations made it possible to get acquainted with the French system of study (5 %).

**Fig. 3: Evaluation of the contribution of French lecturers**

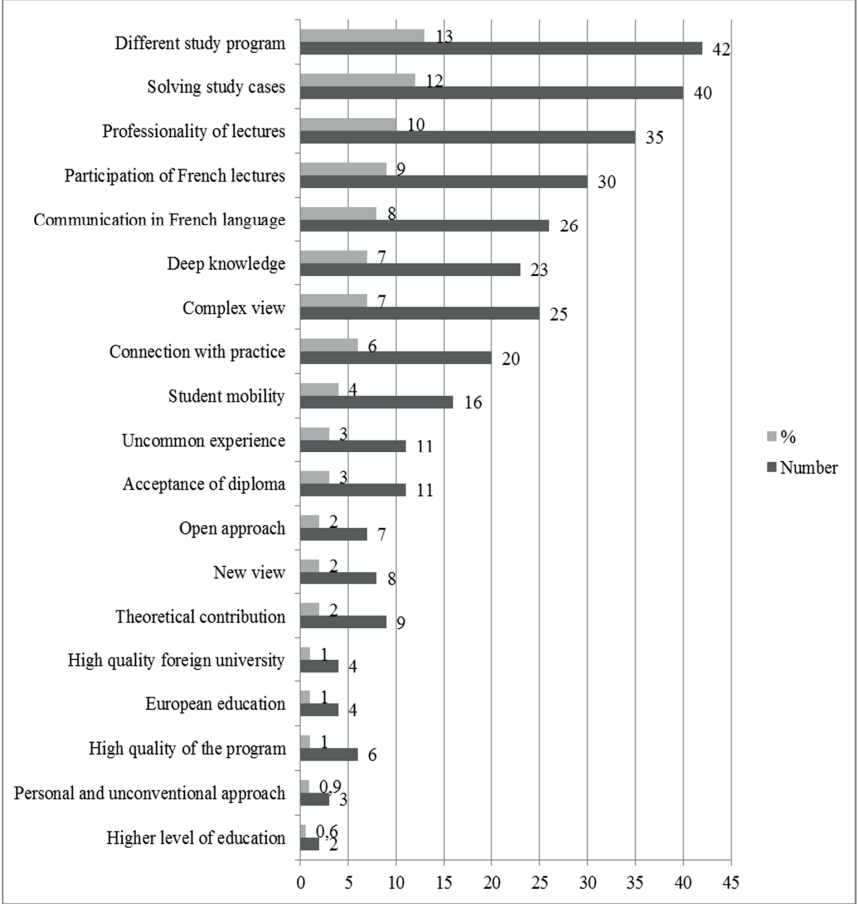


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Clear information about the quality of the didactic process of the study program are the arguments of the graduates, which they used to recommend other students to study the specific program in French language (figure 4). Each of the inquired had an opportunity to formulate several arguments, which are given in the figure 2. It concerns mainly the difference of training from the one offered in the Slovak programs (13%), understanding the problems trained by means of case studies (12%), professional and human approach of lecturers (10%), participation of French lecturers in the program (9%), communication in French language and everyday contact with the language within the study field (8%), complex view of the issue of sales and presentation of Francophone culture and civilization (7%), deep knowledge of the issue with regard to the specific contents of the study program and its practical orientation, connection with the practice, because within the seminars there were also engaged the managers from French enterprises, who made it possible to elucidate the practice in France (6%), student mobility within the program Erasmus or stay in French enterprises (4%), acceptance of diploma by French employers (3%), experience, which is not commonly offered (3%), high theoretical contribution of the subject offered (2%), new view

of the issues studied (2%), open approach to the new culture and form of education (2%), high quality of the program (1%), education at European level (1%), getting knowledge of the high quality foreign university without having to travel abroad (1%), personal and unconventional approach of lecturers (0.9%), obtaining a foreign diploma, which increases the value of education (0.6%).

**Fig. 4: The main arguments in favour of study of the program in French language**

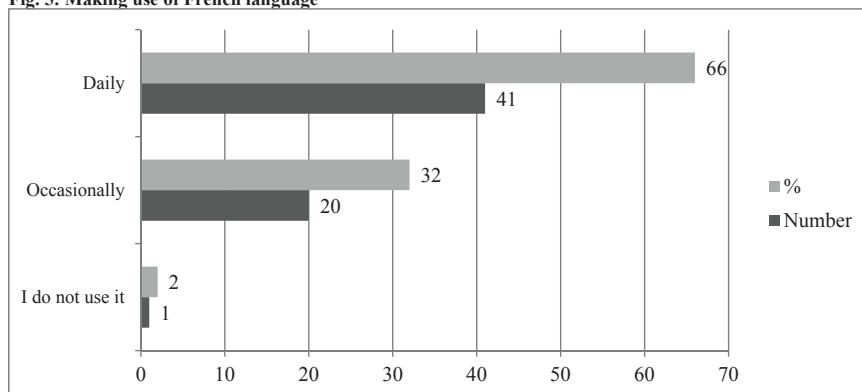


Source: own processing

The third element are the graduates’ opinions on making use of French language, contribution of the program to employment and knowledge of present working positions of the graduates (figure 5). French language is daily used at work by 66% of graduates, 32% of them use

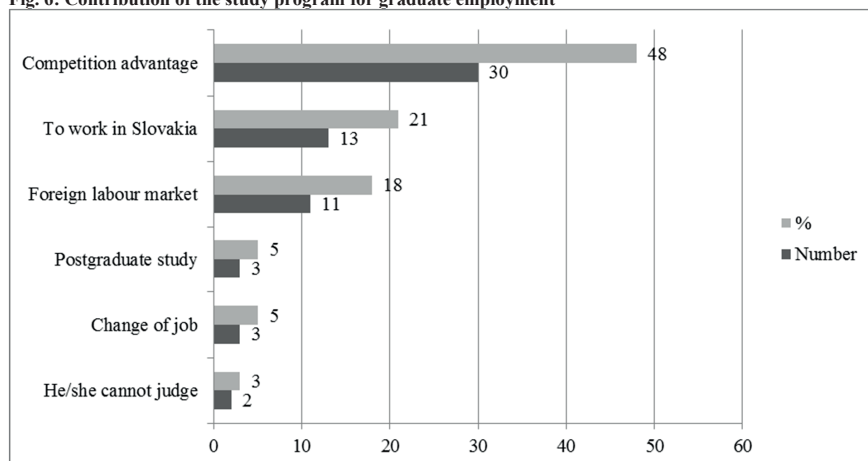
French language occasionally (in personal contacts or at work), 2% of French language is not made use of due to the maternity leave.

**Fig. 5: Making use of French language**



Source: own processing

**Fig. 6: Contribution of the study program for graduate employment**



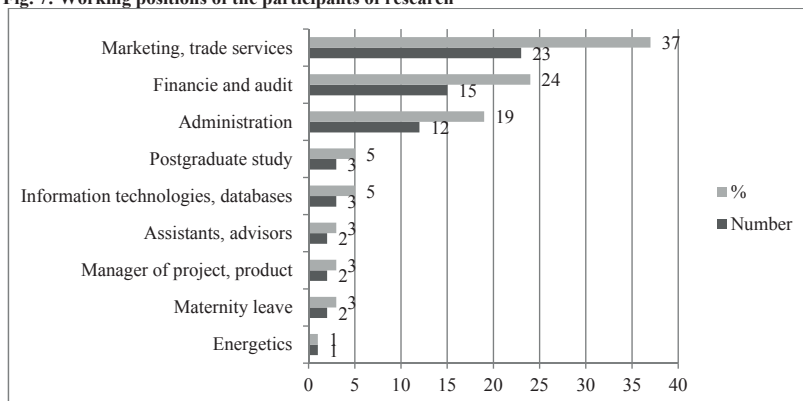
Source: own processing

According to the research results the will and courage to study in foreign language makes employers create a positive image about the potential employee, who has not obtained his/her title easily. The graduates, who work in the spheres connected with the study program, make use of the gained knowledge in their jobs daily. The way of teaching following the French educational system gives more perspectives in the labour market and solving practical tasks can facilitate work duties. From the point of view of contribution of the program to employment (figure 6) the graduates stressed that the program enabled them to get

competitive advantage in the labour market due to expert language skills (48%), to work in Slovakia in the field they had studied (21%), to get employment in the French labour market or other countries and European institutions (18%). Some graduates expected changing their jobs as they wanted to work in the field they had graduated in (5%). 5% continued studying for PhD degree in the field of trade and marketing. 3% could not judge the importance of the program for getting jobs in the labour market as they continued working in the same firm they had worked in before graduation or they worked in their own firm.

Most graduates worked in the positions, which corresponded with the profile of graduate of the study program (figure 7), i.e. in the field of marketing, trade and sales or services (37%). The contents of the study program was related to the positions in the sphere of information technologies and maintaining databases of customers (5%), positions of project and product managers (3%), postgraduate study in the field of trade and marketing (5%). The contents of the program enabled the graduates to get also other positions in enterprises, i.e. in the sphere of finance and audit (24% of graduates), in the sphere of administration and making analyses (19% of graduates). Further the graduates worked as assistants and advisors of MEPs or in the spheres of business and energetics. Two participants of the research were on maternity leave.

**Fig. 7: Working positions of the participants of research**



Source: own processing

## 5 CONCLUSIONS

Since the year 1994 the study in French language at the University of Economics in Bratislava has made it possible for the students to work in the Francophone business world. The process of internationalization of education supports cooperation between the Slovak and French

institutions and enterprises by creating the synergies, which lead to development of business and creative abilities of students and create an innovative (Kita, 2014, 404-405) atmosphere inevitable for development of society (Soares, 2014).

The importance of the study program in French language is emphasized by its connection with the European Social Fund and the Strategy Europe 2020. From the point of view of this context, the task of the university is to increase the quality and flexibility of education by means of innovation and connection of the contents of education with the needs of the knowledge society, to support cooperation between the universities, international scientific networks and private sector at the national and international levels. Securing the quality of university study strengthens the academic values, which create the mission of the university integrating its three basic functions: science, education and training.

The system of research of students' opinions is also an important element of functioning of the faculty and university because these opinions concerning the process of recruitment, evaluation of the didactic aspects of study programs are an important element of their management. It provides information for decision making, which is connected with the the faculty and university brand names and their competitive positions. It creates a core of internal relationship marketing, which connects the faculty and university with its students. At the same time it influences the commercial relation student–institution, in which student plays the role of a client. Internationalization of education of the study program by linking the French way of thinking with the Slovak reality as a result of approaching in the sphere of culture and economy is not only a contribution in the discussion about the academic values and commercial aspects of the relation student–institution, but it is a tangible benefit of growth of quality in education in foreign languages and training students for multilanguage and multicultural environment.

#### **ACKNOWLEDGEMENT**

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# Science, Technology and Export: Slovak Case

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**Abstract:** The paper is a response of authors to a medialized belief implying that Slovakia is experiencing a technological decline and almost all investments have to be directed to acquisition of knowledge from abroad. Domestic companies though produce a lot of export articles but with few know-how and knowledge that would be appreciated abroad. Consequently, the aim of the paper is to assess developments of Slovak export in the light of the above-mentioned assertions by analyzing the relationship of the export on one side and of selected statistical indicators on science and technology on the other side. The authors used theoretical, statistical and econometric methods. Specifically, the structure of input data was investigated using descriptive statistics. Subsequently, linkages between variables and hypotheses were verified by assembling a linear regression model and the correlation analysis. The authors assumed a direct relationship between the both gross export and the share of high-tech export on total export and the statistical indicators on science and technology. By using the polynomial regression analysis, a correlation between the number of human resources in science and technology and high-tech export on total export was investigated. Finally, the authors confronted their findings with previous research in this field. The authors confirmed the relationship between the expenditure on R&D by business enterprise sector and high-tech export for Slovakia. Furthermore, they came to the conclusion that in the period under the review, no significant changes in the Slovak export occurred in relation to its domestic knowledge intensity.

**Keywords:** Science, technology, export, value-added.

**JEL Classification codes:** F14.

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## 1 INTRODUCTION

“Slovakia lags behind and practically all development investments represent acquisition of knowledge from abroad. Domestic companies produce many export goods, though only minimum of knowledge attracting interest worldwide. True “knowledge-based enterprises” are rather a rare thing, not a reality. At the same time, it is knowledge that is demanded at most, and it can be traded in the same way as other goods. It does not require complex production, transport, quantities of materials or numerous human resources. What is inevitable is invention and courage”. These words were in the introduction at the TOP Management 2015 conference, being a traditional meeting-place of corporate top managers and owners, as well as of government representatives. It is featured by granting annual prizes for outstanding entrepreneurial results and a prize for outstanding managerial personality of the year.

The long-term growth-model of the Slovak economy significantly depends on the external demand. Knowledge is currently the driving power for export performance of economies (Baláž, Hamara & Sopková 2015). These assertions inspired us to study the Slovak exports from the point of view of domestic knowledge intensity.

## 2 LITERATURE REVIEW

Several concepts can be used to determine the knowledge intensity of export. Economic literature often uses various sectoral classifications according to the technological intensity, R&D intensity, knowledge intensity or sophistication. The manufacturing sector is classified according to its technological intensity to high-technology, medium-high-technology, medium-low-technology and low technology manufacturing. Some authors (Grupp 1995) divide high technology into very high R&D-intensive products ('leading-edge') and above-average R&D-intensive products ('high-level' technology). The sector of services encompasses knowledge-intensive services and less-knowledge-intensive services (Miles 2008). Export sophistication of countries indicates the extent to which high-value products characterise each country's export profile. It can be measured by the sophistication index (Lall & Zhang, 2006) and it is enhanced by capital deepening, engagement in knowledge creation, transfers via investment in education and R&D as well as foreign direct investment and imports (Zhu & Fu, 2013). Classification reflecting the R&D intensity of industries distinguishes R&D-intensive, medium-high R&D-intensive, medium-low R&D-intensive and low R&D-intensive industries (OECD 2015). Similarly, it is possible to assess the technological or R&D intensity of a country's foreign trade. High-tech trade covers exports and imports of products with a high intensity of R&D. Export of high-tech products reflect a country's ability to carry out research and development and to exploit the results in global markets. Industries producing these goods are generally a source of high added value. Exports of such products therefore represent an important competitiveness indicator in the knowledge-based economy (European Commission 2003). It is possible to determine shares of particular industries in country's exports on the basis of these classifications, and to conclude on its technological, R&D or knowledge intensity. For Slovak exports, see e.g. a study (Gabrielová 2005) providing shares of particular product groups in exports of manufacturing industries in 1998-2003, based on technological intensity.

This approach has though limitations due to production fragmentation among multiple countries, i.e. due to existence of global value chains. Using the share of high-tech exports as a criterion for comparing countries per technology level can be very misleading. Finished-

goods exports are increasingly produced from semi-finished products imported into a country, the latter often being very sophisticated components. The economy in question thus may, despite having a high share of high-tech export goods, remain an economy specialized in low-technology activities, while technologically intensive activities are performed abroad (Gabrielová 2008). It is therefore more appropriate to assess the production per a character of activity in the production chain, using the indicator of domestic value added content of export. However, it was pointed at certain “unfairness” of this indicator towards countries at the end of value chain (Habrman 2014). The case was made for several countries evenly adding the same value to a semi-finished product, where the indicator of share of domestic value added content of export was gradually decreasing for each successive country despite the fact that their contribution might have been the same in absolute terms. Therefore a low share of domestic value added content of exports needs not necessarily indicate a technological lagging behind but it may just reflect position of country at the end of value chain, i.e. specialization in final production.

Another tool for analysing a country’s position vis-a-vis others in the global knowledge economy is the use of various indexes, such as the Index of knowledge composition of a country’s export (Sheehan & Tikhomirova 1998), the Knowledge and Knowledge Economy indexes developed by the World Bank Institute, the Global Innovation Index co-published by Cornell University, INSEAD, and the World Intellectual Property Organization or the Summary Innovation Index providing a comparative assessment of the research and innovation performance of the EU member states. The advantage of these multifactor indicators in comparison to one-factor indicators is their larger complexity. However, besides the knowledge composition of a country’s export, these indexes take into account the whole economy, not specifically the export of a country.

In this paper we applied a different approach. We analysed the relationship of the Slovak export as well as the share of high-tech export on total export on one side and of selected statistical indicators on science and technology on the other side.

## **2.1 Indicators on Science and Technology**

The measurement of science, technology / and innovation (S&T/STI) is not an easy matter. Initially, the OECD in cooperation with its members’ statistical offices developed international standards for R&D measurement. A new set of STI output indicators was developed by the OECD within the framework of the Oslo manual in 1992 (for more details on developing STI indicators see Freeman & Soete 2007). Except for the OECD indicators,

there are also other sets of STI indicators. The overview of main S&T/STI indicators is in table 1. The indicators used by the OECD, the World Bank and the Eurostat are partly the same or similar. However, some indicators appear only in one set of indicators.

**Tab. 1: Science, technology / and innovation indicators**

Science and Technology indicators by the OECD	Science and Technology Indicators by the World Bank	Science, Technology and Innovation Indicators by the Eurostat
Gross domestic expenditure on R&D (current PPP \$, % of GDP, compound annual growth rate a. o.) Basic research expenditure (% of GDP)	R&D expenditure (% of GDP)	R&D expenditure (by sectors, by NUT 2 regions) Gross domestic expenditure on R&D (by source of funds)
Total researchers (headcount, compound annual growth rate, per thousand labour force a. o.) Total R&D personnel (compound annual growth rate, per thousand labour force a. o.)	Researchers in R&D (per million people) Technicians in R&D	Total researchers (by sectors of performance, by NUTS 2 regions) R&D personnel (by sectors of performance) Share of women researchers
		Human resources in science and technology Doctorate students in science and technology fields
	Scientific and technical journal articles	
		Government budget appropriations or outlays on R&D Turnover from innovation
Patent applications to the European Patent Office (EPO) and filed under the Patent Cooperation Treaty (PTC)	Patent applications (non-residents, residents – according to the PCT + national applications)	Patent and high-tech patent applications to the EPO (by priority year, by NUTS 2 regions) Patents granted by the United States patent and trademark office by priority year
	Trademark applications filed at national or regional intellectual property office (direct non-resident and resident)	
	Charges for the use of intellectual property (payments, receipts)	
Technological balance of payments		
International trade in R&D-intensive industries	High-tech exports	High-tech exports
		Venture capital investments
		Employment in high- and medium-high tech manufacturing sectors and knowledge-intensive service sectors

Source: Processed by authors from the Eurostat 2016b, World Bank Group (WBG) 2016a and OECD 2016.

### 3 METHODS AND RESULTS

For our research, we have selected indicators covering R&D expenditure by the business enterprise sector as well as by the government sector, patent applications by residents and human resources in science and technology. Resources devoted to R&D and patent statistics represent the basic S&T indicators. However, these indicators have several limitations. First,

R&D is an input. Although it is obviously related to technical change, it does not measure it. Second, R&D does not encompass all the efforts of firms and governments in this area, as there are other sources of technical change (OECD 1996). Patent statistics are used as indicators of the output of invention activities. The number of patent applications or patents granted to a firm or a country may reflect its technological dynamism. The drawbacks of using patents as indicator are known. Many innovations do not correspond to a patented invention; many patents correspond to invention with a near zero technological and economic value, whereas a few of them have very high value. Information contained in patent statistics can be used to trace the origin of value creation (the geographical location of innovators) and the site of value appropriation (the geographical location of the ultimate owners of innovations). Basic S&T indicators are complemented in our research by the indicator of human resources in science and technology. Calculations were performed using Microsoft Excel and Gretl software.

**Tab. 2: Input data**

Year	ValAdd mil. EUR	Export mil. USD	High-Tech Export %	GERD G EUR p.c.	GERD B EUR p.c.	HRST thousands	Patents quantity
2005	44 741,11	45 170,8	7,4	10,70	18,00	849	171
2006	50 722,96	57 202,2	6,7	13,20	17,40	885	213
2007	56 822,17	71 870,5	5,4	16,60	18,60	894	257
2008	62 118,60	80 305,2	5,3	18,60	24,30	920	192
2009	58 098,69	60 135,5	5,7	19,10	23,10	950	201
2010	61 406,22	68 324,9	6,8	23,10	32,50	1 008	258
2011	63 865,62	83 495,1	7,1	24,00	32,30	1 025	269
2012	66 326,09	85 408,5	9,2	26,60	44,80	1 018	205
2013	67 384,69	91 995,1	10,3	23,10	52,20	1 021	213
2014	68 577,63	92 081,5	N/A	35,00	45,50	1 033	238

Source: Processed by authors from the Eurostat 2016a and 2016b, WIPO 2016, WBG 2016b and ŠÚ SR 2016. Explanatory notes: ValAdd = value added, Export = export of goods and services, High-Tech Export = high-tech export as share of manufactured export, GERD B = expenditure on R&D by business enterprise sector GERD G = expenditure on R&D by government sector, HRST = human resources in science and technology (i.e. persons with tertiary education and/or employed in science and technology), Patents = number of patent applications filed in Slovakia by its residents; N/A = not available.

The input data are shown in table 2 and the descriptive statistics on this data in table 3. It was not applicable to remove the trend and clean up the time series from extreme observations because official statistical databases contain only a limited time series period and we obtained just sufficient number of observations. The low number of observations did not allow time shifting (lagging) of variables. It would cause loss of observations. The Ramsey RESET test proved a correct model specification, therefore it was not considered necessary to include additional variables, nor compensation variable AR (1). Time delay was analysed by the

graphical method. We assumed that expenditures in the past generated the current level of exports.

**Tab. 3: Input data – descriptive statistics**

	ValAdd	Export	High-Tech Export	GERD G	GERD B	HRST	Patents
Mean	60006,378	73598,9 mil.	7,10	21	30,87	960,3	221,7
Standard Error	2408,66	5001,6 mil.	0,57	2,21	4,04	21,84	10,21
Median	61762,41	76087,9 mil.	6,77	21,1	28,3	979	213
Standard Deviation	7616,85	15816,6 mil.	1,71	7,00	12,78	69,08	32,28
Sample Variance	58016456,4	2,50164E+20	2,94	48,98	163,21	4771,6	1042,0
Kurtosis	0,33	-0,78	0,12	0,65	-1,23	-1,63	-1,12
Skewness	-0,96	-0,51	0,91	0,52	0,56	-0,41	0,13
Range	23836,52	46910689712	5,05	24,3	34,8	184	98
Minimum	44741,11	45170835717	5,26	10,7	17,4	849	171
Maximum	68577,63	92081525429	10,31	35	52,2	1033	269
Sum	600063,78	7,35989E+11	63,88	210	308,7	9603	2217
Count	10	10	9	10	10	10	10

Source: Processed by authors from the Eurostat 2016a and 2016b, WIPO 2016, WBG 2016 and ŠÚ SR 2016.

We first produced a correlation matrix (table 4) which proved a strong direct relationship between added value on one side and expenditure on R&D by the government sector, the business enterprise sector, or human resources in S&T on the other side. Based on this relationship, we assume analogical relationship between these indicators and domestic added value content of export, since the added value generated in Slovakia should be included in Slovak export.

**Tab. 4: Correlation analysis**

	ValAdd	Export	High-Tech Export	GERD G	GERD B	HRST	Patents
<b>ValAdd</b>	1						
<b>Export</b>	0,951	1					
<b>High-Tech Export</b>	0,3861	0,43812	1				
<b>GERD G</b>	<b>0,89127</b>	0,823	0,44288	1			
<b>GERD B</b>	<b>0,84512</b>	0,82556	0,83734	0,81704	1		
<b>HRST</b>	<b>0,90719</b>	0,80466	0,53149	0,89735	0,87346	1	
<b>Patents</b>	0,41684	0,39675	-0,1452	0,43275	0,17233	0,49097	1

Source: Processed by authors from the Eurostat 2016a and 2016b, WIPO 2016, WBG 2016 and ŠÚ SR 2016.

We assumed that developments in indicators on S&T will have impact on the total export volume of Slovakia. However, the econometric model 1 stemming from indicators in the table 2 turned out to be statistically not significant, see table 5. The reason behind is that the export volume of Slovakia (dependent variable) was growing constantly but independent variables

stagnated. It follows that exports grew in connection to other factors, assumedly due to increase in low-technology production. The result of the model 1 thus indirectly confirms the thesis quoted in the introduction of our article.

**Tab. 5: Econometric model 1**

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Model: OLS, using observations 2005-2014 (T = 10)					
Dependent variable: Export					
	Coefficient	Std. Error	t-ratio	p-value	
const	7,03743e+010	1,11244e+11	0,6326 < 2,57058	0,5548	
GERD G	9,09917e+08	1,09415e+09	0,8316 < 2,57058	0,4435	
GERD B	9,1373e+08	6,82047e+08	1,3397 < 2,57058	0,2380	
HRST	-7,48522e+07	1,59874e+08	-0,4682 < 2,57058	0,6593	
Patent	1,2535e+08	1,49077e+08	0,8408 < 2,57058	0,4388	
R-squared	0,779121	< 5,19217			
F(4, 5)	4,409217				
Durbin-Watson	1,787463				
RESET test for specification:					
Null hypothesis: specification is adequate					
Test statistic: F(2, 3) = 1,65124					
with p-value = P(F(2, 3) > 1,65124) = 0,328409					

Source: Output from Gretl, using input data from table 2.

We continued our analysis by replacing the total export volume for another dependent variable, namely the share of high-tech export on the total export, in expectation of closer correlations with our input data. In tables 6 and 7 we present resulting models 2 and 3 with the best statistical significance and interpretation capability. Table 6 presents an econometric model 2 with the share of high-tech export on total export as a dependent variable and GERD G and GERD B as independent variables. This model is statistically significant and explains 88,3 % of input data. The econometric equation can be noted as follows:

High-Tech Export = -0,24 \* GERD G + 0,20 \* GERD B + 5,95.

**Tab. 6: Econometric model 2**

Table 6: Econometric model 2

Model: OLS, using observations 2005-2013 (T = 9)					
Dependent variable: High-Tech Export					
	Coefficient	Std. Error	t-ratio	p-value	
const	5,95026	0,950258	6,2617 > 2,44691	0,0008	***
GERD G	-0,242304	0,0791855	-3,0599 > 2,44691	0,0222	**
GERD B	0,200327	0,0337064	5,9433 > 2,44691	0,0010	***
R-squared	0,883281	> 5,14325			
F(2, 6)	22,70284				
Durbin-Watson	1,367242				
RESET test for specification - Null hypothesis: specification is adequate Test statistic: F(2, 4) = 1,66109 with p-value = P(F(2, 4) > 1.66109) = 0.298428					

Source: Output from Gretl, based on table 2.

The equation contains a logical paradox in the negative sign for the variable GERD G, i.e. it challenges the logical hypothesis of direct proportionate relationship between an increase in

expenditures on R&D and an increase in high-tech export share. This result can be supported by our correlation analysis between government expenditure on R&D and high-tech export share that does not confirm a strong direct relationship. The model thus reflects the fact that high-tech export is driven by private investments, mostly foreign ones, and supports, in our opinion, existence of dual economy as identified by authors Baláž, Kluvánková-Oravská & Zajac (2007).

Table 7 presents the econometric model 3 based on share of high-tech export on total export as a dependent variable and HRST as an independent variable. In order to reach the highest possible coefficient of determination (R-squared), we performed a 2<sup>nd</sup>-level polynomial regression analysis. The linear variant of the analysis was less statistically significant and the coefficient of determination was lower. The model significance is marginal (p-value, t-ratio, F-statistics), the estimated coefficients are accepted with 90% confidence (Lukáčik, Lukáčiková & Szomolányi 2011). The econometric equation can be noted in the form:

$$\text{High-Tech Export} = -0,66 * \text{HRST} + 0,0004 * \text{HRST}^2 + 310,32.$$

The model asserts that if the number of HRST hypothetical raised to 1 100 000 then the high-tech export share on the total export should reach 16,02 %.

**Tab. 7: Econometric model 3**

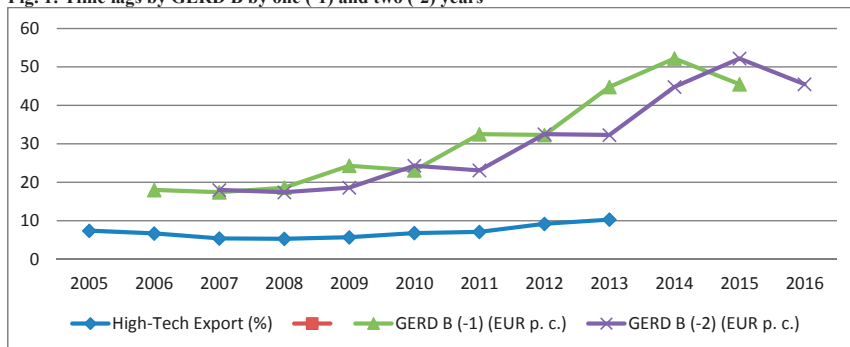
Model: OLS, using observations 2005-2013 (T = 9)					
Dependent variable: High-Tech Export					
	Coefficient	Std. Error	t-ratio	p-value	
Const	310,321	129,549	2,3954 < 2,44691	0,0536	*
HRST	-0,657784	0,274968	-2,3922 < 2,44691	0,0539	*
HRST <sup>2</sup>	0,000354761	0,00014530	2,4415 < 2,44691	0,0504	*
R-squared	0,640070	> 5,14325			
F(2, 6)	5,334951				
Durbin-Watson	1,328165				
RESET test for specification -					
Null hypothesis: specification is adequate					
Test statistic: F(2, 4) = 0,0600973					
with p-value = P(F(2, 4) > 0.0600973) = 0.942507					

Source: Output from Gretl, based on table 2.

We examined the time lag using the graphical method (Figure 1). We observed similarity in the course of curves if shifted by one respectively two years in the variable GERD B. The greatest similarity appeared in a shift by two years. The graphical method was supported by the correlation analysis. The correlation coefficient calculated in Excel spreadsheet between High-Tech Exports (%) and GERD B (-1) was 0.89 with 8 observations and GERD B (-2) was 0.98 with 7 observations. This means that it takes two years until the expenditure on R&D by business enterprise sector manifests in high-tech exports.



**Fig. 1: Time lags by GERD B by one (-1) and two (-2) years**



Source: Processed by authors from the Eurostat 2016a and 2016b, WIPO 2016, WBG 2016 and ŠÚ SR 2016.

#### 4 CONCLUSIONS

It has been proved by previous studies that R&D spending in an exporting country is positively associated with merchandise export, particularly for high-tech products (Bojnec, Fertő 2014). For Slovak export, we were able to confirm the relationship between the expenditure on R&D by business enterprise sector and high-tech export. Contrary to that, we were not able to confirm the same for government expenditure on R&D. The results of our study support the results of the study Baláž, Kľuvánková-Oravská & Zajac (2007) stating that in Slovakia, *two notably different sectors are developing paralelly. One is created by highly efficient, export-orientated and technologically advanced MNC subsidiaries and by international banks. The other is represented by several large enterprises owned domestically and a large number of small and medium enterprises. The domestic enterprises focus on low-cost production with low level of added value. MNCs take advantage of technology transfers from their parent companies, nevertheless, in substance they are typically just assembly workshops.* From among newer studies, this matter was marked also by Ružeková, Kašťáková & Silná (2013) and Baláž, Hamara & Sopková (2015), noting that the period of effect of foreign direct investments in Slovakia was not used at all and a dependence of Slovakia on implementing their production and export activities is deepening. We can therefore conclude in total that in the period under our review, no significant changes in the Slovak export occurred in relation to its domestic knowledge intensity.

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# Rapid Internationalization – Applying the Born Global Company Model in Slovak Companies

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**Abstract:** Born Global Companies have become the new phenomenon in international business in last decades of previous century. Because it lies in the intersection of entrepreneurship and internationalization research streams, and it has appeared recently, it has prompted calls for the revision of traditional internationalization theories. The author examines the classical concept of internationalization represented by The Uppsala Internationalization Model, Product Life Cycle Theory, and Network Approach. The paper is an attempt to illustrate the Born Global Model of rapid internationalization on the examples of Slovak companies and identify the core factors and assumptions of this new internationalization model applying.

**Keywords:** rapid internationalization, born global company.

**JEL Classification codes:** F230.

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## 1 INTRODUCTION

Internationalization is one of the basic processes in world economy and business. It has appeared as a casual consequence of developing and strengthening firm's attempts to enter foreign markets and achieve a higher profit. We can argue that there are numerous contributions in the international literature about internationalization process which are based on theoretical analyses and studies as well as on empirical knowledge.

When companies expand their geographic scope they will probably need to extend their product types and specifications to meet multiple, differing requirements. As they become internationally oriented, they become larger, more diversified and robust (Theodoulides, 2013). Internationalization process of firms has become easier due to a more "free space" when crossing borders, through developing new information and communication means and better and more reliable infrastructure in many parts of the world. Debate in literature defines internationalization as "a process that takes place over time, in which the producer exporter expands his involvement and commitment to international operations." (Kraus, 2006). Internationalization can be understood also as the involvement process in international operations and it relates to activities such as foreign trade, capital flows, technology transfer, information flow and data, alliances, mergers, acquisitions, Foreign Direct Investment among

others (Welch and Luostarinen, 1988). This definition caters for all forms of international activity including advanced forms such as internationalization by joint venture or acquisition. Due to the changing techno-economic environment and new types of business strategies and models pursued in the globalised, more interconnected economies and due to the emergence of new players on the market, the firms have been forced to find and implement new approaches to entrance and sustain the foreign markets. The purpose of this paper is to demonstrate that traditional approaches to internationalisation do not fully explain company's internationalization process. This paper identifies the more traditional approaches to internationalization on the grounds that they are more cyclical and gradual rather than dynamic and holistic and as such do not reflect the evolution of international activities of modern companies.

## **2 HISTORIC PROCESS OF INTERNATIONALISATION OF THE COMPANY**

To identify the evolution of internationalization process it was required to examine number of articles, studies, and books chapters. Author is inclined to believe that the extensive research of the topic of internationalisation of the company should be described briefly in following parts of the paper. Traditional models of internationalisation can be broadly categorised as *stages approaches* and *network approaches*. The advocates of stages approach (Bilkey and Tesar, 1977; Cavusgil, 1980; Reid, 1981) explain the internationalization as a sequential evolution and argue that internationalization takes place in a series of stages, each of which involve an increasing commitment of resources. According to the stage approach companies start internationalization process by selling products in their home markets and then they sequentially enter foreign markets. Three main stages approach models can be identified: the Product Life Cycle Theory by Raymond Vernon (1966; 1971; 1979) and the Uppsala Internationalization Model (Johanson and Vahlne, 1977, 1990, 2006; Johanson and Wiedersheim-Paul, 1975), and Kraus (2006) model features the specifics of internationalization process at emerging market of Brazil.

### **2.1 Product Life Cycle Theory**

Vernon (1966, 1979) argued that technological innovations (development and production of new products) in consumer and industrial goods could explain internationalization of companies. Assuming that (1) products undergo predictable changes in production and marketing, (2) restricted information is available on technology, (3) production process changes overtime and economies of scale prevalent, (4) tastes differ according to income and products can be standardised at various income level" (Buckley, 1985). Vernon distinguished

three different stages in the life of a product; "the new product", "the maturing product" and "the standardized product".

A few shortcomings of product life cycle theory are expressed. Rugman et al argued (1985) that it did not take into account various comparative advantages of different countries at the initial stage of production. It is also added that products are developed not only for a particular market but also for different markets continuously (Buckley and Casson, 1976).

Recently, Vernon (1979) concluded that even if the product cycle hypothesis had lost explanatory power during the decades, it may nonetheless continue to provide a guide to behavior of some enterprises all over the world. He also stated that the model could still be applied to smaller firms, which have not yet created an international network of foreign manufacturing subsidiaries.

## **2.2 Uppsala Internationalization Model**

One of the most well-known theories explaining internationalization process in business belonging to the behavioural group of internationalization theory can be considered the Uppsala Internationalization Model. This model developed by Johanson, Wiedersheim-Paul, and Vahle at the University of Uppsala during 1970s explains companies' decision towards choosing markets and methods of penetration. The model states that companies begin their business abroad in psychically close regions and then gradually, step-by-step, expand to other markets. This psychical aspect is affected by business language and culture, commercial law and economic development. According to the Uppsala Internationalization Model the fact that companies become international can be explained by their ability to learn. The only weakness of the Uppsala Internationalization Model is the fact, that it does not cover characteristics of individuals (e.g. founders, top management) engaged in a particular business operation. The model does not show much consideration to management incentive and its effect on decision making, or when they introduce the sequential four steps of market entry they ignored some other forms of market entries which are difficult to place on the model's scale, such as franchising which is considered to be a relatively less risky market entry and have the opportunity to build great market coverage and control (Doole and Lowe, 2008), or licensing which requires low levels of investment and provide considerable control over the market or strategic alliance and some other market operation. Nowadays many researchers pay attention to the individual level when studying the international behaviour of companies.

### **2.3 Kraus Gradual Model**

Almost the similar approach to internationalization of the company presents Kraus (2006). His model features four gradual steps, which represent the producer exporter company's commitment in operations abroad. The steps are as follows: (1) pre-engagement, (2) passive involvement, (3) active involvement and (4) committed involvement.

Kraus comments that in each stage there are activities that can be considered as sub-steps. The author explains each step: *Step of Pre-engagement* - The organization is focused entirely on the local market it considers safe and familiar. Most Brazilian companies belong here, but may in the future operate abroad. This step consists of: Stage Non-Export and Stage Pre-Export. *Step of Passive Involvement* - In this stage the company is involved with its first export activities; it already has a structure, contacts and has exhibited their products at trade shows or fairs. This step consists of: Stage Irregular Exporter and Stage Passive Exporter.

*Step Active Involvement* - In this stage the company becomes aware of its passivity and shifts its production focus for the market. This step consists of: Stage Pre-Active Exporter and Stage Active Exporter. *Step Committed Involvement* - In this stage the company operates in several markets and seeks to adequate itself to the tastes and habits of its consumers, adapting and developing specific products and after-sale services. It is also at this stage that the company finds opportunities with the establishment of offices and production units.

According Welch and Benito (1996) international activities often do not proceed in a continuously incremental path and there can be periods of de-internationalisation in which firms withdraw from some markets, downsize operations in others so as to strengthen their position for future international involvement. It should be noted that neither of presented stages models of internationalization did not reflected this reality.

### **2.4 Network Approach to Internationalization**

Over the last decade, researchers have increased their attention to justify the internationalization of the companies by applying a network approach. The network approach to internationalization theory has its roots in research made within the Industrial Marketing and Purchasing (IMP) Group from the late 1970s until the early 90s last century. Through the collaborations of a group of European researchers, IMP-Group studies were focused on cross-border, business-to-business marketing activities. Later, two members of the IMP-Group applied the concepts of inter-firm business relationships and networks to the international context and wrote an article that is often considered to be the ground breaking work introducing network theory (Johanson and Mattsson, 1988). Network could be considered as a facilitating factor to the internationalization process.

Networks in the host market are particularly crucial for the small companies as the knowledge learned through these foreign counterparts can help firms to overcome their resource limitations (Zain and Ng, 2006). Researchers claim that the internationalization is happened in an interactive environment that is conducted by a network of companies, which includes of focal and external actors. Interaction of these actors in networks can help companies to acquire activities, resources and information that are necessary for internationalization (Awuah et al. 2011).

In fact, a single theory cannot fully explain and justify the internationalization process. Both stages and network perspective of internationalization were studied and developed by theorists analyzing companies in advanced economies and they did not consider the specifics of emerging companies and emerging markets. Therefore, these theoretical approaches demonstrate limited to understand the internationalization process of companies operating in emerging economies such as e.g. Slovak, Czech, and Polish. Author aspiration in the next part of this paper is to identify the core characteristics of rapid internationalization process and its applying for Slovak companies.

### **3 RAPID INTERNATIONALIZATION AND BORN GLOBAL COMPANY MODEL**

Born Global Company is defined as a business organization that, from inception, seeks to derive significant competitive advantage from the use of resources and the sale of outputs in multiple countries. In due course, these distinctive firms are gradually becoming the norm among companies that do international business. The distinguishing feature of born global firms is that their origins are international, as demonstrated by management's global focus and the commitment of certain types of resources to international activities. Here there is emphasized not the size, but rather the age by which the firm ventures into foreign markets. In contrast to the traditional pattern of businesses that operate in the home country for many years and gradually evolve into international trade, "born globals" begin with a "borderless" view of the world and develop the strategies needed to expand abroad at or soon after the firm's founding. The focus is on the phenomenon of early internationalization and the approaches that companies leverage for achieving superior performance in international business from the inception of the firm (Cavusgil, Knight).

The idea of Born Global Company was first used by McKinsey in a survey for the Australian Manufacturing Council (McKinsey & Co., 1993). In the survey, this sort of company was defined as "an organization which views the world as its marketplace from the beginning".



Born Global Company can be characterized generally as a small firm, which has less than 500 employees and its annual sales do not exceed \$100 million.

One way this firm may become international is starting to export its products within two years since its establishment, in the volume at least 25% of total production. Furthermore, the study discovered another type of exporters. This one, representing around 75% of all organizations, named domestic-based firm, was well established in the home market. Such companies had strong financial position and well developed product line. All of them were mainly focused on the local market, even having had international relations with foreign markets. The average age of those companies, starting export activity, was 27 years. The volume of export did not exceed 20% of total sales.

Meanwhile, according to the study, Born Globals after two years of foundation succeeded to achieve the level of export which was equal to 76% of total sales. This survey says that this type of companies is present in all industries and successfully competes with large multinational corporations. Their main competitive advantage is being close to customers by satisfying their needs better than competitors.

From written above we can make a conclusion that the phenomenon of Born Global Company is not unusual, moreover in most cases of surveys reviewed it is shown as a widespread phenomenon. However, the scholars have not yet agreed what are the specific features of a Born Global Company differing it from the rest international organizations. Some of the more often used attributes are as following:

- Such companies impressively compete with already established large entities and there has been noticed an increase of competitiveness during the first two decades.
- The management is able to manipulate the business in a way to maintain profitability and fast growth at the same time.
- The company perceives the world economy as their target market from the very beginning.
- The company's origin is international and represented by global mindset of its top management.
- The company is strongly focused on international business activities and is not afraid to be exposed to risk abroad.
- Such companies from the very beginning tend to expand simultaneously into many markets and often passing by the domestic market.

Author becomes aware of that this list does not fully characterize the phenomenon of Born Global Company however it gives understanding of uniqueness, particular features and processes the phenomenon is engaged into.

#### **4 RESEARCH METODOLOGY**

To investigate the rapid internationalization model in practice a case study method was used in this paper. As Eisenhardt (2002) argues, it is possible to build theory using case studies and many of the characteristics of the research such as problem definition and construct validation are similar to the hypothesis testing, quantitative, type of research. Yin (2003) explains that case studies are especially useful in answering the 'how' and 'why' questions that research seeks to answer, and that case study research, if properly conducted, follows the normal research methodology of defining the problem, designing the form the research will take, collecting the data, analysing the data and reporting the findings.

Case studies use deductive logic to test propositions, adjudicate among rival explanations, revise existing theories and establish causal relationships; in other words, they are suited to verification and not just discovery of new theory (Eckstein, 2000). In this paper author is concerned with case studies as a qualitative research strategy. The process of rapid internationalization will be described at the examples of Slovak companies.

##### **Case Description**

The case studies have been developed through proper study and observation of secondary resources as firm's internal data and information, web sites, articles, reports, as well as interviews with the founders and CEOs of companies. The company ESET and OMS were selected because they responded to the main characteristics of Born Global Company and they belong among the fastest-growing Slovak private companies accomplishing business all around the globe.

**Slovak company ESET** was established in 1992 by founders Miroslav Trnka and Richard Marko. Five years before the company birth the first antivirus code NOD was developed. In 1999 the first foreign subsidiary has been established in San Diego. Five year later, in 2004 ESET, opened office in Latin America.

Internationalization is occurred through many thousands of customers using the company's product or better to say service – antivirus code - from very beginning of company existing. Existence of global market and global product - these two main factors provide the core prerequisites of rapid internationalization of company ESET. Strong leaders with the clear

vision and highly educated and loyal staff are the other company's assets enhancing the process of rapid development and internationalisation.

During its 24 years history, company implemented the strategies focusing the special needs of particular target groups of customers. Internationalization activities especially in the form of acquisitions and investment into the new aggressive start-ups (e.g. Photoeo, Psiometry) ensured ESET to increase its revenues to 2860 per cent in last five years. Innovation is for ESET vital, both in terms of their own business success and for keeping their customer base free from threats. In 2012 ESET officially opened the technological hub in Montreal, Canada, which is an integral part of company's network of technology centres around the world. ESET technology and malware research will take place in nine hubs spanning Europe, the Americas and Asia-Pacific. ESET continually invests into research and education and promotes awareness about all forms of cyber threats. Nowadays ESET is the world leader in proactive cyber-threats protection with the huge network of subsidiaries and collaborative technological innovation centres.

**Slovak company OMS, s.r.o** - creator and producer of luminaires is the largest producer of industrial and designed lights in central and Eastern Europe. It was founded by Vladimír Levársky and Peter Spiess in 1995 in Slovak town Dojč. OMS exports more than 98 per cent of its production and has started with internationalization activities a few years after the birth. Company has partners and customers in 122 counties all over the world. CEO of the company Vladimír Levársky has been awarded the Best Entrepreneur of Slovakia in 2012. Founder of the company believes that the success of the company is based on extensive experience of his employees, high-quality products and the most modern technologies that company exploits.

Company is declared to be a proven innovator in the fields of design, technology and environmental responsibility. Highly specialised in-house research and development centre and design department combined with its unmatched technical knowledge allow OMS to continuously define new trends in lighting. Unique OMS products approach is rooted in the 6 E's: ergonomics, emotion, ecology, efficiency, esprit and exceptionality.

OMS philosophy is based on an emphasis on maximum customer satisfaction by continuously meeting the customers' needs and expectations. The crucial company's features are as follows: extensive product portfolio, optimum human resources (highly qualified staff), high scalability, (uses innovative technological equipment that permits changes in production rates) customised solutions (ability to meet our customers' needs), courage and speed, trend leadership, continuous geographical expansion, rapid innovation capabilities, and market-

driven products. OMS strongly believes in the importance of industry support of education and the development of an educated and skilled workforce for the future.

Due to these characteristics OMS represents one of the fast growing lighting companies in the world, and also its internationalization process was rapid and dynamic, typical for Born Global Company without the gradual stages of traditional internationalization approach.

## 5 CONCLUSIONS

Nowadays Born Global Companies appear all over the globe and the process of rapid internationalization has been facilitated by three main factors. The first one is the development of electronic communications, which makes possible to get connected with remote target markets. The second one is the homogeneity of some preferences and tastes, which gives a chance to broaden the target group for some domestic goods and services. The third one is the will and capability of companies to procure their materials, parts, products and services used in own production process from abroad. Consequently, there are technology-push and market-pull elements, which stimulate increase of Born Global Companies. By means of High-Tech and transportation development such companies can be promoted into foreign markets, meanwhile there is an attractive possibility to gain a big part of the overseas markets.

Summarising the theoretical background as well as the case study observation outcomes we can note that Born Global Company employs a particular way of doing business and internationalizing it. The key features here are *mind set of top management*, which is characterized by perception of the *world as one marketplace from starting* the business. Such a company, in most cases, uses *differentiation strategies to create a niche* in a particular market for itself. Because of this, its *products are mostly customized and focused* on satisfaction a relatively small target group. Other features which are referred to such products are their *superior quality and design*, which are mainly achieved by using innovative technologies. The Born Global is not just a new label for the modern rapid developed companies that start their international activities from their very birth but also the new phenomenon in internationalization theory and practice.

In future, it would be recommended to scholars to concern their research to observe and explain the rapid internationalization of the company from the knowledge-based or human perspective. Born Global Internationalization model can be used as a target for further studies focused on rapid expansion into foreign markets what help new start-ups to extend their activities through the globe based on knowledge sharing and human capital employing as a path to grow and development.

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# Purchasing Strategies of Low Income Households. A Study of Consumer Behaviour Specifics Among Low Income Segment

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**Abstract:** Low income segment is often underresearched by marketers due to its weaker purchasing power, which seems to be far less attractive. On the other hand the volume of this segment shows it should not be neglected. Marketing strategies based on understanding the segment specifics bring both - success to producers and retailers and - satisfaction to consumers. Therefore researching low income segment purchase strategies brings more light into understanding what, how and why. The submitted paper presents results of hybrid research of low income consumer behaviour done in Central European country. The results show what purchase strategies are used by this segment to minimize the impact of limited income on the overall household consumption. Six different strategies are identified and described in qualitative phase and later some of them are deeper described by quantitative data obtained through quantitative research phase. The paper not only defines the purchasing strategies but also shows the insight how they should be understood to help in planning successful marketing policies of retailers or produces towards this segment.

**Keywords:** Low Income Consumer, Consumer Behaviour, Purchasing Strategies.

**JEL Classification codes:** M31.

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## 1 INTRODUCTION

In each country, the ability of state to provide acceptable living conditions for its citizens is apparent. Level of minimum wages, state of education, and other environmental factors can cause certain groups of population to find themselves at risk of poverty. Economic factors especially household income has the most significant impact on consumption. Income directly affects the material aspect of peoples' existence. The amount of money and the resulting access to goods and services, enables households to saturate their needs and achieve a certain standard of living. For low-income households, this means that certain goods and services are unaffordable and their consumption is directed only to meet basic needs (Holková 2010). The goal of the paper is to present the results of research study aimed at discovering the specifics of consumer behaviour of low income households.

## 2 LITERATURE REVIEW

According to Pauhofová (Pauhofová 2001) consumer behaviour is in a short term determined by incomes, level of prices and by the structure of market supply. In a long term it is mainly under the influence of demographic development, consumption habits and certain cultural patterns.

Consumer behaviour of low income segment has its specifics due to all three factors that are influential in short term. Incomes (minimum wage in Slovakia has been risen in January 2016) that are according to Lesáková (2014) a major factor, level of prices (in 2015 in Slovakia it has not risen) as well as market supply - all three of these have great impact on level and structure of consumption of low income segment.

### 2.1 Definition of Poverty and Measuring Poverty

Poverty is one of the most serious global problems. Gajdoš (2002) reports that poverty is most frequently defined as "lack of money or material resources, where the lack of material means limits the possibility of consumption and a lack of funds makes it impossible to provide even for basic needs".

Michálek (2006) sees a large difference between poverty in less developed countries - such as third world countries or developing countries and poverty in transforming post-communist countries or developed western countries. While the content of poverty in less developed countries is literally fight for survival (due to lack of food, clothing and housing), in economically developed countries, poverty is a relative term, poverty is determined in relation to a universally accepted standard of life in the society, which has often little to do with the struggle for survival.

According to National Human Development Report done in Slovak Republic (Team of authors 2000) the largest project of poverty research was carried out in 1995 as a part of "Poverty project" that was done in cooperation with French INSEE. The research distinguished between three types of poverty:

- monetary poverty - financial conditions, this type is usually used in international researches, the limit of monetary poverty is usually 50% of the average income of the country. In terms of this approach in Slovakia there was 12.1% of monetary poor households.
- poverty of living conditions of households - is defined through the housing conditions, diet, available household electrical appliances (TV, washing machine, refrigerator, etc.). When using this approach, during the time of research, poor in terms of living conditions were 13.4% of households.



- subjective poverty- poor are those who see themselves that way. These households that see themselves as low income represented 7.7% of all Slovak households.

Authors of National Human Development Report for Slovak Republic (Team of authors 2000) emphasize, that more and more the research of low income segment is aimed at this type of households - those who are experiencing poverty.

On one hand, poverty is determined from the outside - statistical methods, expertise, government authority, but on the other hand having the option to say if the person feels poor or not gives the right to determine if his/her income covers basic needs, to say whether he/she feel poor or not (Team of authors 2000).

Poverty and social exclusion are multidimensional phenomena. As not the only one or right definition of poverty exists, nor the only one generally approved method for measurement of poverty exists. Each measurement of poverty means that we measure only some poverty concept. (Vlačuha & Kováčová, )

The source of data on poverty and inequality in the European Union are statistical surveys on living standards, such as Household Budget Survey (HBS), European Community Household Panel (ECHP), and other special Eurobarometer and national surveys. As part of the methodological development, methodological preparation and subsequent analysis of the collected data, the multidimensional aspect of poverty, which extends as intake of key indicators measuring employment, household, health and education is emphasized .

In international researches the income poverty is used the most, The reason is easier comprehension, measurability and subsequent use for international comparison of poverty. Incomes, expenses and assets are used as monetary variables. The poverty measurement consists of two steps - determining the poverty line and poverty specified index. Defining the poverty line means determining the level of income below which people are considered poor respectively, above which they are no longer considered poor. There is a possibility of measurement by: the level of income, consumption expenditure, life minimum or through subjective assessment. Analysis of internationally defined and comparable indicators of poverty in EU SILC is also based on equivalent household disposable income. These indicators measure following poverty concepts (Vlačuha & Kováčová 2015):

- *relative concept* - relative at-risk-of-poverty rate is based on evaluation (comparison) of incomes to relevant mean value, in our case to national poverty threshold,

- *indirect concept* - measurement of poverty is realized through disposable household incomes, where household expenditures are not taken into account,

- *objective concept* - poverty threshold is not set up subjectively on the base of experience and responses of individual household members, but is done on the basis of independent and objectively selected criteria (Vlačuha & Kováčová 2015)

## **2.2 Current Situation of Low Income Families in Slovakia**

According to Country Report Slovakia 2015 'although the overall risk of poverty or social exclusion in Slovakia are generally stable (19.8%) and below the EU average, there are significant regional differences in the level of poverty (Country Report Slovakia 2015). In Slovakia there are major regional differences that result in unequal living conditions and opportunities. Several areas have disadvantage from various aspects (geographic, social, industrial, etc.). The unfavourable situation of these regions comes both from their historical development, as well as the lack of a lasting interest in the systematic elimination of regional disparities.

The minimum wage increased in 2015 by almost 8% (to 380 EUR) and the net minimum wage (339 EUR) now exceeds the poverty line (Country Report Slovakia 2015). According to EU-SILC (Vlačuha & Kováčová 2015) total annual at-risk-of-poverty threshold calculated from EU SILC 2014 was in the case of single person household 4 086 Euro, what means the sum nearly 341 Euro per month. Year-to-year increase of at-risk-of-poverty threshold was approximately 4 Euro per month. For household comprised of 2 adults with 2 children aged under 14 years old, total annual amount of at-risk-of-poverty threshold was 8 580 Euro, what for this type of household meant 715 Euro per month in average. Compared to previous year it was increase by 1.1 % (in absolute values approximately 8 Euro per month).

## **2.3 Purchase Specifics among Low Income Households**

According to several authors (Ibok & Umana 2013, Leibtag & Kaufman 2006, Williams & Windebank 2001) low income households have certain specifics in consumption that is mostly apparent in the way they choose goods and mostly visible in grocery shopping (Leibtag & Kaufman 2003). Alwitt & Donley (1996) see the specifics of low income segment mostly in the choice of point of purchase. Authors see low-income segment as very segregated, usually living in areas without possibility to shop in big supermarkets with lower prices. Due to this disadvantage they have to purchase groceries in small local shops, that usually have narrow assortment and higher prices. Ibok & Umana (2013) emphasize that specific for this segment is the amount of purchases done in total. The households are larger, therefore need more and there is many of them in the population, therefore in total they create very big turnover and should not be neglected by the market. Leibtag & Kaufman (2003,

2006) see the specific of this segment in the way the households shop for groceries. According to them 4 different strategies are typical for low income segment when purchasing in supermarkets.

- 1. Looking for discounted product. Authors emphasize that even low segment households desire for brands and therefore they search for them in promotions.
- 2. Purchasing private labels. Low income households are used to private labels - as cheaper alternatives to brand product.
- 3. Preferring bigger packs. As bigger packs are often cheaper when it comes to value per unit. These households are often even bigger so they not only wait for promotion with price but ask and seek for extra big packs.
- 4. Finding cheaper alternatives. Not only switching brand for private labels but also switching products for less quality same quantity. For example instead of full fat milk buying skimmed milk, instead of ketchup with 70% of tomatoes buying the one with 40%.

### 3 METHODS

This paper presents results of the research study aimed at consumer behaviour specifics of low income segment. Data, which formed the basis for the analysis, were gathered in 2015. The hybrid research, whose partial results are reported, used method of semi-structured interviews that were conducted with more than 370 respondents - considered low income segment. Respondents had an income at the level of monetary poverty. As in international researches, the limit of monetary poverty is usually 50% of the average income of the country, and the average income in Slovakia according to statistics in 2015 was approximately 950 EURO, the limit was set to maximum income of 450 EURO.

The interview was based on prepared scenario where participants had opportunity to respond freely to questions monitoring their consumer behaviour. Interviews were conducted face to face - one researcher interviewed one participant - usually in their home environment. Data from semi-structured interviews were recorded and later the transcription was made based on the record. Subsequently, transcripts were processed first individually (set of chosen 'representative' interviews was analysed by qualitative analysis - forming codes using the GTM method), than all interviews (n=374) were analysed again (using the identified codes) and structured to give comparable results.

The research had the aim to answer the following research question:

*Q1: What are the purchasing strategies that help low income segment to overcome the financial limitations?*

## 4 RESULTS

To identify what strategies help low income households to overcome the financial limitations and to which extend they use strategies that were sooner defined in the literature we had to use qualitative phase of the research. Letting respondents to talk about their way of shopping gave us insight into their shopping approach. We tested, if the defined ways of coping are present also in low income segment in Slovakia and also tried to find out what else the respondents do. Then, after the different ways of coping were identified, we had to recode the qualitative data to be able to see how often this specific way of coping occurred in the sample. The following ways of coping are typical for Slovak consumers with limited income.

- **1. Creating the shopping list and planning budget** (57.8%). When researching further almost half of respondents (47.9%) strictly keep the list and almost one third keep the budget (29.4%).
- **2. Precisely watching the supermarket discounts in flyers** (74.3%). Segment of low income customers is typical by planned shopping behaviour and usually the plan is based on the promotion activities - very often supermarket discount flyers. Since coupons are not that used here in Slovakia, discount promotion flyers are the most used among this segment. Planning to visit the shop only based on the promotions is common among more than a third of respondents (36.1%). Discounts in flyer motivate respondents (38.5%) to visit even more shops during one day depending on promotion presented in flyers.
- **3. Waiting for brand products they like, to be discounted** (46.5%). Although there is a big group of those that despite their income prefer some brand products and therefore wait to buy them when they are on sale, still some respondents tend to **buy whatever is cheaper** - 29.1% of respondents buy any alternative of the product that is currently discounted or cheaper, not considering brands or preferences for any specific features.
- **4. Buying more - to store when a product is discounted** (53.7%). Half of respondents tend to buy more to store, when product is in "good" sale. Discounted prices lead to frontloading. More than a half of respondents that decide to buy more (64.8%) buy at least twice as much when the product is on sale.
- **5. Buying bigger packs, because it is cheaper** per unit occurs among 38% of respondents. on the other hand 27% **prefers smaller packages because it is less money per purchase**. We researched if there is some correlation between the type of household and this preference. Testing it with Pearson chi-square test we found out that there is relation between the group to which the low income household belongs and the type of package they prefer ( $p=0.00$ ). Employed customers with low income and large families prefer purchasing big packs; single

mothers prefer small packages and one person households and seniors do not prefer any alternative. They buy depending on what seems to be more reasonable at the moment.

- **6. Choosing private labels** - more than 4/5 of respondents (84.2%) buy private labels regularly. Some of them do that only due to their financial limitation because they do not think private labels are equal quality compared to commercial brands (19%) but larger group of those that buy them perceives them equally good (65.2%).

## **5 CONCLUSIONS**

The low income segment should not be neglected, because due to its size and therefore purchasing power, it has significant impact on sales, mostly sales of fast moving goods satisfying basic needs - such as groceries.

Compared to studies done in US we did not find the following segment specific to be significant in Slovakia: purchasing mostly in small and more expensive shops. On contrary, low income segment in Slovakia prefers to shop in stores with regular promotions - supermarkets and hypermarket. According to results, this segment is even willing to visit several stores - different brands- to fulfil the list of needed items at the best promotion prices.

Researching the specifics in purchasing strategies of this segment we found 6 mostly used strategies that help people with financial limitation to overcome the stress of not having enough resources. These strategies are often combined to fulfil the basic needs but also to bring consumption satisfaction. Understanding these ways of coping can be very beneficial to producers as well as to vendors.

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# Georgia's Foreign Trade in the Changing Business Environment

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**Abstract:** After the collapse of the Soviet Union, Georgia independently carries its foreign trade activities, of which it was deprived more than 70 years. At the present time, foreign trade of Georgia is based on the high level of economic openness and liberal policies, features of the transition economies and new vectors of development. The article analyzes the current state of Georgia's foreign trade, shows main indicators of foreign trade for the years 1994-2014, the main trends and problems of its development.

**Keywords:** foreign trade, export, import, turnover, trade balance, development, business environment, Georgia.

**JEL Classification codes:** F1, F13, F18.

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## 1 INTRODUCTION

After the restoration of the state independence, Georgia faced the issue of independent development. Post-Soviet transformation of Georgia, the transition to market relations was painful and was accompanied by serious problems. However, over 25 years of independence the country has achieved some success. In 2014, its GDP at current prices totaled \$16.530 million (Geostat). This is 4.8% more than in the year 2013 and 2 times more as compared to 1990. Georgia had the highest GDP growth rate (12.3%) in 2007. During the years of 1990-2014 the GDP per capita increased from \$1611 to \$3680.8. According to the World Bank classification, Georgia is a lower-middle income country (World Bank). According to the World Economic Forum assessment, it is at the development stage 2: Efficiency-driven (WEF 2015). By the level of political and economic transformation it belongs to the countries of limited category (BTI-2014).

Foreign trade plays an important role in the economic development of sovereign Georgia, which is a major factor in the country's integration into the world economy and a source of foreign exchange earnings. As noted by G. Haberler (1970) "International trade has made a tremendous contribution to the development of less developed countries in the nineteenth and twentieth centuries, and can be expected to make an equally big contribution in future if it is allowed to proceed freely". In this connection the purpose of this paper is to analyze the development of Georgia's foreign trade in the changing business environment, to evaluate its

effectiveness and impact on the country's economic growth, to determine the possibility of its further development in the context of globalization and regional integration.

## **2 LITERATURE RIEVIEW**

The internationalization of production has been greatly accelerated and the international division of labor has deepened under the influence of globalization and scientific and technological progress. As a result of this international trade flows have increased. The need to include countries in international trade is explained by different theories. The role of foreign trade in the pursuit of wealth of the nation is highly evaluated by the mercantilists (Magnusson 1994). The starting international trading axioms inherent in classical theories (Smith 1986 [1776], David Ricardo 1951), which, despite a number of assumptions, explain the benefits of trade. Fundamentals of the reasons that determine the direction and structure of international trade flows, as well as the possible advantages in the international exchange, are laid by E. Heckscher and B. Ohlin (Heckscher 1919, 2007, Ohlin 1933). According to their theory, a country will export goods that use its abundant factors intensively, and import goods that use its scarce factors intensively. In the two-factor case, it states: A capital-abundant country will export the capital-intensive good, while the labor-abundant country will export the labor-intensive good. Heckscher-Ohlin theory refined P. Samuelson (HOS-Heckscher-Ohlin-Samuelson Theory) (Suranovic 2010) and W. Stolper (Stolper-Samuelson Theorem) (Stolper&Samuelson 1941).

The standard model of international trade unites the various theories, developing the fundamental position of the classical theories. It is based on the concepts of the limit values and the general equilibrium of the economic system. It provides mathematical and graphical interpretation of international commodity exchange, and shows the real impact of international trade on the economies of individual countries (Edgeworth 1925, Marshall 1979, Haberler 1936), etc.

The alternative theory of international trade is critical to achieve reinterpreted predecessors and offered original interpretation of the participation of national economies in the international exchange of goods. Among these theories following should be noted: The trade theory based on economies of scale (Krugman 1981, Krugman&Obstfeld 1992, Lancaster 1980 et al.), The theory of technological gap (Posner 1986), The theory of a product life cycle (Vernon 1970), The theory of international competition (Porter 1986) and others. Since the second half of the XX century, dynamic comparative advantages became relevant. This



question was studied by Krugman (1987), Grossman and Helpman (1989), Redding (1997) and others.

Although there are many theories of international trade, none of them can fully explain the nature of international trade. And there is ample empirical evidence that recognize the validity of the theory of comparative advantage (Bernhofen&Brown 2005, Schott 2004, Uchida & Cook 2004, Krugman&Obstfeld 2003). Moreover particularly noteworthy is the fact that most of the principles of the World Trade Organization (WTO) is based on the theory of comparative advantage (Root 2001). Currently, comparative advantages are used to assess the country's competitiveness in international trade.

### 3 RESEARCH METHODOLOGY

The theoretical and methodological basis of the work constitutes the fundamental tenets of the theory of international trade. Well-known scientific methods were used for the study: statistical, comparative, deduction and induction, analysis and synthesis, and etc. Informational and empirical basis of the study is constituted by statistical, informational and analytical data of various international and national organizations, research papers, online resources, and etc.

The effectiveness of foreign trade is calculated as the ratio of exports to imports. If this ratio - efficiency coefficient is greater than 1, then the trade can be considered effective. On the other hand, the import dependence of the trading partners is calculated as the ratio of imports to exports. The country will be considered dependent on the other, if the ratio coefficient of import dependence is less than 1.

Comparative advantages of Georgia on certain goods are valued by index Balassa (Balassa 1965), which is calculated according to the formula

$$RCA_{ij} = (X_{ij} : X_{it}) / (X_{wj} : X_{wt})$$

where  $RCA_{ij}$  is Revealed Comparative Advantage Index,  $X_{ij}$  and  $X_{it}$  are the values of country i's exports of product j and world exports of product j and where  $X_{it}$  and  $X_{wt}$  refer to the country's total exports and world total exports. A value of less than unity implies that the country has a revealed comparative disadvantage in the product. Similarly, if the index exceeds unity, the country is said to have a revealed comparative advantage in the product.

### 4 RESULTS AND DISCUSSION

Sovereign Georgia started building its relations with the outside world on the basis of its geopolitical position and characteristics of the transition period, with a review of relations with former Soviet countries, and focus on Far abroad countries, with the gradual expansion

of the geography of foreign trade. In 2014, Georgia's foreign trade turnover amounted to \$11.454 million, including exports - 2.861 million USD (25% of turnover), imports - \$ 8.593 million USD (75%). Compared with 2013 year turnover increased by 4.5%, imports - by 7.3%, while exports decreased by 1.7% (NSOG 2014) (Tab.1). Shares of Georgia's exports and imports in world exports and imports, accounted for 0.02 and 0.05% respectively. In their volume country took the 124th and 107th place (WTO). Georgia's foreign trade turnover is cyclical and growth is combined with periods of its fall. The first cycle of growth was during the years of 1994-1997. In 1997 in comparison with 1994 it increased by more than 2.8 times, and the drop occurred in 1998-1999. Since 2000, second cycle of growth started, which continued until 2009, but Georgia was able to pass over the level of 1997 only in 2002. In 2008, the volume of foreign trade turnover of the country compared to 1999 grew by almost 8.8 times, as compared with 1994 - 18 times. In 2009, in comparison with the previous year, Georgia's foreign trade turnover decreased by \$1921,9 million (25.4%). This was caused by the global financial crisis and the consequences of the war with Russia. Since 2009 the third cycle of growth of foreign trade began, which continues to the present. In 2014, Georgia's foreign trade turnover in comparison with 2008 has increased by 1.5 times, as compared with 1994 - 27 times, export - respectively 1.9 and 19 times, import - 1.4 and 32 times. The highest share of export in the foreign trade turnover of the country was in 1994 - 36.1%, and in GDP - in 2005 - 13.5%. In its turn, the peak share of imports in turnover was observed in 1998 (82.4%), and in GDP - In 2007- 51.3% (Tab. 1).

During the entire post-Soviet period the main trend of Georgia's foreign trade is a permanent negative trade balance and the high dependence on imports. In 2014, the deficit amounted to \$5,732,6 million. Compared to the year 2013 it increased by 12.4%. This is the highest volume of the trade deficit, but its highest share in turnover was in 1998 (64.7%) (Tab.1).

In 2014, the foreign trade of Georgia has covered 145 countries (11 more than in the previous year), but its geographic structure is characterized by a high degree of concentration: 3 main trading partners account for 32.7% of turnover, 5 - 45.1% and 10 - 66.4%. In 2013, the Herfindahl Index for exports amounted to 0.1060226, import - 0.06636129 (UN 2013).

The top trading partners in the total external trade turnover of Georgia were Turkey (\$1966 million – 17.2 %), Azerbaijan (\$1182 million – 10.3 %), Russia (\$853 million – 7.4%), China (\$823 million – 7.2 %), Ukraine (\$686 million – 6.0 %), Germany (\$535 million – 4.7 %), Armenia (\$499 million – 4.4%), United States (\$495 million – 4.3 %), Bulgaria (\$374 million – 3.3 %) and Japan (\$372 million – 3.2 %). Top trading partners by exports were Azerbaijan (\$544 million – 19.0 %), Armenia (\$288 million – 10.1%), Russia (\$275 million –

9.6 %), Turkey (\$239 million – 8.4 %), United States (\$207 million – 7.3 %), Bulgaria (\$164 million – 5.7 %), Ukraine (\$140 million – 4.9 %), China (\$90 million – 3.2 %), Kazakhstan (\$89 million – 3.1 %) and Italy (\$86 million – 3.0 %) (figure 2), the top trading partners by imports – Turkey (\$1727 million – 20.1%), China (\$733 million – 8.5 %), Azerbaijan (\$638 million – 7.4 %), Russia (\$578 million – 6.7 %), Ukraine (\$546 million – 6.4 %), Germany (\$466 million – 5.4 %), Japan (\$368 million – 4.3 %), Romania (\$311 million – 3.6 %), United States (\$287 million – 3.3%) and Italy (\$222 million – 2.6 %) (NSOG 2014). It should be noted that during the entire post-Soviet period Russia was main trading partner for Georgia, but if in years 1994-2006 it was top ranked (during this time period it was 8 times in the first place, 5 times in the second), after the 2008 war and the severance of diplomatic relations, it moved to the 7<sup>th</sup>-3<sup>rd</sup> positions (Geostat).

Table 2 shows the estimates of efficiency of foreign trade of Georgia and its import dependence on top trade partners in 2014. The effectiveness of foreign trade is the ratio of exports to imports and import dependence on trading partners shows the ratio of imports to exports. As seen in Table 2, from 10 major trading partners of Georgia only trade with Armenia can be considered effective and the country does not have import dependence from Armenia. Relatively good case is in turnover with Azerbaijan, Bulgaria and the United States. The change in the share of individual groups of countries in the foreign trade of Georgia is observed. In 1995, the CIS accounted 62.5% of Georgian exports and 40.1% of imports. In 2005, these indicators were 47.0 and 40.0%, in 2014 - 51.2 and 24.7%. Also share of the European Union has changed too. If in 2005, the EU countries accounted for 25.0% of exports and 29.7% of imports, then in 2014 the indicators were 21.3 and 27.6% (NSOG 2014). As is known, In June 2014 the EU and Georgia signed an unprecedented Association Agreement, which includes a Deep and Comprehensive Free Trade Area (AA/DCFTA). But in 2014, from EU countries among the top 10 trading partners by turnover were only Germany (sixth place, 4.7%) and Bulgaria (ninth place, 3.3%), by exports - Bulgaria (sixth place, 5.7%) and Italy (tenth place, 3.0%), by imports - Germany (sixth place, 5.4%), Romania (eighth place, 3.6%) and Italy (tenth place, 2.6%) (NSOG 2014).

Tab. 1: Main indicators of Georgia's foreign trade, 1994-2014 years.

Years	Million \$			Share, % of turnover			Rates of growth, % to the previous year			Share, % to GDP				
	Export	Import	Turnover	Balance	Export	Import	balance balance	Export	Import	Turnover	Balance	Export	Import	Turnover
1994	151.2	268.0	419.8	-116.8	36.1	63.9	27.9	-	-	-	-	6.0	10.7	16.7
1995	151.2	391.6	542.8	-240.4	27.8	72.2	44.3	100.0	146.1	129.3	205.8	5.6	14.5	20.1
1996	198.8	686.7	885.5	-487.9	22.5	77.5	55.1	131.5	175.4	163.2	203.0	6.4	22.2	28.6
1997	239.8	943.5	1183.3	-703.7	20.3	79.7	59.5	120.6	137.4	133.6	144.2	6.8	26.9	33.7
1998	189.0	883.2	1071.2	-694.2	17.6	82.4	64.8	78.8	93.6	90.5	98.6	5.2	24.5	29.7
1999	240.7	622.6	863.3	-381.9	27.9	72.1	44.2	127.4	70.5	80.5	55.0	8.6	22.2	30.8
2000	324.0	709.0	1033.0	-385.1	31.4	68.6	37.3	134.6	113.9	119.6	100.8	10.6	23.2	33.8
2001	317.6	753.3	1070.9	-435.7	29.7	70.3	40.7	96.2	107.6	104.0	113.1	9.9	23.4	33.3
2002	347.8	731.4	1079.2	-383.6	32.2	67.8	35.5	109.5	97.3	100.8	88.0	10.2	21.5	31.8
2003	465.3	1141.1	1606.4	-675.8	29.0	71.0	42.1	133.8	156.0	148.9	176.1	11.7	28.6	40.2
2004	646.9	1847.9	2494.8	-1201.0	25.9	74.1	48.1	139.0	161.9	155.3	177.7	12.6	36.1	48.7
2005	866.7	2490.9	3357.6	-1624.2	25.8	74.2	48.4	134.0	134.8	134.6	135.2	13.5	38.9	52.4
2006	993.1	3681.2	4674.3	-2688.1	21.2	78.8	57.5	114.6	147.8	139.2	165.5	12.8	47.4	60.2
2007	1240.2	5216.7	6456.9	-3976.5	19.2	80.8	61.6	124.9	141.7	138.1	147.9	12.2	51.3	63.5
2008	1497.7	6058.1	7555.8	-4560.4	19.8	80.2	60.4	121.8	116.1	117.0	114.7	11.7	47.3	59.0
2009	1133.6	4500.2	5633.8	-3366.6	20.1	79.9	59.8	75.7	74.3	74.6	73.8	10.5	41.8	52.3
2010	1677.5	5257.1	6934.6	-3579.6	24.2	75.8	51.6	148.0	116.8	123.1	106.3	8.1	25.3	33.4
2011	2186.7	7038.4	9225.1	-4851.7	23.7	76.3	52.6	130.4	133.9	133.0	135.5	9.0	28.9	37.9
2012	2376.2	8036.9	10413.1	-5660.7	23.3	76.7	54.4	108.7	114.2	112.9	116.7	9.1	30.7	39.8
2013	2909.5	8011.6	10921.1	-5102.1	26.6	73.4	46.7	122.4	99.7	104.9	90.1	10.8	29.9	40.7
2014	2860.7	8593.3	11454.0	-5732.6	25.0	75.0	50.0	98.3	107.3	104.9	112.4	10.0	29.5	39.3

Calculated by the author. Source: "Statistical Yearbook of Georgia" and "External Trade of Georgia", 1995-2015 years.

**Tab.2: Efficiency of Georgia's foreign trade and its dependence from imports of top trading partners**

Countries	Exports	Imports	Export/Import*	Import/Export*
Total	2,860,670.6	8,593,325.4	0.33	3.00
Of which:				
Turkey	239,295.9	1,727,390.6	0.14	7.22
Azerbaijan	544,504.8	637,582.4	0.85	1.17
Russia	274,675.0	575,443.8	0.48	2.09
China	90,392.8	732,996.7	0.12	8.11
Ukraine	139,920.7	546,121.3	0.26	3.09
Germany	69,191.6	465,907.8	0.15	6.73
Armenia	288,084.7	210,138.2	1.37	0.73
United States	207,332.6	287,091.5	0.72	1.38
Bulgaria	167,104.8	209,825.6	0.82	1.26
Japan	3,285.0	368,173.8	0.01	112.1
Other countries	836,882.7	2,832,653.8	0.30	3.38

\* Calculated by the author. Source: [http://geostat.ge/cms/site\\_images/\\_files/georgian/bop/Georgian%20External%20Trade%202014%20\(publish\).pdf](http://geostat.ge/cms/site_images/_files/georgian/bop/Georgian%20External%20Trade%202014%20(publish).pdf)

In 2014 in the commodity structure of export on the first place are Motor cars (units) -18.1% (in 2013 their share was 24.2%), then follow Ferro-alloys - 10.0%, Copper ores and concentrates - 8.7%, Nuts - 6.4%, Wine - 4.5%, etc. Due to the fact that Georgia is not a producer of cars, so the leadership of this heading in the country's exports shows a significant amount of re-export operations. In the commodity structure of imports Motor cars (units) also occupy a significant place (8.3%), and are second after the Petroleum and petroleum oils - 10.7%. Followed by: Petroleum gases and other gaseous - 4.3%, Medicaments - 3.7%, Telephones for cellular networks or for other wireless net - 2.3%, and so on. Export and import of Georgia is characterized by a low level of diversification: 10 major export commodity positions account 32.1% of exports and 63.5% of imports (NSOG 2014). 45.71% of exports and 55.51% of imports are Consumer goods, 26.66 and 14.73% - Intermediate goods, 22.40 and 9.39% - Raw materials, 4.75% - Capital goods (WITS). A small share of Capital goods causes a low level of technological development of Georgia and the decline in high-technology exports in manufactured exports: if in 2000, high-technology exports accounted for 10.9% of manufactured exports, it fell to 2.6% in 2013 (World Bank). Despite the negative trends in the development of Georgia's exports, the country has the potential to increase it. As shown in Table 3, Georgia has revealed comparative advantages for such products as Minerals, Food Products, Vegetable, Metals, Transportation and Chemicals. Since 2000 Georgia is a member of the World Trade Organization (WTO) and implements a liberal trade policy. In 2014 compared with 1999, its average tariffs in relation to the countries with the regime "most favored nation" (MFN) for all commodities declined from 9.29 to 0.88%, including agricultural products - from 11.99 to 7.22% and non-agricultural - from 9.1 to 0.46% (WITS).

**Tab. 3: Revealed comparative advantages of exported goods of Georgia**

	<b>Georgia</b> $X_{ij} : X_{it}$	<b>World</b> $X_{wj} : X_{wt}$	<b>RCA<sub>ij</sub></b>
Animal	2.15	2.20	0.98
Vegetable	9.20	3.44	2.67
Food Products	17.52	3.40	5.15
Minerals	9.36	1.52	6.16
Fuels	2.70	11.01	0.25
Chemicals	10.17	9.14	1.11
Plastic or Rubber	1.24	4.34	0.29
Hides and Skins	0.26	0.73	0.36
Wood	0.95	2.47	0.38
Textiles and Clothing	3.18	4.50	0.71
Footwear	0.15	0.92	0.16
Stone and Glass	2.20	4.94	0.45
Metals	16.85	6.91	2.44
Mach and Elec	2.50	25.11	0.10
Transportation	20.56	10.13	2.03
Miscellaneous	1.02	9.25	0.11

Calculated by the author. Source: WITS [http://wits.worldbank.org/CountryProfile/en/GEO,http://wits.worldbank.org/CountryProfile/en/Country/WLD/Year/2014/TradeFlow/Export/Partner/all/Product/90-99\\_Miscellan](http://wits.worldbank.org/CountryProfile/en/GEO,http://wits.worldbank.org/CountryProfile/en/Country/WLD/Year/2014/TradeFlow/Export/Partner/all/Product/90-99_Miscellan)

On the development of Georgia's foreign trade a serious impact has business environment. In the ranking of Doing Business 2016 to the ease of doing business Georgia occupies 24<sup>th</sup> place among 189 countries of the world. It has a good performance by the Property Registration - 3<sup>rd</sup> place, for Starting a Business - 2<sup>nd</sup>, on the Getting Credit - 7<sup>th</sup>. The case for Resolving Insolvency is poor - 101<sup>st</sup> place and Trading Across Borders - 78<sup>th</sup> place. Time to export and import: Border compliance is 14 and 14 hours, Time to export and import: Documentary compliance - 48 and 24 hours, Cost to export and imports: Border compliance - \$ 383 and \$ 396, Cost to export: Documentary compliance - \$ 200, Cost to export and import: Documentary compliance - \$ 200 and \$ 200 (Doing Business).

In foreign trade relations of Georgia an important place has trade of services, whose share in the country's GDP occupies 28.6%. In 2014, commercial services trade turnover amounted to \$4316 million, including exports of \$2954 million and imports of \$1362 million. Compared with the previous year, exports grew by 2%, imports - by 6%. By the volume of commercial services exports and imports Georgia occupies the 90<sup>th</sup> and 122<sup>nd</sup> place. In the structure of export commercial services 32.9% occupy transportation services, 60.5% - Travel, 5.8% -

Other commercial services and 0.8% - Goods-related services, in imports - respectively 59.3%, 19.0%, 21.4% and 0.3% (WTO).

Transport services are of particular importance for Georgia, as it is a transport corridor linking Europe with Asia (communication corridor "East - West"). Across Georgia laid the Baku - Tbilisi - Ceyhan oil pipeline, the Baku - Tbilisi – Erzurum gas pipeline, here goes TRACECA (Transport Corridor Europe-Caucasus-Asia), railway road Baku - Tbilisi - Kars. Despite this possibility transport capacity of Georgia little exploited. According to the index of logistics Georgia in 2014 took the 116<sup>th</sup> place among 160 countries and 40 positions worsened the situation in comparison with 2012 (World Bank).

Travel services are rapidly growing in Georgia. In 2014, the number of International inbound tourists reached 5,516 thousand, which is 2.7 times higher than in 2010 and 14 times - in 2000 (GNTA). The direct contribution of travel and tourism amounted to 5.9% of GDP, the total contribution - 20.0% (WTTC). Accordingly, tourism is increasingly becoming a factor in the multiplier effect on the economy and social sphere of the country.

The degree of integration of the country in international trade can be assessed by Enabling Trade Index, which is calculated in four sub-indices. By Enabling Trade Index 2014 Georgia holds 35<sup>th</sup> place among 138 countries, including Subindex A: Market access – 13<sup>th</sup>, Subindex B: Border administration - 35<sup>th</sup>, Subindex C: Infrastructure - 71<sup>st</sup> and Subindex D: Operating environment - 48<sup>th</sup> (WEF 2014). The most problematic factors for exporting are: Identifying potential markets and buyers, Difficulties in meeting quality/quantity requirements of buyers, Inappropriate production technology and skills, Access to trade finance, Technical requirements and standards abroad, and other. Most problematic factors for importing - High cost or delays caused by international transportation, High cost or delays caused by domestic transportation, Tariffs, Burdensome import procedures, Inappropriate telecommunications infrastructure, and other (WEF 2014). For the further development of Georgia's foreign trade and enhancement of its effectiveness it should first solve these problems.

## **5 CONCLUSIONS**

Since gaining independence Georgia's strategic goal is fast development of the country and increase in the living standard of population. Foreign trade plays special role in achieving this objective, which defines the features of Georgia's participation in the international division of labor and contributes to the development of the national economy.

Georgia carries out liberal policy to achieve this goal and aims at making mutually beneficial contacts with all the states, which respect its national interests. In 2014, Georgia's foreign

trade has covered 145 countries, but its geographic structure is characterized by a high degree of concentration: 5 main trade partners accounted for almost half of the foreign trade turnover of the country.

Status and opportunities for the development of Georgia's foreign trade is largely determined by production and resource base. Because of its limitations Georgia is characterized by low export share in GDP of the country and in many aspects lags behind imports. Despite this, the country has opportunities to increase exports. As shown by estimates, Georgia has a revealed comparative advantage in such products as: Minerals, Food Products, Vegetable, Metals, Transportation and Chemicals.

Georgia's foreign trade turnover is cyclical and growth is combined with periods of its fall. The situation in the foreign trade of Georgia is characterized by negative trends and unfavorable factors. The country has a permanent negative trade balance, a strong dependence on imports, the unsustainable commodity structure, lack of diversification, underdeveloped infrastructure, and others. In this regard, it needs such a development strategy that will ensure the reduction of the impact of adverse external factors and increased self-development.

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# Consumer Awareness of Food Labelling

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**Abstract:** At present food labelling, directly related to food quality and safety, represents a very important topic. Food quality and safety, their origin and labelling are currently discussed in different fora. EU legislation also defines the main principles of consumer protection from which, in accordance with the title of the paper, are significant: (1) the high level of food and other consumer goods safety, and (2) the principle of consumer awareness of what they consume. Dubious product quality, misleading food labelling and other related problems represent threats for consumers from which they must defend. They have to be active market participants, sufficiently impressed by this issue and interested in food labelling. It is necessary to gain knowledge of food labelling and to have relevant information to decide correctly which food to choose and buy. Consumer education is a very important tool to enhance consumer protection, too. Educated consumers who know their rights and duties as well as rights and responsibilities of other market actors are able to adequately defend and protect themselves. Therefore we have focused on consumer awareness of food labelling. Based on the research results, the aim of the presented paper is to find out the consumer awareness of food labelling and to suggest recommendations to improve the current state. The paper is an output of the project VEGA 1/0635/14 "Status and prospects of development of the organic food market, traditional and regional foods in Slovakia."

**Keywords:** food labelling, consumer awareness, consumer behaviour.

**JEL Classification codes:** K32, M38, Q18.

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## 1 INTRODUCTION

Food quality and safety, their origin and labelling are currently topics that resonate in society, and are subject of a variety of professional, scientific events, but also of interest to legislators and supervisory authorities at European and national level. Dubious quality products, deceptive labelling, food fraud and other related shortcomings and problems are threats for consumers that they must defend. It is therefore important that consumers get interested in such issues, have sufficient knowledge on food labelling, as well as relevant information to make the right food choices.

The information given on food packaging is essential source of information for consumers in order to decide when choosing from a wide range of products. In the period of strict market regulation, there was a limited assortment of food produced according to different standards, hence the need of complex labelling was of no use and the customer could not or did not have to choose. Today the situation is more difficult for producers and consumers (Suková, 2006).

Food labels assist consumers to acquire and use product specific information, which can help them make more deliberate and healthier food choices (Grunert and Wills, 2007; Mackison, Wrieden and Anderson, 2009; Grunert, 2013). For food producers, food labels help them promote and communicate certain qualitative characteristics of their food products, such as nutrition content, process-related characteristics (e.g. organic, traditional) and other relevant information (Festila, 2014).

Packaging is considered such as one of the critical factors that affected the purchasing behaviour (Silayoi and Speece, 2007). Other factors include searching, income, quality and characteristics of the product. Therefore, consumer studies were more focused upon these types of behaviours (Johns and Pine, 2002; Grunert, 2005). The communication exchange between the package elements and the consumer determined the acceptability of products (Venter et al., 2010). Package elements involved visual and informational attributes (Speece and Silayoi, 2004). Visual attributes (colour, shape, image, design, logo and illustration) were associated with affective side of decision making, while informational elements (labels, instructions, cultural context and segmentation) were related to the cognitive side of determination (Estiri et al., 2010; Venter et al., 2010).

There is a large amount of published studies describing consumer perception, interest, knowledge or awareness of food labelling (Ipsos and London Economics Consortium, 2013; Aday and Yener, 2014; Flabel, 2011). The most of them are dedicated to the selected aspect of labelling, especially to nutrition labelling (Grunert and Wills, 2007; Hall, and Osses, 2013; Andrews et al., 2014; Bleich and Wolfson, 2015; Grunert, Wills, and Fernández-Celemin, 2010; Gregori et al., 2014), allergen labelling (Watson, 2013; Sakellariou et al., 2010), organic foods (Kozelová et al., 2011; Müller and Gaus, 2015; Eden, 2011), local foods or country of origin (Rutberg, 2008; Bryla, 2015; Jarossová and Pazúriková, 2014), food quality mark recognition (Festila, Chrysochou and Krystallis, 2014), sustainability labels (Grunert, Hieke and Wills, 2013) or packaging and logistics (Ampuero and Vila, 2006; Drábik, 2013). The aim of this paper is to find out the consumer awareness of food labelling and to suggest recommendations to improve the current state.

## **2 LITERATURE REVIEW**

This paper is focused on food labelling that is defined in Article 2 of the Regulation (EU) No 1169/2011 as follows ‘labelling’ means any words, particulars, trademarks, brand name, pictorial matter or symbol relating to a food and placed on any packaging, document, notice, label, ring or collar accompanying or referring to such food. Furthermore, the Article defines

food information such as information concerning a food and made available to the final consumer by means of a label, other accompanying material, or any other means including modern technology tools or verbal communication. So when we talk about food labelling, we mean placing all of the food information whereby the food producer communicates to consumers who, through them, can also get a picture of what they are buying. Some of the information given on food packaging is important for the actual selection and purchase of food (it is especially the name of the food, ingredients, and "best before" or "used by" date), some for their preparation and storage (e.g. instructions for use, storage methods) and some only when there is a problem related to their quality and safety in the sphere of trading (e.g. food business operator, lot number, etc.).

Furthermore, information on food packaging can be divided into:

- General mandatory - particulars which are set by the legislative regulations for food in general, with different requirements applying to pre-packed foods, packed and non pre-packed foods;
- Specific mandatory - the general labelling requirements are complemented by a number of provisions applicable to all foods in particular circumstances or to certain categories of foods. In addition, there are a number of specific rules which are applicable to specific foods. This information is governed by legislative regulations, i.e. information is mandatory but only for specific types of foods, or certain food commodities. We can say that this information is to be shown on the packages of selected foods or certain foods generally beyond the mandatory data (e.g. organic foods, genetically modified foods, but also milk and dairy products, cereals, fruits and vegetables, frozen meat, frozen meat preparations and frozen unprocessed fishery products, etc.);
- Voluntary – their identification is not obligatory and depends on decision made by the food business operator. To this category we include: quality marks, logos declaring the food origin, as well as nutrition and health (e.g. Slovak Gold, Made in Slovakia, Quality Mark SK, Regional product Ponitrie, etc.);
- Information on the packing – information on the packaging material, management and handling of packaging waste, etc.;

Food labelling is governed by several regulations at European and national levels. Below we have selected only regulations that set requirements for general mandatory particulars (within the meaning of the above classification).

*Regulation (EC) No. 178/2002 of the European Parliament and of the Council of 28 January 2002 laying down the general principles and requirements of food law, establishing the European Food Safety Authority and laying down procedures in matters of food safety (the General Food Law)*, which states that food labelled incorrectly or in a misleading way is considered unsafe, i.e. it is considered to be injurious to health and unfit for human consumption.

*Regulation (EU) No. 1169/2011 of the European parliament and of the Council of 25 October 2011 on the provision of food information to consumers* represents binding legal instrument on the European level that establishes the general principles, requirements and responsibilities governing food information, and in particular food labelling. It lays down the means to guarantee the right of consumers to information and procedures for the provision of food information, taking into account the need to provide sufficient flexibility to respond to future developments and new information requirements. Furthermore, it provides the basis for the assurance of a high level of consumer protection in relation to food information, taking into account the differences in the perception of consumers and their information needs whilst ensuring the smooth functioning of the internal market. This regulation entered into application on 13 December 2014. The obligation to provide nutrition information will apply from 13 December 2016.

In accordance with Article 9, a list of mandatory food information contains:

- the name of the food;
- the list of ingredients;
- any ingredient or processing aid listed in Annex II or derived from a substance or product listed in Annex II causing allergies or intolerances used in the manufacture or preparation of a food and still present in the finished product, even if in an altered form;
- the quantity of certain ingredients or categories of ingredients;
- the net quantity of the food;
- the date of minimum durability or the ‘use by’ date;
- any special storage conditions and/or conditions of use;
- the name or business name and address of the food business operator;
- the country of origin or place of provenance where provided for in Article 26;
- instructions for use where it would be difficult to make appropriate use of the food in the absence of such instructions;

- with respect to beverages containing more than 1,2 % by volume of alcohol, the actual alcoholic strength by volume;
- a nutrition declaration.

These particulars have to be indicated with words and numbers. They may additionally be expressed by means of pictograms or symbols. Mandatory food information has to be marked in a conspicuous place in such a way as to be easily visible, clearly legible and, where appropriate, indelible. It shall not in any way be hidden, obscured, detracted from or interrupted by any other written or pictorial matter or any other intervening material.

Regulation brought to the practice some key changes (European Commission, 2016):

- Improved legibility of information (the x-height of the font size of mandatory information is equal to or greater than 1,2 mm, in case of packaging or containers the largest surface of which has an area of less than 80 cm<sup>2</sup>, the x-height of the font size has to be equal to or greater than 0,9);
- Clearer and harmonised presentation of allergens (e.g. soy, nuts, gluten, lactose) for prepacked foods (emphasis by font, style or background colour) in the list of ingredients – all allergens must be highlighted in the ingredients list rather than in a separate allergy box;
- Mandatory allergen information for non-prepacked food, including in restaurants and cafes;
- Requirement of certain nutrition information for majority of prepacked processed foods;
- Mandatory origin information for fresh meat from pigs, sheep, goats and poultry;
- Same labelling requirements for online, distance-selling or buying in a shop;
- List of engineered nanomaterials in the ingredients;
- Specific information on the vegetable origin of refined oils and fats;
- Strengthened rules to prevent misleading practices;
- Indication of substitute ingredient for 'imitation' foods;
- Clear indication of "formed meat" or "formed fish";
- Clear indication of defrosted products.

*Act No. 152/1995 Coll. on foods as amended* is a basic food legislation document at the national level, which sets the mandatory particulars (in accordance with Regulation (EU) No. 1169/2011) and the obligation to label foods in the codified form of the state language. In addition, it regulates the basic requirements for misleading labelling; designation of origin,

geographical indications and labelling of traditional specialties guaranteed; but also the voluntary labelling of agricultural products.

*Decree of the Ministry of Agriculture and Rural Development of the Slovak Republic No. 243/2015 Coll. on food labelling* defines the mandatory information indicated on the food packaging – not only does it provide a list of compulsory information but it also gives detailed information about each mandatory particulars.

*Food Codex of the Slovak Republic* in the so-called commodity (vertical) section provides (among other things) the specific mandatory labelling requirements for individual commodities beyond the basic legislation at the national and European levels. At present, majority of individual chapters are harmonized in the form of regulations, hence it only regulates the labelling of certain commodities (milk and dairy products).

### 3 METHODOLOGY

Selection of scientific methods depends on the paper content focus and the paper aim. To elaborate theoretical knowledge we primarily used theoretical scientific methods, including method of analysis and synthesis, method of induction and deduction, abstraction and concretization, but also the comparative method. As a method of collecting primary data we conducted research. We evaluated and interpreted the obtained quantitative data through statistical and graphical methods in the Statgraphics software and MS Excel.

Based on the research results, the aim of the presented paper is to find out the consumer awareness of food labelling and to suggest recommendations to improve the current state.

The basis for the analysis of consumer awareness on food labelling represents the results of primary research that we conducted by the inquiry method through the standardized online questionnaire in December 2015. Our research was focused on three topics: (1) consumer interest; (2) consumer awareness and (3) consumer information on food labelling. However, this paper focuses on the analysis of partial results concerning the consumer awareness. We set the following research questions:

Are consumers interested in what they actually buy?

Do consumers know what food information is mandatory on the package labels?

What information stated on the packaging do consumers pay attention to?

How do consumers react to the published food scandals?

The questionnaire consisted of 26 closed-ended and open-ended questions (including 5 classification questions). The respondent's answers were evaluated through frequency tables



and cross tabulations, in some cases relevant descriptive statistics (e.g. average, standard deviation) were calculated.

After testing for complexity, accuracy, validity, reliability and consistency, we analysed 139 questionnaires. We can consider our results to be representative. We calculated the sample size of 126 respondents with confidence level 95%, margin of error  $\pm 7\%$  and standard of deviation (on the basis of pre-research) 0,4.

#### 4 RESULTS AND DISCUSSION

In this part of the paper, we present partial results of the research which provide us with answers to the research questions and also testify to consumer awareness of food labelling.

A total of 139 consumers participated in the research, of which 83 (59.71%) were women and 56 (40.29%) men. In terms of age structure, there was the largest representation of consumers aged 18-30 years (76, i.e. 54.68%) and 31-40-year-olds (42, i.e. 30.22%). 51-60-year-olds were represented by 9 consumers (i.e. 6.47%), and two age groups (41-50-year- and more than 60-year-olds) by 6 (i.e. 4.32%).

Are consumers interested in what they actually buy?

Through the research, we wanted to find to what extent consumers are interested in food labelling. Paying attention to information given on food packaging is essential, because through them consumers get to know what they are buying. We think it is important to know consumers' real interest in such information to evaluate consumer awareness of food labelling. Research results indicate that the vast majority of consumers (87%) is interested or very interested in the information appearing on food packaging. When evaluating the research, points were assigned to each option (4 - very interested in; 1 - not at all interested in) and based on the average assessment of individual aspects we determined their order of importance from the consumers' perspective. Based on the results, we have found that consumers put more emphasis on food quality than food information (see Table 1).

**Tab. 1: Consumer interest in food labelling**

Consumer interest in	Not at all interested in	Not interested in	Interested in	Very interested in	Average	SD
Food information on package	1	17	76	45	3.19	0.66
	0.72%	12.23%	54.68%	32.37%		
Food quality	0	0	64	75	3.54	0.5
	0.00%	0.00%	46.04%	53.96%		
Food origin	2	32	62	43	3.05	0.77
	1.44%	23.02%	44.60%	30.94%		
Food scandals in media	4	34	72	29	2.91	0.75
	2.88%	24.46%	51.80%	20.86%		

Source: own results

*n=139*

Do consumers know what food information is mandatory on the package labels?

Most consumers believe that the mandatory particulars are a list of ingredients (97.84%), a food name (95.68%), a date of durability - 'best before' date or a 'use by' date (94.96%) and a country of origin (86.33%). Consumers should choose the information that they deemed mandatory from the list which contains only one optional data – a bar code, which the majority of consumers (66.91%) considers mandatory. However, the truth is that certain information must be listed under defined conditions – e.g. if their omission would mislead the consumer (it applies for the country of origin, with the exception of specific commodities (meat, honey, etc.) or instructions for use and preparation). Nutrition labelling is mandatory from 1 December 2016, at present it is so only if the packaging has a nutrition claim. Based on the results of the research, we claim that consumers do not have sufficient knowledge about the mandatory particulars that must appear on food packaging.

**Tab. 2: Mandatory particulars in the view of consumers**

Name	List of ingredients	Nutrition facts	Net quantity	Identification of lot	Barcode	Food business operator	Allergens
133	136	106	73	31	93	33	103
95.68%	97.84%	76.26%	52.52%	22.30%	66.91%	23.74%	74.10%
Country of origin	Date of durability	Instructions for use	Storage conditions	Nutrition or health claims	Actual alcoholic strength	In official language	
120	132	44	82	23	84	99	
86.33%	94.96%	31.65%	58.99%	16.55%	60.43%	71.22%	

Source: own results

*n*=139

What information stated on the packaging do consumers pay attention to?

**Tab. 3: Food information that consumers read**

Claim	Consumers	Percentage	Total
I always read information on the front-of-package labels but I do not pay attention to back-of-package label information.	3	2.16%	18
I usually read information on the front-of-package labels but I do not pay attention to back-of-package label information.	15	10.79%	12.95%
I always read information on the front- and back-of-package labels.	11	7.91%	89
I usually read information on the front- and back-of- package labels.	78	56.12%	64.03%
I pay attention only to food information labelled on the back of package (including the food name on the front-of-package labels)	19	13.67%	19
I do not pay attention to food information labelled on the package, I'm interested only in the name of the food, it means what product I buy	6	4.32%	6
Other opinion	7	5.04%	7

Source: own results

*n*=139

In the research (see tab. 3), we found that Slovak consumers are not indifferent to what buy, whereas over 95% of consumers pay attention to information given on food packaging. So we can assume that a consumer is watchful when choosing or buying food even when the

packaging attracts his or her attention, but packaging is not a decisive criterion for selecting food. We can also evaluate positively the fact that more than half of consumers (89, i.e. 64.03%) pay attention essentially to all the information on the package, as they are attentive to the front and back of packing. It would be ideal if the number of consumers who would pay attention to at least the information on the back-of-packaging, which generally contains all relevant information on food, including those that are on the front of the package, increased.

How do consumers react to the published food scandals?

The results in the Table 1 show that the vast majority of consumers (101, i.e. 72.66%) are concerned about food scandals reported by the media. Reports concerning misleading food labelling are followed by 56.12% of consumers. Despite the strict legal requirements or periodic official controls on the market, the problem of food quality and its safety, or the adulteration of food, is still current. Regarding consumer interest in reports on deceptive labelling, 56.12% of consumers keep an eye on them (see Tab. 4).

**Tab. 4: Do you pay attention to the food scandals that concern misleading labelling?**

Yes, certainly	Yes, maybe	No, probably not	No, certainly not
0 0.00%	78 56.12%	38 27.34%	23 16.55%

Source: own results

*n*=139

We assumed that media coverage of this information affects consumers' purchasing behavior, which was confirmed by their responses to the research. We wanted to know how they react to publicized scandals. The data in the Table 5 show that more than a half of consumers (53.24%) pay more attention to what they are buying. 38.85% of consumers when buying food is more interested in the country of food origin and 38.13% consumers focus on the ingredients. Since only 3 respondents do not have any information about food scandals, we can state that the media adequately or effectively inform about these serious matters.

**Tab. 5: Consumer reaction on published food scandals**

Consumer reaction	Agree
I'm more focused on what I buy	74 53.24%
I'm more focused on a list of ingredients	53 38.13%
I'm more focused on the country of food origin	54 38.85%
It does not affect my decision to buy products	13 9.35%
I do not know about any food scandals	3 2.16%

Source: own results

## 5 CONCLUSION

Our research has shown that the vast majority of consumers are interested in the information appearing on food packaging, although, given the importance food quality is in the lead. Since all the areas of interest have reached the average brand value from 2.91 to 3.54, we can conclude that consumers are concerned about food quality, food labelling, the origin of food and food-publicized scandals. Most consumers (64.03%) read the information on the front and back of the packaging. We appreciate also the fact that only 4.32% of consumers are not at all interested in what is stated on the food packaging; they just consider the name of the food, e.g. what they are buying. The reason for such action may be that their purchase is limited to food with which they have previous experience and which they know. However, this does not rule out the possibility that they do not care what foods they buy and take in. Regarding consumer awareness of food scandals about misleading and/or deceptive labelling of which media has recently informed intensively and brought negative reports, we found that more than half of consumers had noticed them. At the same time, this information affected their buying behaviour. In particular, they have begun to pay more attention to what they buy (53.24% of consumers), to the list of ingredients (38.13% of consumers) and they have started noticing the country of food origin (38.85%). The results of the research can be considered positively, as it is clear that consumers pay attention to food labelling, they care what they buy. However, we have also identified the negative aspects of consumer awareness. In terms of partial results that we present in this paper, we consider consumers' awareness of the mandatory particulars which must be stated on the packaging of food to be insufficient. If we generalize the results, consumers consider the name of the product, the date of durability and the list of ingredients to be mandatory particulars. Moreover, the vast majority of consumers think that the country of origin and the nutrition labelling are mandatory as well. These results suggest that consumers reflect the information spread through different types of media. However, an essential precondition for building consumer awareness is to educate them in this area - so they know what obligations food business operators have with respect to labelling, but also what their rights are in terms of their health and safety. Consumers' behaviour can be mastered by their better awareness and education in this area so it will enable consumers to assess and choose from the quantity of food in the market what they consider the most suitable.

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# Food Shopping Behaviour in Older Consumers' Segment

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**Abstract:** The goal of our paper is to provide a theoretical rationale and empirical evidence for determining the impact of store attributes on grocery store satisfaction and patronage by elderly shoppers. Satisfaction in our research represents an outcome of post-purchase evaluations in terms of how positively seniors view a store and whether its attributes have met or exceeded their expectations. Two principal aims are formulated for our paper: 1) to identify the factors affecting grocery store satisfaction in elderly customers segment, 2) to propose the ways for retail management and marketing aiming at better consideration of senior's customer segment. To evaluate the effects of store attributes that influence food store satisfaction we applied the qualitative research method with focus group aiming to provide an in-depth, complex understanding of how seniors see and interpret their satisfaction. The qualitative analytical approach chosen in this research was thematic analysis. The purpose of employing focus group interviews lies in selecting information-rich cases for study in depth. The results indicate that age dimensions influence perceptions and behaviour related to store evaluation and thus contribute to the understanding of the growing segment of elderly shoppers. From a retail management and marketing point of view our findings call for a stronger consideration of senior's customer segment in store layout, product display in shelves and signage provision to enable a better orientation within the store.

**Keywords:** shopping behaviour, store environment, shopping satisfaction, seniors.

**JEL Classification codes:** M30.

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## 1 INTRODUCTION

Seniors have been usually viewed as an unattractive market due to the perception that they had limited spending power and the image of old people being frail. However, this perception seems to be short-sighted, because not only will be this market growing for the near future, but new pensioners with higher income will come to the segment. To justify studying the seniors' age group, there are a number of factors that differentiate them from other segments. These factors depend on changes in health, lifestyle and psychographic characteristics resulting in specific marketplace needs. All the above-named changes influence perceptions and seniors' behaviour related to stores. The core of our research is grocery retailing for the reason that buying groceries by seniors is a necessity. Being able to shop foodstuffs is an important aspect of staying well and independent.

## 2 LITERATURE REVIEW

The purchase behaviour of older consumers differs somewhat from that of their younger counterparts. Many authors (Moschis, 2003; Pettigrew et al., 2005; Petterson, 2007) have specified such differences, which include: expecting personal attention and special services, considering shopping to be a social event, perceiving brand and retailer reputation, longer time in purchase decision-making, increased store loyalty, etc. Given the range of differences noted, retailers need to give them serious consideration and use them to differentiate their services to different consumer segments.

Satisfaction with an activity is a necessary precondition for repeat behaviours (Nagyova et al., 2014). With regard to food retailing, consumers face an array of stores in which to shop and the level of choice that exists is immense. In order to guarantee satisfaction, consumers' wants and needs must first be recognised.

With advancing age seniors experience a decline in appetite, food intake and dietary adequacy (Hare et al., 2001) as well as a decreasing ability to taste and smell, chewing difficulties and limited dexterity. Food product developers and retailers should be aware of these changes and tailor their products and services to their customer needs.

Several areas of seniors' satisfaction with the shopping have been identified. Within the store environment, problems have been reported with the use of some facilities, such as large trolleys or large baskets. Also problems with reading price displays and labels on shelves were found to be important to satisfaction (Oates et al., 1996). Several studies found respondents had difficulties reaching high and low shelves and to use deep freezers (Leighton et al., 1996). Seniors suggested that in such cases they either did not purchase the item or had to find staff to help. Older consumers would like to have seats in stores when they feel tired or good lighting within the store.

Display of products has been found to be very important (Oates et al., 1996; Lumpkin et al., 1985). Changing displays of products around a store as a part of retailers' display policy has been frequently criticised by older consumers.

One aspect of dissatisfaction identified in numerous studies has been the service at check-outs (Goodwin & McElwee, 1999; Johnson-Hillery et al., 1997). Long queues at check-outs and overcrowding causes dissatisfaction in older consumers.

Products- related aspects are very important for older consumers (Moschis, 1991). One aspect which is frequently reported to be dissatisfying is the quantity in packaged food. The quantities of food normally packaged were reported as being too large for older people with smaller appetites, particularly when the food is bought for one person (Lumpkin, 1985). Price



is also recognised as being decisive factor to older people, particularly for those with low incomes.

Finally, staff and service are important in ensuring satisfaction among older consumers (Johnson-Hillery et al., 1997). This is particularly relevant in availability of staff ready to help with locating products, information on products and advising (Goodwin & McElwee, 1999). Just as staff can bring satisfaction, it can also cause dissatisfaction when they are unfriendly and unhelpful.

Hence, there appears to be a broad range of factors influencing the satisfaction of older consumers when shopping for foods. These factors will be explored and recommendation presented to improve satisfaction level.

### **3 METHODOLOGY AND GOALS**

Both qualitative and quantitative research methods were employed for the purpose of this study, whereby each played a distinct yet complementary role. Criteria for inclusion in the research were elderly people aged over 60 years, living independently and carrying out their household shopping. Participants for the research were recruited through senior clubs and age-specific organisations.

Qualitative data was initially obtained with the aim to focus the study and to construct the questionnaire. The data was collected using focus group interviews. Focus groups were used as they are particularly suited to the study of peoples' knowledge, attitudes and experiences. Two focus group interviews were held with 10 participants each, of both gender and aged 60+ years.

The purpose of the interviews was to identify the main food shopping issues experienced by older people and to find out whether or not they were satisfied by the current food retail service.

The focus group interviews were recorded and analysed according to principles of content analysis, where substantive statements were identified from individual transcripts (Stewart et al., 2007).

The analysis was conducted in more stages. In step one, texts were read as a whole, a so called naive reading. Statements were then made based on the impressions of and reflections about the wholeness and important elements in the text that had emerged during the naive reading. Then all parts of the text relating to the aim of the study were divided into meaning units that seemed to be about the same thing. In next step the meaning units were coded. The codes were critically discussed and a number of categories with subcategories emerged.

Finally, all texts were re-read and compared with the outcome of the analysis to ensure that the categories covered the contents of the texts and codes. Three categories with twelve subcategories were identified based on the text analysis: food store accessibility (with subcategories: store location, store category), in-store environment (with subcategories: store size and design, products display in shelves, trolleys and baskets, checking points, store assistance, sales promotion), product-related factors (with subcategories: quality of products, breath of the product assortment, product size, products packaging).

The qualitative research was supported by results from a questionnaire (n=468), which documents numerically the findings described in the focus groups. To explore the food shopping satisfaction, respondents were asked to evaluate 12 factors (subcategories) impacting on their food shopping satisfaction.

Two principal goals are formulated in our paper: to identify the factors with positive and negative impact upon food shopping experience in older customers segment during their food procurement process and to propose some recommendations for retail sector aiming at better consideration and meeting the expectations of the older people.

## **4 RESULTS AND DISCUSSION**

From the consumer focus groups, the shopping patterns of older consumers were revealed, areas of satisfaction and dissatisfaction in food shopping recognised and explored later employing the data from questionnaire analysis. To determine the food shopping experience of seniors, three principle categories with 12 subcategories / factors were generated into statements that respondents had to judge for satisfaction during their shopping.

### **4.1 Store accessibility**

Nearly a quarter (22%) of adults aged 60 years and over have mobility difficulties and hence difficulties in shopping. For these people it can be difficult getting to a shop and carrying their shopping home. These mobility difficulties can influence a switch in loyalty between different types of store. Older people who find it difficult to travel to larger supermarkets, reported to prefer shops close to their place of living.

The choice of food store was based on a variety of reasons which included: price-level, close proximity to home, habit or routine and lack of choice. The reasons influencing store choice decisions were: lower prices (30%), habits and routine from the past (25%), proximity to place of living (24%), broad choice and variety of foods (13%), pleasant atmosphere (8%).

Unlike to our expectations, proximity to place of living, which is frequently cited in the literature to be a key factor influencing store choice (Moschis et al., 2004), was not confirmed

in our study as the most decisive factor. Consumer questionnaires revealed that 30% of respondents base their store choice decision on the price-level of foods purchased, 25% on habits and routine from the past and only 24% on the proximity to place of living, which may suggest that older consumers may be adapting to their difficulties.

Various retail categories were noted to be the place of shopping, including supermarkets, smaller food stores and independent retailers. More than one-third (38 %) of the participants carry out their regular food shopping in supermarket, 30 % use smaller food stores for their grocery shopping and 32 % patronise independent retailers.

#### **4.2 In-store environment**

Older consumers face a range of in-store difficulties when shopping for food, particularly the narrow aisles, poor shelf signposting, shelves that are too high or low, a lack of adequate rest and toilet facilities, deep trolleys and freezers, that make it difficult to do shopping.

Nearly one quarter (23 %) of seniors perceive the size of the supermarket to be a problem in their shopping, having a negative impact upon the food shopping satisfaction. Because of their restricted mobility it was hard for them to walk around. In light of the difficulty with store size, it was not surprising that 35 % of older people were unsatisfied with the provision of seating. It was stated: “There are no seats in the shops where you could rest a little”, or “A seat is a very important factor for anyone who cannot walk far”. These findings were confirmed in both focus groups: „After shopping I sometimes need to sit down for a minute or need to sort my bags out before carrying them home, but there are often not any / enough seats.“

Checkout queuing and long waiting times were highlighted as one of critical factors for seniors: “Standing in the queue if there are so many waiting to be served is hard for me”. One of the serious problems reported was a lack of assistance: “I miss somebody to help me to pack my goods”, and “With somebody standing behind me, I feel guilty to be such slowly”. Crowded store and queues at the pay desk have a negative influence on the seniors’ shopping satisfaction.

Respondents expressed also difficulties with reaching high and low shelves and with the use of deep freezers. They suggested that in such cases they either did not purchase the item or had to find staff to help. One in six respondents experience the inability to reach goods and consider inappropriate shelf height to be the main in-store difficulty. It is illustrated in the following quotations: “Sometimes the goods tend to be too high”, or “I could not reach up to get the goods”, or “I cannot stoop down to the lower shelves, so someone has to do that for

me". Consequently, older people have no other possibility, but to ask others for assistance in accessing products when in-store.

The trolleys were seen both to be an aid which can be used by seniors as a support when they are in-store, but also a problem, when large and deep. This was verified in the following comments: "Trolleys give you balance when you are not able to walk", or "I use the trolley to lean on it", but also "I have problems at the checking point to get the goods from the deep trolley". However, preference is given to trolleys (88%), not to baskets, because they are more convenient and of help for those with restricted mobility. Overall 88 % of the respondents said they were satisfied with the trolleys.

Ease of finding products has been found to be very important (Oates et al., 1996; Lumpkin et al., 1985). Retailers often move displays of products around the store as a part of their display policy and such a practice has been criticised by older consumers as well as by younger consumers.

Product relocation caused confusion among older people and in some cases was named as a reason not to shop in supermarket stores: "We find it very confusing, if the item is one week here and the next week it is somewhere else", or "You are running around the store, whereas in independent stores goods are in the same place and you know where to find it". The importance of familiarity in store was used as a justification for continuing to shop in the same store and one in four seniors (25%) base their store choice decision on habit / routine. The following quotes illustrate this: "You know in smaller stores where everything is located, but when you go to a supermarket, you are lost", or "They continually move the items from one to other shelves"). Hence the issue of product relocation has the possibility for either encouraging store patronage or losing a customer.

Over one-quarter of people aged 60 and over, and nearly half of everybody aged 75 and over live alone. The retail is however very much focused on the larger households. A particular example that causes much dissatisfaction among older people is the widespread use of buy-one-get-one-free offers (BOGOF) and similar multi-buy deals that offer discounts for buying in bulk. For those who either live alone or are not able to carry a lot, these offers have the opposite effect. Older people expressed criticism that such BOGOF offers are impractical for them to purchase because they often are not able to consume greater quantity within the use-by-date. 75 % of the questionnaire respondents believe multi-purchase promotions are not good value for them. The respondents claimed: "You have to throw it out, because we are not able to use it, it is a waste".

Staff and service are crucial in ensuring satisfaction among older consumers (Johnson-Hillery et al., 1997). This is particularly relevant in availability of staff ready to help with locating products, information on products and advising (Goodwin & McElwee, 1999). However, staff can not only bring satisfaction, it can also cause dissatisfaction when they are unfriendly and unhelpful.

The retailer staff were reported with only 42 % in a positive light. Staff was commented as not being polite and willing to help. The questionnaire data found that 26 % of older people were satisfied with customer service and further 16 % very satisfied. The retailers' policy of taking the customer to the product when asked for assistance in-store was viewed favourably among older consumers. This is beneficial for retailers as poor service and unhelpful staff can have an immediate negative effect on customers and decreases the likelihood of them becoming loyal to that store (Hayley and Lumbers, 2008).

A further negative factor stressed in the focus groups was the impersonal service provided by staff in supermarkets. Older people do not experience in large stores the same approach they may have been used to when shopping in smaller local stores. In larger stores seniors reported having some difficulty in finding a member of staff who is willing to help them and bring them to the goods needed. Their experience with staff helpfulness varied. „Sometimes staff give directions to products, but it would be better if they could take me to them”. It was found in the focus groups that seniors in generally do not like to ask staff for help (38 %).

#### **4.3 Product-related factors**

Product-related aspects are very important for older consumers (Szmigin & Carrigan, 2001). Not only price, which is recognised as being important to older people (particularly for those with low income) plays an important role in food shopping perception. It has been found that older people perceive the price of foods to be high, which can be caused not only by their low pensions, but also by higher tax-levels on foods in the country.

The majority of older consumers expressed satisfaction with the range and variety (92%) of product choice in store, stating: “They have everything I want and even more”, or “I can get everything I want”. Only 8 % of research respondents reported they are not very satisfied with the range of food available in a store and 12 % are not satisfied with the quality of food products.

One factor which was frequently identified to be dissatisfying is the quantity in packaged food. The quantities of food normally packaged were reported as being too large for older people with smaller appetites, particularly when the food is bought for one person.

Respondents complained that food was often sold in portions too large for older people living on their own. As a result they often have to have the same food for three-four days in the row, to avoid wastage. This mainly related to fresh products such as meat, fruit and vegetables, but also to some tinned products. One respondent reported: “The size of the portions, in which the foods are sold, prevents me from buying some items”. If food products were available in smaller portion sizes, this would be of much help and greater use to 82 % of older shoppers.

It was found that 62 % of respondents read food labels and the information provided on food packaging. Because older people are usually more health-conscious, they obviously read the ingredients on the labels before buying. However, the font size on such labels and packaging caused problems for older people (66%) when food shopping, as they were too small to be legible. Many of them were frustrated by the fact that the ingredients were written in a very scientific language and it was difficult to recognize what the food actually contained.

Respondents commented that many of the use-by dates are printed too faint, or there was insufficient colour contrast. Yoghurt and cream were cited as examples where there was poor colour contrast on packaging, making people unsure whether they were still safe to eat.

Focus groups reported: “The instructions are so small, that I cannot see them at all”, or “I have to ask someone else in the store to read the information for me”, and „I would recommend that all food products state the ingredients of products clearly and put the content of fat, sugar and salt in the food in a large bold print”.

Many seniors indicate problems with food packaging, particularly with opening jars or tins. Most of the respondents (66%) confirmed they had problems opening packaging. Cans, vacuum sealed containers and cartons were all named as examples of products that are hard to open. Some also found ring-pulls difficult, despite the fact that these are aimed to make tins easier to open.

## **5 CONCLUSION**

This paper highlights the purchase behaviour shopping satisfaction of older people during their food procurement process. Seniors face several positive and negative factors in the food shopping. Through both quantitative and qualitative research the critical areas for improvements in seniors’ food shopping satisfaction could be identified: lower (“fair”) prices, larger print on food labels, shorter checkout queues, single unit promotions, smaller portion sizes, easy to open packaging.

The results of this research revealed also that older people consider the social element and experience of food shopping to be a positive factor. The social aspect of food shopping is very

important to this age group and regular social interaction is recognised as a key element in maintaining both mental and physical well being as people age.

Price level has been cited as one of the most important reasons when older consumers make decisions regarding where to shop. Further important decisive factors have been habit and routine from the past, and proximity to the place of living.

The satisfaction of older people, when in stores, can be improved by the provision of adequate trolleys that provide support for those who need help due to mobility restrictions or due to the impact of advancing age. Staff can also enhance the shopping satisfaction by providing in-store assistance and friendly service.

One positive factor experienced by the consumers in our study was the variety and choice of food products available for purchase when shopping food. The majority of older people (74 %) are satisfied with the current range of food that exists. Satisfaction with product choice was very high.

Several in-store factors impact negatively upon the food shopping satisfaction. The internal store environment has been identified as a key area for improvement when examining retail provision for older people. This outcome is supported also by the results of other studies (Hare, 2003).

The promotion of multi-purchase products is not beneficial for older people who live alone or in smaller households. Many customers complain they do not want two of the same item; just one. Despite this most supermarkets favour such special deals.

Product and pack sizes do not meet older consumers' needs, as they contain more food than is required and suitable for two-person households or for seniors who live alone. Current quantities are focused towards larger families, they do not meet the needs of older people. To improve the situation, food quantities should be smaller in terms of portion size and pack.

Product relocation also causes confusion among older people. Positive experiences arise if the store makes it easy for consumers to find the product they are looking for.

Shelf height, store size and food labelling have been identified as problem areas for older people when shopping for food.

The research indicated that there are still more areas for retailers to improve the service for the growing seniors population. As a consequence retail managers should respond to the needs of older people in altering shelf height, increasing in-store seating, informing customers of product relocation changes, minimising the use of multi-purchase promotions, reducing the product and portion size of food and improving food labelling with increased font size and

adequate colouring. It is in the interest of the retailers to resolve the negative factors and improve the positive experience.

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# The Nature of HRM and the Meaning of Work: Turkish Case of HRM Practitioners

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**Abstract:** It's not so easy to put the meaning of work clearly. Rather, defining work on an unquestionable ground is almost impossible because of its nature and of how people or scholars from different academic traditions see it. While the mainstream economic thought see work or labour as a commodity that could be bought and sold in labour markets, many others can approach work in out of an economic framework. That paper intends to provide the meaning of work for HRM practitioners in Turkey. Main purpose of doing that is to examine the nature of HRM via the Turkish experience. The paper is grounding on the work concepts that are provided by John W. Budd. In his prominent study [The Thought of Work] Budd examines the meaning of work under ten different concepts on work. The paper is trying to find how Turkish HRM practitioners mean work and their approach run into which category. For that purpose, at first the paper will provide a general conceptual framework of Budd's study, then, depending that ten-conceptualisation-approach it will examine the data from HRM practitioners via a periodical, HR Dergi [HR Magazine] that publishes the interviews with those practitioners. And finally the paper intend to put a critics on the nature of modern human resource management.

**Keywords:** the meaning of work, the nature of HRM, Turkish HRM practitioners.

**JEL Classification codes:** J00, J50, O15.

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## 1 INTRODUCTION: HOW THE MEANING OF WORK HAS BEEN SHIFTED?

Under the Nazi Regime, so many concentration camps had been established in Germany during the Nazi rulership. There was a same statement on the gates of all these camps in German: *Arbeit macht frei* (work makes you free). This German phrase brings so many important questions on the table: Is this reflecting just a Nazis' ideology? Has work had such an importance during the whole human history? If not, when and how a transformation in the meaning of work has been happened?

At first, we need to emphasise that, the statement on the gates of concentration camps reflects not just the Nazi ideology but also a labour ideology of modernity or its economic world, capitalism. On the other hand, this perspective on work is not valid for the whole human history or for the all cultures. A well-known paradigm on thinking on the meaning of work is the Greek paradigm. Although there is not a consensus<sup>14</sup> on the paradigm, frequently this

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<sup>14</sup> As a text that is not comply with that paradigm, see Hesidos, 2004

paradigm is treated as a paradigm that sees work as a virtueless activity (Meda, 2005). Here is a quotation from Aristotle (1985: 91 -1277a1/35): “Now we speak of several forms of slave; for the sorts of work are several. One sort is that done by menials: as the term indicates, these are persons who live by their hands; the vulgar artisan is among them. Hence among some peoples the craftsperson did not share offices in former times, prior to the emergence of [rule of] the people in its extreme form.” And a quotation from Aristotle’s teacher Plato (2003: 54,371e):

“And there is still another group of people, I think, offering a service. We certainly would not want them as partners or associates for their mental attributes, but they possess physical strength suitable for manual labour. This they offer for sale, and the price they put on it they call their hire. That, I imagine, is why they in turn are called hired labourers. Isn’t that right?”

Thus, the approaches toward labour, especially manual labour, was quite negative in ancient ages. This perception maintained a long period, till middle ages. Even during the middle ages, for example, the negative view of manual labour could be seen in the medical professions (Conner, 2005: 308): “medical practitioners organized themselves professionally in a pyramid with physicians at the top and surgeons and apothecaries nearer the base, and with other healers marginalized or vilified as ‘quacks’”. The position of surgeons in the pyramid reflects the position of manual labour.

On the other hand, perceptions on labour has changed completely in modern capitalist societies. While the Greek paradigm saw work as an activity that makes people unfree because of its nature that includes an obligatory condition, modern labour ideology takes work as an activity that makes people free just as stated on the gates of the Nazi’s concentration camps. So, the key question is that: what is the main reason under that transformation of perception about work? Of course this question imply a wide-range debates, but shortly we can say that the material conditions or necessities lead to or feed new discourses that serve for these conditions or necessities. Therefore, the main factor under that discursive transformation has been the transformation of economic structure in which a shift from a subsistence economy to a capitalist economy has occurred. Several great developments such as protestant reformation, scientific revolution (and Enlightenment) and Industrial Revolution have paved the way for new labour discourse that see work as a great virtue. Thus, classic and neo-classic economic thought approached to labour just like any other commodity. One of the most important critics against that perspective was put by Karl Marx. In his

prominent work *Capital*, he present a detailed explanation that demonstrate this commodification of labour stand on an exploitation ground (Marx, 1992).

Thus, standing on neoclassic economic theory mainstream modern labour economics also see labour just as any other commodity and analyse labour market such as any other markets by supply-demand and price (wage) laws. Under that circumstance the meaning of work would had been transformed into one that see work as a great virtue. The roots of modern labour ideology that sees work as a virtue activity could be simply seen in a well-known novel written in early seventeenth century by Daniel Defoe (2003), *Robinson Crusoe*. Robinson is a quite well iconic-fictional figure who reflects so many characteristics of modernity and modern economic man. The novel can be analysed in vary aspects but for the purpose of that paper I would like to present some Robinson's characteristics about labour. One of the most apparent characteristics on novel is the importance of working on nature. Working on nature reflects the motive of modernity on conquering or transforming nature into one that serves mankind's aims. Robinson transformed the environment in which he lives into a safer place or a less hazardous one and the main activity under that transformation is his working. The text places work in a position that is quite different from its position in Ancient Greek paradigm on labour.

On the other hand, the some measures taken by public authorities and some ethic codes against idleness also strengthened the importance of work. Michel Foucault (1988) presents a clear explanation on banning of mendicancy in his *Madness and Civilization*. Thus, while once upon a time a beggar was an agent to reach the God via charity, now he or she is an unwanted person who is seen as idler or a person who is a bad example for society. Additionally, work ethic also served for to constructing a new meaning of work. Because it says to employees that maximizing your benefit is less important to be more productive worker for your company (Bauman, 2004). So, when during the consolidation of capitalism till today, a meaning of work that is totally different from the Greek paradigm has been widespread. Especially an economic approach that see just paid employment as work has a wide acceptance in mainstream economics. In the next part of the paper, I am going to present the conceptualisations that are delivered by John W. Budd (2011) to form a theoretical basis for the paper.

## **2 LITERATURE REVIEW: TEN CONCEPTUALISATIONS ON WORK**

In the mainstream economics, work is just the activities under employment relations. In the other words, just paid works or jobs are entitled to be or named as "work". But in sociology of

work literature this tendency has been criticized because sociological perspective tries to conceptualize work in a quite broad sense. This approach tries to go beyond a dichotomy on work such as private (domestic works) / public spheres (paid employment), market / non-market divide or production (public-market area) / reproduction (private area) fields (for details see. Williams, 2010; Taylor, 2004). One approach that blur all the borders between these dichotomies is “total social organisation of labour” by M. Glucksmann (Williams, 2010: 404).

A recent report by UNDP approach work partly in a conventional tendency. Overview part of the report begins as (UNDP, 2015: 1):

“Work enables people to earn a livelihood and be economically secure. It is critical for equitable economic growth, poverty reduction and gender equality. It also allows people to fully participate in society while affording them a sense of dignity and worth. Work can contribute to the public good, and work that involves caring for others builds cohesion and bonds within families and communities.”

This perspective on work imply a more-market side explanation of work. But in the following sentences, report open a door slightly to a broad conception of work, it goes as (UNDP, 2015: 1): “The Report takes a broad view of work, including voluntary work and creative work, thus going beyond jobs.”

In that paper I will stand on the conceptual ground that was presented by John W. Budd. In his prominent book, *The Thought of Work*, Budd, present the meanings of work in a quite broad perspectives, in ten different conceptualizations.

In Budd’s (2011: 14-18) presentation the first conceptualisation takes the work as a curse, the second conceptualisation, in the words of Budd, “shows how work can be seen as a source of freedom. The third conceptualisation depends largely on mainstream economic thought that see labour as commodity just like any other commodity that can be sold and bought. The forth conceptualisation approaches work as occupational citizenship (“an activity undertaken by citizens with inherent equal worth who are entitled to certain rights and standards of dignity and self-determination irrespective of what the market provides”). With the fifth conceptualisation, work is seen as “an instrumental, economic activity that is tolerated because of the resulting income and extrinsic rewards but that lacks psychological satisfaction and other intrinsic rewards and is therefore not enjoyed.”

In the sixth conceptualisation work is come up as personal fulfilment. Under that conceptualisation work is held as a beneficial activity “for an individual’s physical and psychological health.” This conceptualisation has another importance for its relation to human

resource management practice because it presents an intellectual ground for human resource management, “which seeks to enhance worker effectiveness by recognizing the satisfying and dissatisfying aspects of work.” So this conceptualisation is also one of the most important ones for that paper, because so many dimensions which have relation with that conceptualisation have been emphasised by HRM practitioners who consist the sample of that paper.

And in turn, the seventh conceptualisation approaches work as a social relation that present a view which go beyond an economic exchange; the eighth conceptualisation takes work as caring for others that is not a central conceptualisation for that paper; the ninth conceptualisation see work as a part of personal identity which is also a weak conceptualisation for that study. And finally the tenth conceptualisation consider work in a way that go beyond an individual needs. Under that conceptualisation work is seen as service for a broad field such as society or God. For that paper emphasises on social responsibility or environmental concerns have relations to that conceptualisation.

### **2.1 A Brief Statement on the Meaning of HRM**

Now we need to focus on the nature of HRM and its relation to these conceptualisation on work very briefly. Discussions on HRM provide a bunch that consisted of vary approaches, which is not possible to present all of them in here. Yet as some writers do, we can put these approaches under some categories. Looking at HRM through these categories makes easier to think on the nature and meaning of HRM. I will present the Kaufman’s brief frame on these categorisation but similar categorisations are available in another text on HRM nature (e.g. see, Collings and Wood, 2009: 1-16).

Kaufman (2004: 322-324), presents various HRM definitions that allows “nearly a dozen different conceptualisations or dimensions of HRM” and then his final point as “a careful reading of these pages yield at least three different conceptualisations of HRM.” Thus, I present these three conceptualisations or definitions in here very shortly. The first definition conceptualise HRM as “a generic management activity or function in business firms.” So in that perspective HRM is “largely equivalent to personnel management in that both are a generic functional management activity, although HRM is distinguished by a broader range of concerns and practices that are sometimes considered at a higher management level in the firm” (p. 322). In another world through this perspective HRM is no more than personal management, which is pointed as “old wine in a new bottle” by Armstrong in his an early study (2007: 18).

The second approach presents some distinctions between HRM and personal management. For instance personal management implies that employees are an organisational cost. “On the other hand, HRM emphasizes the potential of employees as organizational assets.” This definition puts a great difference for my paper. Because seeing employees either as a cost or as a potential requires quite different two perspectives, and HRM see workers as potential to be developed in that definition.

And the last definition is the most comprehensive one: “Human resource management is the science and the practice that deals with the nature of the employment relationship and all of decision, actions, and issues that relate to that relationship. In practice, it involves an organization’s acquisition, development, and utilization of employees, well as the employees’ relationship to an organization and its performance (Ferris et al. 1995: 1-2). This definition is quite useful for our purpose in that paper especially the emphasis on utilisation of employees imply a broad frame that include some work-conceptions from our ten-conceptualisation base such as commodity which stand on human potential in employment relations.

### **3 PROCEDURE, DATA AND OBJECTIVES**

In that paper I’m trying to bring two controversial concepts, work and HRM, together. In doing that, my aim is to look at how work is seen through HRM practices and so to revisit the debates on HRM nature. For that purpose I’m looking at the human resource management practitioners from Turkey by using the archive of a relatively long-lasting magazine, *HR Dergi* (HR Magazine). The magazine is generally a monthly periodical and has a twenty-year history, has been publishing since 1996. The magazine is not an academic journal, but is a periodical that share the current development in the human resource management world in Turkey. The target group of the magazine is the practitioners: “The % 67 of our readers are middle and senior executives” (*HR Dergi*, 2016). Almost all issues include one or more interviews with HRM practitioners, so I consisted my sample from that archive.

Determining my sample, I scanned all issues from the beginnings to end of the 2015. In that period 193 issues of *HR Dergi* have been published and subscribers can access the all issues via internet. I retained 140 interview from all these issues and selected 67 interview randomly. Then, I read these 67 interview made with HRM practitioners to find out how Turkish HRM practitioners see employment relations or work issues. Doing that of course I will not try to get the ten-conceptualisation directly but more indirect way by using MaxQDA 12 qualitative data analysis software. In another word, I have read the interview via some codes that I created to derive work conceptualisations of Turkish HRM practitioners in indirect way.

*The construction of codes for MaxQDA:* Analysing the interviews for my purpose, I created sixteen sub-codes under five main groups. A brief explanation about my coding design is shown in the table below. As you see there are only five categories, not ten because all the conceptualisations mentioned above from Budd are not available in the interviews that I selected for the sample of the paper. Another point that I need to present is an explanation about the main codes. All main codes (except one, post-Fordism) are labelled as in the Budd's framework but the sub-codes under post-Fordism serve for several purposes: First of all some of these sub codes have relations with other conceptualisations from our "ten", for instance the connection between these sub-codes and "fulfilment" is also a possibility. Thereby, secondly, the reason of constructing a main-code such as post-Fordism is also to see something about "the nature of HRM" from lens of practitioners.

### **3.1. Findings**

In that part of the paper I will provide some analysis depends on the statistics or frequencies that I derived from MaxQDA. Table 1 presents detailed information of frequencies for both main-codes and sub-codes. The table supplies a chance to see the percentage of any sub-codes in main-codes and among all codes and also the percentages of main codes in all main-codes. Now looking at all these data, it's easy to grab a narrow conceptualisation of work and also a narrow-dimensional view toward HRM. Our conceptualisation ground, ten conceptualisations, presents a quite wide or rich perspective to see work activities. But as it's seen in the data presented here just several conceptualisations of our ten came in sight from the interviews with HRM practitioners, and just three of them have a meaningful frequency size. The three biggest main-code categories consist 96 percentages of all codes. So the other two main-codes have quite small value in our analysis. If so, what do these three main categories that compose almost all codes mean?

Our codes and their frequencies show that the corporate-related issues have the most important priority comparing with ideological discourse of HRM. In narrative level HRM ideology bring the importance of human as human fore while the importance of human is realised in practice but as source that could make contribution to corporate strategy. In our data, "HRM-human aspect" stands in the fourth rank but I put some emphasises on such as communication, employee-voice into that code but this emphasises on human aspects in HRM have primarily concerns of corporate strategy. An interviewee presents this perspective very clearly: "The strategy, aims and perspective of top management are necessary to come down to our friends who are working in the plant. They are playing a critical role for us. Thus, the



construction of firm, tight and healthy communication channels by middle level managers is so important.”

**Table 1: Frequencies of main-codes and sub-codes**

Main-codes	Sub-codes	Frequency	Percentages in the main-code	Percentages in all codes
<b>Post-Fordism</b>	corporate-employee consistency	36	32,14	12,1
	total quality	29	25,89	9,7
	outer customers	21	18,75	7,0
	team	16	14,29	5,4
	flexibility	10	8,93	3,4
	<b>Total</b>	<b>112</b>	<b>100,00</b>	<b>37,6</b>
<b>Commodity</b>	human potential	44	43,14	14,8
	training	31	30,39	10,4
	performance	16	15,69	5,4
	skilled personnel	11	10,78	3,7
	<b>Total</b>	<b>102</b>	<b>100,00</b>	<b>34,2</b>
<b>Fulfillment</b>	employee satisfaction	33	45,83	11,1
	HRM-human aspect	32	44,44	10,7
	HRM as bridge	5	6,94	1,7
	private life/work life	2	2,78	0,7
	<b>Total</b>	<b>72</b>	<b>100,00</b>	<b>24,2</b>
<b>Service</b>	environment	5	50,00	1,7
	social responsibility	5	50,00	1,7
	<b>Total</b>	<b>10</b>	<b>100,00</b>	<b>3,4</b>
<b>Identity</b>	Identity	2	100,00	0,7
	<b>Total</b>	<b>2</b>	<b>100,00</b>	<b>0,7</b>
<b>Total</b>		<b>298</b>		<b>200,0</b>

As I have stated above the main-category post-Fordism is a mixed category that is not available under the same label in our ‘ten-conceptualisations’. Thus, if we exclude that category, the most striking main-code group is “commodity”. This conceptualisation in our ten implies an exchange in labour market and see labour just as a commodity that has a changeable potential nature. Because of that potential, employers exploit, control or monitor it during working time to expand that potential till its end point. First ranking of “human potential” sub-code in our analysis shows that HRM practitioners are aware of the value of human potential at work. Another important sub-code, training, also demonstrates the importance of expanding that potential via developing practice.

Third important main-code category is fulfillment that points to employee satisfaction in a broad sense. Especially the sub-code employee satisfaction is ranking number three among all sub-codes. This reflects a tight relations with the ideology of modern HRM practice which

aims to maintain and rise employee engagement as an interviewee puts: “As HR team, our priority is to keep the employee engagement in a highest level.”

Last two main-code fill a quite limited room in our paper. One of them is about to seeing work as service for whole community or country. Recently corporation and thereby HRM practitioners began to emphasise this dimension by a discourse on environmental protection and social responsibility. But nevertheless this emphasises are just available in five interviews. On the other hand work-identity relations that is a quite significant debate on the meaning of work is also not available, just two interviewees mentions something on that issue –one of them is quite indirect and just one emphasise the importance of identity. The date of this last one goes back to 1997. I emphasise the date because according to some argument work-identity relation is getting weaker especially for the transformation of work in post-industrial process (for details see Strangleman and Warren, 2007). Thus the frequencies on that sub-code also show that this issue is certainly not a priority for HRM practitioner in our case.

#### **4 SOME CONCLUDING REMARKS**

Post-Fordism main category is on the first rank among all main-code categories. This title and the sub-codes that place under that title implies significant issues in relation with employment relation and the nature of HRM. The sub-codes under that title point to a new working world that is not similar to one under Fordism. Total quality practices, flexibility and working with teams are new concepts and reflect effective conclusions on labour control. Thus, these sub-codes reflects also important implications about the nature of HRM.

Remembering the definitions of HRM presented above, the second and especially the third definition are presenting a quite broad borders for HRM that put a clear distinction for HRM comparing with traditional personal management. The second definition was emphasising “the potential of employees” and the third definition was approaching to HRM as an area that “deals with the nature of the employment relationship and all of decision, actions, and issues that relate to that relationship.” Hence, looking at the data derived from the interviews with HRM practitioners, these last two definitions are seen very clearly. On the other hand a lexical search in the interview text also presents a similar conclusion. The numbers of words searched through all the interviews text are as following: training 776, performance 443, customer 257, team 138; while employee voice 52, employee satisfaction 21, social right 7. These numbers reflect a picture on the nature of HRM.

What about the meaning of work? As seen very clearly above, the broad meaning of work can't be seen in the interviews with HRM practitioners. There are just several main-categories that have direct relation with markets and profit, in the other word analysis of our data present just the economic dimension or the economic meaning of work. Therefore, one of the important conceptualisations of work, identity, also is almost not available in these interviews. Shortly, the narrow meaning of work that is just stand on an economic understanding is quite widespread in HRM practitioners' world, so seeing meaning of work on an economic ground as mainstream is the case.

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# The Importance of Public Resources for Entrepreneurship and Development of Innovation

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**Abstract:** The scientific paper examines the importance of public resources for supporting entrepreneurship and innovation on the basis of selected indicators, and compares data of European companies with enterprises in Slovakia and SMEs. Specifically, it examines the use of public funds in European clusters and tourism clusters in Slovakia. Surveys show that public resources are not a significant source of financing for business activities or funding for research, development and other innovation activities in enterprises. Similarly, cooperation with the public sector enterprises in the innovation activities is low and the benefits of the public sector organizations in the promotion of innovation are perceived the same. Public financial support for research and development, and other innovation activities are mainly used by large enterprises (followed by medium-sized enterprises), which also have the highest rate of innovation activity. However, public resources are significant for smaller enterprises. Position of the public sector and public resources is significant in the European clusters, and even more important for the tourism clusters in Slovakia.

**Keywords:** public resources, entrepreneurship, cluster, innovation.

**JEL Classification codes:** O38, R53, H59, M20.

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## 1 INTRODUCTION

The intention of the European Union is to stimulate business environment in order to ensure economic growth, which is one of the main objectives of the development strategy of the European Union – Europe 2020. Its action plan for 2020 entrepreneurship highlights the creation of proper business environment within the scope of the second pillar. Within the six core areas it appeals to the improvement of business environment conditions, as well as ensuring of access to financing and businessmen support at key stages of their enterprises and their growth. This support also involves the use of public resources as the monetary relations arising in connection with the production, distribution and use of monetary funds associated with the activity of public institutions. Public administration entities (state administration, local government and public legal corporations) handle these in various forms in relation to other entities of the economy. Yet, public resources are not only the funds budgeted in the budgets of government entities, but also domestic grants, foreign grants, EU funds and others. Their essential feature is that even after the provision of public funds to other entities, as the entities of public administration, public funds do not lose their public nature, and therefore are

considered public until their final use and are subject to a regime under applicable budgetary rules of public administration.

Different sources of scientific and technical literature presenting theoretical postulates, analyses of statistical data and results of surveys assess the importance of public funds in promoting entrepreneurship and supporting innovative activities. The role of supporting organizations that ensure the use of public funds to actively support the business environment is also mentioned in this context, either directly aimed at enterprises (enterprises as recipients of aid for infrastructure or non-infrastructure projects), influencing – creating or improving the conditions in which enterprises operate or carry out other activities and use the various tools of active state or regional policies.

The presented article is also devoted to the use of public resources for the promotion of business. The aim of the article is to evaluate the importance of public resources for entrepreneurship and innovations, based on the selected indicators of their utilization by enterprises relying on secondary and primary data of several surveys carried out in the EU-28 and own investigations in Slovakia. In this context, the data were compared with the situation in small and medium-sized enterprises; particular focus is given to the clusters and tourism clusters. The stated aim is met methodically particularly through the selected key indicators, such as the proportion of enterprises using public resources in their business, the proportion of enterprises using public resources for innovation, evaluation of support importance from the public resources for enterprises in the sphere of innovations, size and sectoral structure of enterprises using public resources, the proportion of enterprises using cooperation with public sector organizations for innovations, the perception of contribution of the public sector to innovations, as well as the planning of public funds use, the success rate of enterprises receiving public funding, evaluation of accessibility of public funds and other partial indicators.

## **2 LITERATURE REVIEW**

The ability to innovate is associated with cooperation, networking and clusters. Innovation ability, ability to cooperate, ability to create and operate in networks are part of dynamic capability, strategic change capability and architectural capability of enterprises, according to Moldaschl (2006). The innovation performance of countries is monitored in different areas and measured by various indicators. One of the indicators in cooperation and business specifies the proportion of small and medium-sized enterprises, which have innovated products or processes in cooperation with other entities. Overall, small and medium-sized

enterprises have innovated their products or processes in cooperation with other entities at a low rate. In this context, the available results of the European Innovation Scoreboard 2008 show that only 9.5% of small and medium-sized enterprises in EU-27 and only 2.2% of small and medium enterprises in Slovakia made innovations in cooperation with other entities. Cooperation of SMEs, however, is seen as the key to the countrywide innovation activity and the shift to knowledge-based economy (SBA a/, 2014). Van Essen, Meijaard (2009) considers the cooperation for the firm growth to be the additional key factor in actual firm growth and the author speaks of "an open mind for cooperation and global focus." Similarly Khan, Siddiqi (2012) considers working through networks to be one of the features that are found to be important factors affecting firms' growth.

Tödtling, Grillitsch and Höglinger (2011) emphasize the importance of the regional level for product and process innovations. Regional links show positive associations with product innovations and process innovations. At the regional level, the important role in the development of innovations is played by the regional innovation system as a part of regional innovation policy, which is formulated and implemented by the regional policy subsystem consisting of public authorities, regional development agencies and other policy agents (Trippel 2006). Heintel, Schienstock (2007) reported three central aspects of policy contributing to innovations – promotion of corporate restructuring, building a dense institutional environment that will enable the provision of resources – knowledge, competences, financial capital, technologies and the third aspect is promotion of cooperation and networking among enterprises themselves and enterprises with various institutions. Kubičková (2014) points out the existence of multiple-unit organizational forms (networks) and new combinations of services as a prerequisite for effective implementation of innovations in production of services. Inter-company cooperation is a part of new organizational logic. Regional networks are generally admitted to have the ability to influence the growth opportunities for business development; they promote skills and knowledge of the entrepreneurs and in overall support the economic performance of enterprises (Tuinstra, Mekkes and Koldijk, 2012). Kubičková and Benešová (2011) draw the attention to the importance of cooperation with the public and private sectors and the creation of partnerships as one of the priority opportunities for accumulation of resources for innovation, transport and sharing of knowledge in the environment of service enterprises. Heintel, Schienstock (2007) indicate, however, that although enterprises rarely develop new products and renew their procedural structures in isolation, these are also not created even in the multilateral innovative networks. It is rather a results-based two- or three-way cooperation.

A new framework for the public sector, regional innovation policy and cooperation of public and private sector is offered by the clusters operating at the regional level. Within the European policy, clusters are seen as an essential tool of modern innovation, regional and industrial policy. The starting point of clustering support is the document EUROPE 2020 – A strategy for smart, sustainable and inclusive growth, which counts with the support of innovation clusters for regional growth. The Smart Specialisation Platform S3 created by the European Commission is a part of efforts to promote innovation and to promote strategic approach to economic development based on targeted support of research and innovation. Documents of the platform highlight the importance of innovation clusters for regional development. Linking of SMEs into clusters could be a key factor in strengthening their ability to innovate and launch their activities in foreign markets (EP Regulation No. 1287, 2013).

The cluster approach is usually categorized as one of the territorial innovation models (Porter, ME is the founder of the model), its basis is the market with competition and network relationships, including social interactions (Terluin 2003). Many authors unequivocally state the positive effect of cluster activities on innovations (Pavelková, D., Skokan, K., Nemcová, E. Anderson, T., Serger S.T., Sörvik, J., Hansson, E.W., Lindqvist, G., Ketels, Ch., Sölvell, Ö., and others). The studies show that the development of cluster initiatives increases investment in research and development (VDI / VDE Innovation Berlin, 2012). The said study postulates were also confirmed by the European Cluster Observatory (2012), under which the major objectives of the clusters include, inter alia, the promotion of entrepreneurship, growth and investment, innovations, promotion of export and development of value chain.

Suppliers and customers are the most crucial innovation partners in clusters. However, innovation performance can be achieved through goal-oriented cooperation and combination of resources and competencies of enterprises, research institutions, society and the public sector. This is also confirmed by the OECD study (2009), which classifies cooperation between the partners as the key aspect of clusters' and innovation success. Among other key aspects, the study also indicates strong commitment of the public sector; that the public authorities should help promote a comprehensive strategy and agree on investments in infrastructure and public services, such as transport, housing, schools and personal services to meet new cluster requirements. Strong partnership and leadership is regarded as another key factor by the study. For all of the analysed clusters, strong partnerships and clear leadership have been essential factors for success. Public-private partnerships are crucial in making sure that policies are adequate and that needs are met in the cluster. It is necessary to facilitate a

rapid access to public funds and to encourage private investment. However, according to a Swiss study Cluster in der Wirtschaftsförderung (2010), the public support should be limited in time. The aim should be to maintain a medium-term financial establishing of platforms and to build organizations independent of public funds. It is also necessary to consider the use of public resources in the context that the aid is not directed equally to all subjects in the cluster, corresponding to their status and power in this union. The clustering coefficient (Micháľková, 2011) can be used to find out the equivalence of entities in the network, and hence the priority source direction.

### **3 RESULTS**

#### **3.1 The use of public resources by the enterprises**

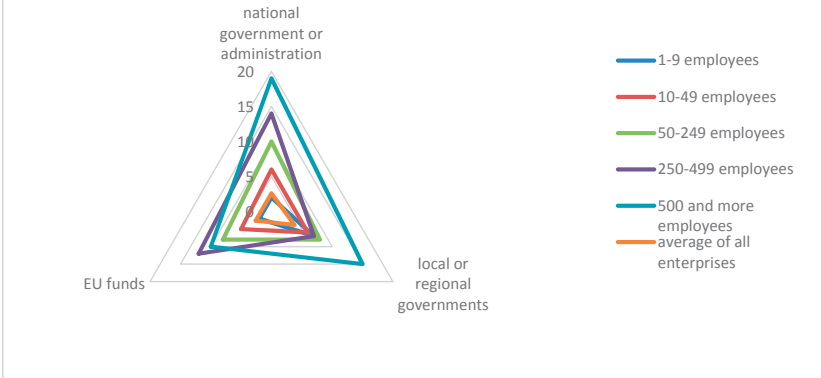
Despite the fact that the public resources and their use are a frequent topic in the sources of expertise, but also for the general public, it is questionable what role they play in the financing of enterprises and their innovations. Based on the survey of EC (2014) on a sample of more than 11 thousand enterprises from the states of EU-28, Switzerland and the USA, most enterprises (91%) did not receive any financial support from public funds to support research and development or other innovation activities since 2011. Of those enterprises that received such support, about a half considers this support to be important and the other half to be insignificant. Only 4% received support from the local or regional governments or administrations, 3% from the national government or administration, and 3% from the European Union. Most enterprises in Belgium and Finland received support from public funds, the least enterprises from Romania. At a local or regional level, the funds are also received especially by the enterprises in Belgium, but also in Austria and Finland. In general, according to the European Central Bank (2015), the enterprises use in particular credit line or overdraft, bank loans and leasing or hire purchase to finance their activities from external sources, these are used by the highest percentage of enterprises, and for them they are the most important.

Of the surveyed enterprises in Slovakia, 6% of enterprises gained funds from the public sector for support of research and development and other innovation activities, where the means of local or regional governments or administrations represent 1% of enterprises, 2% the national government or administration, and 3% the European Union. These results point to the fact that for the enterprises public funds are not important financial resources in the promotion of research and development and other innovation activities.



Public financial support for research and development and other innovation activities was particularly gained by large companies (national, regional and local public resources, in total public resources of EU-28 up to 45% of companies) and medium-sized enterprises (in particular national public funds and resources of the European Union, in total EU-28 public resources represent together 32% of enterprises), the difference between large enterprises and micro-enterprises in the EU is up to 38% (Fig. 1). While the companies with turnover of 2 million euro or less are more likely to say that the assistance was important, compared to companies with a higher turnover (EC 2014). According to Community Innovation Survey (Eurostat 2012), it is the large enterprises which are characterized by the highest levels of innovation activities. In Slovakia, in 2012 in the industry, the share of SMEs (10-249 employees) with innovation activity was 29.9% of all SMEs and large enterprises accounted for 63.8%. Similarly, in the construction industry, large enterprises recorded the highest proportion of subjects with innovation activity (44.4%). In services, the share of SMEs with innovation activity accounted for 29.7%, and again a significantly higher proportion of enterprises with innovation performance was reached by large enterprises in services (61.4%). Yet even among SMEs, a greater percentage of medium-sized enterprises implement innovative activities (by about a third in services and by almost a half in the industry). From the above it is obvious that in terms of sectors, the highest rate of innovation activities is reached by SMEs in the industrial sector (29.9%), services sector (29.7%), and the lowest innovation in construction (15.7%). And it is mainly manufacturing, which is supported from public resources (Eurostat 2012).

**Fig. 1 Profile of enterprises received financial support from public funds to support research and development or other innovation activities, EU-28, 2011 – 2013, in the percentage of enterprises**



Source: processed based on EC (2014). Flash Eurobarometer 394, Brussel.

If we look at the use of public resources in general in the enterprises of entrepreneurs, micro and small enterprises in Slovakia, they are also essentially irrelevant. Of those enterprises, who made use of external resources in 2012, only 3.9% of enterprises have benefited from the support of the public sector – loans, grants, subsidies (NARMSP 2013, a survey of 1002 respondents), however, with 5.9% of small enterprises, 4.8% sole traders, and 2% of micro-enterprises. An interesting finding is that, especially from entrepreneurs doing business up to three years, who have used external sources, drawing of support from the public sector was reported by 7.9% of enterprises (on the second place after bank loans with 8.4% of enterprises) and from small enterprises operating for more than three years by 7.8% of subjects, with the support of the public sector being used the least by tradesmen doing business over 3 years (1.5% of entrepreneurs) and micro-enterprises (0.5% of micro-enterprises). In the years 2010 – 2012 58% of surveyed entrepreneurs did not use financial support from the public resources, but does not even consider it. Almost a quarter of 24% of surveyed companies did not use it, but considered it. The support was used by only 15.8% of entrepreneurs. Even though a quarter of small enterprises (24.3%) and one fifth of entrepreneurs (20.0%) have used some public support for this period, which is in sharp contrast compared to 7.3% of micro-enterprises. Nearly two thirds of micro enterprises (63.8%) did not use public resources and did not even consider it. Similarly, a high percentage of self-employed 56.8% also did not consider the use of support from public resources and 49% of small enterprises have the same considerations. Only a quarter of small enterprises (25.7%) did not use, but considered it, a fourth of micro-enterprises (25.8%), and even fewer self-employed (21.3%). Within the entities doing business up to 3 years a quarter of small enterprises (23.0%) and a third of entrepreneurs (33.2%) have used the public resources, but only a small percentage of micro enterprises (7.3%). Within the enterprises operating over three years, a quarter of small enterprises (25.0%) have use these resources, a low percentage of self-employed (6.6%) and micro-enterprises (7.2%).

When we make a profile of entrepreneurs (sole traders, small and micro-enterprises) receiving support from public funds during the period 2010-2012, these are mainly enterprises doing business on the basis of other legal forms of enterprises (57.1%, Note: ex trade licenses, limited liability companies, and joint stock companies) and joint stock companies (35.7%), enterprises operating in the market for 1-3 years (20.6%) and enterprises up to 1 year (19.6%), with a staff of 10 to 49 (24.2%), annual turnover of 2-10 million euro and doing business especially in the field of agriculture (33.3%), hotels and restaurants (28.9%). This profile only partly differs from that for the period of 2012. Other legal forms (17.9% of enterprises) and

joint stock companies (10.7% of companies) used the support from the public sector this year the most, minimally the limited liability company (only 2.2%) and traders (4.8%), with primarily the enterprises operating in the market for less than 1 year (15.2% of respondents), especially enterprises from agriculture (16.7%), construction, hotels and restaurants (all with 5.3%).

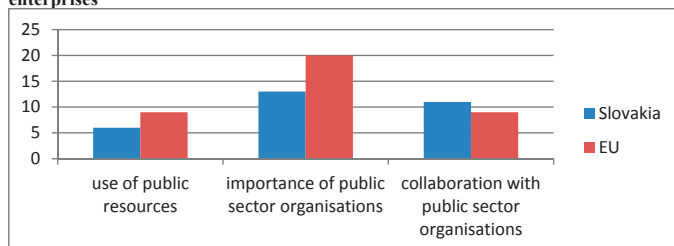
The importance of public funds in the structure of SMEs' financing forms is highlighted by the Report on the condition of small and medium enterprises in Slovakia (SBA b/, 2014), which published the results in connection with the implementation of Small Business Act initiative (Commission Communication No. COM (2008) 394). As regards the financial programs to support small and medium enterprises, the largest proportion is represented by loans from the state budget (36%), followed by EU grants (almost 24%) and measures of active labour market policies (14%). Incentives, venture capital and subsidies from the state budget have a minimum representation.

Collaboration of companies with public sector organizations to market, distribute or promote innovative goods or services is not common. Only 9% of companies in EU-28 and 11% in Slovakia (EC 2014) collaborate with public sector organizations (similarly small number as collaboration with competitors 12%, in Slovakia 14%), where the companies collaborated especially with partner companies or external consultants (35% of EU-28, in Slovakia 31%). Surveys explore the contribution of public sector organizations to support the development of innovation itself. Only a fifth of companies (20% of enterprises) designate the public sector organizations as beneficial for the support of innovation development, and attach the utmost importance to its enterprises in Finland (37%), Latvia and Portugal, on the other hand the smallest importance in Slovenia (9%) and Hungary. Overall, public sector organizations designated especially larger companies as significant due to the company size and turnover (38% of large enterprises with over 500 employees and 27% of companies with a turnover of 50 mil. Euros), in particular industrial and service companies. In Slovakia, only 13% of companies identified the public support organizations as beneficial in promoting innovation. (Fig. 2)

Another view of the accessibility of public funds was provided by the survey Access to finance 2007-2010 (Eurostat 2011), which mentions the success rate of enterprises in obtaining funding from various sources. In the SR, 62.1% of respondents were successful and 37.9% failed in the subsidies by country's government in 2007; 67.6% were successful and 25.7% failed, 6.7% were partially successful in 2010. For comparison, the EU average, which was calculated on the basis of the data, is 62.93% of enterprises that have been successful in

obtaining subsidies by the country's government. Available Eurostat data allow for selection by sector and based on these data, the success rate for services in the SR is 68.83% and the calculated average 62.9% in the EU. The industry of SR reached 67.7% and the EU average 56.6%. In case of funds from foreign government bodies or international organizations, 26.9% were successful in Slovakia in 2010 (industry accounts for up to 50%), while the EU average is only 45.1%.

**Fig. 2 Importance of public sector for innovations, comparison of Slovakia and EU, in the percentage of enterprises**



Source: processed based on data in <http://ec.europa.eu/eurostat/web/structural-business-statistics/ad-hoc-data-collections/access-to-finance>

The Access to Finance Survey 2014 allows for insight into the planning of public resources use in enterprises with various dynamic, according to which there is no big difference between the planned uses of resources of the local government body gazelles, high-growth enterprises or other enterprises. 6% of gazelles said they planned to use the resources of local government, 5% of high-growth enterprises and the same percentage of other undertakings (period of 2011-2013).

Eurostat survey (2015) provides a view of the accessibility perception of different financial resources for the investigated companies for the period 2010-2015. Despite the fact that for the first time since the surveys held in 2009, perceptions regarding the development of general economic outlook faced by EU-28 SMEs were positive in 2015, SMEs are less positive about changes in public financial support. Based on this survey, SMEs do not perceive a positive change in the accessibility of public funds in 2015. Public financial support has been lacking since 2009 in the perception of SMEs as they have reported a net deterioration in every survey year. The net deterioration in 2015 equals -7%. Specifically, the access to public funds improved only for 6% of EU-28 respondents (in 2009 for 5%), remained unchanged in the opinion of 44% of enterprises (in 2009 for 24%), worsened for 14% of respondents (in 2009 for 23%) and a high percentage of respondents 36% of enterprises were unable to assess it (in 2009 for 48%).

Preferred type of external financing to realise growth ambition for SMEs in the period 2009-2015 (possible answers – bank loans, loans from other sources, equity investments and other sources) is clearly a bank loan (61% of enterprises in EU-28, SR 67%, in 2009 67% of enterprises in EU-28). "Other sources for loans" (including trade credit, related enterprises, shareholders and public resources) are preferred by 17% of enterprises, equity investment only 9% of enterprises. "Other sources" with 5% were the least preferred in EU-28 in 2015 (2009: 8%). In Slovakia, the "other sources" were preferred by 8% in 2015. EU countries, which prefer these sources, are particularly enterprises in Turkey and Romania 16%, Hungary 15%, Estonia 14%. In terms of sectors, these particularly involve service enterprises in EU-28 (10%), in terms of enterprise size – 11% of companies with 1-9 employees, in terms of enterprises with various dynamic, in particular 12% of gazelles, 10% of high-growth SMEs, 10% of innovative enterprises, and 7% of non-innovative enterprises.

The results of the European survey of SMEs can be compared with the results of family enterprises survey from various industries in the Slovak Republic (PwC Krošlákova, 2014). 19% of respondents plan to finance their further growth through EU funds, only 2% from other public resources (government subsidies and others), the most are planning to use their internal resources – profit (89% of enterprises), bank loans (54%), and savings of the family (private resources) 32% of subjects.

### **3.2 The use of public funds by cluster organizations**

Several available surveys conducted at different times on clusters and cluster organizations in Europe, in the Danube region, in the V4 countries and in Slovakia completed by own research clusters of tourism in Slovakia served as the basis for this part. The first cluster initiatives originated in Europe around 1985 (ECO 2012). Roughly a half of cluster organizations were initiated after 1997. The development of clusters was not only influenced by support programs, but probably also the dynamic development of various sectors.

The public sector has a significant presence in clustering, cluster organizations are essentially public-private partnerships. The average structure of clusters in Europe represents 59% share of the private sector, and 15% of the public sector, 17% of academic field, 2% of finance institutions, and 7% of non-profit organizations. The share of research and development institutions (hereinafter referred to as R&D institutions) and universities is different in different countries, Iceland and Germany have the largest shares (Germany with 11% and Iceland with 24%, of which 14% are R & D institutions, 10% of universities), Austria 9% Poland 8%. Finnish clusters have the highest proportion of enterprises (86%, thereof 80%

SMEs). The share of SMEs and non-SMEs together in clusters in Iceland is only 38%, the structure of members is thus more even here, Austria has a 68% share of SMEs and 7% of non-SMEs, Poland 49% of SMEs and 12% of non-SMEs, Germany 53% of SMEs and 13% of non-SMEs. The public sector is a part of the European clusters, but the greater part of their membership base consists of the private sector.

Public resources are particularly important for the operation of cluster organizations. Cluster organizations are mainly funded by membership fees (25%), regional and local public resources (24%), national public resources (17%), and international public resources (13%), sales of services (9%). The share of public funds in Austria, for example, is 69%, in Germany 49%, in Norway 78%, in Sweden 81%. The mentioned structure of financial resources is confirmed by the study Cluster Initiative Greenbook (2013), which states that public funds represent 54%, private funds 34%, and other sources 12%. As per surveys, older cluster organizations are less dependent on public resources as a result of revenues from the provision of services (especially counselling services). Financial resources and the share of public funds in the budget of clusters depend on the clusters themselves and their individual circumstances, as well as the support programs of public funds.

The most significant budget resources for clusters and cluster policies are the EU Structural Funds (average about 43%), state budget (24%), regional budget (13%), private donors (12%) and the remainder, about 7%, other European funds (TMG 2013). Similarly, the importance of structural funds is confirmed by another survey in the V4 countries (Cluster COOP Project 2013), the results of which also classify the European funds, especially the European Regional Development Fund and partly European Social Fund as the most essential resource of support programs related to the clusters. Even though the use of EU structural funds is the most important nationally implemented and co-financed program, EU-programs, such as the CIP (Competitiveness and Innovation Framework Programme), are also of great importance. According to the survey, a strong focus lies on non-recurring sources in these countries. The vast majority of funding is from European sources since 2004.

The situation in the tourism clusters in Slovakia is specific. Based on the Register of the Ministry of Interior (2015) we can currently identify 14 organizations that bear the designation of tourism cluster in their name. Based on secondary sources and its own primary research (which examined all tourism clusters, survey conducted in 2015), the public sector has a significant representation herein, and public resources constitute a major source of income of cluster organizations. This makes the tourism clusters different from the industrial clusters in Slovakia and the European clusters based on the reported results of several surveys.

The public sector considerably prevailed already during the establishment of these clusters, and based on a survey of technology clusters 61% of founding members come from the business community (SIEA 2009). In terms of member structure of tourism clusters, the public sector has a high share of up to 58%, and the business sector only represents a nearly 38% share. The clusters only invest minimum funds in the development of innovation (only two clusters indicate identically 15% of the budget for innovation support). As regards the sources of funds, the bulk of it is obtained from grants (56%), followed by membership fees – the public sector (22%), membership fees – the business sector (11%) and income from business activities (11%). It means that up to 78% of funds that are used by the clusters are public resources. Based on the examined sources of funding in industrial clusters in Slovakia, the situation is different; the membership fees account for 55% (SIEA 2009). However, the difference in the structure of financing activities in this case may be caused by the time period of surveys, as there was a greater scope for drawing subsidies from public funds in the previous financial period.

#### 4 CONCLUSIONS

As the surveys show, public resources are neither a significant source of financing for business activities, nor funding of research, development and other innovation activities. A high percentage of enterprises do not use public resources and a relatively small number of enterprises plan to use them. Public financial support for research and development and other innovation activities are mainly used by large enterprises, followed by medium-sized enterprises. Large companies are at the same time those entities that reach the highest level of innovation activities, and their innovation activity is significantly higher than in medium-sized enterprises. For companies with turnover of 2 million euro or less, however, public resources are seen as more important when compared with larger companies.

In general, the cooperation of enterprises and the public sector in innovation activities is low. The benefit of public sector organizations in the promotion of innovation is also perceived in the same way. Despite the insignificance of public resources and the public sector, however, public sector organizations should play their role of supporting the development of innovation activities and partly protecting enterprises in their innovation activities, especially those where market processes alone are not enough as an incentive to innovation. Public resources should be also used for these purposes.

In this regard, networks of enterprises operate in competition and at the same time are willing and able to cooperate. The situation in clusters and cluster organizations supports such action.

The public sector is their part and public resources play an important role in their activities. The public funds in total represent in average more than a half of their financial resources in the European clusters. The public sector and public funds have a significantly stronger position in the tourism clusters in Slovakia. This fact may be related to a specific situation, in which the tourism clusters in Slovakia originated, with the lengthy process of adoption of the law concerning the destination management organizations and later failure to meet the minimum legal conditions for the establishment of a regional tourism organization in the regions. The fact that tourism clusters replace the regional tourism organization and also use the support from the public resources is also evidenced by the fact that the public sector prevails in most of them and the focus on innovation promotion is missing.

The challenge for the use of public funds to support entrepreneurship and innovations is to ensure non-duplication of public resources from different levels and transparency in support from various public sector organizations. In terms of further research it is essential to find and improve the methodologies for measuring efficiency in the use of public resources, which includes a complex of problematic points.

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# The Performance of Services Exports in Central and Eastern European Countries

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**Abstract:** Technology has changed the nature of service activities and made them more productive, tradable and fragmented in the global supply chains. Has CEECs been benefiting from the ongoing globalization of services? Over the last few years, across the region, services are increasing as a share of total employment, GDP and exports, driving value addition and providing critical inputs to boost other economic activities. The purpose of this paper is to describe the performance of CEECs in exporting services that become more apparent when one looks at trade through the lens of new trade-in-tasks paradigm. This significance of services in trade has been demonstrated through two key elements: (1) services as final exports and (2) the role of services in supporting other export economic activities, such as manufacturing. Findings of the study suggest that services are a significant source of the region's international competitiveness and CEECs seem to be the group that currently is reaping the benefit from the globalization of services.

Trade in value added estimates presented in the paper are sourced from the OECD-WTO "Trade in value added" (TiVA) 2015 database<sup>15</sup>.

**Keywords:** Central and Eastern Europe, global value chains, services exports, trade in value added.

**JEL Classification codes:** F10, F14, O19.

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## 1 INTRODUCTION

The world in mid-1990s saw two seemingly separate but related developments: the revolution in information and communication technologies (ICTs) and the rapid developments in those global forces often referred to as the 3Ts – technology, transportability, and tradability (ed. Ghani 2010). Those two developments had a profound impact on the nature, productivity, and tradability of services. A rising number of services can now be stored and traded digitally, similarly to the manufacturing goods. Not only more services are crossing the borders, the domestically produced services are also emerging as vital inputs to the production of traded goods and services (Gable & Mishra 2011).

As a result, over the last two decades, world services trade has recorded negative annual growth only once (-9% in 2009), in the wake of the global financial crisis<sup>16</sup>. In 2010, services trade resumed its pre-crisis level and has continued to expand steadily despite sluggish

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<sup>15</sup> For more on the methodology used see <<http://www.oecd.org/sti/ind/tiva/tivasourcesandmethods.htm>>.

<sup>16</sup> International trade in services has been less volatile than merchandise trade in the last 20 years, indicating the greater resilience of services to the global macroeconomic upheaval.

economic growth. In current dollars, the global exports of services increased by 5% in 2014, compared to 0.5% for goods (WTO 2015).

The increasing international fragmentation of production that has occurred in recent decades has challenged the conventional perception and interpretation of trade, including trade in services. Traditional measures of trade<sup>17</sup>, record gross flows of goods and services each and every time they cross borders, leading to a multiple counting of trade. To respond to this challenge a number of researchers have moved forward in this area in the recent years – such as Johnson and Noguera (2012), and Koopman et al. (2014). Building on these efforts, OECD and WTO created a joint global database of trade in value-added (TiVA)<sup>18</sup>.

The most impressive results relate to services, a sector that has sometimes been classified by economic theory as non-tradable; in fact, services are a critical part of global value chains (GVCs). The new trade statistics that take into account value-added data show that services are much more significant than previously thought as this method of measurement enables the proper valuation of many services involved in the production of goods (Johnson 2014). Global services trade, as measured by balance-of-payments statistics, represents only about a fifth of total trade in goods and services combined (19% in 2011 according to WTO 2012). However, the OECD-WTO TiVA database shows that in 2011 the services content of exports reached nearly 50%. And in the United Kingdom, European Union as a whole (28 countries), India, United States and Turkey over half of the value of exports reflected services.

The recent advances in the measurement of trade and looking at trade through the lens of new trade-in-tasks paradigm, proposed by Grossman and Rosii-Hansberg (2008), are also shedding a new light on the role of services in trade and competitiveness of Central and Eastern European countries<sup>19</sup> (CEECs). In the article, this importance has been demonstrated through two key elements: (1) services as final exports (section 1 and 2) and (2) the role of services in increasing the competitiveness of other economic activities, such as manufacturing (section 3).

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<sup>17</sup> Trade data are usually measured by transaction values, which is the price actually paid or payable for goods and services. Transaction values are gross values, or value-added plus domestic and foreign intermediate inputs (Saez et al. 2014).

<sup>18</sup> The OECD-WTO 'Trade in value added' (TiVA) 2015 database, covers 61 economies and 34 unique industrial sectors, including 16 manufacturing and 14 services sectors classified according to the International Standard Industrial Classification (ISIC) Revision 3. Nonetheless, the data presents some limitations, such as timeliness, as the latest time period is 2011.

<sup>19</sup> The analysis covers 10 EU new member states: Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovak Republic, Slovenia and Romania.

## 2 THE IMPORTANCE OF SERVICES IN TOTAL CEECs' EXPORTS

A deeper analysis of trade statistics for countries in the region shows that service exports are much more significant for CEECs than previously thought.

Figure 1 provides two different measures of the importance of service exports in CEECs:

- 1) the contribution made by the service sectors<sup>20</sup> to overall exports, i.e. the value added that the service sector creates and exports directly (as direct exports of services), but also indirectly as intermediate inputs into the production of goods, breaking the total services down into foreign (a blue bar) and domestic (a red bar) value added origin, and
- 2) the direct contribution of services to gross exports (the spot) as published in countries' National Accounts statistics (SNA93)<sup>21</sup>.

The figure provides the illustration of how the value of trade in services differs when measured in gross and value added terms. Value added measure makes it visible that the gross trade statistics mask the important role played by services in creating goods; trade in value added estimates reveal the important contribution made by the services sectors (domestic and foreign) in producing goods for export, and so provide a better measures of the sources of international competitiveness.

The data make clear that the service exports constitute a significant share of overall exports (both goods and services) in all countries in the region, when measured by value-added. In 2011<sup>22</sup>, the service exports comprised more than 40% of total exports in Romania, Slovak Rep., Czech Rep. and Bulgaria; more than 50% in Hungary, Poland and Slovenia and more than 60% in Baltic States. The average services content of total exports in CEECs was 52.5%<sup>23</sup>, slightly below the OECD average of 54.3%. This is a clear indication of the central role that services play in increasing CEECs' export competitiveness.

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<sup>20</sup> Total services are defined according to ISIC REV. 3 Divisions 45 to 95, available from < <http://unstats.un.org/unsd/cr/registry/regist.asp?CI=2>>.

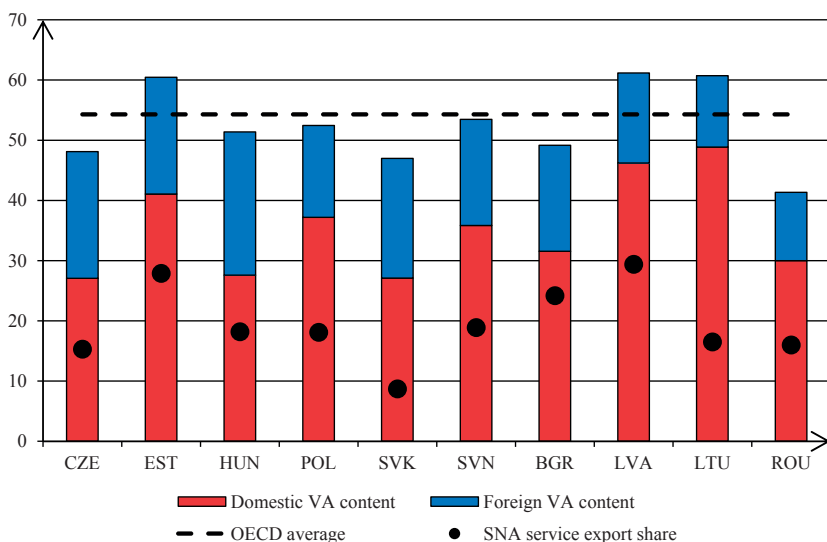
<sup>21</sup> It is important to note two things here: 1) the denominator, total exports of goods and services, in the National Accounts will typically include re-exports and since these are almost exclusively goods, their inclusion drags down the service sector share compared to TiVA estimates, which do not include re-exports in the gross exports denominator; 2) margins from the distribution sector are allocated to the services exports in TiVA but are included in the exports of goods in the National Accounts. (OECD 2015a)

<sup>22</sup> The latest year for which data is available.

<sup>23</sup> Of this share, domestic services value added content represented 35.3% of the gross exports while foreign content accounted for 17.2%.

All CEECs have higher domestic services value added content in their exports<sup>24</sup>, but at the same time the foreign services content of exports has risen over the last two decades (especially in the high-technology sectors)<sup>25</sup>, supporting evidence pointing to the increased participation of CEECs in international fragmentation of production (Cieřlik 2014). For example, out of the total services value added embodied in Hungary's exports nearly half (46.3%) reflected foreign content, significantly above the OECD average (21.8%). Similarly in Czech Republic, where it is partly reflecting the hi-tech (knowledge) content of the Czech Republic's imports (e.g. ICT and motor vehicle intermediates).

**Fig. 1: Services content of gross exports in CEECs, gross and value-added terms (percentage of total gross exports, 2011)**



Source: author's own calculations on the basis of OECD-WTO 2015 and OECD National Accounts statistics.

A deeper analysis of CEECs' domestic services value added content of exports (fig. 2) shows that in 2011, nearly a half (45.4%) reflected the exports of intermediates. This was below the OECD average (51.2%), but higher than the share in 1995 (55.7%). Countries with the highest shares were Latvia (53.1%) and Lithuania (52.3%). The rise of shares of domestic value-

<sup>24</sup>Out of the total domestic value added produced by the service sector in CEECs, nearly one-third was driven by foreign final demand in 2011, higher than equivalent figure in 1995 (24.7%) and also higher than the OECD average (23.9%) in 2011.

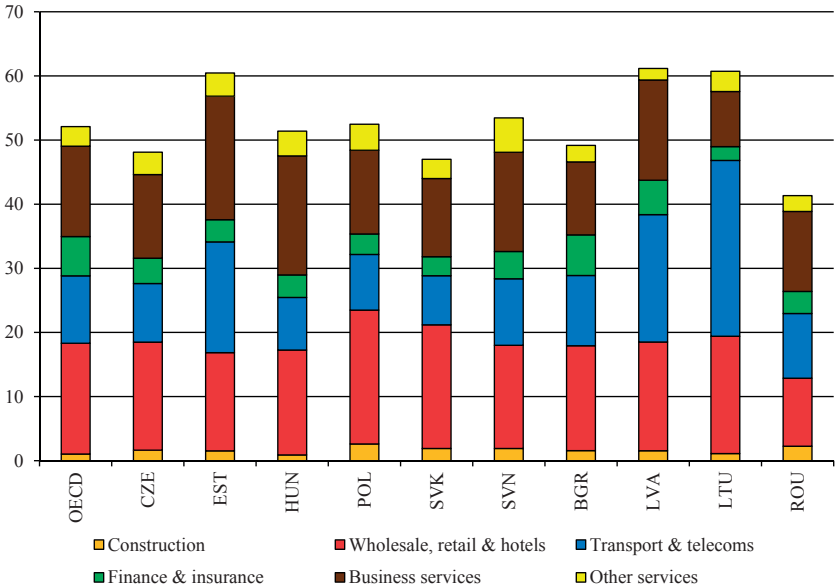
<sup>25</sup>One of the reasons for the declining share of domestic services could be the increasing tendency of services offshoring, which has become a common element of the GVC phenomenon.

added embodied in exports of intermediates provides strong evidence of the increased international fragmentation of production.

### 3 SECTORAL COMPOSITION OF SERVICES EXPORTS FROM CEECs

The services exports from CEECs are increasing. Many countries in the region are joining with other countries that have demonstrated remarkable success in exporting services, both regionally and farther abroad to the major markets. Atop that list are some of the world's fastest-growing economies, such as India, where the services exports account for a significant share of the total exports. Although India's success is well known, CEECs also are participating in the service growth. Today, CEECs provide services both regionally and globally.

Fig. 2: Service subsectors' share of gross exports, value added terms (percentage of total gross exports, 2011)



Source: author's own calculations on the basis of OECD-WTO 2015.

Figure 2 shows the service subsectors' contributions to the total exports for countries in CEE region. The data make the importance of services inputs related to distribution (wholesale and retail trade & hotels and restaurants) very clear and represent a significant percentage of total service content of gross exports in all countries. The data also illustrate the increased tradability and large export intensity of the so-called modern services i.e. business services

which include inter alia computer & related activities and professional services (which also play the critical role in supporting other export activities). Between 1995 and 2011, their share within the total service content of exports grew steadily from 10% to 14%. It should be noted that Estonia and Latvia experienced the highest growth. By contrast, the logistic-related services (transport<sup>26</sup> and storage & post and telecommunication) have lagged behind and their importance in CEECs' exports has diminished slightly since 1995. This subsector generated the greatest source of service value added in Baltic States. The service sector with the lowest contribution is construction, just behind the residual category of other services (community, social and personal services).

Due to their nature (services were historically perceived to be non-tradable), most services are likely to have relatively high domestic content, especially utility services (electricity, gas and water supplies) and construction services. Among the services embedded in CEECs' exports finance & insurance sector as well as business services have the highest domestic-to-foreign value added ratio: 11.3 and 8.0, respectively. In the case of all other subsectors domestic services account for more than two thirds of the total value added.

#### **4 THE SIGNIFICANCE OF SERVICES TO OTHER EXPORT ECONOMIC ACTIVITIES IN CEECs**

The grown importance of 'servicification'<sup>27</sup> implies that the role of services value-added in industrial exports has been increasing. In CEECs, for exports of manufactured goods alone (fig. 3), on average 38.5% of the total value reflected services sector value-added<sup>28</sup> (in comparison to 33.4% in 1995), above the OECD average (36.9%). In addition, there has been an increase in the reliance on imported services at the expense of domestically-supplied ones, which reflects a rapid pace of international 'servicification', especially in capital and technologically-intensive sectors such as basic metal and fabricated metal products, chemicals and non-metallic mineral products, electrical and optical equipment, machinery and equipment manufacturing (n.e.c.) and recycling and transport equipment.

Not all services contribute to the manufacturing sector exports. The available data proves that the expansion of global value chains involving CEE economies has contributed to services such as the wholesale, retail & hotels, business services, and transport & telecoms becoming a

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<sup>26</sup>The backbone of merchandise trade.

<sup>27</sup>'Servicification' is most simply defined as an increased use of services in the manufacturing processes.

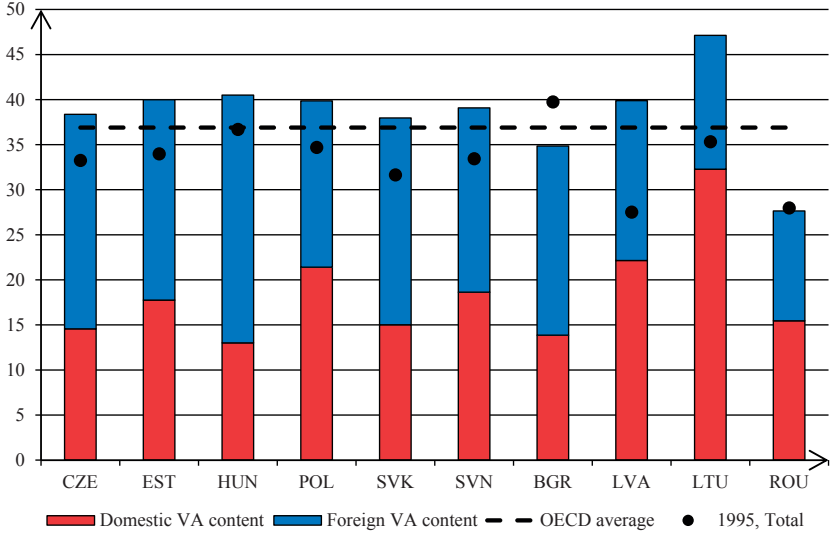
<sup>28</sup> Value-added in exports can be split into its three components: value-added from services, manufacturing, and primary products. Increasing the share of one of these components, *ceteris paribus*, leads to the decrease of the other two shares.



critical component linking and facilitating international production networks for the industrial exports.

In the majority of CEECs (except Lithuania, Latvia, Romania and Poland), services provided by foreign suppliers dominate the services content in manufacturing exports and it is expected that the imported services will be supplying an increasing share in those sectors that are perceived to be the part of international fragmentation of production, including the electrical & optical equipment and the transport equipment sectors.

**Fig. 3: Services value added embodied in manufacturing exports of CEECs (percentage of total gross exports, 2011)**



Source: author’s own calculations on the basis of OECD-WTO 2015.

At the individual industrial level (tab. 1), the services content of exports from CEECs was near the OECD average in all industries. However, the share of services value-added differ across economies. The share of services is predominant in high-technology sectors participating in the global value chains, i.e. chemicals and non-metallic mineral products (40.3%), transport equipment (37.7%), electrical and optical equipment (37.5%), and machinery (35.5%). Many other industrial sectors’ exports also included services content of more than 35%, e.g. food products, beverages and tobacco (38.5); basic metals and fabricated metal products (37.4%); textiles, textile products, leather and footwear (37.1%). In contrast, the traditional industrial sectors’ gross exports typically contain a smaller value of services (not more than 30%). For example, in the case of mining and quarrying, the export services’

share was 27.3% while in agriculture, forestry, hunting and fishing it was 29.3%. These results are consistent with the global trends, under which the transport equipment and high-tech sectors are the most service-intensive industries (Francois et al., 2013).

## 5 CONCLUSIONS

Given the recent trends, it is likely that in the nearest time services export will become a significant component of CEECs' overall trade strategies. As technological advances have facilitated the growth of service tradability, countries are beginning to capitalize on these new opportunities. The performance of service exports from CEECs are the strong examples of seizing this potential. And as the data presented in this paper show, the role of services goes well beyond the direct exports. Some services are produced in CEECs and exported directly to different locations (e.g. offshoring of accounting or financial services), while other are embodied in physical products traded across borders, which is not captured well by the traditional services trade statistics (e.g. IT or business services embodied in the machinery).

Access to cost-efficient, high-quality services allows them to effectively participate in the global value chains – in effect, a solid service sector helps to connect the region to the global marketplace. As inputs to downstream activities, the services also help increase the competitiveness and performance of other economic sectors – especially in manufacturing export activities.

And while the growth in manufacturing is still an important track for many CEECs, the service exports and an increase in their sophistication may be an additional or even alternative channel for sustained high growth. Service export sophistication will continue to play an important role in Europe's future growth. Thus, enhancing the competitiveness and export performance of the service sector – in effect, strengthening a country's bonds with the global economy – is now imperative for CEECs' continued economic development.

It will therefore be important for the policy makers in the CEE region to identify reforms that will create the right conditions for development of a competitive domestic services sector and for efficient trading of services across the borders. Furthermore, the increasing trend in services' content as intermediate inputs, especially those services that are foreign supplied, means that access to such services needs to be freed from any unnecessary barriers, which can have an adverse impact on the efficiency of services sectors; this, in turn, reduces the productivity and efficiency of sectors where such services are used as intermediate inputs.

Tab. 1: CEECs' services content of gross exports, by exporting industries and service category, value added terms (percent of gross exports by industry 2011)

	Agriculture, hunting, forestry and fishing	Mining and quarrying	Food products, beverages and tobacco	Textiles, textile products, leather and footwear	Wood, paper, products, printing and publishing	Chemicals and non-metallic mineral products	Basic metals and fabricated metal products	Machinery and equipment n.e.c.	Electrical and optical equipment	Transport equipment	Manufacturing n.e.c. and recycling
OECD average	30.89	22.14	41.43	41.40	37.88	36.76	32.43	32.80	33.06	36.47	35.57
CEECs average	29.32	27.31	38.53	37.06	35.27	40.26	37.45	35.54	37.54	37.68	34.99
CZE	32.46	30.79	36.94	42.79	35.77	37.77	35.62	36.29	40.80	38.43	40.19
EST	34.70	25.72	42.03	41.74	38.53	37.50	41.89	39.29	40.24	40.60	40.79
HUN	27.27	30.98	40.58	43.24	40.42	40.26	38.57	36.63	42.69	40.42	33.91
POL	27.52	21.03	39.97	40.33	41.30	41.11	39.30	35.87	39.92	39.77	40.88
SVK	23.01	18.03	37.93	36.32	33.21	38.11	33.96	34.36	39.33	40.09	33.46
SVN	25.57	32.32	42.95	44.43	38.82	37.91	40.33	36.77	39.17	39.81	36.54
BGR	30.28	24.65	37.53	28.89	31.35	32.32	34.73	35.96	37.26	41.49	32.46
LVA	38.07	35.42	45.04	37.10	38.90	38.23	40.41	35.49	39.41	37.70	38.12
LTU	38.03	19.98	43.57	34.42	29.41	60.02	39.33	35.06	33.89	33.76	32.65
ROU	16.27	34.19	18.80	21.36	25.02	39.39	30.33	29.71	22.71	24.74	20.94

Note: n.e.c. - not elsewhere classified

Source: author's own calculations on the basis of OECD-WTO 2015.

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# Electromobility in the European Union and in the Slovakia and Its Development Opportunities

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**Abstract:** The objective of the article is to analyze the current trends in the automotive industry on electromobility in the European Union and in the Slovakia. Partial goal is to identify potential uses of electric vehicles on those market. The article makes recommendations that would increase the marketability of electric vehicles in the Slovakia and gives focus on prospects of electromobility in the EU and in the Slovakia. Article contains information on benefits for the development of the Slovak economy in the event of electromobility development and SWOT analysis for its implementation.

**Keywords:** Electromobility, Electric vehicles, Automotive.

**JEL Classification codes:** R48, Q55.

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## 1 INTRODUCTION

Transport plays a macroeconomic perspective vital role in the economy of each country. It creates not only a lot of jobs for residents of the state itself, but also contributes to the GDP and provides economic growth of the internal market, which impacts on the living standards of citizens. The number of cars is growing constantly in the world, consumers demand is high, production costs are falling and this is reflected ultimately in price. Same trend has been increased care and in particular public interest in a healthy lifestyle in recent years. More than half of population lives in cities precisely, while public transport is responsible for one quarter of CO<sub>2</sub> emissions from transport. We would not have to speak about emissions and about rapid increase in greenhouse gas emissions, if the majority of the industry, along with transportation are not dependent on oil supplies. Alleviate of this condition and achieve sustainable mobility require mainly the introduction of new technologies and innovations, as well as modernization of transport and infrastructure investment. Transport recently becoming greener, but due to its increased volume is slight changes and its current functioning is unsustainable in the long term. Further development of transport should be based on improving energy efficiency in vehicles, development and deployment of propulsion systems, and renewable fuels, more efficient use of transport modes and infrastructure. Problems in the field of transport is also aware of the European Commission, which responds to the unfavorable situation by issuing directives and measures binding on all member countries.

Alternative fuels are extremely important in pursuit of the independence of European transport on fossil fuels and reducing greenhouse gas such as natural gas, biofuels, hydrogen. Given the fact that natural gas is already for a long time well established in the market and fuel cell cars will be launched first in 2015, we will dedicate to electromobility of third generations.

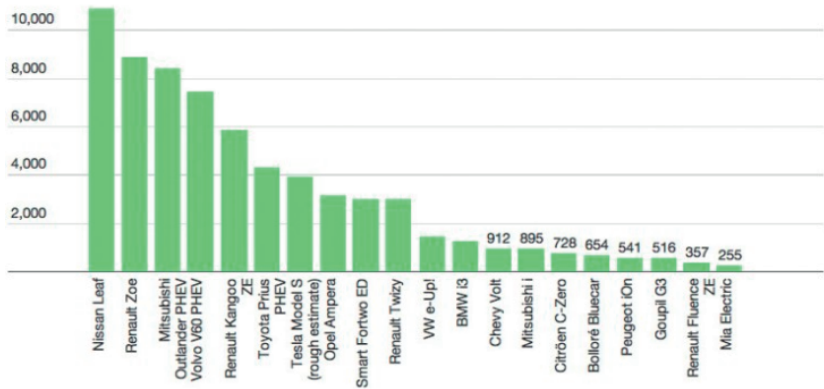
## 2 ELECTROMOBILITY

### 2.1 E-Mobility in the European Union

Europe has become the second largest market for electric vehicles after the United States and whit number of electric cars sold surpassed Japan. 18,939 pure electric vehicles were registered in Europe in the first half of 2014 (compared to 15,503 in the first half of 2013), while in the United States were registered almost 30,000 electric vehicles. In Japan, the figure was less than 6000.

French carmaker Renault played a significant role in above-mentioned first half of year 2014, which among all automakers sold in Europe the largest number of EVs - 6000 pieces. Nissan placed on second place with 5500 the number of vehicles and third position belonged electric Smart (1500). The first two places have already been reordering in favor of Nissan at the end of the year.

Table 1. Sales of electric vehicles in Europe (2014)



Source: SHANAN, Z. Top electric cars in 17 European countries. On internet <: <http://www.abb-conversations.com/2014/02/top-electric-cars-in-17-european-countries-charts/>>. (accessed: 22.3.2015).

French government provided subsidies for the purchase of an electric car with a value of EUR 5 000 in 2013. This financial amount increased by a further 2,000 after 2 years, which

ultimately reduces cost of electric car by 7 000, and left us to pay 13 700, to become the owner of a new car. Also remarkable is that in order to reduce the selling price to sell a vehicle with batteries, but the batteries would be rented through a contracted delivery cheap electricity. There are several tariffs in respect of the lease the battery, but in cities the electric car is still worth it, because electric cars are exempt from congestion charges, parking or even road taxes. In the UK, customers have the opportunity to use allowance of 5,000 pounds. France is earned a leading position in Europe in 2014. The number of electric and hybrid vehicles are accounted for 3.1% share of the total passenger car market. Compared to 2013, sales of electric vehicles (including light commercial vehicles) increased by 50%, while sales of hybrid vehicles increased by 60%. All in all, France boasts 8,779 registration of personal electric vehicles for the year 2014.

If we take into account all types of electric vehicles to plug-in hybrids to fuel cell vehicles, a mention would certainly cost the Netherlands. In December 2015 are 23% of all sales car belonged just to electric vehicles, the first three points of the marketability of these vehicles seized plug-in hybrids - Mitsubishi Outlander, Volvo V60, Toyota Prius. The fifth best-selling EV was electric Tesla Model S with the number of 1,127 pieces. While operating in this country, the marketability of the greatly varies are according to the benefits conferred on the Government. The Netherlands has allocated in 2015 for the promotion of electromobility budget of EUR 9 million. These funds are used for the purpose of implementing the national action plan, ie. to stimulate electric mobility, strengthening international cooperation and creating partnerships, improving communication and science and research.

**Table 2. Summary of system tools support electromobility**

Country	single		regular		Support for Business
	financial contribution	financial contribution	fee waiver / tax	nonfinancial	
Italy		5 000 €	✓	✓	
Spain	25 % of price (max.6 000 €)				15 000 € resp. 30 000 € <sup>1</sup>
Belgium	3 500 €	over 9 190 €	✓		depreciation 120 %
Denmark		over 2 000 €	✓	✓	
Sweden	4 500 € <sup>2</sup>		✓		
Austria	to 4 000 € <sup>3</sup>	✓	✓	✓	30-50 % from price
Estonia	to 18 000 € (on charger 1000 €)				to 18 000 €

Source: IEA: Global EV Outlook: Understanding the Electric Vehicle Landscape to 2020. [online]. On internet: <[http://www.iea.org/publications/globalevoutlook\\_2014.pdf](http://www.iea.org/publications/globalevoutlook_2014.pdf)>. (accessed 18.3.2015)

<sup>1</sup>15 000 € for vehicles cat.N2; 30 000 € for buses

<sup>2</sup>Support is limited to the first 5,000 registered EVs

<sup>3</sup> True if the electric charge using electricity generated from photovoltaic system

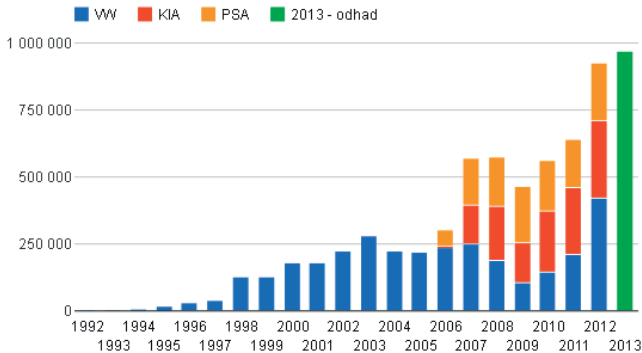
Nor other European countries are lagging in favoring electric vehicles. In Germany as the owner of an electric car is exempt from road tax for the first five years from the date of registration of the vehicle. Support of research plays an important role in this area. The result created from this platform was called Electromobility model regions 2009 – 2011. The Federal Government has allocated over these years to support electromobility around EUR 500 million and fair share of this budget stimulated just the supply side. It is expected to double that investment in the next period. The following table shows supporting tools electromobility in other European countries.

### 2.2 E-mobility in Slovakia

Slovakia is a major world center for the automotive industry due to the presence of three factories carmakers Volkswagen, PSA Peugeot Citroen, Kia Motors quantities and concentrations of businesses supplying their subcontracts production. The graph below shows the number of cars produced in Slovakia for individual years, and since 2014 was expected closeness to the limit of one million cars produced annually.

Slovakia has produced more than 1 mil. cars in 2015, which in comparison to the previous year is an increase of 5.8%. Slovakia has once again defended lead the world in the number of vehicles produced per capita based on record statistics for the past year (181 cars / 1,000 inhabitants).

Table 3. Production of cars in Slovakia



Source: BELLA, T. Zabije nás nakoniec úspech našich automobiliek?. On internet: <<http://ekonomika.sme.sk/c/7028263/zabije-nas-nakoniec-uspech-nasich-automobiliek.html>>. (accessed 23.3.2015).

Although the presence of three automobile manufacturers built large logistics network, the tradition of the chemical or electrical engineering would evoke huge prerequisite for a well functioning market electric vehicles in Slovakia. Currently, the only electromobile produced



in Slovakia is the German Volkswagen E-Up !. Competed on our market are brands of electric cars Nissan Leaf, Smart ED or sister trio Citroen C-Zero, Mitsubishiii MiEV, Peugeot iON. In the case of low confidence in electric vehicles, customers can choose between plug-in hybrid Toyota Prius, Opel Ampera, or other newer models.

The first public charging station for electric vehicles in Slovakia was put into operation on Nov. 30, 2010 in Košice (VSE), followed the next year in Bratislava, Nitra and Poprad. In Bratislava is also the first-ever quickcharging station (power up to 44 kW), which is accessible to the public in Petržalka (Einstein Street) at the gas station Slovnaft and operated by ZSE (ZSE). The second location for such a station, but not the public, the site is the exclusive distributor of Auto-Implex.

**Table 4. SWOT analysis of development of electromobility in Slovakia**

<b>Strengths</b>	<b>Weaknesses</b>
<ul style="list-style-type: none"> <li>• strong position of the automotive industry in the national economy and the developed network of suppliers</li> <li>• strong position electrotechnical industry in the national economy</li> <li>• the availability of experts in technical fields, including IT</li> <li>• relatively low labor costs compared to key markets for electromobility</li> <li>• functioning platform and professional dialogue focused on the development of electromobility in Slovakia</li> <li>• suitable energy mix</li> </ul>	<ul style="list-style-type: none"> <li>• low expenditure on research and development</li> <li>• underdeveloped research base automotive industry in Slovakia</li> <li>• lagging behind neighboring countries (AU, CZ), which began systematically to promote electromobility rather</li> <li>• slower economy and increased focus on price often at the expense of quality</li> <li>• harmonization of norms and standards</li> <li>• lack of infrastructure for charging electric vehicles</li> <li>• lower sensitivity of the adoption of environmental, respectively. innovative solutions</li> </ul>
<b>Opportunities</b>	<b>Threats</b>
<ul style="list-style-type: none"> <li>• reduce dependence on oil</li> <li>• reduce emissions and pollution concentration transport locations</li> <li>• creation of new skilled jobs</li> <li>• developing research base in some areas related to electromobility</li> <li>• impetus for innovative automotive companies and their suppliers</li> <li>• creation of new innovative business models and services</li> <li>• effective integration of mainly smaller, respectively local RES</li> <li>• the use of electric vehicles in smart energy networks (SmartGrids)</li> </ul>	<ul style="list-style-type: none"> <li>• inefficient investments made for the development of electromobility</li> <li>• lag in competitor countries, failure in stimulating investment and employment</li> <li>• delay reduction in input prices due to slow implementation of economies of scale in mass production</li> <li>• unsystematic ad hoc solutions</li> </ul>

Source: PRACOVNÁ SKUPINA MHSR. 2014. Návrh stratégie rozvoja elektromobility v Slovenskej republike a jej vplyv na národné hospodárstvo Slovenskej republiky. [online]. On internet:<<https://lt.justice.gov.sk/Default.aspx>>. (accessed 23.3.2015)

In addition to energy companies, manufacturers of electric cars and service providers in this area would be the development of e-mobility in Slovakia, should significantly help the government and local governments. There is the concept of e-mobility under the auspices of

the Ministry of Economy since 2011, which established in 2012 a working group on electromobility involving all major actors (governmental and non-governmental) in the field of electromobility to create Slovakia platform for e-mobility modeled on Germany. The result of this collaboration was the development of an expert group key document entitled "Basis of the Strategy of development of electromobility in the Slovak Republic", which was approved in May 2013 at the Ministry of Economy. Another goal after reaching this important step was the creation of a new concept in the form of analysis and recommendations stemming from the strategic documents, as well as draft policies to promote e-mobility in Slovakia. The outcome was a paper entitled "Strategy for the development of electric mobility and its impact on the national economy of the Slovak Republic", part of which is presented in the following table.<sup>4</sup>

*Slovak Association for electromobility (SEVA)* was founded in 2012 in Bratislava in order to represent and promote the development of transport and transport infrastructure for passenger and commercial electric vehicles in Slovakia. The main motivating factor of representatives energy and electronics industries in establishing the association was the need of creating an effective platform for communication and cooperation between administrations, educational institutions, businesses and foreign partners. Also it participates in the preparation of essential documents, legislation and projects for the development of electromobility. The association has expanded the scope of its activities on the area of education and training in March 2014. In addition to research activities it is also aimed at providing consultation in the development of training courses focusing on the practice of theses focused on the issue of electromobility, organizing training events and presentations at high schools and colleges that offer internships and professional experience for students.<sup>5</sup> *GreenWay project* focuses on environmental transport of goods through a complex system of infrastructure, logistics, technology and services. Its ultimate aim is to build an attractive and interesting business model in electromobility in Slovakia. Building a network of battery exchange stations allows to replace lengthy recharging by simply replacing the whole battery box car, while exchange stations is charging continuous in their ongoing. Given the range of services offered was founded a company called GreenWay Operator, which ensures the operation of the whole system. Green Way Operator includes fleet of electric supply, the network of charging stations and battery

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<sup>4</sup> MINISTERSTVO HOSPODÁRSTVA SR : *Prvé rokovanie pracovnej skupiny pre elektromobilitu*. [online]. On internet: <[http://www.economy.gov.sk/aktuality-prve-rokovanie-pracovnej-skupiny-pre-elektromobilitu/10s139196c?set\\_subframe=blind](http://www.economy.gov.sk/aktuality-prve-rokovanie-pracovnej-skupiny-pre-elektromobilitu/10s139196c?set_subframe=blind)>. (accessed 30.3.2015).

<sup>5</sup> SEVA: *O nás*. [online]. On internet: <<http://www.seva.sk/sk/o-nas>>. (accessed 3.4.2015).

exchange station, electricity for charging, information system for the management and operation of the system, service, operator service / call center.<sup>6</sup>

*VIBRAte* (Vienna Bratislava e-mobility) is the first cross-border pilot project to support electromobility in Europe, brought about by a consortium of Austrian and Slovak company in 2011. Its main aim was to implement a standardized charging infrastructure in the two countries and to establish a link between the neighboring metropolis of Vienna and Bratislava. The aim of this three-year project (January 2011 - December 2013) was also drawn to the functionality and use of electric vehicles in daily operation, which throughout the period tested a group of maybe 20 users primarily from the ranks of public institutions. Each project partner had to choose maybe 5 users ZSE (ZSE) has selected the following: City Bratislava, Bratislava Region, Municipality of Three-MoE SR MPaRV.<sup>7</sup> There were formed 2 types of scenarios in connection with the development and future of electromobility in Slovakia formed under the Working Group MHSR: *standard and technology*. Order to develop scenarios based on certain assumptions (development of oil prices, the price of batteries and electric vehicles, public perception, business environment, consumer behavior and public infrastructure) is to create a rough picture of the impact of electromobility development on the environment, assess the degree of dependence on fossil fuels, energy intensity assess whether the development of the necessary infrastructure.

- *Standard scenario* - slight Slovakia's interest in the development sector, conservative image of global market developments (development of prices and demand for electric vehicles in Western Europe), 7 thousand electric cars for 2020.
- *Technological scenario* - a proactive approach in Slovakia (to become a leader in e-mobility in Central Europe), optimistic developments in global markets, in accordance with the relevant forecasts, 25-thousand electric cars for 2020.

### 3 PROPOSALS AND RECOMMENDATIONS

*State intervention* - It is important to suggest a timetable for the introduction and temporal scope, because due to this sustainability can not be introduced all at once. It would be attractive for consumers remission of fees and charges associated with the operation of an electric vehicle (registration fee, road tax, tolls and tolls), the opportunity to recharge their electric vehicles for a discounted tariff for supply of electricity to park in designated areas for electric cars in the city center, as also use the lanes for public transport, which is not yet in

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<sup>6</sup>ELEKTROMOBILY.SK : *GreenWay*. On internet: <<http://elektromobily.sk/greenway>>. (accessed 3.4.2015).

<sup>7</sup>ZÁPADOSLOVENSKÁ ENERGETIKA : *VIBRAte – ekologické spojenie regiónu*. On internet: <[http://www.skupinazse.sk/documents/7607/VIBRAte\\_flyer\\_A-long\\_2012.pdf](http://www.skupinazse.sk/documents/7607/VIBRAte_flyer_A-long_2012.pdf)>. (Accessed 31.3.2015).

Slovak towns too much, but their extension would certainly be worth considering municipal bodies to improve and thinking “ground” clearance and public transport. It would also still reserved for parking space for the owner of an electric car in his residence. The use of dedicated lanes follows the introduction of visible signs electric car, which will give the vehicle owner feel special and by which it will be able to easily identify such.. City Bratislava has a plan to extend the time to enter some pedestrian zones since 4:00 arguing that electric vehicles are quiet. In such cases, the account also of the fact that in addition to the noise of the engine is noisy and the like handling and transshipment to supply this and the resulting effect can be minimized. If state had not a clear vision in this area, support businesses and individuals, we would not have to lead these discussions. That is why it is important to consider the introduction of various tax breaks and incentives, co-financing, aid in finding financial resources, building permits for developers who think of e-mobility, procurement of electric vehicles into the ranks of police and firemen.

*Segmentation* – we can argue under studied of secondary surveys that potential consumers and those interested in electric cars have emerged as modern humans, mostly to 34, interested in technology and its surroundings, open innovation and indicating trends. As Tesla Motors focuses on the premium segment, other car manufacturers should be targeted also to a specific segment based on actual surveys, particularly in Slovakia, where consumers are not favoring of direct financial subsidies from the government and the current bid price for electric ranges up to 30 000 EUR. Electric vehicle would be communicated as a vehicle whose possession reflects the image of the consumer and makes it exceptional in relation to the surroundings.

*Marketing communication* - to be able to selling electric vehicles in Slovakia and in the EU, the potential owners have at least know their positive aspects. Many people in electric vehicles imagine only a high price and short range. The aim should be to inform and educate the public as well as direction of advertising message to the target segment. Appropriate forms can be considered product placement, guerilla marketing, mobile marketing, internet marketing and other less traditional forms that are somehow modern, imaginative and accepted by the target group.

*Education* - For education system are typical research and development activities in the field of electric vehicles. Probably the most famous project was the development of student electrical formulas, involving the Slovak Technical University in Bratislava and the company ZSE. As more practical benefit of the University we consider the design and development of special hybrid vehicles, while the R & D activities is no less than the University of Žilina University or Technical University of Kosice. It is necessary to establish cooperation at all

levels, ie. we should involve all market EVs in education and forgive the outdated teaching methods. The results are not only worthy projects in student competitions. We must enable students to learn and learn about electro-accredited under the new program, elective courses or courses whose completion would guarantee success in the labor market. Courses opened by the carmakers or other commercial companies on campus seem as a supplementary education to students of the theoretical basis for their learning curve in business processes, where the company would train their future employees. This model need also the investmnet or cooperation from the side of state and public institutions.

*Partnerships, leasing and service* - cost of electric vehicles will be the biggest obstacle in Slovakia for which many consumers have not bought a vehicle. It is not possible since the long term to rely on an endless state support in the industry. Electric vehicles current price could be reduced, for example, if the seller offered the most expensive components of the vehicle - battery - for leasing, or could be interested about electric vehicle designed repayment program.. The battery life is one of the causes of doubt and hesitation. The battery should be warranted, during which there would be, if anything goes wrong the customer would be given a temporary replacement vehicle until the fault has been removed or replaced without charge the battery with a new one.

#### **4 CONCLUSION**

The article allows us to understand the nature of e-mobility and deployment of electric vehicles in road traffic. The important elements are production of electric vehicles, charging net and infrastructure, information and communication technology and legislation. The electric mobility appears to be an alternative solution meeting the economic, ecological and social aspects of sustainability in view on the current traffic situation, which is characterized by strong growth performance and share emissions from transport,. Traffic problems are registered by European and other world countries that they have decided to implement national strategies to promote the development of e-mobility in the form of direct financial subsidies or through non-financial instruments, or a combination thereof. Funds spent in the electromobility sector should also ensure increased employment in the country while reducing dependence on fossil fuels. Not less important is the contribution of electric mobility and improve the environment by reducing CO2 emissions, noise reduction or other adverse consequences for human health. Among the driving characteristics and specifications it should be emphasized efficiency of energy use, lower operating costs than conventional cars, the engine runs smoothly and energy recovery. The main disadvantages is discouragement of many

potential consumers from buying an electric car, consider a limited range (up to 200 km on a single charge), battery life and recharging, the length of which depends on the type of charging station, and the high selling price. Electromobility has currently the greatest opportunity to establish itself in the market, thanks to its great variety of international agreements and partnerships for the purpose of its development, as well as increased public interest in this topic for the last time. We have also taking into account other measures in force in foreign countries as free charging, parking in the city center, the possibility of using marked lanes for public transport, forgiveness toll, the electric vehicle becomes in the eyes of consumers attractive means of transport. The benefits can outweigh the negative aspects. The future of electric vehicles may be viewed as vehicles primarily intended to urban areas for short distances. Although the EU aims in urban transport by 2030, reduce the use of conventionally fueled cars in half, it is important to note that the role of electric vehicles is not fully replace cars with internal combustion engine and therefore comparison is sometimes not justified. Electric vehicles can be also extremely useful in meeting the objectives to be achieved by the introduction of urban logistics zero emission of CO<sub>2</sub> in the centers of large cities in 2030.

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# The Effect of Performance-based Rewards on Organizations' Outcomes in Serbia: Evidence from Cranet Research 2015

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**Abstract:** The relation between employees' compensation and organizational outcomes is one of the most explored areas in human resource management (HRM) researches. Generally, it is accepted that the implementation of high performance working practice, which contains different forms of incentive compensation, leads to the higher level of organizational outcomes (financial-in terms of profitability, market share and sales; organizational-in terms of productivity, quality, and HRM outcomes-in terms of turnover, satisfaction, absenteeism, and engagement). These researches are usually based on the exploration of managerial compensation and profitability. On the other hand, there are fewer researches on the relations regarding the usage of performance-based pay for all categories of employees and organizational results. The aim of this research is to explore the differences between the levels of profitability and productivity in relation with the usage of different elements of performance-based pay for employees. The research was conducted on the basis of Cranet project results in the Republic of Serbia in 2015. The methodology of the research included the development of research hypotheses on the basis of past researches and HR theory on employees' compensation and implementation of several statistical techniques (descriptive statistics, Spearman's Rho correlation, ANOVA tests and Welch ANOVA test). Results indicate that there are positive relations between incentives and profitability and productivity of organizations in Serbia and statistically significant differences between the level of profitability and productivity regarding the usage of incentives for all categories of employees. Organizations that reward their employees with bonuses on individual and team level have higher level of organizational outcomes.

**Keywords:** human resource management, performance based pay, incentives, Cranet, Serbia.

**JEL Classification codes:** J 33, L25, M12, M52.

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## 1 INTRODUCTION

Human resource management and its main activities such as HR planning, staffing, training, career development, performance management, compensation and benefits, retirement, etc., are seen as a factor for gaining competitive advantage and organizational success (Wright, McMahan, and McWilliams 1994; Bowen and Ostroff 2004; Chadwick and Dabu 2009; Noe et al. 2012; Savaneviciene and Stankeviciute 2013; Radosevic et al. 2014; Albrecht et al. 2015). Although there are many evidences (theoretical and practical) of the positive relations between the HRM practices and organizational performances, it is important to emphasize that HRM can achieve its main goal – to manage and develop people to achieve their goals



and overall organizational effectiveness, only if it is implemented as strategic organizational process rather than poor administrative (Slavić and Berber 2013; Ananthram et al. 2013; Gurbuz and Mert 2011).

Among many HR activities, one that is of specific importance is compensation. Compensation as monetary and non-monetary rewards for employees is seen as important factor that is used to attract, motivate and retain employees (Fay and Thompson 2001, p. 213). Compensation system is consisted of three basic parts: basic pay, variable pay – incentives, and benefits. Among these, special importance in this research is dedicated to the incentive pay as a variable part of total compensation that is related to the performance of employees. Incentives are used to motivate employees to engage themselves in achieving their goals and work tasks. This part of the total compensation is variable because it varies in relation to the objectives and standards - organizational, group or individual goals. This way of rewarding emphasize the importance of the connection between employees' efforts and performance, on the one hand, and rewards, on the other. Incentive pay is seen as a primary way to encourage the desired behavior of members of the organization (Jansen et al. 2009, p. 59). The main goal of incentive is an increase in productivity and the level of actual performance of employees, and to make a system of incentives effective, it should be based on the following assumptions:

- Individual workers differ from work teams in terms of the contribution to the organization, in terms of what they do and how they are performing their work activities.
- Organizational performances are largely dependent on individual and group performances.
- In order to attract, retain and motivate those employees who achieve high levels of performance and to achieve justice for all employees, organization should reward employees based on their performance (Martochioo 2009, p. 129).

Based on the above mentioned, the subject of the research is performance-based pay in terms of individual, team and organizational bonuses and their relation with organizational performances. The aim of this research is to explore the differences between the levels of profitability and productivity in relation with the usage of different elements of performance-based pay for employees. The research was conducted on the basis of Cranet project results in the Republic of Serbia in 2015. The methodology of the research included the development of research hypotheses and implementation of several statistical techniques (descriptive statistics, Spearman's Rho correlation, ANOVA tests and Welch ANOVA test).

## 2 LITERATURE REVIEW

Encouraging and motivating employees to improve their business performance is one of the most important tasks in contemporary organizations. There are still no ideal models or systems for stimulating employees, because what suits in one organization does not have to mean automatic implementation in others, since there are different factors such as sectors (e.g., food production and information technology), age, gender, education of employees, etc. that influence the adoption of different reward strategies. Motivation and performances are shaped based on the link between the effort and the reward and by the importance or valence of the reward to the person in question (Brewster et al. 2007).

The system of incentives can be viewed from different perspectives. According to one, which will be used in this paper, all the incentives can be divided into individual, group and organizational (Martochioo 2009, p. 132). Individual incentives include rewards to employees for their individual efforts and effects that are achieved during their work and goal achievement. Group incentives promote collegiality and cooperation among employees. Incentives at the level of organization relate to the entire organization, and these plans include rewarding of all employees in relation to organizational performance in the period from 3 months to 5 years (Martochioo 2009, p. 132). For the purpose of this research the authors explored the effects of incentive pay on organizational performances. One of the most cited works on this theme is the research of Huselid (1995) who evaluated the links between systems of High Performance Work Practices (HPWP) and firm performance. Results from a sample of 1000 firms indicated that HPWP, where incentive rewards are an important element, have statistically significant impact on employee outcomes measured through productivity and measures of corporate financial performances. Gerhart and Milkovich (1990) using longitudinal data on about 14,000 top and middle-level managers and 200 organizations; we found significant differences between organizations. Their results suggest that organizations tend to make different decisions about pay contingency, or variability, rather than about base pay. Findings indicate that contingent pay was associated with financial performance but base pay was not. Another research explored the effects of cash bonus systems in Taiwan's high-tech sector on firm performance. The results also showed that the bonus systems have statistically significant positive impacts on firm performances (Han and Shen, 2007). Similarly, Guest et al. (2003) explored the relationship between HRM practices and performances in 366 UK companies. They used a questionnaire with nine main areas of HRM: staffing; T&D; performance appraisal; financial flexibility; job design; communication; employment security and the internal labour market; single status and

harmonization; and quality. Inside financial flexibility part they proposed several questions on the usage of incentive pay methods (individual and team based incentives, and cash bonuses). Their results pointed that there is a strong association between HRM practices and productivity and financial performances. Authors from Serbia explored the relationship between incentive pay and the level of organizational performances. Based on the sample of 25 European countries from CRANET research in 2008/2010 period here have been detected a statistically significant differences between those organizations that offer incentive pay for their professional workers relative to those organizations that do not used that kind of pay, in terms of organizational performances (service quality, productivity, profitability and the rate of innovation). The results indicated that organizations that use bonus schemes achieved greater level of organizational outcomes (Štangel Šušnjar and Berber 2014). According to the results of previous researches on this theme, the authors proposed a research hypothesis:

*H0: Organizations that use bonus schemes for their employees will have greater organizational performances measured by productivity and profitability than organizations that do not use bonus schemes.*

The proposed hypothesis was tested through statistical analysis, according to the presented methodology.

### **3 METHODOLOGY AND DATA**

In this research the authors used the methodology of CRANET research ([www.cranet.org](http://www.cranet.org)). Cranet is a network of scientific institutions from different countries that collect unique and mutually comparable data on the policies and practices of HRM. This network, which was founded in 1989, conducts the largest survey of HRM practice around the world, and has a current picture of the state of the practice in Member States. Coordination of activities is carried out by Centre of European HRM in Cranfield School of Management in the UK. Currently, the organization has about 40 members, not only from Europe. Network members are also Japan, Canada, India, USA, and so on. From the former Yugoslavia there were several members, from Slovenia - University of Ljubljana, Croatia - University of Zagreb and Serbia - University of Novi Sad - Faculty of Economics in Subotica (Lekovic et al. 2015). Faculty of Economics in Subotica conducted this research in Serbia for the second time. As the only member of the international scientific network in this country, Faculty of Economics in 2008 participated in Cranet project for the first time with 50 analyzed organizations. In the first half of 2015 the authors examined 158 organizations from the territory of Serbia. The answers to the questionnaire were given by HR managers or executives in organizations with

more than 50 employees (Lekovic et al. 2015). The research was conducted using a standardized questionnaire, which was translated into the languages of participating countries. The questionnaire has about 70 questions and covers the main activities of the HRM. The first part deals with the characteristics of HR department of the analyzed organizations. The second part of the questionnaire focuses on staffing practices. The third part deals with the issues of training and development of employees. The fourth part deals with compensation and benefits. The fifth part of the questionnaire analyzes the relationship between employers and employees and deals with various issues of communication with employees. The sixth part contains the basic organizational data. The seventh part refers to the data of the person who filled out the questionnaire. In the continuation of the text the authors presented the sample of organizations and the structure of the research.

**Tab. 1: Structure of the sample according to the size of organization in Serbia (N=158)**

Size of organization	2015	
	Frequency	Percent
1-249	95	60.1
250-1000	42	26.6
1000+	21	13.3
<b>Total</b>	<b>158</b>	<b>100.0</b>

Source: Authors' analysis based on CRANET data

According to the data from table 1 the largest share of the sample in Serbia in 2015 was SME sector, 60%. There are 27% of large organizations and 13% of very large, with more than 1000 employees.

**Tab. 2: Structure of the sample according to the ownership of organizations in Serbia (N=158)**

Ownership structure	2015	
	Frequency	Percent
Private	104	65.8
Public	53	33.5
Total	157	99.4
Missing	1	0.6
<b>Total</b>	<b>158</b>	<b>100</b>

Source: Authors' analysis based on CRANET data

Data from table 2 show that the sample of explored organizations in Serbia was consisted of public (34%) and private (66%) sector. Also, around 8% of analyzed organizations are from agriculture sector, 1/3 is from industry sector, and 63% of organizations are from service sector. The largest share of organizations from Serbian CRANET sample in 2015 is in the sector of food production, trade, telecommunication, and IT (Lekovic et al. 2015).

The research was conducted in two parts. The first part included the analysis of correlations between bonus schemes for employees (managers, professional and clerical workers) and organizational performances measured by productivity and profitability. Since the bonus schemes were coded as dummy variables for three categories of employees - managers,

professional and clerical workers (0=not used and 1=used), the authors recoded them into ordinal variable for all employees for each element of bonus schemes (0=not used, 1=used only for one group of employees, 2=used for two groups of employees and 3=used for all employees). Organizational performances are presented as ordinal variables (from 1=poor productivity/profitability to 5=superior productivity/profitability). The analysis was performed with SPSS V20 programme.

#### 4 RESULTS AND DISSCUSSION

The presented results and conclusions are defined after basic statistical analysis of responses received from 158 organizations in 2015. From table 4 there is evident the existence of correlations between incentives for employees and organizational performances. In case of profitability there are statistically significant positive weak correlations with individual pay for performance (IPFP), individual bonuses, team bonuses, and organizational bonuses. On the other hand, in the case of productivity only one statistically significant positive correlation with team bonuses was found.

**Tab. 4: Correlation between performance based pay and organizational profitability and productivity in Serbia (N=158)**

Spearman's rho		Bonus_in dividual	Bonus_ team	Bonus_ org	Rating of Profitability	Rating of Productivity
Bonus_indivi dual	r <sub>s</sub>	1,000				
	Sig. (2-tailed)					
Bonus_team	r <sub>s</sub>	<b>,669**</b>	1,000			
	Sig. (2-tailed)	,000				
Bonus_org	r <sub>s</sub>	<b>,590**</b>	<b>,579**</b>	1,000		
	Sig. (2-tailed)	,000	,000			
Rating of Profitability	r <sub>s</sub>	<b>,251**</b>	<b>,288**</b>	<b>,225**</b>	1,000	
	Sig. (2-tailed)	,002	,000	,005		
Rating of Productivity	r <sub>s</sub>	,104	<b>,260**</b>	,109	<b>,653**</b>	1,000
	Sig. (2-tailed)	,200	,001	,176	,000	
**. Correlation is significant at the 0.01 level (2-tailed).						
*. Correlation is significant at the 0.05 level (2-tailed).						

Source: Authors' analysis based on CRANET data

The second part of the analysis obtained a research of the differences between organizations that use bonus schemes to a large extent in contrast to those that use them for only two or one category of employees or to those that do not use incentives at all (value 0) regarding the level of organizational profitability and productivity. The authors used Welch ANOVA test (instead ANOVA, since the homogeneity of variances was violated). According the data from table 5 it is obvious that there are statistically significant differences between organizations that use and not use individual bonuses for their employees (F=15,729, df=3, p=0,004) regarding the level of profitability. If organizations use individual bonuses for one, two or all groups of

employees, organizational profitability is higher (Mean from 3,68 to 3,62) than if they do not use this kind of bonuses at all (M=3,10).

**Tab. 5: Welch Anova test – differences between the level of organizational profitability regarding the usage of individual bonuses in Serbia (N=158)**

Rating of Profitability						
Individual bonuses	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
				Lower Bound	Upper Bound	
,00	3,10	,775	,100	2,90	3,30	2
1,00	3,68	,871	,156	3,36	4,00	2
2,00	3,63	1,065	,244	3,12	4,14	2
3,00	3,62	,936	,140	3,34	3,90	2
Total	3,43	,912	,073	3,29	3,58	2
Test of Homogeneity of Variances				Levene Statistic	df1	df2
				3,356	3	151
				Sig.		
				,021		
Welch ANOVA		Statistics <sup>a</sup>	df1	df2	Sig.	
		15,729	3	58,059	,004	

a. Asymptotically F distributed.

Source: Authors' analysis based on CRANET data

According the data from table 6 we can conclude that there are statistically significant differences between organizations that use and not use team bonuses for their employees ( $F=7,049$ ,  $df=3$ ,  $p=0,000$ ) regarding the level of profitability. If organizations use team bonuses for one, two or all groups of employees, organizational profitability is higher (Mean from 3,47 to 3,92) than if they do not use this kind of bonuses at all (M=3,16). The authors used ANOVA test since the homogeneity of variances was not violated.

**Tab. 6: Anova test – differences between the level of organizational profitability regarding the usage of team bonuses in Serbia (N=158)**

Rating of Profitability						
Team bonuses	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
				Lower Bound	Upper Bound	
,00	3,16	,871	,094	2,98	3,35	2
1,00	3,92	,759	,152	3,61	4,23	3
2,00	3,47	,964	,221	3,01	3,94	2
3,00	3,81	,849	,167	3,46	4,15	3
Total	3,43	,912	,073	3,29	3,58	2
Test of Homogeneity of Variances				Levene Statistic	df1	df2
				,865	3	151
				Sig.		
				,461		
ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Between Groups		15,729	3	5,243	7,049	,000
Within Groups		112,309	151	,744		
Total		128,039	154			

Source: Authors' analysis based on CRANET data

For the exploration of the usage of organizational bonuses and profitability the authors used Welch ANOVA test (since the homogeneity of variances was violated here, too). According the data from table 7 it is obvious that there are statistically significant differences between organizations that use and not use organizational bonuses for their employees ( $F=3,221$ ,  $df=3$ ,

$p=0,032$ ) regarding the level of profitability. If organizations use organizational bonuses for one, two or all groups of employees, organizational profitability is higher (Mean from 3,44 to 3,70) than if they do not use this kind of bonuses at all ( $M=3,21$ ).

**Tab. 7: Welch Anova test – differences between the level of organizational profitability regarding the usage of organizational bonuses in Serbia (N=158)**

Rating of Profitability						
Organizational bonuses	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
				Lower Bound	Upper Bound	
,00	3,21	,769	,094	3,02	3,40	2
1,00	3,44	1,076	,190	3,05	3,83	2
2,00	3,67	,888	,256	3,10	4,23	2
3,00	3,70	,930	,140	3,42	3,99	2
Total	3,43	,912	,073	3,29	3,58	2
Test of Homogeneity of Variances				Levene Statistic	df1	df2
				4,010	3	151
Welch ANOVA	Statistics <sup>a</sup>		df1	df2	Sig.	
	3,221		3	42,170	,032	

a. Asymptotically F distributed.

Source: Authors' analysis based on CRANET data

According the data from table 8 we can conclude that there are statistically significant differences between organizations that use and not use individual bonuses for their employees ( $F=3,789$ ,  $df=3$ ,  $p=0,012$ ) regarding the level of productivity. If organizations use individual bonuses for one, two or all groups of employees, organizational productivity is higher (Mean from 3,51 to 3,90) than if they do not use this kind of bonuses at all ( $M=3,38$ ).

**Tab. 8: Anova test – differences between the level of organizational productivity regarding the usage of individual bonuses Serbia (N=158)**

Rating of Productivity						
Individual bonuses	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
				Lower Bound	Upper Bound	
,00	3,38	,687	,088	3,20	3,55	2
1,00	3,90	,790	,142	3,61	4,19	3
2,00	3,89	,963	,227	3,41	4,37	2
3,00	3,51	,944	,141	3,23	3,79	2
Total	3,58	,844	,068	3,45	3,71	2
Test of Homogeneity of Variances				Levene Statistic	df1	df2
				2,449	3	151
ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Between Groups		7,682	3	2,561	3,789	,012
Within Groups		102,060	151	,676		
Total		109,742	154			

Source: Authors' analysis based on CRANET data

Similarly, there are statistically significant differences between organizations that use and not team bonuses for their employees ( $F=3,789$ ,  $df=3$ ,  $p=0,012$ ) regarding the level of productivity. From table 9 we can see that if organizations use team bonuses for one, two or

all groups of employees, organizational productivity is higher (Mean from 4,08 to 3,69) than if they do not use this kind of bonuses at all (M=3,34).

**Tab. 9: Anova test – differences between the level of organizational productivity regarding the usage of team bonuses Serbia (N=158)**

Rating of Productivity						
Team bonuses	Mean	Std. Deviation	Std. Error	95% Confidence Interval for Mean		Minimum
				Lower Bound	Upper Bound	
,00	3,34	,765	,083	3,18	3,51	2
1,00	4,08	,702	,140	3,79	4,37	3
2,00	3,84	,958	,220	3,38	4,30	2
3,00	3,69	,884	,173	3,34	4,05	2
Total	3,58	,844	,068	3,45	3,71	2
Test of Homogeneity of Variances				Levene Statistic	df1	df2
				2,042	3	151
ANOVA		Sum of Squares	df	Mean Square	F	Sig.
Between Groups		12,731	3	4,244	6,606	,000
Within Groups		97,011	151	,642		
Total		109,742	154			

Source: Authors' analysis based on CRANET data

For organizational bonuses no statistically significant differences between the levels of productivity were found.

From the obtained results it can be concluded that in the sample of 158 organizations in Serbia there are correlations between incentives and performances and that organizations which use individual, team and organizational bonuses for their employees gain higher level of profitability and productivity. The results of the research are in the line with the results of other similar researches and overall idea that HRM practices of rewarding employees with incentives in terms of bonus schemes have positive relations with organizational performances. The authors confirmed the proposed hypothesis.

## 5 CONCLUSION

Bonus schemes which provide cash payments to employees that are related to the performance of their organization, their team or themselves, or a combination of two or more of these (Armstrong 2007) are very important material motivator for all employees. Those are usually short-term rewards that vary with the performance of employees. In the literature of HRM there are numerous researches on the relation between bonuses and performances. Evidences show that the extent of the usage of performance based pay usually has positive impact on organizational turnover, productivity, profitability, etc. On the other hand, sometimes these relations are not so unambiguous, for example in the case of CEOs' compensation and firm performance (Berber et al. 2012). Surely, these relations are very



important for decision makers who are responsible for organizational results in terms of increasing employees' motivation for work. An adequate incentive system can be used to motivate employees to achieve their goals.

According the theoretical review and the results of the analysis we can conclude that there are differences between organizations that use and not use individual, team, and organizational based bonuses for their employees regarding the level of productivity and profitability as organizational performances. Organizations that provide their employees with this kind of incentive variable pay have higher level of organizational productivity and profitability than organizations that do not use this kind of rewards.

At the end it is important to emphasize limitation of this study which lies in the usage of statistical methods for analysis. In this paper the authors did not measured the direct influence of the usage of bonus schemes on organizational performances, but they explored the differences regarding the usage of bonuses. Incorporation of several control variables (size, sector, ownership, union influence, etc.) and with the usage of different regression models this influence will be explored in more detailed manner.

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# **The Impact of Corporate Credibility on Organizational Commitment of Employees and Financial Performances: the Serbian Case**

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**Abstract:** Corporate credibility is the degree to which consumers, investors and other constituents believe in the company’s trustworthiness and expertise. Corporate credibility is an important stimulus that marketers use to build and enhance consumers’ attitudes toward advertisement as well as their attitude toward brands and their purchase intention. This paper presents the results of research into the impact of corporate credibility (CC) on organizational commitment (OCM) of employees and financial performance (FP) of companies. The data were obtained using questionnaires completed by N = 400 middle managers from 129 companies in Serbia. The statistical methodologies that were used in the data analysis are: descriptive statistics and correlation analysis. The main conclusions of the study are as follows. The correlations between the corporate credibility (CC), organizational commitment (OCM) of employees and financial performance (FP) of companies are statistically significant, strong and positive. Good expertise of a company has increasingly bigger effect on the financial performance while trustworthiness of a company increasingly affects the commitment of employees. The bigger the expertise of the company is, the better will be the financial performances, and the greater is the trustworthiness, the commitment of the employees grows.

**Keywords:** corporate credibility, organizational commitment, financial performance, Serbia.

**JEL Classification codes:** D230, L220.

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## **1 INTRODUCTION**

For companies, one main question is whether the level of corporate credibility actually has an impact on financial performance. According to (Ivanov, Sims & Parker 2013) favourable corporate image and positive credibility should provide greater consumer confidence and lessen the perceived consumer risk associated with a new product introduction. An empirical survey about the relation between corporate reputation and corporate financial performance can be found in the study by Gatzert (2015). A public that has a negative image of a corporation can influence dependent variables such as financial statements and misstatements (Jin & Yeo 2011). Companies with positive reputations are in a better position to change

consumers' attitudes than are those with negative reputations, and also company's perceived credibility is closely related to its sales record. (Fombrun 1996).

According to (Rose & Thomsen 2004) corporate reputation does not impact firm value, whereas corporate financial performance improves corporate reputation. This finding is in correlation with the one by Roberts and Dowling (2002), who found that firms which have relatively good reputation can better sustain superior profits over time. According to the aforementioned authors a strong image will result if management is able to increase performance. The results of a survey (Tischer & Hildebrandt 2014) emphasize that more research is necessary with respect to the relation and linkage between corporate reputation, and the financial consequences of a company.

Committed staff can improve growth and excellence in the organization, and a lack of committed staff can reduce the quality of services and products and hinder the organization's performance (Ghasemi & Keshavarzi 2014; Rafiee, Bahrami & Entezarian 2015). There cannot be found references that investigated the relation between corporate credibility and organizational commitment. Therefore this research has significance if it is proven that there are relations between them.

The research presented in this paper aims to determine the direction and intensity of the impact of the corporate credibility dimensions on organizational commitment and the financial performance of companies in Serbia. Such research may have practical significance, in terms of making recommendations for managers, how to raise organizational commitment of employees and build corporate credibility of the company.

## **2 THEORY AND HYPOTHESIS**

### **2.1 Company image and corporate credibility**

Corporate image is likely to have an impact on customer behaviour and it can also materially affect an individual's sense of association with an organization (Balmer, Powell & Greyser 2011; Karaosmanoglu, Banu Elmadag Bas & Zhang 2011). According to (Goldsmith, Lafferty & Newell 2000) corporate image directly determines corporate credibility. Corporate image can be said to lead to heightened corporate credibility. Keller (1998) defines corporate credibility as the extent to which consumers believe that a company can deliver and design products/services that satisfy customer needs and wants. Corporate credibility is an important stimulus that marketers use to build and enhance consumers' attitudes toward an advertisement as well as their attitude toward brands and their purchase intention. Corporate credibility is defined as the degree to which consumers, investors and other constituents

believe in the company's trustworthiness and expertise (Goldsmith et al. 2000). The scope of a company's expertise and trustworthiness is an important component of credibility that is influential in persuading consumers to patronize it (Wu & Shaffer 1987). Corporate credibility is surely an important aspect of a corporation's reputation. A company's credibility increases if its actions coincide with its statements while credibility decreases if its actions and pronouncements are inconsistent. According to (Newell & Goldsmith 2001), corporate credibility is conceptualized as a type of source credibility focused on a specific corporation as the maker of a product and/or the source of advertising and of other marketing communications. According to (Men 2012), CEOs are corporate spokespersons who are actively visible and favourably shape the corporate image.

## **2.2 Organizational commitment**

Organizational commitment reflects the extent to which staff members identify with the organization and engage with its goals (Meyer & Herscovitch 2011). Organizational commitment indicates the belief in and acceptance of organizational values, goals and the willingness to exert considerable effort on behalf of the organization (Mayer & Schoorman 1992).

Organizational commitment is usually seen through its dimensions. There are several models in defining the dimensions of organizational commitment (Cook & Wall 1980; Allen & Meyer 1990; Mowday, Steers & Porter 1979). For the research in this paper, a model developed by Cook and Wall (1980) was used. This model has three dimensions:

1. Organizational identification (refers to the sense of the employee's pride because of the belonging to the company).
2. Organizational involvement (is reflected in the desire and willingness of the employee to make additional efforts to fulfil the objectives of the organization).
3. Organizational loyalty (includes the sense that an employee has an obligation to the company and his willingness to stay in the company even if another company would offer him/her more money).

## **2.3 Financial performance**

According to (Hatane 2015) financial performance is a measure of changes in a financial condition of a company and it is a result of management decisions and the implementation of their decision by the company's members. Financial performance can be measured using a variety of dimensions. According to the aforementioned author, when respondents are asked about financial performance they are asked to report the level of their satisfaction with the

company's performance in terms of sales growth, profitability, profit growth, sales margins and market growth. The financial performance measurement is related to signalling theory in which the financial information is a signal given by one party to the other, so that the respondents' answers regarding to company's financial performance have been enough to be a signal in describing the actual financial condition (Spence 1973).

Based on the above considerations, in this paper, there are two hypotheses set:

H1: There is a statistically significant correlation between the dimensions of corporate credibility and items of financial performance.

H2: There is a statistically significant correlation between the dimensions of corporate credibility and dimensions of organizational commitment of employees.

### 3 METHOD

#### 3.1 Survey instruments (measures)

*Company Credibility.* Newell and Goldsmith (2001) developed and validated a short, reliable, and valid self-report scale designed to measure corporate credibility or the amount of expertise and trustworthiness that are perceived within a corporation. The questionnaire consists of 8 items covering two dimensions. The responses were measured using a seven-point Likert scale.

For measuring *organizational commitment* an instrument that was developed by Cook and Wall (1980) was used in this paper. This instrument measures three dimensions of organizational commitment with 9 items. Dimensions are as follows: Organizational Identification, Organizational involvement and Organizational loyalty. The responses were measured using a five-point Likert scale.

*Financial Performance.* When selecting the financial performance aspects in this study we were guided by the references (Tan & Litschert 1994; Wang et al. 2003; Wang, Tsui & Xin 2011). These articles examined the following aspects of financial performance: profitability, sales growth, asset growth, market share, and competitive status in the firm's industry. This group of five financial performance aspects was extended by two more: productivity and salaries. Based on previous analysis we formed a seven-item financial performance set to be examined in this paper: productivity, profitability, market share, sales growth, competitive status, asset growth and employee salaries. All financial performance items were assessed by the respondents by means of a five-point Likert scale. This was modelled on the references (Tan & Litschert 1994; Wang et al. 2003; Wang et al. 2011).

### 3.2 Participants and data collection

The respondents were middle managers, employees of companies in Serbia. Middle managers completed questionnaires, where an interview was used to support the process of completing the questionnaire. A total of  $N = 400$  middle managers from 129 companies completed the questionnaire.

## 4 RESULTS

### 4.1 Descriptive statistics

The descriptive statistics for the items and dimensions of the observed questionnaires (corporate credibility, organizational commitment, financial performance) are shown in Table 1. The table shows, among other things, the names of the items and dimensions, the short names for each dimension (which are used hereafter), mean size, standard deviation and Cronbach's Alpha, for each dimension. The values of Cronbach's Alpha range in the interval from  $\alpha = 0.739$  to  $\alpha = 0.921$ .

**Table 1: Descriptive statistics for all items and dimensions**

Dimensions / Items	Short name	N	Min	Max	Mean	Std. Deviation	$\alpha$
Expertise	CC1	400	1,75	7,0	5,3137	1,32276	,921
Trustworthiness	CC2	400	1,00	7,0	5,0294	1,40228	,912
Organizational identification	OCM1	400	1,00	5,00	3,7425	,96619	,793
Organizational involvement	OCM2	400	1,00	5,00	4,0942	,83222	,784
Organizational loyalty	OCM3	400	1,00	5,00	3,1558	1,15393	,739
Productivity	FP1	400	1,00	5,00	3,48	,858	
Profitability	FP2	400	1,00	5,00	3,39	,906	
Market share	FP3	400	1,00	5,00	3,35	,995	
Sales growth	FP4	400	1,00	5,00	3,23	,981	
Competitive status	FP5	400	1,00	5,00	3,48	,944	
Asset growth	FP6	400	1,00	5,00	3,20	,942	
Employee salaries	FP7	400	1,00	5,00	2,95	,950	

### 4.2 Correlation analysis

**Table 2 Pearson coefficients of correlation between dimensions of corporate credibility, organizational commitment and financial performance items**

	OCM1	OCM2	OCM3	FP1	FP2	FP3	FP4	FP5	FP6	FP7
CC1	,355**	,328**	,237**	,407**	,428**	,353**	,325**	,358**	,347**	,339**
CC2	,444**	,387**	,259**	,362**	,317**	,266**	,297**	,368**	,321**	,379**

\* $p < 0.05$ ; \*\* $p < 0.01$ .

Table 2 shows the correlations between corporate credibility on organizational commitment and financial performances. These results refer to the total sample of  $N = 400$  respondents. Pearson correlation was used. In Table 2 the statistically significant correlations are indicated

as follows: \* $p < 0.05$ ; \*\* $p < 0.01$ . It may be noted that all correlations are statistically significant \*\* $p < 0.01$ .

## 5 DISCUSSION

Descriptive statistics (Table 1) shows that the mean values for the Corporate credibility dimensions are quite high, both for expertise and for trustworthiness. Also values for Organizational commitment are slightly higher than average. It must be noted that Organizational loyalty dimension - OCM3 has the lowest mean value. This is logical if one takes into account the low level of wages and low living standard of the people in Serbia. In such circumstances, it is difficult to expect high employee loyalty towards their organization. If someone can provide a better alternative regarding work, many people would take advantage of such a good and rare opportunity now.

When analysing the mean values of financial performance items it can be concluded that the mean values are about average, and they are uniform for all items. It may be noted that the Employee salaries item - FP7 has the lowest mean value. This is not surprising given that the transition process in Serbia was among the most dramatic experienced by any nation. During the decade from 1989 Serbia experienced the disintegration of Yugoslavia, war, economic sanctions, an enormous output fall, a collapse in real incomes, a sharp rise in the grey economy, and a hyperinflationary episode (Kecmanovic 2012).

At correlation analysis (Table 2) we can see that the company's expertise increasingly affects the financial performances, while trustworthiness in the company increasingly affects the organizational commitment of employees. The bigger the expertise of the company is, the better the results will be, and the greater the trustworthiness of a company is, the commitment grows. Skill has more to do with the results and trustworthiness with dedication. At all of the observed pairs there are statistically significant correlations, so we can say that the hypothesis H1 and H2 are confirmed.

At the correlation between corporate credibility and organizational commitment, the Trustworthiness dimension (CC2) has the most influence. So, if a company communicates accurate information, acts honestly and ethically and is socially responsible company, the employees will identify with their company and therefore their organizational commitment will be high. At Expertise dimension (CC1) there is a smaller but certainly existing impact. Although the company has extensive experience in its core business, high competence and expertise to its activities, quality resources it does not necessarily mean that the employees will be loyal, because as it was mentioned wages in companies in Serbia are small and



employees even though the company has a good expertise, will leave it if he/she gets a better opportunity.

At the correlation between corporate credibility and financial performance the Expertise dimension (CC1) has the most influence on financial performance. Thus, if a company has extensive experience in its business, high competence and expertise to its activities, quality resources, this will certainly affect the financial performance of the company. The biggest correlation is at company Profitability (FP2) and Productivity (FP1).

## **6 CONCLUSION**

Both hypotheses set in the paper, are confirmed. So, there were statistically significant correlations between the dimensions of corporate credibility, dimensions of organizational commitment and financial performances items. Trustworthiness dimension has the biggest influence on Organizational commitment dimensions. On the other hand, Expertise dimension has the greatest impact on the financial performance item.

Generally, it can be concluded that corporate credibility certainly has a positive effect on organizational commitment and financial performance. If companies want greater commitment of employees and better financial performance, managers should improve corporate credibility of their company. In this way, at the same time, conditions for increasing the level of organizational commitment and financial performance would be provided, but also this would result in improvement of a number of other organizational and business performances.

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# Can I Be Opened?

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**Abstract:** Values, personality features and attitudes are closely related. Understanding the extent to which values and personality features form attitudes is crucial when planning each campaign focused on change of public opinion. The following article, on basis of primary research done by the authors, shows the relations between value systems of young people, the personality feature – anxiety and their attitudes towards immigration issue. The quantitative research done in late 2015 in Central European country Slovakia used questionnaire that measured values using the Schwartz's value inventory, as well as anxiety tendencies and attitudes towards immigration. The results show that there are significant relations between certain values attitudes towards immigration. The article helps to understand the relations between these internal structures and offers insights how to approach different segments of young people in order to promote positive attitude towards immigration.

**Keywords:** Values, Schwartz's Value System, Attitudes, Anxiety, Immigration.

**JEL Classification codes:** M31.

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## 1 INTRODUCTION

The business environment in Central and Eastern Europe is changing. The changes are not induced only by the transformation of economies, political changes and ongoing globalisation but also by changes in values, attitudes towards others and one very important and extremely discussed topic - immigration. The need of growing economies to compensate the declining demographic curve as well as the pressure of wealth disparity causes immigration which is for Central and Eastern Europe new phenomenon. What are the attitudes of new generation towards this issue? How are their attitudes interconnected with their value's system? How can they be changed in case of need? The following article gives insights into relations between these concepts and shows, what needs to be done in case that immigration attitudes and public opinion towards demographically and therefore economically needed immigration has to be altered.

Despite the fact that values are not visible and often not even openly realised they are constantly influencing our opinions, attitudes as well as our behaviour. Many authors, throughout last decades, keep trying to research their impact on attitude and opinion formation. Some authors measure values directly. In such cases respondents use scales to

show the importance of listed values. Other authors research values indirectly, without naming the value. They often use description of behaviour or attitude that is typical for such value and the respondent has to decide how much he/she thinks it describes him/her.

Values are often researched in context of opinions, attitudes and behaviour. It is the same in the research that is subject to this paper. The values of young people are researched in context of their personality feature - tendency to anxiety and their attitude towards immigration - as we were trying to uncover if there is any relation between these three concepts.

## **2 LITERATURE REVIEW**

It is well known that Milton Rokeach and Lynn R. Kahle are the most cited authors among pioneers of value research. Rokeach (Rokeach 1973), believed that values are strongly connected to terminal goals or so called end-states of existence, as well as to preferable modes of behavior, that lead to reaching the terminal goal. He created a system with two sets of 18 values (Rokeach Value System - RVS). One set represents the 18 terminal values or desired end-states of existence and the other set are 18 instrumental or preferable modes of behavior. Later, based on RVS and Maslow's hierarchy, Kahle (Kahle, Beatty & Homer 1986) created a list of nine values - LOV (List of Values).

Other group of authors decided to research values indirectly. They created a system of statements that contained descriptions of typical demonstration of the value without naming it. For example Herche extended Kahle's LOV into Multi – Item Measures of Values so called MILOV (in: Bearden & Netemeyer 1999). He used Kahle's 9 values and added to each of them several statements that are characteristic for a person with that value. The respondent had to choose the extent to which the statement fits his/her own perception.

Shalom Schwartz created two systems of measuring ten basic values. Both of the systems are easily usable in quantitative researches. The first system is called Schwartz Value Survey SVS (Schwartz 1992, Schwartz 2012). It usually contains 58 items (some researches use less). Thirty items represent basic values - potentially desirable end states in noun form, the rest are instrumental values - potentially desirable ways of acting in adjective form (similarly like in Rokeach's system). Later Schwartz created the second system as an alternative to SVS. It is called PVQ (Portrait Values Questionnaire). It contains 40 descriptions of a person (Schwartz 2012). These portraits describe a person's goals, aspirations or wishes which serve as an indicator of importance of researched values.

Values influence how the person sees himself/herself as well as how he/she perceives others.

Currently very discussed issue of immigration causes a lot of changes in society. According to Scott Blinder (2015) specific sub-sets of immigrants generate different public reactions. As our country has very little to almost no experience with immigrants, public opinion is based on emotions that vary from compassion on one hand to fear and hostility on the other. German Institute for the Study of Labor divides countries into three types according to nature of experiences they have with immigration (Bauer, Lofstrom & Zimmermann 2000). One group consists of traditional immigration countries like USA, Canada or Australia, for which immigration was essential for their founding. The second type are European countries such as UK or France with post-colonial immigration or countries as Germany with active labor recruitment. The third type are European countries which just recently transformed from emigration to immigration such as Ireland or Italy. Slovakia, the country in which the following research was carried out, belongs to the third group of countries. For immigrants from the third world and refugees from war zones it does not belong to the countries of the first choice. As it is not even on the route from the east to the west the wave of immigrants has not hit the country yet. Despite that fact, media constantly bring this issue up because with upcoming parliamentary elections it became very hot. Therefore we see the importance of research in field of values and immigration attitude context. Discovering which values lead to seeing immigration as a threat and which values build the insight of cultural enhancement can help with planning communication campaigns aimed at attitude change.

### **3 METHODS**

The research that is the base for this paper was carried out at the end of 2015 among students of Faculty of Commerce at University of Economics in Bratislava, Slovakia. The standardised questionnaire was used to obtain data from 199 students.

The questionnaire was split into two parts. In the first part we used Schwartz's PVQ, the second part investigated opinions and attitudes towards different life issues. The content of the questionnaire was inspired by several surveys carried out by European Commission, especially Standard Eurobarometer 83, Special Eurobarometer 432 Europeans' Attitudes Towards Security, Flash Eurobarometer 408 European Youth, as well as European Social Survey 7.

## 4 RESULTS

### 4.1 Rank of Values

At first we analysed the PVQ test values. We calculated the average score on the 6-point scale - the higher the score, the more prepared the individual is to accept the value.

Table 1 shows the average scores of the values as well as their order. We used t-test to determine whether the differences in average scores are significant. The results showed that there are no significant differences between the first three values in their rank

The next value "Achievement" has average score significantly different from the "Self direction" but not different from Benevolence and Hedonism and therefore in the Figure 1 it overlaps the first three.

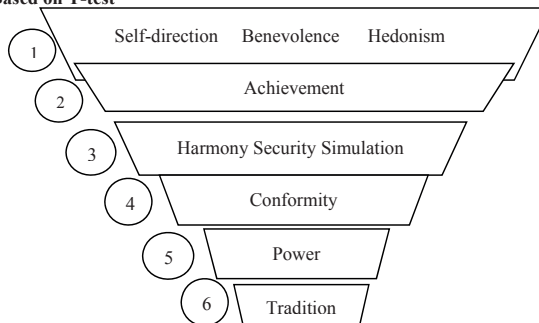
**Tab. 1: Averages of Schwartz's Values**

	<i>Value</i>	<i>Mean</i>
1.	Self-direction	4,54
2.	Benevolence	4,49
3.	Hedonism	4,45
4.	Achievement	4,36
5.	Harmony	4,15
6.	Security	4,13
7.	Stimulation	4,06
8.	Conformity	3,80
9.	Power	3,46
10.	Tradition	2,93

Source: Authors' research results

The next in the rank are Harmony, Security and Stimulation with insignificant differences. Differences between the rest values are significant. All ranks based on t-test are shown in Figure 1.

**Fig. 1: Rank of Values Based on T-test**



Source: Authors' research results

According to the results the most important values for young people are Self-direction, Benevolence and Hedonism and the least important are Tradition, Power and Conformity.

#### 4.2 Anxiety Tendency

To measure the anxiety tendency we used a set of scales that determined the overall life satisfaction, expectations, future perspectives and anxiety about future. The set measuring anxiety tendencies had sufficient internal consistency measured by Cronbach's alpha (Alpha = ,813)

The researched sample showed very little life anxiety. According to the results the respondents were rather satisfied, optimistic and with high self-esteem. For example only 9 % of the sample showed pessimistic tendencies, and less than 6% showed some to overall dissatisfaction with life. The students were even quite confident, that they will find the job after finishing their studies (Tables 2, 3, 4).

**Tab. 2: Satisfaction with the life they lead**

	%
Very satisfied	12,1
Satisfied	57,8
Fairly satisfied	24,6
Fairly not satisfied	4,0
Not satisfied	1,0
Not at all satisfied	0,5

Source: Authors' research results

**Tab. 3: Expectations for the future**

	%
Very optimistic	17,1
Optimistic	41,2
Fairly optimistic	28,1
Fairly pessimistic	6,0
Pessimistic	1,5
Very pessimistic	1,5
Don't know	4,5

Source: Authors' research results

**Tab. 4: Confidence about finding a job after finishing school**

	%
Very confident	52,3
Fairly confident	33,2
Not confident at all	14,1
I am not going to look for a job	0,5

Source: Authors' research results

As the anxiety tendencies in the sample were quite low, measuring correlations (using Pearson correlation coefficient) showed no correlations between anxiety tendency and openness to immigration.



### 4.3 Attitudes Towards Immigration

Can I be opened? It is the question all the people in developed countries ask themselves when the immigration issue is on the table. Some people see openness of the country towards immigrants as natural and basic human reaction. Some see immigration as a concern, burden for economy, cultural and security threat. To find out which of the previous feelings do young people have, we first asked what are their most important concerns about their security. The results are shown in Table 5. As the most important concern for the future they see corruption (61,3%), probably as it has been the number one public topic in Slovakia for years. The second most threatening issue to young people seems to be illegal immigration, followed by economic and financial crises and terrorism – all three much discussed topics in media as well as in private conversations. Interestingly the least worrying issues are environmental issues, nuclear disasters and cybercrime.

**Tab. 5: The most important security concerns**

	%
Corruption	61,3
Illegal immigration	48,7
Economic and financial crises	48,2
Terrorism	41,7
Religious extremism	37,7
Poverty	37,2
War	34,7
Insecurity of the external borders	25,1
Natural disasters	21,1
Organised crime	20,6
Environmental issues or climate change	16,6
Nuclear disasters	12,6
Cybercrime	8,5

Source: Authors' research results

As it is apparent from the table above, the illegal immigration ranks among the top security concerns of young people. But how do they perceive immigration if it is legal? What if state allowed these people to live among us? The question we asked was, if the state should allow people from other countries and people of other races to immigrate to Slovakia and if so, than how many? The aim of the question was to measure the extent of openness of young people towards immigration. The Table 6 shows that the openness to immigration depends on the origin of the immigrant. The first thing that is notable from the results is that young people are rather against immigration, because according to the results only little more than one third of respondents (37,5 %) is willing to accept many immigrants from the closest and “last harming group” - people from richer countries of Europe and almost one fifth of the sample (18.2%)

thinks we should forbid people from poorer countries outside Europe to come and live among us.

**Tab. 6: Extent to which Slovakia should accept immigrants**

<i>How many immigrants should Slovakia allow to enter the state?</i>	MANY	SOME	A FEW	NONE
Same race or ethnic group	43,2	40,2	13,6	2,9
Different race or ethnic group	10,6	44,2	33,2	12,1
From the richer countries in Europe	37,5	41,5	16,8	4,2
From the poorer countries in Europe	16,7	45,9	30,2	7,1
From the richer countries outside Europe	23,0	43,1	25,5	8,4
From the poorer countries outside Europe	10,7	32,3	38,8	18,2

Source: Authors' research results

The results show that willingness to accept people from other countries is dependent on the race or ethnic group, type of the country (European, non-European) and the economic situation of the country of origin.

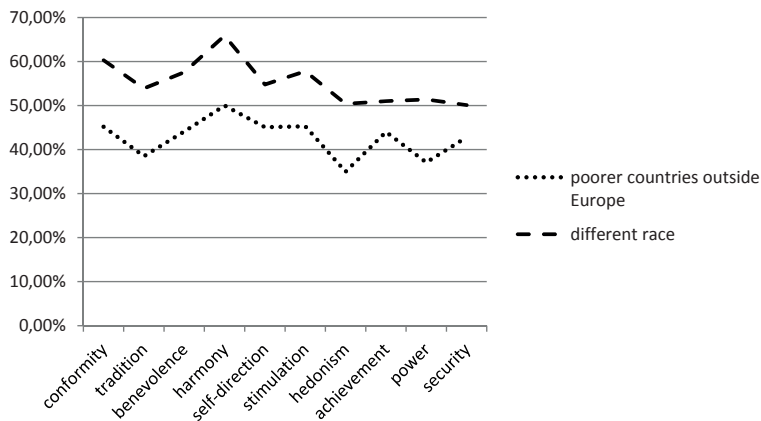
#### **4.4 Values and Attitudes Towards Immigration**

As we found out that young people are rather optimistic and satisfied in life but on the other hand slightly against immigration, we researched whether there are differences in extent to which immigration is acceptable to them based on their most prevailing life value. As the last welcome are, according to the results, immigrants from poorer countries outside Europe and people of different race, we tested these two scales with clusters of students characterized by their dominant value. We created 10 value clusters with young people (if an individual had more dominant values, he/she became part of more clusters). Then we computed the percentage of the cluster that was opened to accepting many or some of the immigrants from poorer country outside of Europe or of other race. Figure 2 shows the results.

When researching the willingness to accept immigrants depending on the dominant value of the respondents we found out that students with prevailing value Harmony are the most opened towards both groups of immigrants. Clusters of respondents characterized by Conformity and Stimulation can be as well considered as opened. The least opened seem to be young people that see as the most important values Hedonism and Power.

Larger difference in perception of people coming from poorer countries outside Europe and people of different race is typical for segments with dominant values Self-direction, Achievement and Security. The willingness to accept people from poorer countries outside Europe is far lower compared to openness towards people of other race. With other clusters the willingness is also lower for this segment of non-European poorer immigrants, but the difference is not that large.

Fig. 2: Values and willingness to accept immigrants



Source: Authors’ research results

We also researched if the perception of overall impact of immigration on society (positive, negative) is related to the dominant value of the respondent. Testing the results with Kruskal – Wallis test we discovered significance only among clusters of values Conformity, Achievement and Security. Young people that are characterized by values Conformity and Achievement see the economic impacts of immigration on the country more negatively than others. Among Conformity cluster it is likewise with perceiving the cultural benefits. The cluster with dominant Security is more pessimistic than others when evaluating the economic impact of immigration and sees larger possibility of loss of jobs due to immigration.

5 CONCLUSION

Results of the research show that values do impact the attitudes towards immigration. Although young people feel mostly satisfied and are optimistic they seem to more likely support the immigration regulation, as illegal immigration is the second most important security threat to them. They see the impact of immigration rather negatively. They do not oppose immigration as a whole but they distinguish between different countries and origins and are most closed towards people from other race and poorer non-European countries. When approaching the segment of young people with a communication that has a goal to change their rather negative attitude towards the immigration issue, the campaign should directly address and properly handle the value Hedonism as it belongs to very important and those that are represented by this value oppose immigration the most.

## ACKNOWLEDGEMENT

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# Using Social Media Communication as a Marketing Strategy to Generate Corporate Reputation: A Study in the Telecommunication Industry

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**Abstract:** Changes that took place thanks to globalization and the internet have affected both businesses and consumers. In order to succeed in a high competitive market environment, businesses are constantly developing new strategies in order to satisfy consumers. Consumers on the other hand are more likely to choose the businesses that produce goods and services of high quality, take in consideration their requests, deliver values and establish an interactive communications with their consumers through social media platforms. With the widespread use of the internet, establishing an interactive communication with consumers has become critical. The establishment of interactive communication is possible mainly through social media platforms and therefore, businesses should produce strategies that aim to manage, enhance and protect corporate reputation, which is also affected by the use of social media. This study intends to demonstrate the importance of managing corporate reputation through usage of social media platforms. According to the results of this study there are four main dimensions of social media that affect corporate reputation. Interaction and utility, Evaluation, Information and Contradiction does affect reputation individually. According to this study; the most important dimensions affecting corporate reputation are Interaction and utility and Evaluation. Moreover the effect of social media on corporate reputation according to analysis conducted in this study is very significant and high. This study revealed that effect of social media on corporate reputation is significant and has its importance in managing online corporate reputation.

**Keywords:** Interactive communication, Corporate Reputation, Social Media.

**JEL Classification codes:** M000, M140, M390.

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## 1 INTRODUCTION

According to Charles Fombrun, a well-known authority in publications related to corporate reputation concept, reputation is a very strong dimension in gaining competitive advantage. Companies can gain competitive advantage skills through: (i) investments in infrastructure, (ii) reducing costs, (iii) attracting the most skilled employees, and (iv) strong reputation (Fombrun, 2003). Martin and Hetrick (2006) and Gaines-Ross (2008,p. 6) also claim that strong reputation together with a strong brand is essential in differentiating a company from its competitors. Moreover, reputation is a distinctive feature when comparison among

companies with similar activity occurs (Watson and Kitchen 2008, p. 122). Institutions are expected to take seriously in consideration every critique coming from outside even if they find it unjustified or unfair (Davies et al. 2003, p. 73). Wide usage of internet is without doubt among the most important reasons why nowadays has become at the same time crucial and difficult to protect reputation. Corporations are expected to be coherent in following every single detail related to them on the internet, and provide appropriate answers especially to protect themselves from unpleasant situations (Weinberg 2009, p. 75-76). The rise of social media platforms usage has given power to customers and they can 7/24 comment on companies' pages, and share photos or other content related to them. Customers are not limited only with evaluating companies but at the same time share their opinions which can have either positive or negative effect on companies (Beal and Strauss 2008, p.5). This article aims to show the connection between social media and corporate reputation. Considering the lack of studies on the two topics combined together, this article aims to furthermore contribute to the literature. Moreover it has been estimated since the beginning that social media has a positive effect on corporate reputation. This research is using the data based on survey conducted on GSM operator subscribers in the city of Konya, Turkey.

Companies have to take in consideration social media platforms while formulating their communication strategies. Through investments in social media platforms companies can establish interactive communication with their customers and can manage their overall reputation by either enhancing or protecting it. The main aim of the study is to show the impact of social media on corporate reputation. The main hypothesis of the study is that social media has a positive effect on corporate reputation.

## **2 CORPORATE REPUTATION AND SOCIAL MEDIA PLATFORMS: AN OVERVIEW**

### **2.1 Corporate Reputation**

Studies and researches on corporate reputation became popular especially after 1995. Reputation Institute which was founded in 1997 in New York and aims bringing together academics and businesses, is an influential institution known for its works on reputation concept, and development of metrics used to measure and monitor reputation (Reputation Institute 2014a). It can be said that reputation studies increased due to Reputation Institute founded by Charles Fombrun (Martin and Hetrick 2006, p 23, 70). There are some concepts that sound similar but are different from corporate reputation. While some researchers find similarities between 'reputation' and 'image' (Gatewood et al. 1993), some researchers say

that 'image' and 'reputation' are very similar but different. According to another view reputation is the combination of image and identity (Martin and Hetrick 2006, p. 65). According to Gray and Balmer (1998) corporate identity reflects the realistic situation of the company. Corporate identity, while also representing the realistic situation of the company, it is also a path on which corporate management and employees should proceed (Fombrun 1996, p.36). Corporate identity which can be defined as the way how a company represents itself, and which contains the visual elements (logo, font, colors) of an institution (Dalton and Croft 2003, p. 11) contains special features which aid distinguishing an institution from another (Nguyen 2006, p.63). On the other hand corporate image is the perception that people have of a certain company when they hear its name or see its logo (Davies et al. 2003, p. 61). For this paper, corporate reputation means the perception in the mind of people based on the company's activities. With the raising importance of social media platforms, corporate reputation has become among the most important strategic issues that have to be taken in consideration from the companies. Companies monitor regularly social media platforms in order to be updated while managing their reputation and using social media platforms to shape it (Klososky 2011, p. 81-82).

## **2.2 Corporate Reputation Dimensions**

Corporate reputation is composed of several variables or dimensions. Among these we could mention financial and market data, media reports, and corporate social responsibility (Fombrun and Shanley 1990). Marken (2002) in his study has taken in consideration dimensions such as products and services, and the ability of attracting skilled employees (Marken 2002, p. 22). Reputation Institute on the other hand added emotional appeal and governance (Reputation Institute 2014b). Dalton and Croft (2003, p. 10) mentioned brand value, customer service satisfaction, corporate policy and organizational structure, competitiveness, vision, leadership, CEO, employee satisfaction and loyalty, and cooperation and alliances. A survey conducted worldwide classified the companies' reputation as average, damaged and good. A company considered to have an average reputation is chosen by 41% of customers. Evidences show that only 16% of the customers are considering buying the products of a company having a damaged reputation. On the other hand, 64% of the customers are considering buying products and services from companies having top reputation (Nielsen 2012).

In specific case of Turkey, according to a study conducted by Capital magazine in Turkey "The most Admired Companies of Turkey" revealed the ability of some successful companies

in establishing a relationship based on emotional feelings. According to this study Coca-Cola, Ülker, and Microsoft are successful in satisfying their customers. Vodafone, Coca-Cola, and Turkcell are considered being successful in communicating with customers and using social media platforms (Ayvaci 2013, p. 90). Companies try to provide to their customers not only products and services but also unique experiences. For instance, Coca-Cola and McDonald's offer similar concepts all over the world (Kunde 2002, p. 41). Samsung's success also comes from selling products of high quality thus meeting the needs and expectations of their customers (Grant 2006, p. 16). Starbucks is another company offering not only products (coffee) but also experience to its customers. British Airways and Virgin Atlantic too emphasize the importance of offering the flying experience to their customers (Dalton and Croft 2003, p.18). Together with offering products and services of high quality companies should find striking ways to promote them. For instance Coca-Cola, Wal-Mart, and Boeing are good examples of companies performing successful marketing activities (Fombrun 1996, p. 24). Another point to be considered is the product life cycle of products. For instance in automobile industry the product life cycle is estimated to be 2-3 years. In home appliances this period is shorter and is estimated to be 1 year (Erdoğan 2013, p. 134a). "The Most Admired Companies of Turkey" study revealed that Tüpraş, Ülker, and Microsoft were the most prominent companies when considering the quality of products and services (Ayvaci 2013, p. 90). Furthermore, vision and leadership are another important dimension of reputation. Vision which is considered to be the road map of success for a company mainly is designed by management but is crucial to be understood and implemented by employees (Goetsch and Davis 2000, p. 82). At the same time, importance of leadership and CEO in the success of a company is obvious. In their study "The Best-Performing CEOs in the World" Hansen et al. (2013) identified some of the most influential CEOs lately. Table below shows that Steve Jobs, CEO of Apple Inc., who passed away, is on the top of the list with his performance. Providing a comfortable environment for employees is crucial too. Companies which provide a comfortable working place to their employees make an important contribution to their reputation capital (Fombrun 1996, p. 116). Given that the period of changing the workplace has been reduced to three years (Erdoğan 2013b, p. 197) is a clear fact that shows the importance of having a good workplace environment that satisfies employees. Workplace also contributes positively in increasing teamwork skills. "The Most Admired Companies of Turkey" study revealed that success of companies such as Coca-Cola and Arçelik is strongly related the teamwork capability of their employees (Ayvaci 2013, p. 84, 86, 88). Nowadays companies are expected to behave in a more responsible way.



Companies that are conscious of their social responsibility are more likely to attract the most skilled workforce, and at the same time provide motivation to their current employees (Gaines-Ross 2008, p. 159). Social responsibility altogether with financial performance is critical in shaping corporate reputation. The study conducted by Capital Magazine for identifying Turkey's most admired companies revealed that Vodafone, Koç Holding and Eczacıbaşı seriously take in consideration important environmental issues (Ayvaci 2013, p.88). Companies check regularly other performance indicators such as market share, and unsatisfied customer rate (Best 2000, p. 28-29). Measuring corporate reputation is crucial in determining the dimensions that have impact. In order to make more concrete this concept and to measure it thus providing data for companies, many studies have been conducted. Bebbington et al (2008, p. 36) provided a detailed summary on corporate reputation conceptualizations. The study conducted by Reputation Institute which was taken as the core conceptualization in developing this paper was based on criteria such as: financial, performance, vision and leadership, social responsibility, workplace environment, product and services, and emotional appeal (Bebbington et al. 2008, p. 36).

### **2.3 Social Media**

Social media can be describes as online platforms which provide interactive communication for individuals (O'Leary et al. 2011, p. 2; Orsburn 2012, p. 3). Kuhlman (2012) described social as a digital content generated by masses using communication platforms (Facebook, Twitter etc.) (Kuhlmann 2012, p. 8). By using social media platforms individuals establish an interactive communication and are able to share their views with each other (Zhao et al. 2011, p. 1; Safko 2012, p. 5; Sherman and Smith 2013, p.20). Companies have become more careful and seriously take in consideration social media platforms since they have become more powerful than other communication channel, and are being used widely to deliver the message to wide audiences. Companies are using web sites, blogs, Facebook pages, Twitter accounts, You Tube and other social media platforms to communicate their messages (Gaines-Ross 2008, p. 119; R. Jamison and S. Jamison 2011, p. 105; Reinders and Freijssen 2012, p. 41). With the raise of technological facilities there have been many changes in the social life of youth (Watkins 2009, p. 47). Customers can easily reach plenty of information by using social media platforms (Weinberg 2009, p.6). On the other hand companies monitor the behavior of their audience in social media platforms in order to be close to customers (Orsburn 2012, p. 79). Another important topic is the degree of innovation companies offer in order to survive in this highly competitive market. The list of Fortune 500 is now filled with companies suitable

to the new rules of competition such as Amazon.com, Google, e Bay; thus replacing companies such as Ace Hardware and Polaroid (Halligan and Shah 2010, p. 200). Social media platforms which are an important communication platform and marketing (Funk 2011, p. 18) have deeply affected communication strategy of the companies since many people are using them consistently (Scott and Jacka 2011, p. 3). The number of social media platforms is showing a raising trend even though there are more than 300 platforms (Sweeney and Craig 2011, p.111). Companies should construct a serious social media strategy in order to identify the platforms used by their customer target, to stay updated with the last industry insights, to monitor what others comment about them, and to prevent any uncomfortable situation that can influence negatively on their overall reputation (Parker 2010, p. 8). Actually social media platforms are more effective than conventional marketing channels to promote new products and services (McHale 2012, p. 2). Usage of social media platforms in marketing activities and from important units (ex. human resources department) clearly shows their importance. Burson-Masteller, an expert company in digital reputation and marketing management, in one study gave some interesting findings regarding social media platforms (as cited in Carter 2012, p. 10-11):

- 79% of the companies listed in Fortune 500 use social media platforms (Twitter, Facebook, YouTube, corporate blogs etc.) to communicate with their shareholders and customers.
- 80% of the companies listed in Fortune 500 benefit from LinkedIn when recruiting new employees.

For instance, companies such as Ernst &Young are among big global enterprises which benefit from social media platforms to reach skilled employees (Turner and Shah 2011, p. 87). Another important fact regarding social media is the content shared by users. Contents with unpleasant situations shared via Facebook or My Space has been the reason why many companies have not hired an individual (Qualman 2009, p. 33). Social media platforms, thanks to their characteristics (ex. enhancing the impact of events) deeply can affect the world (Orsburn 2012, p. 7), and have caused a radical change in business practices (E. Brown 2010, p. 1). Since social media medium has the world's bigger population companies should benefit (Funk 2011, p. 2) but never should underestimate the establishment of connection with individuals more important than brand benefits, due to the fact that social media platforms are made for humans and not for companies (Tuten 2008, p. 31). The main advantage of social media is connecting people with each other (Hansen et al. 2011, p. 12). On the other hand

46% of customers benefit from information on social media platforms previous to their purchase decisions (Nielsen August 2012, p. 6). By using social media platform companies aim to gain some important benefits as follows (Scott and Jacka 2011, p. 36):

- Raising brand awareness and creating positive perception
- Identifying and hiring talented employees
- Raising customer satisfaction and customer loyalty
- Gaining customer views during innovation and product development processes

Dell Computer made around \$3 million sales by using its @DellOutlet Twitter account. Sony used Twitter to announce a campaign consisting of discount 10% on Sony Vaio for its followers only. At the end Sony made \$1,5 million sales (Funk 2011, p. 6). There are many critics toward internet and social media. For instance internet is very big source of information but it has been criticized for the big amount of wrong and fake information found in it (Cross 2014, p. 135), or low reliability of this information (De Jong 2014, p.50). Negative effect of social media tools on individuals' personalities is another concern. Communication taking place in social media platforms is not real and can be considered as fake. People behave different from their real personality in social media platforms and this situation can be source of identity crisis (Lovink 2011, p. 20, 38).

### **2.3.2 Social Media Tools**

Social media a wide topic in literature and there can be found different classifications of social media tools. Many researchers have contributed with their works in providing proper classification of social media tools. Considering the usage of social media tools in order to define the most coherent classification this research implemented the following classification based on many researchers and their works (Zarella 2010, p. 3; O'leary 2011, p. Sterne 2010; Kaplan and Haenlein, 2010; Parker 2010): Social networks, micro blogs multimedia sharing sites, blogs, social bookmarking sites, virtual worlds and social news sites, other social media platforms. Some of common characteristics of social networks are establishing interactive communication through connections, sharing content, and sending direct message (Funk 2011, p. 8; Zarella, 2010, p. 61). Companies use microblogs to stay in touch with their customers without spending much time (Parker 2010, p. 53; Halligan and Shah 2010, p. 103). Especially when crisis and hard situations occur, micro blogs are very useful. For instance, during an oil spill accident, British Petroleum used Twitter to provide continuous information to its followers (Funk 2011, p. 45). Measuring and monitoring social media is crucial too. For

instance there are many different metrics used for this. Metrics are important in measuring marketing activities including monitoring social media platforms. Metrics such as hash tags (#) key words (Crowe 2012, p. 105) and other metrics developed to monitor web pages provide information and important details for companies (R. Jamison and S. Jamison 2011, p. 137). To measure and monitor talks in online medium many metrics by companies such as BuzzMetrics (Nielsen), New Media Strategies (Meredith), Intelliseek (Nielsen), Cymfony (TNS Media Intelligence) have been developed. Many authors (Evans 2008, p. 29; Reece 2010, p. 243-244; Brito 2012, p. 113-119; Sherman and Smith 2013, p. 81-82; R. Brown 2009, p. 136-138; Weinberg 2009, p.40, 43; Safko 2010, p. 577; Carter 2012, p. 179-180; Chaney 2009, p. 218, Scott and Jacka 2011, p.161-170) in their works provide detailed information on metrics and scales used to monitor and measure social media.

### **3 DATA COLLECTION, METHODOLOGY AND DATA ANALYSIS**

The paper has been written based on application of the quantitative methodology, specifically through conduct of Survey. The Survey was conducted in the period of April – July 2014 in the metropolitan city of Konya, Turkey. The sample was taken out of Konya residents, specifically targeting the people walking in the main square of Konya. The sample has been chosen randomly and is composed of subscribers using at least one GSM operator. There were no preferences attached to the selection of the people. Subjects were chosen randomly who ever accepted to attend the Survey. 500 questionnaires were distributed, out of which 433 people accepted to be included in the Survey.

Selection of survey methodology is due to the fact that the primary aim of the paper was to measure the “perception” of the audience as regards usage of social media and its effect on corporate reputation.

The questionnaires included questions as regards demographics and internet usage, including social media usage as well as questions on corporate reputation. For corporate reputation dimensions and social media usage, Lickert scale was applied.

403 out of 433 questionnaires were included in the analysis for the needs of this paper. For the analysis of the data, SPSS 20 was used. In the analysis of the data, descriptive, regression and factor analysis was done.

Social media was the independent variable whereas corporate reputation was the dependent variable. To construct the survey descriptive questions were used. Likert scale was used and corporate reputation and social media dimensions were represented by three expressions. Below are given the dimensions representing corporate reputation and social media.

Corporate reputation dimensions are as follows: emotional appeal, products and services, vision and leadership, workplace, social responsibility and financial performance.

#### 4 FINDINGS

The questionnaire was composed of two parts. The first part was composed of demographic and descriptive questions regarding internet and social media usage. The second part was composed of questions aiming to measure corporate reputation and social media usage.

**Tab. 1: Demographic results of the study**

Demographics	% and characteristic	% and characteristic	% and characteristic	% and characteristic	% and characteristic
<b>Gender</b>	61.8 Male	38.2 Female	-	-	-
<b>Age</b>	51.9 Under 25	18.4 26-35	14.9 36-45	13.4 46-55	1.5 Over 65
<b>Marital Status</b>	43.2 Married	56.8 Single	-	-	-
<b>Education</b>	3.7 Elementary	15.1 High School	71.5 University	9.7 MBA	-
<b>Occupation</b>	44.8 Student	27.3 Public servant	15.6 Private Sector	12.2 Others	-
<b>Internet Usage</b>	21.6 Daily: Less than 1 hr	41.4 Daily: 1 hr – 2 hr	22.8 Daily: 2 hr – 4 hr	Daily: Less than 1 hr	-

This study revealed that internet penetration is done mostly by mobile phone. This study found that 15.4% of the participants use Desktop to access internet. 44.2% of the respondents use Laptops. While only 5.7% of respondents uses tablet to access internet, 75.5% of the participants uses smart phones.

Internet mainly is used for social purposes by 47.9% of respondents. The study stated that 46.2% use internet for research purposes. While 50.1% of the respondents use internet for entertainment, 41.2% use internet for communication purposes.

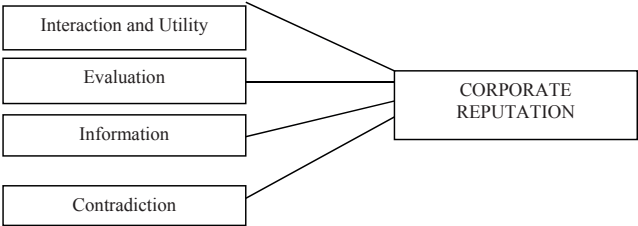
41.2% of respondents said that they followed companies in social media platforms. It is therefore crucial for companies to organize the content their share on social media platforms due to the fact that a high number of people is following them on social media platforms. Moreover this study revealed that Facebook is among the most used social media platforms. 80.9% of the participants use Facebook. 34.5% use Twitter. LinkedIn is used only by 5.2% of the respondents. You Tube on the other hand is used by 60.3% of the participants. The popularity of Google+ in Turkey is obvious and 67% of the participants in this study use it. Instagram is used by 22.1% of the audience, especially by youth. Foursquare also, a location based service (LBS) is used by 11.7 % of the respondents.

Another interesting fact is that customers get informed mainly by SMS from GSM operators regarding their offers and campaigns. While 70.3% of respondents get notified by SMS, 27% are being updated via social media platforms and 30.8% by friends.

**Tab. 2: Social media usage and the effect on corporate reputation**

SM Dimension	R Square
Interaction and Utility	0.343
Evaluation	0.426
Information	0.176
Contradiction	0.11

**Fig 1: Proposed Model**



Corporate reputation concept obviously does not have a single meaning to audience. 57.1% stated that corporate reputation is the way how people perceive an organization. Moreover, to 53.8% of the participants corporate reputation meant the trust of public towards an organization. Reliability of the scale on the other hand is very high. Cronbach's Alpha value of the 44 items is 0.965. To measure the effect of social media (Atadil 2010) on corporate reputation (Chun 2005; Hillenbrand & Money 2007) a questionnaire of 44 items divided in two scales (corporate reputation and social media usage) was built. Corporate reputation was composed of six dimensions; emotional appeal, products and services, workplace environment, vision and leadership, social responsibility, and financial performance. On the other hand social media usage was composed of dimensions such as: getting information, sharing content, trust, utilitarian function, oppositeness, usage, corporate evaluation, and general evaluation. Factor analysis showed that corporate reputation is explained by 5 dimensions. Emotional appeal altogether with products and services was merged together at the end of analysis, and this can be seen as the linkage between the trust towards a corporate and the quality of products and services. Regression analysis on the other hand showed that social media usage can be divided into four dimensions. These dimensions are named as follows: Interaction and utility, evaluation, information and contradiction in usage of social media platforms. The effect of each social media usage dimension alone in the corporate

reputation is given Table 2. After the regression analysis, the proposed model is given in Figure 1.

The table shows the effect of each dimension of social media usage individually on corporate reputation.

**Tab. 3: Effect of Social media usage on corporate reputation, 4 dimensions**

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.706	.236		2.991	.003
1 MA	.263	.065	.257	4.078	.000
MB	.508	.058	.507	8.695	.000
<b>MC</b>	<b>-.089</b>	<b>.055</b>	<b>-.087</b>	<b>-1.632</b>	<b>.103</b>
<b>MD</b>	<b>.101</b>	<b>.055</b>	<b>.069</b>	<b>1.841</b>	<b>.066</b>

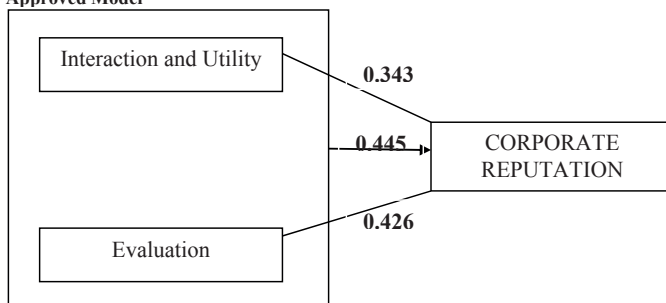
a. Dependent Variable: K1K20

According to the results of Table 3, Information and Evaluation were excluded of the final approved model.

**Tab. 4: Regression analysis: Effect of Social media usage on corporate reputation**

Coefficients <sup>a</sup>					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	.997	.128		7.795	.000
1 MA	.219	.058	.214	3.736	<b>.000</b>
MB	.491	.057	.490	8.582	<b>.000</b>

**Fig. 2: Approved Model**



**Tab. 5: Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.667 <sup>a</sup>	<b>.445</b>	.442	.65113	.445	160.844	2	401	.000

a. Predictors: (Constant), MB, MA

According to the results above the effect of social media on corporate reputation mainly is defined by two dimensions (Interaction and Utility, Evaluation).

## 5 CONCLUSION

The effect of social media nowadays is obvious. Many companies find it crucial to be present in social media platforms. That is why social media marketing has become a core concept in the communication strategy of organizations. Moreover, managing corporate reputation in online medium is essential due to the possibility to establish interactive communication with the audience.

This study revealed the importance of social media and its effect on corporate reputation. Managing online corporate reputation is important considering the usage of social media all over the world. This study showed that social media platforms are important and should be considered by organizations as an important foot of managing reputation. According to the results of this study the most important aspects of social media usage affecting corporate reputation are Interaction and Utility altogether with Evaluation.

The main finding of this study is the important and significant effect that social media has on corporate reputation. Considering that there is very narrow amount of studies on the topic, this article is estimated to have done an important collaboration to the literature.

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