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

18th International Joint Conference

CENTRAL AND EASTERN EUROPE IN THE CHANGING BUSINESS ENVIRONMENT

Proceedings

Bratislava, Slovakia and Prague, Czech Republic

May 25, 2018

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Proceedings of 18th International Joint Conference

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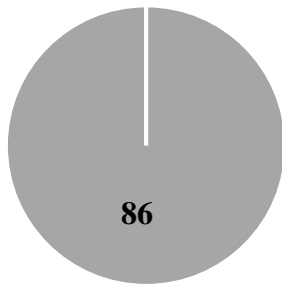
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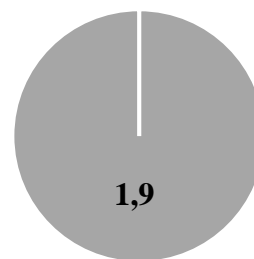
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The One Belt One Road project – an Instrument to Globalize the World Economy the Chinese Way
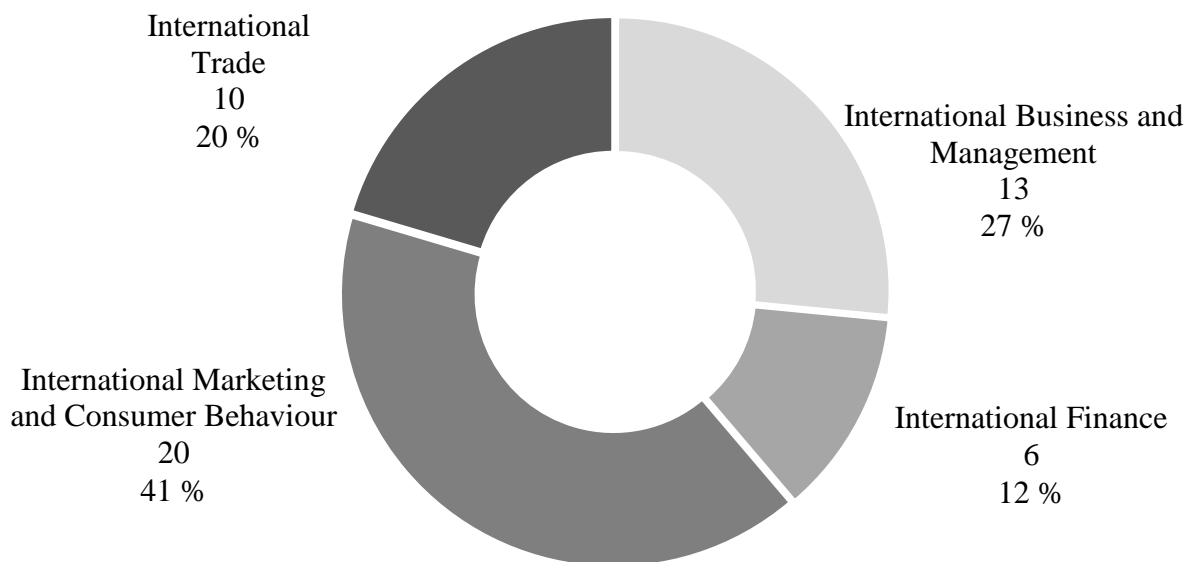
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Abstract: China is promoting its own era of globalization. One of the manifestations is the so-called "One Belt One Road" (OBOR) initiative that aims to change international shipping and logistics between Asia and other continents and to strengthen China's position in world markets. OBOR plans to build new transport channels, increase the capacity of the existing ones, generate cost savings, and simultaneously increase China's geopolitical influence. Successful overseas expansion of Chinese companies is expected. The rejection of the international agreements, namely the Trans-Pacific partnership (TPP) with Asian countries and the Transatlantic Trade and Investment Partnership (TTIP) with the EU by the US creates a new room for China's global expansion. The success of OBOR will depend on many factors, both global and regional. The paper aims to examine the fundamental components of the OBOR project and, on this basis, identify its possible development scenarios. Authors try to evaluate business opportunities and risks in terms of the strategic expectations of the EU and Chinese companies.

INTRODUCTION

Developments in the world economy are inadequate even in the period following the widespread financial crisis. Likewise, the economic progress of the world economy is more a result of ad hoc interventions to its functioning than systemic steps to help eliminate the risks that arise in this geopolitical space and affect its territorial components due to the process of globalization. Whether it is a mixture of demand-boosting policies (e.g. quantitative easing) or different macroeconomic interventions related to greater integration of production and sales capacities in developed market economies (DMEs) or increasing pressure on the world financial and capital markets, most of these interventions in the final form did not help resolve the root causes of the first global financial crisis of the 21st century, which started in 2007. Ultimately, DMEs should, in particular, bring about the restoration of their international competitiveness and the revitalization of their positions on the world markets which they have been losing in favor of the South Asian economies for a long time. China, Singapore, and the Greater China Region (China, Hong Kong, Taiwan and Macau) are holding the top spots when it comes to the achieved GDP growth rates, with their positions in the global competitiveness rankings also being relatively high. They are systematically expanding into more and more sophisticated production sectors, but they also activate the economic potential of the surrounding countries, which they support and include into their various long-term strategic plans. It is really a tragedy that neither the EU nor the US have so far not seen these far-reaching strategic steps taken by the Asian countries that have a major impact on the future of the world economy as

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a significant risk, which is result of them being mainly concerned with tackling various local economic or socio-political conflicts.

The post-crisis period, however, confirms that the Chinese economy will, in the short term, end its internal industrialization phase and exhaust the classical comparative advantages that have long been available. It will be able to strengthen its further economic growth and global influence only at the cost of promoting robust investment projects, the extent and intensity of which will depend largely on the success of structural shift towards the high technology production and, therefore, the exceptional value added that only needs a minimum of energy and materials. On the other hand, the expected enormous productivity gains will only make sense if the effective conditions for placing this production on world markets are safeguarded and, as counterweight, there will be an opportunity to draw on the comparative advantages of other entities in order to further strengthen its own economy (Fojtíková, 2016).

At the end of 2013, Chinese President Xi Jinping introduced a draft of the Silk Road Economic Belt and the 21st-Century Maritime Silk Road, currently known as "One Belt, One Road" (OBOR) and "Belt and Road Initiative" (BRI), which quickly gained extensive international economic and political support. Building up new transport routes and logistics should positively address the most important cause of instability in the Asian region, namely large variety in the level of development of individual regions as well as poorly developed mutual economic and political relations between Asian countries. The project is also thought of as "a new instrument of economic, political and cultural unification of all parts of Asia" (Xi Jinping, 2017). Its important mission is also to remove the gigantic economic disparities in the level of development of eastern parts compared to the Central and the Western China. Solving them is politically and economically vital for China (Yu, 2016). Participation in the project has already been confirmed by some 70 countries, including Belarus, Kazakhstan, Turkey, Thailand or Russia.

It should not be forgotten that the successful implementation of the OBOR project will not only strengthen China's Eurasian position, but growing number of countries linked to these new transport routes will be increasingly more interdependent with China's economy and internal political decisions of its leaders. This is likely be deepened by the consequences of the disruption of another project - the TPP - which the US government has seen as the main tool for reducing China's international influence and building a geostrategic alternative for countries in the sphere of its growing Asian influence (Tai, Tseng & Wei, 2016).

1 METHODOLOGY

The objective of the present paper is to highlight the most important aspects of the implementation of the OBOR project, its benefits and risks for the participating partners and to evaluate it provisionally as a factor affecting the world economy and international positions of the EU. At present, it is not yet possible for the most important economic parameters of a project to be more precisely quantified or evaluated, as it is being implemented gradually. The existence of reliable data on its impact on the most important economic indicators is minimal and its availability is very limited. Authors devoted to the longer-term research of the development of the Chinese economy and the importance of this project are aware of these facts and therefore focused mainly on the identification of its projected impacts and their coherence with the strategic interests of the European integration community. They gradually concentrate important partial findings from the process of implementing the entire project and try to compose them into a coherent whole. It should have a higher informative value and its objective interpretation could enable acquiring relevant knowledge. Bearing this in mind, the authors of this research paper used primarily the methods of analysis and international comparison and the supplementary the method of synthesis.

2 RESULTS AND DISCUSSION

The rapid economic growth and the steadily rising volume of exports, as well as import, position China as one of the most important countries in the world trade. In 1996, China (including Hong Kong) accounted for 3.3% of world trade, in 2008 for more than 7.1%, and in 2016 for almost 20% (World Bank, 2018). However, in the context of the global financial and economic crisis, world trade after 2009-2017 experienced considerable turbulence and, ultimately, a gradual decline in its volume, with all countries of the world being affected by globalization, but China came out best since its decline was significantly lower and delayed (UNCTAD, 2012). Its positive balances of trade with the US and the EU have continued to grow and have remained the drivers of the economy. However, J. Stiglitz (2005) pointed out that despite of this: "The gap between China and the advanced industrial countries remains large. But China's strong investment in education and the closer integration of China into the global economy has put China in a position to close this gap at a rate, perhaps even faster than it has been closing that gap in the past" (The Financial Times, 2005). This prominent expert probably overlooked the fact that already since 2012, the investments in sectors connected to high value-added manufacturing, in particular the education, science and research, are above the EU average and are growing further. He also failed to take into account the fact that the efficiency of these investments is very high, coupled with, among other things, the return of thousands of scientists and researchers from DMEs that conducted their studies abroad (e. g. in the US or Australia). Subsequently, these economies make a great use of the knowledge accumulated by their former expatriates to cultivate and sophisticate their own economies. In addition, unlike the EU and the US, Chinese students "crave" education and new knowledge, and in the spirit of neo-Confucian traditions, they use the acquired knowledge and experience very purposefully at home.

OBOR, initiated by China in 2013, is in line with the overall strategic objectives of this country and has a potential to boost competitiveness of numerous developing counties. Its geographic scope is illustrated in figure 1. The roadmap of OBOR underlines the five most important priorities. In general, these are:

- policy coordination (promoting intergovernmental cooperation),
- facilities connectivity (improving road, energy and information infrastructure),
- unimpeded trade (removing trade and investment barriers),
- financial integration (deepening of financial cooperation) expansion of bilateral currency swaps and settlements,
- establishment of new financial institutions) and people-to-people bonds (promotion of cultural and educational exchanges, enhancing cooperation on tourism and epidemic information). The initiative also includes strengthening environmental and energy cooperation (National Development and Reform Commission, 2015).

Despite the direction of Chinese strategies and policies towards achieving higher technological advancement in domestic production, as evidenced by the 13th Five-Year Plan for 2016-2020 and the "Made in China 2025" strategy, the country's progress towards economic growth based on quality (as opposed to the past, when the emphasis was placed mainly on the quantity of growth) and the higher sophistication of production as well as the whole economic structure of the country cannot be fully achieved within the set horizon (by 2020 or 2025). The change in economic orientation requires adaptation of production base deployed across the country, retraining of the current workforce as well as adaptation of the education system, especially in the secondary and tertiary education. Chinese leaders are currently aware of this "time pressure", as evidenced by the update of the strategy's goals, which was officially announced in early 2018 (Wei, H., 2018). Some economists point to the unattainability of the strategy over a given time horizon, and even predict its successful finalization as late as in 2049 (Ang, 2017).

Fig. 1 OBOR and its geographical scope
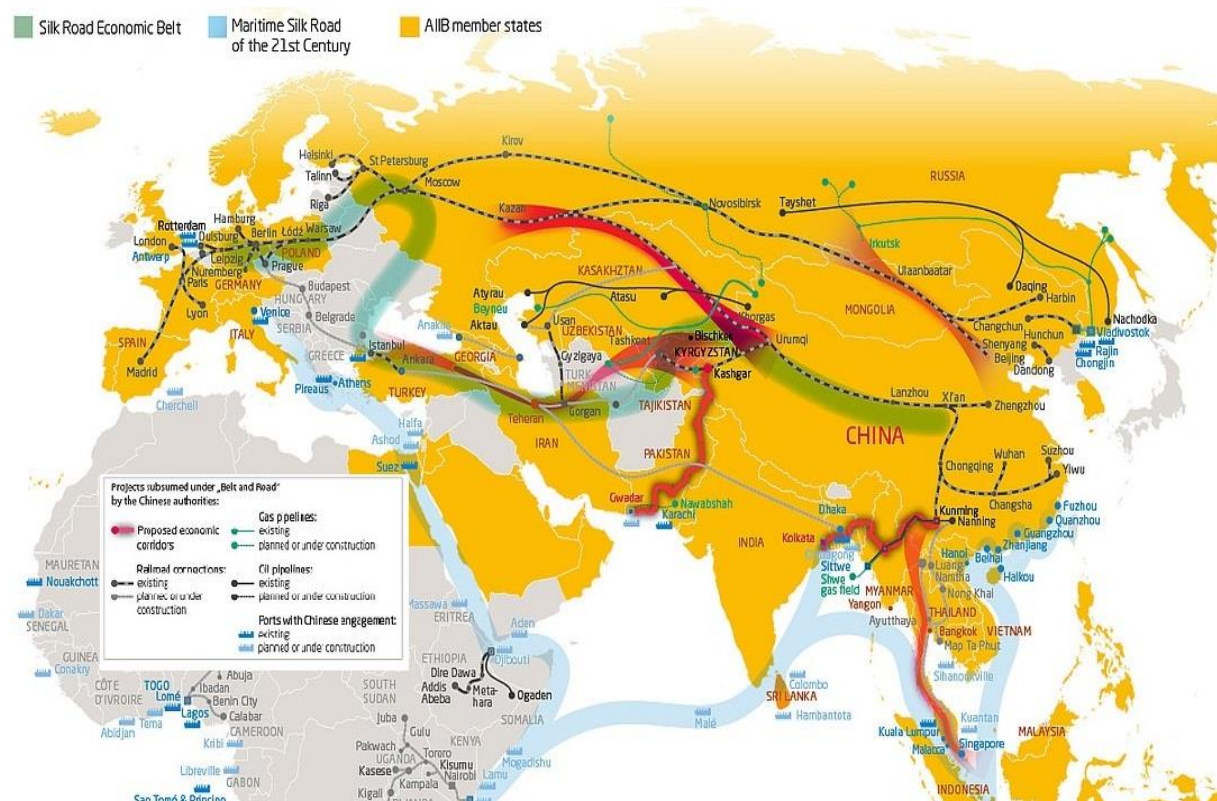
Source: The Mercator Institute for China Studies (MERICS)

However, Chinese leaders do not leave anything to chance, and the concurrent announcement of the OBOR and "Made in China 2025" strategies in 2013 must be seen in a strategic context. The OBOR strategy is actually aimed at solving the problems hampering the successful implementation of Made in China 2025 as well as addressing the structural problems of the Chinese economy as such. The process of structural shift launched by the "Made in China 2025" strategy faces problems of which the most serious are:

- economic differences between the various provinces of China (west vs. east, inland vs. coastal areas),
- the dominance of state-owned enterprises in the key sectors of the economy, causing overproduction that the domestic market is unable to absorb,
- decreasing foreign demand due to the continuing effects of the global financial crisis, which began in 2007/2008,
- labor shortages and the threat of rising unemployment caused by restructuring processes in this economy,
- environmental degradation associated with industrialization and the growth model of the economy based on quantity.

Indeed, the OBOR strategy, which is already partially implemented in some countries of the world economy, helps to eliminate the threats to the Chinese economy and has the potential to reduce the negative effects of structural changes brought about by shifting production towards higher added value, which is in line with the "Made in China 2025" strategy. OBOR allows China to "export" its overproduction created by the traditional processing sector (e.g. steel, cement and aluminum), while it also generates a long-term demand for other kinds of goods and services (Holslag, 2017).

It should be noted that OBOR currently only gains its momentum and takes in new participants. For example, at the end of 2017, Chinese officials announced the expansion of OBOR involving the Latin America and Caribbean (Xinhua, 2018) and since the beginning of 2018, China's strategic plans rely also on the creation of the so-called "Polar Silk Road" (Reuters, 2018). Enhancing the geographical reach of the initiative will enable China to increase its global economic and political influence and also diversify and expand its own export markets. It is also important to note that many participating countries are developing countries located in Asia and Africa that are experiencing dynamic economic growth. Building the infrastructure needed to develop mutual trade relations with China can, therefore, lead to an increase in demand for all kinds of Chinese goods in the future. The threat of rising unemployment caused by the increased sophistication of the Chinese economy can be reduced by the creation of job opportunities under the OBOR strategy, as it is currently involving an increasing number of landlocked Chinese provinces and cities, which are in the process of linking with other countries of the world economy via rail. In 2017, for example, a railway line from Zhengzhou (located in central China) to Hamburg, Germany, was extended to Munich. Since its launch in 2013, until the end of 2017, the route between Zhengzhou and Hamburg has been made about 500 times and has transported about 472,500 tons of cargo worth $ 4.92 billion. The transit time is about 12 days and, in addition to opportunities for Chinese producers, it also creates significant business opportunities for the European manufacturing sector (Xinhua, 2017). Linking the Chinese regions lagging in development to the global market has the potential to generate additional job opportunities, accelerate the economic growth of several provinces and allow them to adapt more quickly to the "new normal" of China's economy. "New normal" is the period, which the Chinese economy has entered in 2012. It is associated with slowing pace of economic growth and its structural changes, and the necessity to move the government's focus on securing economic growth based on quality (so-called sustainable growth combined with increased environmental protection, reduction of excess manufacturing capacities and increased orientation on services and progressive technology).

In fact, in the context of the presented facts, the OBOR allows for the preparation of labor force and adaptation of the production capacities in the most remote Chinese territories and for the upcoming implementation of the "Made in China 2025" strategy.

However, the macroeconomic and microeconomic expectations of the implementation of the OBOR project are even more extensive as they will have a major impact on the overall changes in international transport routes, mainly between Asia and Europe, but also on the prices and conditions of transport, its speed and security. It can be expected that redirecting them will increase the competitiveness of Chinese goods in all countries located on or near the main transport lines of the project. This will also change the nature of the transported goods, particularly of food or other types of goods whose economic efficiency will depend on new transport conditions (Zheng & Lim, 2017). In addition, these new routes will be built, upgraded and operated mostly by Chinese companies using Chinese capital and investments, so long-term benefits from these activities will be under the control of China. B.K. Sharma and D.K. Nivedita (2017) stressed that in in this way, China will also gain influence, whether it be economic or socio-political, over the countries involved in the project.

The implementation of the OBOR project will have a significant impact on geopolitical landscape. The implementation of this project should also be supported by the construction of a new institutional background, including the recently established Asian Infrastructure and Investment Bank (AIIB). The founders of the AIIB include several DMEs and major banks (Baláž, Bronček & Královičová, 2017). It is very likely that Chinese companies will gradually take over a significant part of the world's transport services, dominated by US and EU businesses. The substantial reduction in China's dependence on shipping routes through the US is also going to be an important factor determining the success of the whole project. The

US will lose control over Chinese goods flows and therefore lose the ability to influence the developments in this economy.

The implementation of a strategy as large as the OBOR is obviously associated with risks and threats. The most significant among them originate from the unstable political regimes of participating developing countries (e.g. Central Asian countries), terrorism, mutual political conflicts among participating countries, piracy, or inadequate financial supervision of the invested funds, causing financial loss, corruption and moral hazard (Financial Express, 2018).

Tab. 1 China Going Global Investment Index ranking 2017

Rank	Country	BRI	Rank	Country	BRI	Rank	Country	BRI
1	Singapore	x	**21**	**Finland**		41	Pakistan	x
2	US		**22**	**Poland**	x	**42**	**Spain**	
3	Hong Kong		**23**	**Hungary**	x	43	South Africa	
4	Malaysia	x	24	Saudi Arabia	x	44	Mexico	
5	Australia		**25**	**Ireland**		**45**	**Bulgaria**	x
6	Switzerland		26	Indonesia	x	46	Turkey	x
7	South Korea		**27**	**France**		47	Ukraine	x
8	Canada		28	Philippines	x	**48**	**Portugal**	
9	Chile		**29**	**Sweden**		49	Egypt	x
10	Russia	x	30	Vietnam	x	**50**	**Italy**	
11	Israel	x	**31**	**Netherlands**		51	Argentina	
12	Kazakhstan	x	32	Sri Lanka	x	52	Brazil	
13	Taiwan		**33**	**Slovakia**	x	53	Azerbaijan	x
14	Japan		**34**	**Romania**	x	**54**	**Greece**	
15	Norway		35	New Zealand		55	Colombia	
16	**Czech Republic**	x	36	India	x	56	Algeria	
17	**Denmark**		**37**	**Belgium**		57	Ecuador	
18	Thailand	x	38	Peru		58	Nigeria	
19	Iran	x	**39**	**Austria**		59	Venezuela	
20	**Germany**		**40**	**UK**				

Source: The Economist Intelligence Unit (EIU).

Note: EU member countries are highlighted.

Economists also point to the economic unsubstantiality of the OBOR, arguing that countries generally favor the liberalization of their foreign trade (for example, through the FTA) with the countries that represent their most important trading partners, hence the countries with the highest turnover of mutual trade. China's most important trading partner, however, is still the US, whose participation was never counted on with regards to OBOR. A significant part of the OBOR participants are developing countries with which China has negligible foreign trade turnover, with the potential for improvement remaining very low. Chinese economist, D.

Cheng, highlights the low linking of global value chains among OBOR participants that hinders the dynamic development of business relationships within the participating countries. The economist also points to the high degree of conjunction and complementarity of the value chains between China and DMEs which are traditionally high-income economies and their foreign trade with China has a higher level of added value (Cheng, 2017). From this point of view, the OBOR is, despite its perspective in generating economic benefits in the future, more of a political project aimed at strengthening China's influence in the global economy and its soft power.

OBOR is not China's international effort aimed to exclude countries and polarize the world economy, which is also a notion maintained in the Chinese government's official communication. All EU member states are welcome to join the initiative. However, that does not mean that all EU members are equally important for the project. The Economist Intelligence Unit (EIU) published an index ranking 59 major economies in terms of their attractiveness to Chinese firms, utilizing 57 indicators belonging to "opportunity" or "risk" pillars. As we can see, none of the top 15 ranking countries belong to the EU, with the Czech Republic on the 16th and Slovakia on the 33th position. Achieving more desirable attitude of Chinese firms, with regards to both greenfield investments and M&A, must be based on stable developments in bilateral relationships between the European Union and the People's Republic of China. The Chinese government has realized that EU institutions and the official investment framework play a key role in execution of this project in various EU member states. The cooperation must stand on open and transparent rules. Although a comprehensive and unified strategy regarding OBOR has not been established by the EU, some transparency-oriented initiatives have emerged. In September 2015, a memorandum of understanding was signed during the EU-China High-Level Economic Dialogue, aimed at promoting the cooperation in infrastructure, equipment, technologies and standards. Two years later, at the 19th Summit between the European Union and the People's Republic of China, The European Investment Fund (EIF) and China's Silk Road Fund (SRF) have signed a Memorandum of Understanding, advancing the joint investment initiatives and complementing the Juncker Plan's European Fund for Strategic Investments (EFSI), which improves access to finance for small and medium businesses in Europe. On this basis, the leaders have committed to enhance the transport links between the two economies under the Belt and Road initiative. For example, the development of the Košice and Leopoldov Intermodal Terminals and Bratislava Trimodal Terminal were presented under the EU-China Connectivity Platform.

CONCLUSION

Chinese President Xi Jinping, in his speech at the World Economic Forum in 2017 in Davos, stressed that: "Emerging markets and developing countries are already contributing to 80% of the growth of the global economy. [...]. However, the global governance system has not embraced those new changes" (CGTN America, 2017). In this context, the OBOR strategy can be perceived as China's response to the rigidities of the global power and economic order.

Despite the criticism presented and the threats associated with its implementation, the OBOR is positively perceived by many politicians and international organizations. In 2017, in support of the strategy, the World Bank President Jim Yong Kim said that: "two things that the world needs very much right now are strong leadership and an embrace of multilateral approaches to solving difficult problems, and the BRI is both of those things" (Kim, 2017).

OBOR already begins to bring the first economic benefits. For example, in 2017, mergers and acquisitions made by Chinese companies in the countries and regions participating in the strategy increased by 47.4%, which was in sharp contrast to the development of Chinese global investments in the same year, which recorded a decrease of 13.5% (China Daily, 2018).

Within the OBOR, $ 20.8 billion was invested directly by Chinese companies solely in 2015, an increase of 18.2% compared to 2014. New contracts signed with foreign partners reached $ 92.6 billion in the same year (State Council of the People's Republic of China, 2016). Foreign trade between China and OBOR participants recorded a year-on-year increase of 15% in 2017, exceeding the total amount of $ 1.2 trillion (Moak, 2018). Large Chinese state-owned enterprises are already establishing departments specially focused on the OBOR strategy, in order to raise finance for their own projects, which can bring new business opportunities also for European companies.

The rapid rise of the Chinese economy over the past century and its current advancement makes it clear that in order to achieve global hegemony, the country does not adopt chaotic and inconsistent policies, but strategically thought-out, highly coordinated and consistent measures with a long-time perspective, often with a timeframe exceeding a ten-year period. A unique political establishment for the 21st century is an inimitable competitive advantage for the country. The absence of opposition and the certainty that current leaders will not be replaced by other political leaders in the short term gives them the opportunity to plan the development of the country for decades ahead but also to be responsible for their decisions in the long term.

Recently, there is a significant global breakthrough related to China's goal to increase its political influence in the world and, in particular, help transform its domestic economy from industrial giant into a global industrial power through long-term strategic projects and encourage domestic export industries to gain new markets (Krugman, 2017).

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The Non-financial Information (NFI) Reporting of Polish Companies Listed on the Warsaw Stock Exchange – WIG INDEX – prior to the Transposition of the NFI Directive into Polish Law

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Abstract: From the reporting year, 2017, the legal requirements for transparency on non-financial information in management reports of large Public Interest Entities (PIEs) are stricter. In the case of Poland, the Directive requires almost 300 companies to disclose information, at least on environmental, social, and employee-related matters, as well as on respect for human rights, anti-corruption, and bribery issues. The aim of this article is to understand the degree of conformity within the non-financial information disclosure of Polish PIEs, prior to the transposition of Directive 2014/95/EU into Polish law. The empirical research was based on the content analysis of the management reports published by the companies listed on the Warsaw Stock Exchange - WIG INDEX.

INTRODUCTION

The history of non-financial reporting amounts to almost 50 years, and during those five decades, it has gone through various stages – from short information in the annual report, through hundreds of pages of separate reports, to integrated reports. Currently, the approach to non-financial reporting differs among regions and countries, but also industries. Business can also adapt a wide palette of standards, frameworks, and guidance. This diversification was welcomed in communication with customers and the media, but became problematic in the case of communication with shareholders, investors, and business partners, who need much more standardised and transparent information.

According to Wim Bartels, KPMG's Global Head of Sustainability Reporting & Assurance, the trend of disclosing non-financial information by companies in annual reports is driven by two factors: firstly, the NFI is increasingly perceived by shareholders as relevant for their understanding of a company's risks and opportunities, and secondly, stock exchanges and governments are issuing requirements for companies to report NFI in annual reports (KPMG, 2015).

The evolution of corporate governance from shareholder perspective to integrating stakeholders' concerns is also of great importance to NFI reporting. As explained by Idowu et al. "corporate governance is about running corporate entities in a socially, economically and environmentally responsible manner so as to ensure that all interested stakeholders suffer no

loss or adverse impacts as a result of the operational activities of the entity being governed by those at the helm of that corporate entity management hierarchy" (2017, p. 271). According to the G20/OECD Principles of Corporate Governance (OECD, 2015), particularly V Principle "Disclosure and transparency", the mentioned disclosure should, among others, include company objectives and non-financial information.

In the case of the European Union, the year 2014, was a turning point for corporate non-financial reporting. The introduction of the EU Directive on the disclosure of non-financial and diversity information (Directive 2014/95/EU), has been a big step towards greater business transparency and accountability on social, environmental, labour, human rights, and anti-corruption issues. The 28 EU Member States had to transpose the Directive into their own national legislations up till the 6th of December, 2016, and as a result, a certain group of companies is expected to comply with the new disclosure requirements of the locally transposed laws from 2018.

This also applies to Poland, which is not very advanced in CSR and Sustainability issues, and has relatively low non-financial information disclosure requirements. Polish companies are also slow to publish   NFI – for example, in the years 2016/2017, only 56 Polish companies published reports based on the GRI standard (GRI, 2017).

The aim of this article is to understand the degree of conformity within the non-financial information disclosure of Polish PIEs, prior to the transposition of Directive 2014/95/EU into Polish law. The evaluation will focus on the scope and quality of non-financial information disclosure, with regard to five matters required by EU and Polish law, namely: the Environment, Labour Practices, Human Rights, Community Involvement, Anti-Corruption and Bribery.

1 LITERATURE REVIEW

1.1 Non-financial reporting

Corporate reporting includes both financial and non-financial information on all important issues of business activity, and is considered as the primary channel of communication with a wide range of stakeholders. High level, non-financial reporting is expected to enable sustainable finance, but also make companies more resilient and perform better, both in financial and non-financial terms. Roxana-Ioana and Petru, (2017), state that non-financial reporting is one of the most important trends in corporate reporting development, regarding the improvement of annual report information content, based on the increasing needs of stakeholders to be informed on the corporate environmental, social, and ethical performance of a company. Lusher, (2012), goes even further, stating that financial reporting was a priority in the past, whilst non-financial reporting is a priority nowadays, and integrated reporting will increase in the future.

Non-financial reporting can be defined as "a process of gathering and disclosing data on non-financial aspects of a company's performance, including environmental, social, employee and ethical matters, and defining measurements, indicators, and sustainability goals based on the company's strategy" (Deloitte, 2015, p.1). Non-financial reports are published under a number of different names, including "sustainability reports", "social reports", "corporate social responsibility reports", "social and community reports", and are classified as Corporate Social Disclosure (CSD), Corporate Environmental Reporting (CER), Triple Bottom Line (TBL) reporting, ESG reporting, and many others (Kolk 2010; Owen et al. 2001, Buniamin and Ahmad, 2015).

The practice of reporting on non-financial information is not new. It has been almost 50 years since the early initiators started to release external social and environmental reports. According to Kolk, (2010), the first wave of non-financial reporting started in the 1970s, in the United States and Western Europe, where companies adopted the practices of so-called social reporting and accounting, defined at that time as "the identification, measurement, monitoring, and reporting of the social and economic effects of an institution on society", "intended for both internal managerial and external accountability purposes" (Epstein et al. 1976, p. 24). The Ernst & Ernst surveys showed that, by 1978, 90% of the Fortune 500 companies, reported on social performance in their annual reports. However, the amount of social information they published was rather limited - frequently less than a quarter of a page. This phenomenon lasted less than a decade, because in the 1980s, reporting in this shape lost its momentum (Dierkes and Antal 1986). Business organisations came back to non-financial reporting practice in the late 1980s, with a particular focus on environmental issues, and with most attention being paid to external, accountability dimensions, influenced by pressure from non-governmental organisations (NGOs). This practice has grown substantially, and has become a new trend, in the form of separate reports (Kolk, 2010). As the findings from the KPMG Survey of Corporate Responsibility Reporting 2017 show, corporate NFI reporting is still growing - with almost all (93%) of the world's largest 250 companies, and 75% of the 4,500 companies from 45 countries surveyed by KPMG (KPMG, 2017, p.9) providing such information. It is mostly due to the rising demands of the stakeholders, who are increasingly aware of environmental and social issues, climate change, sustainable supply chain management, natural disasters, and the scarcity of natural resources (Kolk and Van Tulder, 2010; Seuring and Muller, 2008).

There is also another reason for such a high engagement in non-financial reporting. The Annual Study of Intangible Asset Market Value (Ocean Tomo, 2015) has revealed that the average intangible asset value of the S&P 500 grew from, 17% in 1975, to 84% by 2015. That is why investors, but also other stakeholders, are looking for more information about the value creation process of the company, as well as information on how it interacts with the world around it. The non-financial information disclosure provides the context for financial disclosures, demonstrating both how far the organisation is able to meet stakeholder expectations, and how much the viability of its business model has contributed to a transformation in the way business is conducted (FEE 2016). As highlighted in the World Economic Forum's 'The Global Risks Report', (2016), most macro trends and risks, that could affect an undertaking in the future, are non-financial. Also, in EY's 'Tomorrow's Investment Rules Report', (2015), it was concluded that companies need to improve the non-financial information they report, in order to meet the needs of investors. The 2015 survey, involving more than 200 institutional investors around the world, showed a dramatic increase in respondents, who consider corporate social responsibility reports or sustainability reports as essential or important when making investment decisions — from 35% in 2014, to nearly 60% in 2015 (EY, 2015).

There is also the other side of the coin - according to EY (2013) the results of more than 200 empirical studies examining the relationship of CSR performance to corporate financial performance suggested that companies might benefit from the non-financial disclosure. But it was also highlighted that "the rigor of the reporting process matters a great deal in terms of the value that can be realized" (EY, 2013, p.12).

Since the 1970s, there has been considerable diversity in the voluntary publication of sustainability reports across industry sectors and countries. To provide guidance and standards for this practice, some guidelines were developed around the world, such as: the Global Reporting Initiative (GRI) guidelines, UN Global Compact Communication on Progress, AA1000 Standard, ISO 26000 - International Standard for Social Responsibility, OECD Guidelines for Multinational Enterprises, CERES Principles, the ESG Framework, and many others. Amongst

all of those just mentioned, the GRI Sustainability Reporting Guidelines are currently the most-used set, and used by many organisations around the world. According to the GRI (2017), 74% of the world's largest 250 companies reporting, use their Standards.

This diversity of standards, guidelines, and frameworks, and in many cases, the decision of companies to choose an individual approach, has led to the failure to provide comprehensive business information, whilst creating the need to integrate financial and non-financial business reporting. In August 2010, the International Integrated Reporting Council (IIRC) was formed to create a framework, enabling the accounting of sustainability, along with bringing together financial, environmental and social, as well as governance information, into an "integrated" format. Integrated reporting involves "far more than simply combining a financial report and a sustainability report into a single document". (Eccles and Krzus, 2010). It is the next step in corporate reporting that presents the way in which the defined business capitals can create the value expected by shareholders and other stakeholders, too.

1.2 NFI Directive

It has become clear over the years, that voluntary non-financial reporting has reached its limit. Given the increasing importance of non-financial information, the EU has, therefore, decided to oblige certain groups of companies to disclose non-financial information and promote the consistency and comparability of this information within its community.

For the European Union, non-financial reporting has been an important issue from the very beginning of this century, but, as mentioned by the Federation of European Accountants (FEE, 2016), it became a major political issue after the 2008 financial crisis, as there was a clear need to rebuild investors' and consumers' trust in markets, partly through better information regarding risk management and sustainability. According to Matuszak and Różańska, (2017), Europe, after the financial crisis of 2008, has become the most active region in promoting transparency and NFI disclosure.

The European Commission's services, started in 2010, a public consultation on companies' disclosure of non-financial information, such as social aspects, environmental information, human rights, and sustainable development. The summary report (2011), revealed a high diversity of applied solutions in member states, which has led to the fragmentation of the EU's legislative framework. This diversity was perceived as a potential cost, as investments were needed to build capabilities necessary for managing properly the overall business, leading to better long-term performances (EC, 2011). In 2014, the EU legislator decided to unify the way a certain group of entities report non-financial information, through the NFI Directive, aimed at the improvement of the quality, consistency, and transparency of NFI reporting in the whole EU (Directive 2014/95/EU). This was believed to have led to confidence, both among investors, as well as consumers, and other stakeholders (especially investors who, provided with insight into the non-financial aspects of the business, can better assess the opportunities and risks of their future investments). Obviously, it is difficult to clearly assess how such disclosure regulations might affect companies, ex ante. As observed by Ioannou and Serafeim, (2017), on the one hand, mandatory reporting laws and regulations could increase transparency and motivate companies to do better in terms of socio-environmental dimensions of performance. On the other hand, such laws and regulations could result in a costly pooling, rather than a separating equilibrium, with respect to the value of sustainability disclosures, and can, thus, eventually destroy shareholder value. However, many consider that mandatory regulation is the only valid method of improving the quantity and quality of non-financial information (Deegan, 2002; Jackson et al., 2017; Crawford and Williams, 2010).

The EU is rather careful in the process of introducing obligatory NFI disclosure. The NFI Directive applies to large public-interest entities (PIEs), with an average of 500 or more

employees, and either — a balance sheet total exceeding EUR 20 million, or a net turnover exceeding EUR 40 million. By the term — public-interest entity — the EU understands it to mean any entity, which is trading transferable securities on the regulated market of any Member State; is a credit institution; or an insurance undertaking, or has been designated by a Member State as a public interest entity.

According to the European Commission, the NFI Directive will affect approximately 6,000 large companies and groups across the EU. Companies are obliged to disclose in their non-financial reports, information on environmental, social and employee matters, respect for human rights, and anti-corruption and bribery matters. Reporting organisations must disclose, for each of the above matters, the following information:

- A description of the business model;
- A description of the policies pursued in relation to the above matters, including due diligence processes implemented;
- The outcomes of those policies;
- The principal risks related to those matters including, where relevant and proportionate, its business relationships, products, or services, which are likely to cause adverse impacts in those areas, and how those risks are managed;
- Non-financial key performance indicators relevant to the business.

This information must be presented in the management report, or separate report published alongside the management report, or within 6 months of the balance sheet date, made available on the PIE's website, and referenced in the management report. The discloser of non-financial information may rely upon a national, EU-based, or international reporting framework.

As highlighted by Biernacki, (2017), the President of the Reporting Standards Foundation and Vice-President of the Polish Association of Listed Companies, the requirement has been introduced in a relatively soft way, as it has been presented in the form of a directive (not a regulation, as in the case of, for example, the Market Abuse Regulation that defines everyday information obligations of listed companies). The NFI Directive provides a legislative framework, with sufficient flexibility, to enable Member States to implement in the manner that best serves their internal markets. So, Member States may differ in the ways in which they define an organisation as a large undertaking, or consider organisations to be public interest entities. The Directive also allows Member States to define whether or not reports must be verified by an independent assurance services provider, and if any penalties will be imposed upon organisations, which fail to report adequately.

Additionally, the NFI Directive allows Member States to impose state specific requirements on companies regarding the three key aspects of reporting:

- Reporting Framework
- Disclosure Format
- Reporting Content

The EU Directive on disclosure of non-financial information and diversity information (2014/95/EU) was published at the end of 2014. The European Member States were given two years to transpose the EU Directive into national legislation. New requirements were applied in all Member States for the financial year starting on the 1st of January, 2017, or during the calendar year of 2017.

1.3 Non-Financial Reporting in Polish Legislation

This NFI Directive was transposed into Polish legislation by the Act of the 15th of December, 2016, amending the Accounting Act 61. Most requirements are the same as in the Directive – only three requirements were adapted:

1 Definition of a Public Interest Entity – the number of employees is the same (over 500 employees in relation to average full-time employment in the year), but net turnover was defined in Polish currency for over PLN 170 million; or a balance sheet total over PLN 85 million;

2 Reporting framework - apart from the international, national, or EUbased reporting frameworks, a mixed reporting methodology, constituted by one or more reporting standards, was added;

3 Non-compliance penalties – fines are specified in the Accounting Act.

The new regulations cover large Public Interest Entities (PIEs), having headquarters in Poland, including: listed companies, insurance undertakings, banks, investment undertakings, pension funds, national payment institutions, electronic money institutions, entities intending or pending for admission to one of the EOG regulated markets. There are estimated to be 300 of such entities in Poland.

The new regulation follows the "comply or explain" approach under which, if the company does not pursue policies in relation to one or more of the listed matters, the consolidated non-financial statement shall provide a clear and reasoned explanation for not doing so.

As highlighted by Biernacki, (2016), the provisions proposed by the Polish regulator do not impose additional responsibilities and burdens on issuers that exceed the minimum imposed by the Union.

Compering to other CEE countries the transposition has been conducted in a similar way and the adaptations addressed similar requirements. The only significant difference was adapting the reporting framework by adding the possibility to use the mixed reporting methodology constituted by one or more reporting standards. The EU country which implemented the same approach was only Italy.

2 METHODOLOGY

The data on the non-financial information disclosure of Polish companies, listed on Warsaw Stock Exchange indices, was collected by Ernst & Young (EY), Global Ethical Standard (GES), and the Polish Association of Listed Companies (PALC), which together, collect data, annually, for the "ESG analysis of companies in Poland" project. The data was collected to explore the state of voluntary non-financial reporting of Polish PIEs, listed on the Warsaw Stock Exchange, half a year before the implementation of mandatory non-financial reporting. The analysis covers the companies listed on the Warsaw Stock Exchange: WIG20, mWIG40, and sWIG80 indices, as of June the 30th, 2017. Altogether, 140 business entities have been analysed.

The data collected was compiled via GES Risk Rating methodology, to evaluate both the company's preparedness and performance, by using a set of criteria, and the final score is calculated as an average. The main source of the GES Risk Rating analysis is the company's Annual Report, other official documents, and website.

Following the NFI Directive requirements, the received data was analysed to evaluate the level of the non-financial information disclosure by Polish PIEs, separately in five categories, namely:

1 Environment

2　Labour Practices

3　Human Rights

4　Community Involvement

5　Anti-Corruption and Bribery

The data was also analysed from the perspective of defined sectors, namely:

- Chemicals and Raw Materials sector – represented by 21 companies,
- Consumer goods sector – represented by 6 companies,
- Finance sector – represented by 31 companies,
- Retail and services sector – represented by 22 companies,
- Healthcare sector – represented by 8 companies,
- Oil, Gas, and Utilities sector – represented by 11 companies,
- Construction and industrials sector – represented by 25 companies,
- Technology sector – represented by 16 companies.

3 RESULTS AND DISCUSSION

The first stage of the analysis focused on the level of the five matters, as defined by the NFI Directive, and their inclusion in the non-financial reporting. The radar chart presented on Fig. 1 shows the percentage of organisations (n=140) that include in their non-financial reports, the matters required by EU and Polish law, namely: Environment, Labour Practices, Human Rights, Community Involvement, Anti-Corruption and Bribery. The most frequently reported matters are Environment (71,43%) and Community Involvement (67,86%), which may be a consequence of CSR or Sustainability reporting, as practised by Polish companies, as those reports were mainly focused on environmental and social engagement issues. Slightly less frequent is reporting on Labour Practices, such as CSR, and Sustainability reporting in Poland had previously been focused mostly on external stakeholders, and an interest in internal CSR is a trend of the last decade. The weakest parts of the non-financial reporting are: Human Rights and Anti-Corruption and Bribery matters (43,57% and 34,29%, respectively).

At this point, it should be mentioned that Corruption and Bribery in Poland, according to 76%, is still a problematic issue for Poles (among those, 31% consider it to be a very problematic issue) (CBOS, 2017), and as can be understood from this analysis, it is also very problematic for companies to deal with this issue. Also, the Human Rights issue is of very high importance, as more and more frequently, companies move production or other elements of the supply chain, to countries where they can minimise costs. In such countries, there is a much higher risk of human rights violations (forced labour, the employment of children, lack of occupational health and safety, low wages, and many others) carried out by both local public institutions and the private sector. That is why the supply chain, throughout its entire process, should be the subject of corporate policy and, as a consequence, should be included in corporate reporting of non-financial information (PIHRB, 2017).

Taking into consideration the percentage of companies reporting on NFI matters, from the perspective of the sectors (Tab. 1), the Oil, Gas, and Utilities sector should be distinguished as companies in this sector's report, on all 5 matters required by the NFI Directive. However, a relatively small number of the analysed companies (11) belong to this sector. The Chemicals and Raw Materials and Construction and Industrials sectors, both covering more companies in the analysis (21 and 25, respectively), gained relatively good scores, as well. Similarly, so did the Consumer goods sector, but it was represented by only 6 companies.

Fig. 1 The percentage of companies disclosing NFI against the 5 required matters
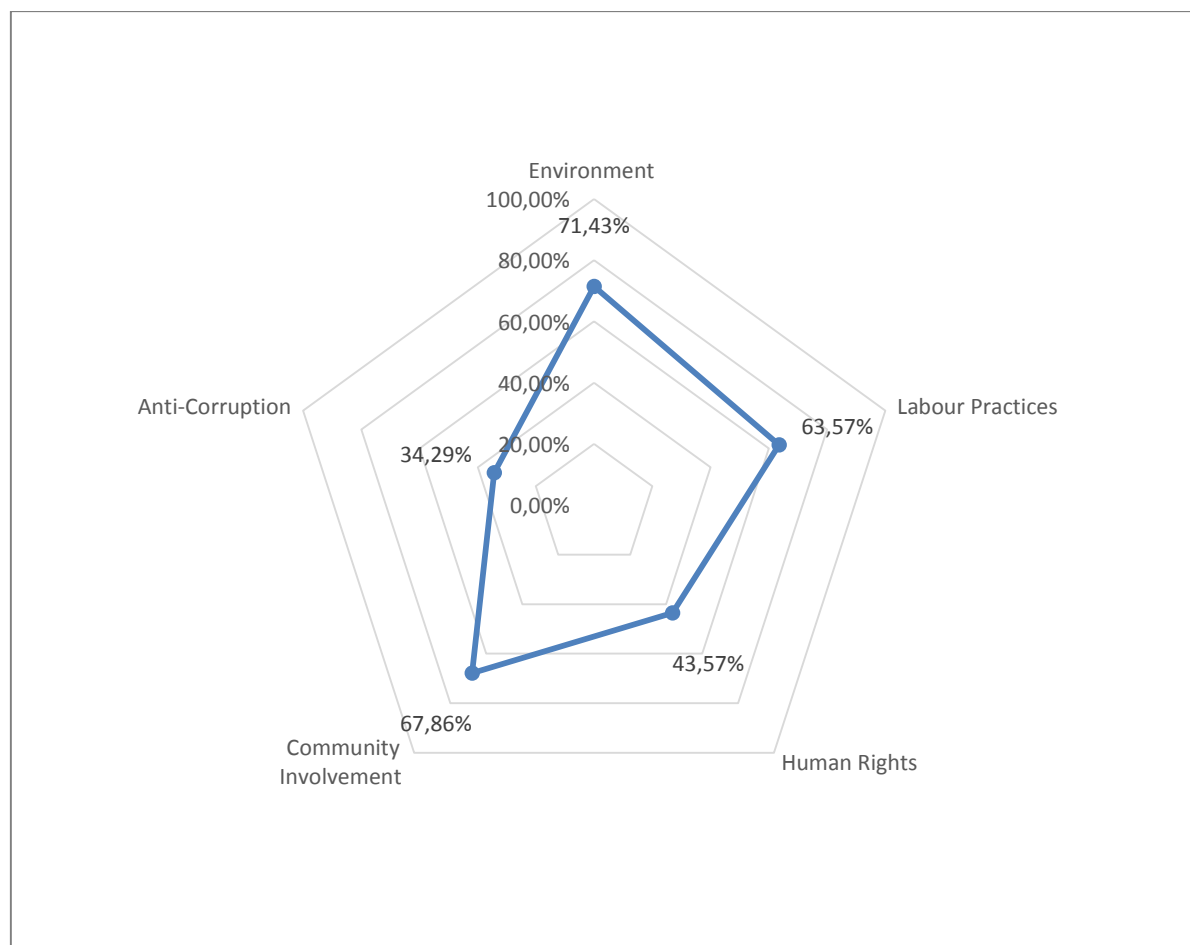
Source: based on the data from the Polish Association of Listed Companies, GES, and EY, collected for the "ESG analysis of companies in Poland" project, edition 2017.

The results in other sectors, remain on a low level, in relation to matters defined in the NFI Directive. The lowest level of NFI reporting is presented by companies in the Healthcare, Technology, Finance, and Retail and Services sectors.

Obviously, the percentage of companies reporting on each of the five matters, differs significantly, between sectors, as it is also determined by sector specifics. For example, the Chemicals and Raw Materials sector gains a very high level of reporting on Environment and Community Involvement matters, whereas the percentage of companies reporting on distinguished areas in the Finance sector, is relatively evenly distributed. However, all companies, despite the sector, are obliged to disclose the required information on all five matters in their NFI reports.

The Directive and its transposition to Polish legislation in the Accounting Act 61, require much more than just the disclosure of information on certain matters. As presented in the literature review, in the case of all five matters, PIEs must also present polices pursued in relation to those matters, the outcomes of those policies, the principal risks related to those matters, and non-financial key performance indicators relevant to the business. Such an obligation makes NFI reporting a serious challenge for Polish companies, which used to report on the issues that they voluntarily had chosen, and now, they will have to disclose information on many more issues, and in a much more precise way. As a result, the level, shape, quality, and integrity of the information presented by organisations must change, significantly.

Tab. 1 The percentage of companies disclosing NFI against the 5 required matters by sectors

Industry	Total number of analysed companies	Number of companies reporting on Environment matters	Number of companies reporting on Labour practice matters	Number of companies reporting on Anti-corruption and bribery matters	Number of companies reporting on Community Involvement matters	Number of companies reporting on Human Rights matters
Chemicals and Raw Materials	21	100%	76,19%	52,38%	89,95%	47,62%
Consumer goods	6	83,33%	66,67%	50%	100%	33,33%
Finance	31	48,48%	48,48%	41,94%	67,74%	32,26%
Retail and Services	22	59,09%	59,09%	40,91%	77,27%	22,73%
Healthcare	8	50%	37,5%	37,5%	25%	12,5%
Oil, Gas, and Utilities	11	100%	100%	100%	100%	100%
Construction and Industrials	25	84%	76%	20%	60%	24%
Technology	16	56,25%	43,75%	37,5%	37,5%	18,75%

Source: based on the data from the Polish Association of Listed Companies, GES, and EY, collected for the "ESG analysis of companies in Poland" project, edition 2017.

Tab. 2 Methodology of company evaluation

Points range	score	Score description
0-0,29	0	No information or a total failure
0,3-0,74	1	Indications of a policy existence
0,74-1,79	2	Detailed policy or strategy in place
1.8-3,0	3	Detailed policy, programme, and management system in place

Source: based on the GES Risk Rating methodology

As the aim of this paper has been to understand the degree of conformity within the non-financial information disclosure of Polish PIEs, prior to the transposition of Directive 2014/95/EU into Polish law, the second stage of the analysis - the detailed assessment of the quality of the NFI disclosure, was duly conducted. The data received from EY, GES, and PALC, contained a detailed assessment of each company in a number of categories, including the five areas required by the NFI disclosure regulations. The points given, ranged from 0 to 3. Using this detailed assessment, the scores from 0 to 3 were attached, where 0 means "no

information or a total failure"; 1 means that there are "indications of a policy existence"; 2 means that there is a "detailed policy or strategy in place"; and 3 means that there is a "detailed policy, programme, and management system in place". The methodology of company evaluation is presented in Tab. 2.

The results of the evaluation of the 140 companies in relation to the Environment, Labour Practices, Human Rights, Community Involvement, Anti-Corruption and Bribery matters are presented on Fig. 2. As we can see from the radar chart, the average assessment of the NFI disclosure matters are all on a very low level – all below 1 on the 0-3 points scale. The best quality of NFI disclosure was recognised in the Community Involvement and surprisingly, the Anti-Corruption and Bribery areas. The worst average assessment was granted to Human Rights matters. Those results prove that the frequency of reporting in certain areas is not connected with the quality. For example, Environment is the most frequently reported matter (over 71% of the analysed companies included that aspect in their non-financial reporting), but its quality was assessed at a relatively low level, with only 0,45 points on the 0-3 points scale.

Fig.2   The evaluation of the quality of NFI disclosure by the 5 matters
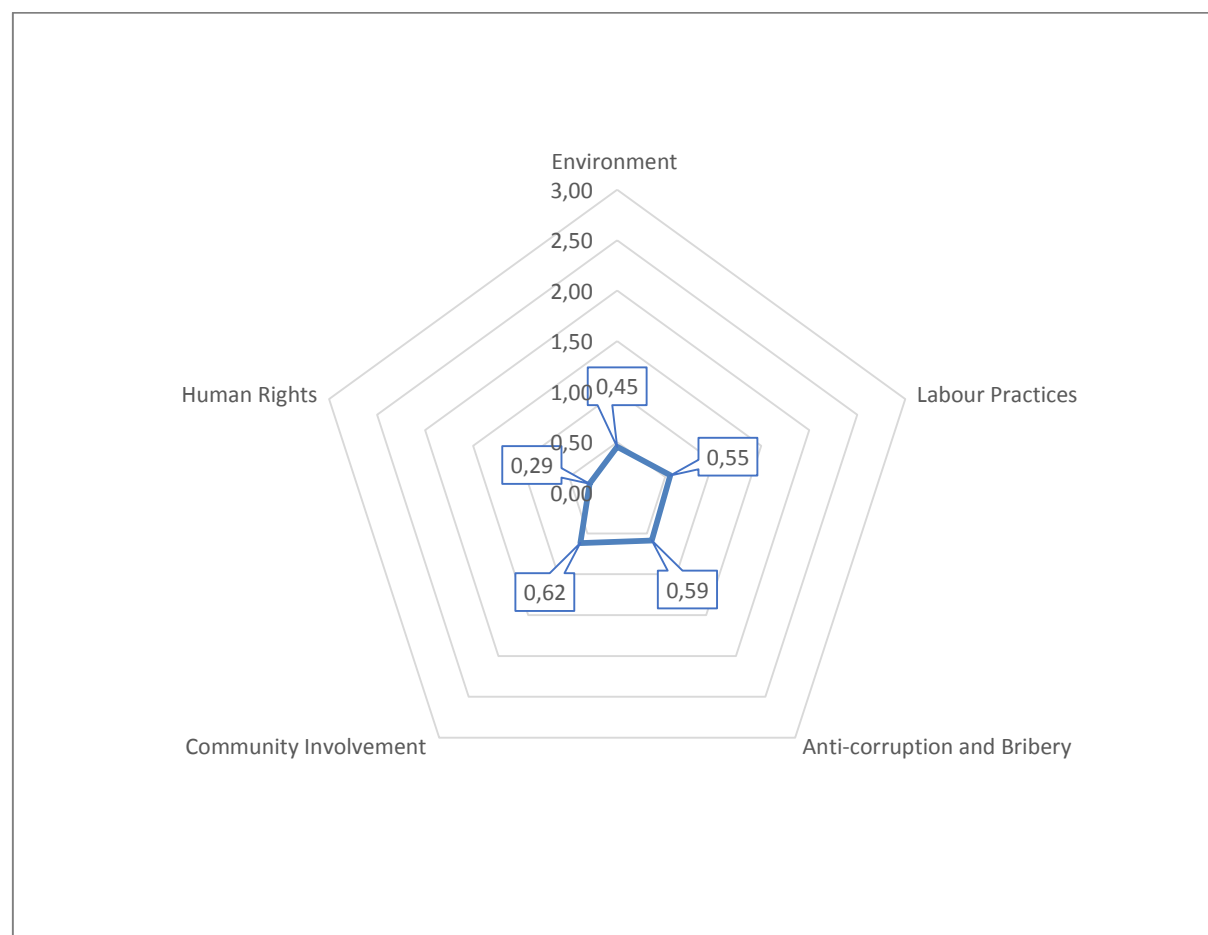
Source: based on the data from the Polish Association of Listed Companies, GES, and EY, collected for the "ESG analysis of companies in Poland" project, edition 2017.

If we look at the sector breakdown of the NFI disclosure assessment of all 5 matters (Tab. 3), it can be stated that again, the Oil, Gas and Utilities sector is the most advanced one in the NFI disclosure. The weakest sector is Healthcare, which received a 0 score in all evaluated

areas. Other sectors received a mixture of 0, 1, and 2 scores, which means that they have relatively strong points, but also very weak points. Unfortunately, the score 3, which means the expected level of non-financial information disclosure, was given only once – to the Oil, Gas, and Utilities sector, in the area of Anti- Corruption and Bribery.

Tab. 3 Non-financial data reporting level by sector

Sector	Environment		Labour Practices		Anti-Corruption and Bribery		Community Involvement		Human Rights	
	Points	score	Points	score	Points	score	Points	score	Points	score
Chemicals and Raw Materials	0,63	1	0,74	1	0,60	1	0,83	2	0,26	0
Consumer goods	0,43	1	0,71	1	0,79	2	0,96	2	0,22	0
Finance	0,41	1	0,40	1	0,60	1	0,65	1	0,37	1
Retail and services	0,30	1	0,39	1	0,40	1	0,51	1	0,17	0
Healthcare	0,10	0	0,14	0	0,22	0	0,13	0	0,03	0
Oil, Gas, and Utilities	1,20	2	1,68	2	1,84	3	1,27	2	0,80	2
Construction and Industrials	0,34	1	0,48	1	0,31	1	0,48	1	0,19	0
Technology	0,38	1	0,33	1	0,47	1	0,31	1	0,28	0

Source: based on the data from the Polish Association of Listed Companies, GES, and EY, collected for the "ESG analysis of companies in Poland" project, edition 2017.

CONCLUSIONS

Disclosing non-financial information in annual financial reports is now a firmly established global trend. According to KPMG (2016), almost 3 in 5 companies do this now, compared with only 1 in 5 in 2011. This rise in non-financial reporting is due to the growing pressure from stakeholders, more and more aware of the business impact on society and the environment, but also from shareholders and investors, who need more transparent and standardised information on the business value creation process. To meet those needs, the EU has decided to oblige a certain group of companies, to disclose the most important elements of non-financial information in five categories: Environment, Community Involvement, Labour Practices, Human Rights, Anti-Corruption and Bribery. Directive 2014/95/EU serves as a vital instrument to promote the EU's agenda for non-financial and further integrated reporting. New requirements were applied in all Member States, including Poland, and from 2018, all defined PIEs are expected to comply with the new disclosure rules of the locally transposed laws.

This paper has been aimed at the evaluation of the state of non-financial information disclosure in 140 Polish PIEs, listed on the Warsaw Stock Exchange (WIG 20, WIG 40 and WIG 80 indices), 6 months prior to the implementation of mandatory non-financial reporting.

In the light of the results, it should be stated that the new reporting requirements are a challenge for the Polish PIEs. If we look at the coverage of the required matters, almost 30% of companies do not include Environmental issues in their reporting, and over 30% omit Labour Practices and Community Involvement. Even more alarming is the fact that over 50% of the

analysed companies do not include Human Rights and Anti-Corruption and Bribery matters in their reporting (43,57% and 34,29%, respectively).

The situation is even more problematic from the perspective of the quality of the disclosed information. The results of the evaluation of the 140 companies, in relation to the five matters defined in the NFI Directive, gave very low results – all below 1 on the 0-3 points scale. Even though many organisations have been already providing extensive non-financial information, in many cases, they will have to introduce significant amendments to meet all the requirements of the new legislation. The five matters defined in the new legislation require the PIEs not only to have policies that are implemented and practised, but also to possess adequate data management and reporting systems.

Having said that, it must be highlighted that this evaluation has certain limitations, as the sample contains only listed companies, which accounts for less than 50% of all PIEs that are the subject of new regulations. Despite this limitation, the authors believe that the study makes a significant contribution to the existing literature.

In future research, it would be interesting to find out how the new regulations have impacted upon non-financial reporting in Poland, but also in other EU countries. It would also be highly valuable to see if the NFI Directive impacted upon the non-financial reporting of companies, not obliged to comply with the NFI disclosure regulations.

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Competitiveness of Small and Medium – sized Enterprises in the Single European Market

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Abstract: Small and medium-sized enterprises in Europe and Slovakia are an important factor in economic growth and development, helping to address the urgent social, economic and political challenges of countries and regions, and thus become an important determinant of the healthy economic development of the European Commuity. The aim of the paper is to define the nature and importance of small and medium-sized enterprises in the Slovak economy and to point out the marketing assumptions of their competitiveness in the EU common market. In the paper, we identify the barriers, strengths and weaknesses of Slovak SMEs in their low expansion to the competitive single EU market, which resulted from a quantitative field survey, which was carried out on a sample of 256 randomly selected SMEs in the SR.

INTRODUCTION

Small and medium-sized enterprises in Europe and the world are an important factor in economic growth and development. Small and medium-sized enterprises (SMEs) are helping to address the urgent social, economic and political issues of countries and regions in the current turbulent economic environment. They help create new job opportunities in the business economy and have a significant role to play in generating GDP. They account for 99.8% of the total number of businesses in the European Union, with a share of more than 60% in employment, representing an average of 40% to 60% of the added value. The dynamic development of small and medium-sized enterprises is one of the main prerequisites for healthy economic development of the country. Slovak SMEs have shown their viability in the short term of their existence, and today they offer jobs of almost three quarters (74.1%) of the active labor force and contribute more than half (52.7%) to the creation of added value (Eurostat, 2016).

The basic feature of small and medium-sized enterprises is their high ability to adapt to changing external conditions but, on the other hand, they are limited by their capital base. Small businesses have many benefits that enable them to respond more flexibly to changes in the market and customer requirements compared to large businesses. The main benefits are: size and simple organizational structure allowing faster responses to market changes, greater sensitivity to customer requirements, and more active participation in technology and marketing innovations. Small and medium-sized enterprises have also an important role of suppliers and subcontractors of goods and services not only for final consumers but also for companies in important sectors such as automotive, electro-technical, engineering and large foreign corporations.

However, Slovak small and medium-sized enterprises, as shown by the results of our survey, do not yet benefit sufficiently from the big European market. For future growth and business development in this area, it will be essential to increase the competitiveness of Slovak SMEs in the European market space and to ensure their wider participation in the large European market.

1 LITERATURE REVIEW

Business in the way we see it nowadays is the result of a long historical development. Its beginnings should be sought in the founding of crafts which had been booming especially in the 16th and 17th century. The craftsmen were united in the guilds that were a key place in the life of medieval towns. Their manufacturing, self-governing, and social organization was regulated by guild articles. Guilds supervised the way of production, sales, product quality and working conditions. They were ensuring that nobody produces products they weren't mastered for as well as products which weren't authorized. A craft was performed as Lohnwerk or Preiswerk. The purpose of Lohnwerk was that the craftsman only offered his work. The material was provided to him by a customer. This method of work was accused of making the craftsman dependent. At Preiswerk, the craftsman provided the necessary material himself, he was almost independent (Marková, 2003). This is true in some conditions even today. A significant shift in production organization, business development and the emergence of new distribution channels were brought by manufactories. The point of the manufactory production method was to concentrate production in one place and to share machinery and energy. Large-scale and mass production was created on the basis of this system. Small craftsmen were pushed out of the market economy. As a form of defense, cooperative forms of business have expanded. After the Second World War, changes in the economy evolved. In 1945, all enterprises with over 500 employees were nationalized, and in 1948 same happened with enterprises with over 50 employees. Between 1974 and 1987, statistics show only a negligible number of private entrepreneurs doing small business. A great interest in entrepreneurship took place in 1988, and especially after 1990, after the transition to a market economy, after a small and large privatization. During this period, it was necessary to adjust the conditions for small businesses and tradesmen. This was realized by the issuance of the Trade Licensing Act - Act no. 455/1991 Coll. which is still valid until today (Chodasová et al., 1996). The sector of small and medium-sized enterprises has been rapidly developing in Slovakia since then and has an irreplaceable role in the economy of the country (Majková, 2008).

2 METHODOLOGY

The aim of the paper is to define the nature and importance of small and medium-sized enterprises in the EU and Slovak economy and to point out the marketing preconditions for the competitiveness of Slovak SMEs in the common EU market. In the paper, we will point out the importance of small and medium-sized enterprises within the Slovak Republic, their weaknesses and strengths and the possibilities of their progress which we obtained from a marketing survey that we conducted on a selected sample of small and medium-sized enterprises operating in the Slovak Republic. The methodology and the scientific methods of investigation were developed from the aim of the work. Secondary and primary research was carried out. The secondary survey concerned the collection and processing of data from domestic and foreign literature from the area of small and medium-sized enterprises. The classic methods of scientific heuristics - the method of abstraction and concretization, analysis, synthesis as well as the comparison method we used to compare and evaluate the views of various theoretical approaches to SME issues were used for data processing. Primary research aimed to obtain direct information from small and medium-sized entrepreneurs on the

conditions, barriers and competitiveness of Slovak SMEs in the single European market. The survey was conducted on a sample of 256 randomly selected SMEs through electronic query. The evaluation of the obtained data was carried out using mathematical and statistical methods using the Statgrafic program. Statistical data from the Slovak Statistical Office and the EU Statistical Office Eurostat were also used in the work.

3 RESULTS AND DISCUSSION

3.1 The nature and importance of small and medium-sized businesses

Small and medium-sized enterprises (SMEs) in Europe have traditionally been called the pillar or backbone of the economy. They are the key segment of the business sector in practically every economically developed country. "Small and medium-sized companies with 10 to 249 employees are the engine of the European economy, job creation and economic growth." (Eurostat, November 2013). SMEs are thus an important stabilizing element of each national economy in regard to their predominant share in the total number of business entities and the creation of new job opportunities. The Slovak business economy is dependent on small and medium-sized enterprises because they make a significant contribution to the successful economic development of our country. In 2016, SMEs accounted for 99.9% of the total number of business entities; in the business economy they provided jobs of almost three quarters (74.1%) of the active labor force and contributed more than half (52.7%) to the creation of added value (Statistical office of the Slovak Republic). These data far outweigh the relevant EU averages. More than three quarters of small and medium-sized enterprises in Slovakia are active in sectors such as business services, trade, construction and industry.

SMEs are able to adapt more flexibly to changing macroeconomic trends and the current economic situation compared to large corporations, therefore they are often a stabilizing element of the economy. In the long term, they play an important role especially in economically less developed regions where large corporations and multinational corporations do not take place. In such areas, SMEs constitute most jobs and represent local capital. Support for SMEs is, in regard to their key economic position, one of the most important topics of the European Union. The key strategic documents in this field include the European Charter for Small and Medium-Sized Enterprises (2000), the Small Business Act of 2002 and its 2011 update, the Europe 2020 strategy and the Entrepreneurship 2020 Action Plan. These documents have successfully identified the significant issues SMEs face in their business and have put forward comprehensive proposals for action. They have also led to the creation of new tools for financial and non-financial support to SMEs. However, many EU Member States make long-term references to the recommendations of these documents rather declaratively. However, if the EU wants to maintain or strengthen its competitiveness on the international market, removing obstacles to doing business with SMEs is inevitable in regard to their importance to the economy.

SMEs can be classified according to multiple approaches. However, the unequivocal determination and definition of SMEs raises considerable problems for the uneven selection of SME indicators in individual countries. The largest indicators that apply to these businesses include: profits, investments, market share, individual types of capital, production and sales volume, number of jobs, sales and more.

Currently the valid size categorization of enterprises is in line with Commission Recommendations 2003/361/EC (European Commission, 2003) and EU Regulations (Commission Regulation (EU) No 651/2014). Small and medium-sized enterprises (SMEs) according to these documents are business entities employing less than 250 persons and

whose annual turnover does not exceed EUR 50 million and / or the total annual balance sheet does not exceed EUR 43 million. The SME category distinguishes between:

- a microenterprise as an enterprise that employs less than 10 people whose annual turnover and / or annual balance sheet total does not exceed EUR 2 million,
- a small business as an enterprise that employs less than 50 people and whose annual turnover and / or annual balance sheet total does not exceed EUR 10 million,
- a medium-sized enterprise as an enterprise that employs less than 250 people and whose annual turnover does not exceed EUR 50 million and / or the total annual balance sheet does not exceed EUR 43 million.

SMEs work similarly to most market economy enterprises on the principles of private ownership, combinations of factors of production, economy, profitability and financial equilibrium. The result of their business is a product or service. As in the service sector, SMEs have an increasing scope for their application. SMEs have a number of important functions in the economy of a country. According to various authors (Strážovská, Pavlík, 2007), (Sakál, 2007), the following functions can be defined:

Social function. SMEs help build a democratic and free social system. Every citizen can freely build his own existence.

Occupational and conjuctural function. SMEs have so far proved to be more successful as an indicator of conjuctural changes than large enterprises because they respond more responsibly to fluctuations in the economy rather than large enterprises. In general, the positive role of small and medium-sized enterprises in creating new job opportunities is now known, and they are currently the majority of newly created jobs.

Offer function. Small and medium-sized enterprises are not only producers of consumer goods but also suppliers of semi-finished products and finished products. They have a significant subcontracting role, especially in the automotive, mechanical engineering, electrical engineering and chemistry sectors. They also play a significant role in creating a differentiated market, whether technically specialized or made up of individual customer needs. They are an important factor in creating a regional and spatial structure of the economy. They provide the supply of sparsely populated regions, small communities, meet the needs of less mobile residents, or increase seasonal or spontaneous needs.

Economic function. Small and medium-sized enterprises contribute to maintaining a competitive market environment by providing free choice to participants.

Structure function. Besides the other functions of small and medium-sized enterprises, the important feature of the accelerator of structural adaptability of industry is emphasized. They reduce regional disparities in employment, pensions, supply, service and transport. They reduce the risk of dominance of a large enterprise in a given region, thereby increasing the stability of the area's living standards.

Growth function. Economic growth is closely linked to the level of investment. In recent years small and medium-sized enterprises have contributed significantly to their level in the Slovak Republic, thus confirming their role as the economic growth maker. The most important factors of economic growth are the technical progress and the level of qualification of the earners in the national economy.

Export function. The share of small and medium-sized enterprises in exports of industrialized countries is significant, while the share between individual sectors is distinctly different. Very important is mainly the indirect contribution to the export performance of the economy in the form of sub-deliveries for the final product.

Educational function. Small and medium-sized enterprises also have a significant role to play in the acquisition of education and practical qualifications of apprentices, graduates of secondary and higher education institutions.

Political function. With the support of small and medium-sized businesses, political stability and democracy are also being strengthened, as economic and political power is dispersed among broader strata.

Ecological function. In many cases, SMEs have also proven themselves in the field of environmental protection. They are often carriers of environmental protection, some products are more environmentally friendly to produce in smaller volume when the process is more controllable. Their positive point is that they disperse production, prevent concentration and thus eliminate the excessive ecological burden of one area.

Small and medium-sized enterprises have many advantages but also disadvantages over large corporations. The strengths of SMEs are mainly: greater adaptability and flexibility to changing market conditions, creativity, imaginativeness, closer contact with customers, often act on a narrow segment of the market that is unattractive for large companies. Because of these advantages, small and medium-sized enterprises are the carriers of development, progress, creating a competitive environment, filling market gaps, pushing for price reductions and thus costs. On the other hand, SMEs are more vulnerable than their larger competitors, they have limited access to obtaining foreign sources of funding, so they are mostly unable to make more investments. Large businesses have the benefits of a large scale – large-scale production and resulting economies of scale, usually greater tradition and experiences (the effect of the experience curve), the strength of the brand, the loyalty of customers – in case of difficulties, have a greater chance of state support, especially when it is a strategic business, have more options and means to use their impact, better access to information, more qualified professionals.

Small and medium-sized enterprises in Slovakia in numbers, current data are available for 2016 (Slovak Business Agency, 2017).

The Slovak Business Agency, in the framework of its activities aimed at supporting the development and growth of small and medium-sized enterprises (SMEs) in Slovakia, conducts regular monitoring and research of the business environment with an emphasis on the small and medium-sized enterprise sector. The elaborated analytical materials serve as information and analytical inputs in connection with the preparation and implementation of the policy of support and development of small and medium enterprises in Slovakia. Small and medium-sized enterprises in Slovakia accounted for 99.9% of the total number of entrepreneurs in 2016, their number increased by 4.9% in the year-on-year comparison to 557 122 mainly due to the growth of small and medium-sized enterprises by 9.1%. The number of natural persons - entrepreneurs increased by 2.5%, rising for the first time since 2008. The largest share in the total number of business entities continued to be micro-enterprises (97.1%), followed by small (2.3%) and medium-sized enterprises (0.5%). From the point of view of legal forms, natural persons - entrepreneurs formed almost two thirds (62.3%) of the total number of active SMEs in Slovakia. More than three quarters of small and medium-sized businesses are active in sectors such as business services, trade, construction and industry. In the year-on-year comparison, the number of small and medium-sized entrepreneurs in the whole spectrum of industries increased. In relative terms, their number increased most markedly in trade (+7.3%), agriculture (+6.5%), or in business services (+6.0%). Compared to other EU countries, Slovakia is characterized by high entrepreneurial activity, the dominant presence of microenterprises, but the below average representation of women in the total number of entrepreneurs. In 2016, SMEs achieved the highest growth (by 3.5%) in employment since pre-crisis 2008. Employment increased in all SME size categories. The share of small and medium-sized enterprises in employment in the corporate economy reached 74.1% and in

total employment in the SR 59.3%. Compared to other EU countries, Slovakia has an above average SME share in employment. The added value of small and medium-sized enterprises increased by 4.3% on a year-on-year basis and reached 52.7% in the national economy. More than half of the added value generated is the result of SME's operating in the industry and commerce sector. However, due to higher growth of the added value of large enterprises than SMEs, the share of SMEs on the added value created has been declining for six consecutive years. Compared to other EU countries, Slovak small and medium-sized enterprises are lagging behind in their share of added value. In the foreign trade area, on the other hand, small and medium-sized enterprises failed to see a significant improvement, as confirmed by our survey. According to the preliminary results, the exports of SMEs in the year-to-year comparison almost did not change and the share of SMEs in total exports even slightly decreased. There is also no sign of positive development in the innovation activity of small and medium-sized enterprises in Slovakia. According to Eurostat, almost every third SME (30.5%) was innovative in Slovakia. However, almost every other SME (48.0%) performs innovative activities within the EU - 28. The largest measure of innovative activities is characterized by SMEs operating in the industrial and service sectors.

3.2 Prerequisites for Competitiveness of Slovak SMEs in the EU Single Market - Results of the Survey

The term *competitiveness* is based on a word *competitive* which is defined in the literature as *competing*. Freebairn defines competitiveness as an ability to offer goods and services demanded by buyers at the time, at the place, and in the adjustment, which is at least in such level as competition, where recoverability of factors of production is at the same level of their opportunity costs (Freebairn, 1996). Competitiveness factors can be divided into macroeconomic and microeconomic. According to Porter, macroeconomic, political, legal and social factors of competitiveness create conditions for competitiveness - wealth creation but do not they create wealth (Porter, 2007). Wealth is made at the micro level through the use of human, capital and natural resources. From our point of view, the competitiveness of Slovak SMEs on the European market is: professionalism of management and quality of company management, quality of products and services, support for innovation in the company, cooperation with other entities (research institutes in the EU, universities) and creation of partnerships that will support the innovative spirit, focus on knowledge management and support for employee training, adherence to and adoption of EU environmental, social, legal, technical and other standards (Čihovská, Hvizdová, 2011).

By the primary survey we wanted to find out what is the real level of competitiveness of our SMEs in the EU foreign markets. Within the scope of the survey, we conducted a sample survey of randomly selected SMEs in the Slovak Republic in the form of on-line questioning. The survey was attended by 256 Slovak small and medium-sized enterprises. In the questionnaire, we focused on the issue of entry and competitiveness of Slovak SMEs in the EU market. We were wondering whether businesses are taking an opportunity of the easier way to enter the EU single market, how many countries they serve, what barriers to enter the EU market they perceive and how they increase their competitiveness.

The examined sample consisted mainly of limited liability companies (78, 91%), tradesmen (13.67%) and joint stock companies (7.42%). According to the number of employees, the majority of companies in the survey were the companies with up to 9 employees - micro-enterprises (82.81%), following companies with 49 employees accounted for 12.89%, and only 4.3% formed enterprises with 50 - 249 employees. Up to 81% of the businesses surveyed acted in retail, wholesale, or services. 12.5% displayed construction companies and about 4% of companies were operating in the engineering industry. Nearly 2% reported other sectors such as agriculture, paper industry, or science and research.

Survey Results: Since 2004, Slovakia has been a full member of the EU and since 2009 a member of the Economic Monetary Union. A single European market offers wide scope for expansion for SMEs as well. Therefore, we were interested in the scope of demanded Slovak companies in the EU markets for the placement of products and services in individual European countries. The responses of the companies surveyed showed that 32% of them have already entered the EU market, while up to 68% of businesses still not operating on any foreign market. This means that not even 1/3 of the companies surveyed place their products in some of the EU countries. Interestingly, of those businesses that have not entered any European market yet, up to 65% have even no ambition to do so in the near future. Almost 60% of businesses that have already entered the EU market serve 1 to 3 member countries. Almost 21% of businesses serve more than 4 EU countries, more than 13% of enterprises have already entered more than 11 EU countries, and 9.64% of enterprises have not answered this question. Most businesses operate in the Czech Republic (almost 46%), followed by Austria (approx. 32%), and Hungary (almost 16%). 6% of businesses said they are active on the markets of the whole Europe. The answers showed that Slovak SMEs most often serve the Visegrad Group (Czech Republic, Hungary, Poland), according to this survey it represents almost 70% of enterprises. Many SMEs operate only in border areas, resulting mainly from the social links and traditions of the V4 countries.

We also investigated the biggest barriers that businesses face when they enter the European market. As the biggest barrier, businesses have identified bureaucracy, lack of finances, weak experience, language barriers, low-skilled staff and lack of infrastructure. Another question evaluated the response to growing competition on our market, in other words, how our small business responds to foreign competition on the domestic market. About 64% of businesses said they were improving the quality of their products and services, 24% said they did not have to do anything to increase business competitiveness, 16% increased investment in employee training, and almost 15% of companies asked to invest increased investment in new technologies.

In the questionnaire, we also focused on the use of various SME support programs. After the accession of the Slovak Republic to the EU, broader possibilities of using aid for SMEs were opened, enabling businesses to obtain financial resources for the start of business and also to improve their managerial skills which should help SMEs to increase their competitiveness. Therefore, we asked our surveyed sample of companies whether they are using EU / SR aid (financial / non-financial). The answers show that almost 97% of enterprises have not yet benefited from financial or non-financial assistance from EU funds, only about 2% of EU assistance has been used. Nearly 50% of businesses said they did not need any help, with 31% of businesses indicating too much bureaucracy as the reason for not using, and about 21% of businesses lack information and do not know who to turn to. Three respondents tagged the "other" option and as an obstacle they mentioned a corruption, furthermore, there were no help programs for their business focus, and one company said that the help programs were not available for a new business.

The results of the quantitative survey declare the fact that Slovak SMEs do not yet fully benefit from the benefits offered by EU membership. Access to EU markets is not yet a priority for Slovak SMEs, businesses are still oriented in foreign trade transactions mostly on traditional V4 partners. The main obstacle to the more courageous expansion of our SMEs in advanced Western European markets is high competition, lack of financial resources, but also little experience of demanding administration and red tape. The positive thing is that our small businesses have become fully aware of increasing competition not only on the foreign market but also on the domestic market, and that up to 64% of the sample surveyed increases the quality of their products and services and increases investment in employee training and new technologies.

CONCLUSION

Small and medium-sized enterprises in Europe and Slovakia are an important factor in economic growth and development. SMEs are involved in addressing many of the social, economic and political issues of countries and regions, are the engine of the European economy, job creation and economic growth. It is documented by the positive development of the main economic indicators characterizing the development of SMEs in the EU and Slovakia in 2016. Out of the total number of more than 23 million entrepreneurs in the non-financial business economy in the EU-28, 99.8% were SMEs. Representation of micro-enterprises reached 93.0%, small enterprises represented 5.9% and medium-sized enterprises 0.9%. Small and medium-sized enterprises in Slovakia accounted for 99.9% of the total number of entrepreneurs in 2016. Their number increased by 4.9% to 557 122 in the year-on-year comparison. In Slovakia, the representation of micro-enterprises is 97.1% out of all enterprises which is 4.1 pp. b. more than in EU countries. Representation of small enterprises is 2.3%, and medium-sized enterprises 0.5%. Slovakia is ranked among the countries with the highest share of microenterprises in the total number of business entities within the EU non-financial business economy. It is also important to compare the EU and Slovakia in the number of SMEs per 100 inhabitants. In 2014, according to Eurostat, 7.4 were small and medium-sized enterprises per 100 inhabitants in Slovakia, with 4.6 in the EU-28. Slovakia is ranked among the countries with the highest number of small and medium-sized enterprises to the total population. The number of small and medium-sized enterprises per 100 inhabitants is highest in countries such as the Czech Republic (9.5) and Portugal (7.5).

For the total number of persons employed, SMEs accounted for 66.8% in the non-financial business economy in the EU-28, with a share of microenterprises representing 29.9%, small enterprises representing 20.1% and of medium-sized enterprises representing 16.8%. The current share of small and medium-sized enterprises (SMEs) in employment in the business economy in Slovakia in 2011 was 74.1%. Within each size category, Slovakia has the dominant position compared to the EU-28 countries (higher by 15.4 pp). Slovakia continues to be ranked among the countries with a higher share of small and medium-sized enterprises in employment. SMEs have the highest share of employment in countries such as Latvia (79.2%), Estonia (78.0%), Malta (77.9%).

The innovation activity of small and medium-sized enterprises (10-249) can be evaluated as the weaker part because it does not show any signs of positive development in Slovakia. According to Eurostat, almost every third SME (30.5%) was innovative in Slovakia. However, almost every other SME (48.0%) performs innovative activities within the EU - 28. The largest measure of innovative activities is characterized by SMEs operating in the industrial and service sectors. In the context of the use of information and communication technologies in the SME sector it can be said that the use of computers with increasing business size is growing. Compared to other EU countries, Slovak SMEs, (10-249) with an 11% share of those with at least 1% of sales coming from on-line sales, rank among the countries with sub-results in this area.

In the foreign trade area, the SMEs SR do not register any significant improvement as well. According to Eurostat's results, exports of SMEs in the year-to-year comparison almost did not change and the share of SMEs in total exports even slightly decreased. This was also confirmed by the results of our survey. It has emerged that Slovak SMEs have not yet fully used the benefits offered by EU membership. Access to EU markets is not yet a priority for Slovak SMEs, businesses are still more focused on the domestic environment, and in small foreign trade transactions they are mostly oriented to traditional V4 partners. In this area, efforts will need to be made for all support mechanisms that will help our SMEs to increase their focus on foreign markets.

The high competitive environment of the European market is constantly increasing the demands for SMEs and only the highest quality products and services can satisfy the demands of demanding customers. That is why Member States have begun to take measures to save jobs and stimulate production. Similarly, the government of the Slovak Republic has given in its program statement one of the main tasks to support small and medium-sized enterprises and the competitiveness of the economy. It has committed itself to improving the business environment and facilitating entry into business. One of the main institutional tools of SME support is the Slovak Business Agency. The Slovak Business Agency (SBA) is the key and oldest institution that supports small and medium-sized enterprises (SMEs) in the Slovak Republic. The Slovak Business Agency (floods the National Agency for the Development of Small and Medium Enterprises) provides direct and indirect support for small and medium-sized entrepreneurs. The SBA's main mission is to assist entrepreneurs in line with the principles of the Small Business Act initiative, comprehensive business support at national, regional and local level, and enhancing the competitiveness of entrepreneurs within the EU and third-country markets.

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Impact of Cultural Heritage on Tourism

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Abstract: Tourism plays a key role in development and competitiveness of many countries. Statistical data show that cultural and heritage tourism continues to grow rapidly. One of the possibility how to compare and measure the level and the development of cultural heritage in individual countries is represented by competitiveness indices. We focused on the Travel and Tourism Competitiveness Index, precisely Natural and Cultural Resources subindex that enables to identify current state of the countries/economies in the field of cultural heritage development. The aim of the paper is to investigate impact of cultural heritage on tourism. We applied quantitative methods (descriptive, correlation and regression analysis) of scientific work. We conclude that there is statistically significant dependence between variables. We found out positive impact of cultural heritage on international tourism receipts, thus also on GDP per capita growth.

INTRODUCTION

2018 was announced to be the European year of cultural heritage. The aim is to encourage more people to discover and engage with Europe's cultural heritage, and to reinforce a sense of belonging to a common European space (Europe, 2018). Cultural heritage shapes our identities and everyday lives. It surrounds us in towns and cities, natural landscapes and archaeological sites. It is not only found in literature, art and objects, but also in the crafts we learn from our ancestors, the stories we tell to our children, the food we enjoy in company and the films we watch and recognize ourselves in. Cultural heritage has a universal value for individuals, communities and societies. It is important to preserve and pass on to future generations.

In the past decades travel and tourism, and its enabling ecosystem have proven to be significant drivers of economic growth, contributing over 10% to global GDP and accounting for 1 in 10 jobs on the planet (WEF, 2017). Tourism, one of the most relevant industries worldwide, plays a key role in the development and competitiveness of many regions (Alberti & Giusti, 2012). Tourism is considered a major economic power and today´s one of the most dynamic activities. In addition to generating economic benefits, the activity of tourism also contributes to the enhancement of cultural and environmental aspects. Thus, tourism was considered an essential component in bringing value to natural and cultural monuments, as well as enhancing the importance and significance of heritage sites to the nation. It is important to understand that in addition to owning monuments of historical and artistic interest, destinations must seek a better use of these monuments by tourism, as well as create strategies to enable cultural tourism. Therefore, tourism should fulfil its role of intermediary element that allows the encounter between people and cultural heritage (Da Silva, 2017).

1 LITERATURE REVIEW

Culture and heritage are important motives for tourism. Studies in recent years have suggested a substantial percentage of tourists seeks cultural and heritage experiences (Andereck, 2018). Statistics also indicate that cultural and heritage tourism continues to grow rapidly, especially in OECD and APEC regions (Childs, n.d.). Culture and heritage tourists usually visit cultural heritage attractions such as historic buildings and other historic attractions; archaeological sites; parks; galleries or museums; concerts, plays or musicals; ethnic or ecological heritage sites, etc. Such trips are more memorable for them than conventional holiday trips since they allow them to learn something new.

European cultural heritage, tangible and intangible, is our common wealth - our inheritance from previous generations of Europeans and our legacy for those to come. It is a valuable resource for economic growth, employment and social cohesion (European Commision, 2014). Heritage has many dimensions: cultural, physical, digital, environmental, human and social. Its value - both intrinsic and economic - is a function of these different dimensions and of the flow of associated services (European Commision, 2014). Cultural tourism belongs to the largest and fastest growing global tourism market (OECD, 2009). According to J. Gržinić (2015), cultural tourism is considered to be a source of sustainable development, as it is reflected in places that are not exclusively tourist. Benefits of cultural heritage in tourism can be divided into three groups: (1) economic, (2) social; and (3) environmental benefits (Childs, n.d.; Oohlala, 2013; Abbas, 2012).

In terms of economic benefits, cultural and heritage tourism enables business and tax revenues to be boosted. According to Bowitz & Inbenholt (2009) investment in cultural heritage are beneficial to the local economy, not only in terms of cultural consumption, but also in the form of increased employment and income. It helps to diversify the local economy by creating new jobs, businesses, events and attractions. Furthermore, cultural heritage development supports small businesses and enables them to expand. It helps to encourage the development and maintenance of new and/or existing community amenities that support tourism services, to develop rural regions and to support local economies, but also international trade. In general, tourism is a fast-growing industry that helps promote economic growth and development by creating jobs, earning foreign exchange, stimulating infrastructure provision, and generating tax revenues (Eilat & Einav, 2004).

Social benefits include various aspects of cultural and heritage tourism which helps to:

1. Support important local resources to be actively preserved and protected,
2. Develop partnerships and improve relationships among and/or within local communities,
3. Support positive behavior,
4. Improve image, pride and beauties of local communities,
5. Provide opportunities for research, education and working jobs for students,
6. Improve experience of local residents and visitors/tourists interested in cultural arts, history, and/or cultural heritage protection; and
7. Build social capital.

At the same time, the development of the cultural and heritage tourism supports preservation of local traditions, customs and culture.

For example, UNESCO currently considers intangible cultural heritage as important as the tangible one. Last, but not least, it enables to get know different cultures. Cultural heritage stimulates a respect and understanding of other cultures and consequently promotes peace and understanding (WTO, 2001)

Regarding environmental benefits, cultural tourism helps to encourage local residents and visitors to be aware about their impact on the natural and cultural environment. It also improves awareness, knowledge and interests of local residents and tourists in sustainable development. According to Huang et al. (2012), the pollution produced by the tourism industry is recognized to be lower when compared to the production of the manufacturing sector. Current debates about sustainability tend to focus on technical issues, such as carbon emissions, energy consumption and waste management, or on the economic aspects of urban regeneration and growth. Governments increasingly recognise the contribution of cultural heritage to social well-being of different groups living within increasingly cosmopolitan towns and cities. Heritage is seen as a major component of quality of life (Tweed & Sutherland, 2007).

On the other hand, UNESCO (2015a) appeals to strengthen the role of the World Heritage properties as a guarantee of sustainable development. Their full potential to sustainable development needs to be harnessed. States Parties to the World Heritage Convention should consider three dimensions of sustainable development as follow: (1) environmental sustainability, (2) inclusive social development, and (3) inclusive economic development, together with the fostering of peace and security. These reflect the concern for "planet, people, prosperity and peace", identified as areas of critical importance in the 2030 UN Agenda for Sustainable Development (UN, 2015). According to previous studies carried out by UNESCO (2015b), site managers claimed that the property's World Heritage status has a positive impact on a wide range of areas. The positive impact was largest for conservation in both natural and cultural properties, followed by recognition, research and monitoring, as well as management. Political support for conservation was estimated as higher in cultural than natural properties and fairly low for mixed properties. Negative impacts of the World Heritage status were rarely ever mentioned.

Cultural attractions play an important role in tourism at all levels, from the global highlights of world culture to attractions that underpin local identities. At global level cultural attractions are often seen as icons of important streams of global culture. Cultural attractions have also played a significant role in cultural policy and in efforts to promote cultural development. At the European level, culture is considered as an essential resource that not only provides work but which can also develop cultural harmony in the EU. The EU adopted "new approach to culture" which underlines the growing importance of culture in European policy that resulted in growing number of activities in the field of cultural tourism and cultural attractions funded by the European Commission (Richards, 2001).

Results of the transnational study of European cultural tourism demand and supply (Richards (1994; 1996) revealed a rapid increase in the production and consumption of heritage attractions. Although heritage tourism demand has been fueled by rising income and education levels, there has also been a significant supply-induced element of demand. In particular, those engaged in cultural production play a key role in exploiting the cultural capital concentrated in the major historic centers of Europe. Spatially localized production of heritage is intimately linked with socially limited consumption of heritage tourism by groups within the "new middle class", rendering attempts to spread tourism consumption through heritage promotion difficult.

There is large consensus that tourism plays a key role in the development and competitiveness of some regions (Lazzeretti & Petrillo, 2006). In general, Europe is the region with the strongest overall tourism and travel competitiveness performance. It boasts six (Spain, France, Germany, United Kingdom, Italy and Switzerland) of the 10 most competitive countries in the travel and tourism sector, and attracted 620 million of the 1.2 billion international visitors in 2016. Southern European countries tend to be characterized by stronger cultural and natural resources and tourism service infrastructure, their business environment, ground transport

infrastructure and attention for environmental sustainability performance scores tend to be somewhat lower than those in Western and Northern Europe. These countries provide better enabling environments, including some of the most advanced ICT systems in the world, and better transport infrastructure, but have not developed their natural and cultural resources to the same extent. They also tend to be pricier destinations. However, despite recent terrorist attacks and increased fear of terrorism, tourism performance of countries such as France, Germany and Belgium have not declined significantly, confirming a strong resilience of the travel and tourism sector to security shocks (WEF, 2017).

One of the possibilities how to compare and measure the level and the development of cultural heritage in individual countries represents competitiveness indices. According to the topic of the presented paper we focused on the Travel and Tourism Competitiveness Index, precisely Natural and Cultural Resources subindex that enables to identify current state of the countries/economies in the field of cultural heritage development.

2 METHODOLOGY

The aim of the paper is to investigate the impact of cultural heritage on tourism. In order to fulfil the aim, we measured the impact of the Travel and Tourism Competitiveness Index, more specifically Natural and cultural resources subindex, on selected variable - international tourism receipts (current US$) in 126 countries in the world.

The World Economic Forum (2017) engaged leaders in travel and tourism to carry out an in-depth analysis of the travel and tourism competitiveness of economies across the world. The Travel and Tourism Competitiveness Index measures the set of factors and policies that enable the sustainable development of the travel and tourism sector, which in turn, contributes to the development and competitiveness of a country.

Tab. 1 Indicators of the Natural and Cultural Resources subindex

Pillar 13: Natural Resources	Pillar 14: Cultural Resources and Business Travel
13.01 Number of World Heritage natural sites	14.01 Number of World Heritage cultural sites
13.02 Total known species	14.02 Number of oral and intangible cultural heritage expressions
13.03 Total protected areas	14.03 Number of sports stadiums
13.04 Natural tourism digital demand	14.04 Number of international association meetings
13.05 Attractiveness of natural assets	14.05 Cultural and entertainment tourism digital demand

Source: WEF, 2017

The overall Travel & Tourism Competitiveness Index TTCI structure is composed of 14 pillars divided into four subindices: (1) subindex A: Enabling Environment; (2) subindex B: T&T Policy and Enabling Conditions; (3) subindex C: Infrastructure; and (4) subindex D: Natural and Cultural Resources. Pillars are calculated on the basis of data derived from the Executive Opinion Survey and quantitative data from other sources. The survey data is derived from responses to the World Economic Forum's Executive Opinion Survey and range in value from

1 to 7. Each of the pillars has been calculated as an un-weighted average of the individual component variables (WEF, 2017).

In presented paper we focus on subindex D: Natural and Cultural Resources that consists of 2 pillars: (1) Natural Resources and (2) Cultural Resources and Business Travel. Indicators of the pillars are shown in table 1.

Regarding our research, we assume that if the score of the cultural resources pillar improves, then international tourism receipts will increase. To verify this assumption, we applied quantitative methods (descriptive, correlation and regression analysis) of scientific work which were interpreted by Lukáčik, Lukáčiková and Szomolányi (2011). Obtained statistical data were analysed through Microsoft Excel and Gretl.

First, we defined international tourism, receipts (IT_receipts) for the year 2016 that was compiled from the databases of the World Bank Group (WBG) as dependent variable. Second, we defined natural and cultural resources subindex (Nat_and cult_ resour_ subi) and cultural resources and business travel pillar (Cult_res_ andbus) as independent variables and GDP per capita in current US $ (GDP_pc) as control independent variable. Natural and cultural resources index dataset was obtained from Travel and Tourism Competitiveness Report 2017 (WEF, 2017), but subindex values are of the year 2016. The source of dataset for GDP per capita for year 2016 was World Bank Group (WBG). The regression equations were:

$$Dependent\ variable\ (y) = const + b_1 \times x_1 + b_2 \times x_2 \text{ , where} \tag{1}$$

x_1 ,x_2 – independent variables

3 RESULTS AND DISCUSSION

Data in table 2 describe the input data using descriptive statistics. Indicators are mean, standard deviation, coefficient of kurtosis, coefficient of skewness, minimum and maximum values. The total number of observations (N) is 126. The positive value of kurtosis coefficient indicates the positive, right-handed asymmetric distribution of countries. Based on the mean of dataset, there are some countries with index value more than average. High coefficient of kurtosis indicates that there are extreme values in the dataset which exceed the standard normal distribution.

Tab. 2 Descriptive statistics

N=126	IT_receipts	Nat_and cult_ resour_ subi	Cult_res_ andbus_	GDP_pc
Mean	10 306 984 920.63	2.71	2.27	15 990.23
Standard Deviation	24 697 381 970.94	1.08	1.40	19 718.41
Kurtosis	65.56	1.06	2.13	2.90
Skewness	7.22	1.30	1.69	1.74
Minimum	1 900 000.00	1.30	1.02	285.73
Maximum	24 4708 000 000.00	5.74	6.69	100 738.68

Source: own results based on WEF, 2017; WBG, 2016

Correlation matrix in table 3 shows correlation coefficients between dependent variable (IT_receipts) and independent variables (Nat__and cult_ resour_subi; Cult_res_ andbus_; GDP_pc). It points to positive signs of the correlation coefficients. The correlation between two variables is medium strong. It means that the increase of independent variables, especially Natural and cultural resources subindex and/or Cultural resources pillar results also in increase of the international tourism receipts.

Tab. 3 Correlation matrix

N=126	International tourism, receipts
Natural and cultural resources subindex	0.57
Cultural resources and Business Travel pillar	0.58
GDP per capita in current US$	0.37

Source: own results based on WEF, 2017; WBG, 2016

For more detailed estimation of relationship between variables, we did regression analyses, which results are shown in the table 4 and table 5.

Tab. 4 Model OLS, using observations 1-126; Dependent variable: IT_receipts

	Coefficient	Std. Error	t-ratio	p-value	
const	−2.47356e+10	4.80258e+09	−5.1505	1.00e-06	***
Nat_and cult_resour_subi	1.15418e+10	1.76321e+09	6.5459	1.44e-09	***
GDP_pc	238069	96682.3	2.4624	0.0152	**
R-squared				0.359731	

Note: Significance of marks (stars) by parameter´s estimations *** - 99 %, ** - 95 %, probability

Source: own results based on WEF, 2017; WBG, 2016

Table 4 shows regression model with independent variables (natural and cultural resources subindex and GDP per capita in current US$). Model OLS analyses the impact of independent variables on receipts from international tourism. Based on regression analysis, the R-squared indicates 36% of input data. The estimation of the variables supports correlation analysis results which indicate statistically significant dependence between variables. Increase of natural and cultural resources subindex by 1 point, with probability of 99%, reflects in an increase of international tourism receipts by approximately 11 541 800 000 $. To conclude, we verified the assumption that if the score of the Natural and Cultural Resources subindex improves, then international tourism receipts will increase.

Table 5 shows regression model with independent variables (pillar 14: cultural resources and business travel and GDP per capita in current US$). Model OLS analyses the impact of independent variables on receipts from international tourism. Based on regression analysis, the R-squared indicates 36% of input data. The estimation of the variables supports correlation analysis results which indicate statistically significant dependence between variables. Increase of cultural resources and business travel pillar by 1 point, with probability of 99%, reflects in an increase of international tourism receipts by approximately 9 023 150 000 $. We verified

the assumption that if the score of the cultural resources pillar improves, then international tourism receipts will increase.

Tab. 5 Model OLS, using observations 1-126; Dependent variable: IT_receipts

	Coefficient	Std. Error	t-ratio	p-value
const	-1.37863e+10	3.41640e+09	-4.035	9.51e-05 ***
Cult_res_andbus_	9.02315e+09	1.37263e+09	6.574	1.25e-09 ***
GDP_pc	227085	97143.4	2.338	0.0210 **
R-squared				0.361131

Note: Significance of marks (stars) by parameter´s estimations *** - 99%, ** - 95% probability

Source: own results based on WEF, 2017; WBG, 2016

CONCLUSION

With the enormous growth of knowledge, increasing mobility and the increased accessibility of travel there is widespread curiosity about other places and a huge demand to visit and personally experience other societies. One of the pillars of the tourism industry has been mankind's inherent desire to see and learn about the cultural identity of different parts of the world. In domestic tourism, cultural heritage stimulates national pride in one's history. In international tourism, cultural heritage stimulates a respect and understanding of other cultures and consequently promotes peace and understanding (WTO, 2001).

Over the last two decades, tourism has grown exponentially and is currently considered to be one of the essential qualities to support economic development. Tourism plays a key role in the development and competitiveness of many regions. Despite the increasing interest in cultural heritage and tourism to increase regional competitiveness, the relation between cultural heritage and competitiveness remains vastly unexplored by scientists (Alberti & Giusti, 2012).

According to Faria and León-Ledesma (2003) cultural heritage has a positive impact on economic growth and the impact is influenced by social, political and institutional factors. They found that the impact of cultural heritage on growth was positive and it was smaller for countries that either suffer a high degree of political instability or enjoy a high degree of legislative rule. According to Aleemi & Qureshi (2016) tourism receipts have a significant and positive impact on the economic growth of the country. These opinions are supported also by our results presented in this paper support these opinions. We found out positive impact of cultural heritage on international tourism receipts, thus also on GDP per capita growth.

Besides strengths of cultural heritage in tourism, the cultural heritage is faced with specific threats and proven imminent dangers, such as significant loss of historical authenticity and cultural significance; modification of juridical status of the property diminishing the degree of its protection; lack of conservation policy; effects of regional and/or town planning projects; threat of armed conflict; impacts of climate, geological or other environmental factors; the management plan or management system is lacking or inadequate, or not fully implemented; etc.

According to obtained results, we recommend to protect and promote cultural heritage, since cultural heritage influences the increase of international tourism receipts. We also recommend to strengthen the protection and support the development of cultural heritage. In terms of observed natural and cultural resources subindex, the assessment of the country can be

improved by effective measures applied in one of the indicators that composed the subindex, for example by increasing the number of World Heritage sites; oral and intangible cultural heritage number of expressions; and/or cultural and entertainment tourism digital demand.

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Trade Relations between the European Union and South Africa – Causes and Effects of the Transition from TDCA to EPA

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Abstract: This article aims to carry out a cause and effect analysis of signing and implementing the TDCA and its transition to the EPA for both parties (the EU-SA) in the context of their mutual trade. The article provides an example of the RSA, because it is considered not only to be a middle-income country, but also to have an emerging market status, and its economic situation is better than of the majority of countries from Sub-Saharan Africa. The discussion is limited only to trade in goods, i.e. the exports and imports of goods. The methodology of the study is based on the comparison of trade statistics between the years 2000 (or 2001, depending on the availability of data) and 2016 relating to SA and the European Union. The analysis of statistical data is preceded by a description of the main provisions of the TDCA and changes introduced by the SADC EPA.

INTRODUCTION

South Africa (SA, or the Republic of South Africa, the RSA) has a population of 56 million people (4.5% of the total Africa's population) and a GDP per capita of USD 5,198 (own study based on: African Statistical Yearbook, 2017). Due to the fact that the RSA is the largest economy in Southern Africa and also the Africa's second biggest one, behind Nigeria, since the mid-1990s, it had been perceived as the gateway to Africa (van Heerden, 2016, p. 114). Relations between the EU and the RSA (the biggest African trading partner) used to be quite complex in the past. The Community's foreign policy towards the Republic of South Africa was centred around a formidable task of maintaining a balance between trade interests on the one hand, and the official condemnation of the apartheid regime on the other. After the fall of the apartheid system and the democratic revolution in 1994, the formal co-operation between the EU and the new government of the Republic of South Africa became politically feasible. At that time, the RSA's government applied for membership of the African Caribbean Pacific group, also with a view to benefiting from trade preferences, which were granted by the EU to this group of countries pursuant to the then applicable Lomé Conventions. Under these conventions, 96.5 per cent of all imports (all industrial products and 80 per cent of agricultural products) from the ACP already entered the EU duty free (Bilal & Rampa, 2006, p. 15). In the end, the RSA achieved only the status of a country associated to the ACP, which meant co-operation opportunities on a political plane, however, regarding trade – this was not possible. In 1994, the European Union introduced a package of immediate measures to facilitate the RSA's integration with the global economy; and in September that year, the EU granted GSP preferences to this country (they entailed mainly reduced customs duties on industrial goods from the RSA).

Instead of granting unilateral Lomé preferences, the European Union proposed a bilateral free trade agreement. At the time of entering into negotiations with the EU, the RSA was in a difficult position. On the one hand, the country strived to ameliorate the situation following the end of the apartheid regime and improve the quality of life, which required the state to be more involved in the economy. On the other hand, the realities of the global market were a driving factor behind the liberalisation of a trade and economic policy, yet to attain this, it was necessary to attract direct foreign investments (van Heerden, 2016, p. 125). Eventually, after five-year negotiations, on 11 October 1999, both parties signed the Trade, Development and Cooperation Agreement (TDCA), which entered into force for an interim period on 1 January 2000; however, it was not until April 2004 when the agreement was ratified. The TDCA consists of two parts; the European Union and South Africa Free Trade Agreement (EU-SA FTA) and the European Program for Reconstruction and Development (EPRD). The EU-SA FTA constitutes the creation of a free trade area between the European Union and South Africa consistent with World Trade Organisation (WTO) rules. The EPRD agreement, on the other hand, consists of the European Union's financial support to South Africa in terms of social service, private sector development, good governance, democratisation and human rights, and regional integration (Assarson, 2005, p. 7).

The RSA is a signatory of the Cotonou Agreement, since 2007 it had actively participated (before that time, it had been only an observer) in negotiations of the regional Economic Partnership Agreement together with countries from Southern Africa (the so-called SADC EPA). Eventually, the regional SADC EPA was concluded in 2016 and replaced the TDCA in respect of trade part.

1 LITERATURE REVIEW

There is a relatively extensive literature on trade relations of the Republic of South Africa, which in particular is centred around the free trade agreement between the EU and the RSA. All researchers concur that the agreement has become the cornerstone of trade relations between South Africa and the EU. Many of them believe that the TDCA between South Africa and the EU has been also an important model and precursor when negotiating Economic Partnership Agreements (EPAs) with the ACP countries to supplement the Cotonou Agreement (Laaksonen, 2008, p. 24).

The first research direction refers to the effects of the free trade agreement on the trade between the RSA and the European Union. Some studies that evaluated the potential impacts of the trade agreement before its implementation showed potential positive impacts on South Africa. Jachia and Teljeur (1999) suggest that in addition to trade creation, trade diversion also takes place. Jachia and Teljeur (1999) further state that South Africa's imports are likely to be bigger than their exports to the European Union's market. Similar observations can be also found in publications released after the TDCA was signed. In his comparison of statistical data regarding trade, Assarson (2006) claims that the free trade agreement between the EU and the RSA resulted in greater exports from and imports to the EU between 1999 and 2004, and therefore a trade creation effect could be noticed. Kwentua (2006) investigates the trade creation and trade diversion effects of the EU-SA agreement and finds evidence that both trade between members of the EU-SA agreement and trade between members and non-members of the EU-SA agreement increased, and therefore concludes that the EU-SA agreement is trade creating. Holden and McMillan (2006) investigate whether the EU-SA and SADC agreements have had any effects on South Africa's trade. A similar view was held by Jordaan and Kanda (2011), who utilised panel data estimation of the gravity model of bilateral trade and relied on data from 1994 to 2008. The two scholars maintain that the EU-SA preferential trade agreement has a significant trade expansion effect.

Most of research had been conducted before the TDCA entered into force or was undertaken during the implementation of its provisions, which means that final conclusions cannot be drawn in a conclusive manner. Furthermore, the research usually covers a relatively short period and concerns the time when the TDCA was not fully implemented. In fact, as regards industrial goods, both the European Union and the RSA introduced considerable reductions of customs duties already in 2000 (86 per cent and 62 per cent respectively), however, the reductions of customs duties on agricultural goods were spread over a longer time period (see Assarson, 2006, p. 8 for more information on the schedule of customs duty reduction in the TDCA).

To evaluate the effects of the TDCA, research period must cover a longer period, especially after 2010, when the essential provisions of the agreement were implemented, only then it will be possible to draw conclusions regarding its significance for EU-RSA trade relations. It is, as a matter of fact, an insufficient time period that some researchers refer to, among others, Jordaan and Kanda (2011). They claim that an informative conclusion on trade effects of preferential trade agreement can only be reached once the agreement has been fully operational. This article aims to fill this gap, as it spans the years between 2000 and 2016. The final provisions of the SADC EPA are also known. The agreement entered into force temporarily in October 2016, and it is thus possible to evaluate its potential effects on trade relations between the EU and the RSA.

The second research direction pertains to the significance of the TDCA, and subsequently – the SADC EPA, for trade relations between the RSA and other Southern African countries being members of integration groupings in Africa. Akinkugbe (2000) argues that some of the Southern African Custom Union (SACU) countries will suffer losses from the common tariff revenue pool when the EU-SA FTA is implemented. A decrease in customs revenues from Southern African countries has been foreseen also by Greenberg (2000) and Sandrey (2005).

It must be emphasised that publications made by the European Union (the European Commission) lay particular stress on the benefits that will be obtained by African countries (including the RSA) as a result of signing the EPAs or – to be more general – of creating free trade areas with the EU (European Commission 2016a). Meyn (2004b) discerns also more opportunities and benefits – rather than threats – for countries from Southern Africa, which arise from executing the free trade agreement. Plant (2009) analyses costs and benefits to the RSA relating to the replacement of the TDCA with the SADC EPA. He asserts that economic costs will be probably limited. In particular, South Africa's trade with SADC neighbours is, to a large extent, vertical, as South Africa exports industrial goods to those countries in exchange for unprocessed goods and raw materials, such as energy, cotton, precious stones. As a consequence, the RSA-EU trade expansion could really boost regional trade subject to constraints on supply. As regards economic benefits to South Africa, they will be associated with the export of agricultural products to the EU, however, constraints on supply of these goods in South Africa will be of key importance. It must be emphasised that the research concerning the effects of the EPA on Southern African countries was carried out at the time when final provisions of the SADC EPA were not yet known. Nevertheless, publications made by the European Union (the European Commission) lay particular stress on the benefits that will be obtained by African countries (including the RSA) as a result of signing the EPAs or – to be more general – of creating free trade areas with the EU (European Commission 2016a).

2 AIM OF THE ARTICLE AND RESEARCH METHODS

Despite the fact that the RSA is considered one of the most developed African countries, there are still huge disparities between the EU and this country. Therefore, the following doubt and question arise – whether the RSA can also benefit from a free trade area created with a partner

whose economic development is significantly higher? What influence the TDCA has had on the external trade with the RSA, whether the reduction or elimination of customs duty in relation to the mutual trade has contributed to a growth in trade with the European Union? Moreover, in view of the fact that in 2016 the BLNS countries (Botswana, Lesotho, Namibia and Swaziland) signed, together with the RSA, the SADC EPA and that this agreement replaced the TDCA with regard to the trade part, yet another research problem arises, namely, to what extent the provisions of this new agreement are relevant to bilateral trade relations with the European Union and whether they will produce any change in the conditions for trade with EU Member States and with the other states parties to the agreement, and what possible consequences will ensue from such changes?

This article aims to analyse the effects of signing and implementing the TDCA and its transition to the EPA for both parties (the EU-SA) in the context of their mutual trade. Furthermore, the aim of the article is to examine the reasons for executing the EPA and an attempt to evaluate possible effects (real effects cannot be evaluated yet at this point) for the South Africa, also in the context of recent voices saying that the EPA brings no new opportunities for Africa, but only greater dependence. The article provides an example of the RSA, because it is considered not only to be a middle-income country, but also to have an emerging market status. Moreover, this state is the most important African trading partner of the EU and its economic situation is better than of the majority of countries from Sub-Saharan Africa. Therefore, the following hypothesis can be put forward, namely, that a free trade area with the European Union (covering a substantial portion of trade) will be a contributing factor to considerably increased trade, and consequently, will bring certain benefits to the RSA.

The discussion is limited only to trade in goods, i.e. the exports and imports of goods. The research does not include trade in services, nor focuses on the changes in the level of salaries, employment, prices and in economic growth. Similarly, foreign direct investments, which are of special importance to mutual relations, are also not covered. The methodology of the study is based on the comparison of trade statistics between the years 2000 (or 2001, depending on the availability of data) and 2016 relating to SA and the European Union.

3 RESULTS AND DISCUSSION

3.1 Liberalisation of Trade between the European Union and the RSA in View of Trade, Development and Cooperation Agreement

The TDCA was the first bilateral free trade agreement which was signed in Southern Africa (Tsolo et al., 2010, p. 130) but also South Africa was the first developing country that entered into an FTA with the EU (Meyn, 2004a, p. 1). Also, this is the first agreement between the EU and another party, which includes free trade (although only partial) in agricultural goods. A key provision of the TDCA related to the creation of a free trade area between the RSA and the EU after the end of the transitional period. The RSA abolished customs duties on 86 per cent of goods imported from the EU, and the European Union – 96 per cent. The agreement is also asymmetric in terms of the time frame – South Africa had a period of twelve years to fully implement the agreement and the European Union had ten years. Since 2010, the RSA had been permitted to export 99.98 per cent of all the industrial goods on a duty-free basis, whereas only 0.02 per cent had been subject to customs duty (which had included, in particular, aluminium) (Table 1; Meyn 2003, p. 3). However, as for agricultural goods, duty-free access to the EU market was also granted, but with respect to considerably fewer tariff lines, namely 62 per cent. By contrast, the RSA abolished customs duties on 86 per cent of all the industrial goods, while in the case of three per cent of goods – duties were partially liberalised. Also, customs duties on 82 per cent of agricultural goods imported from the

European Union were repealed (Table 1). 11 per cent of European industrial products did not have duty free access to the South African market, including petroleum and petroleum products, some chemical products, textiles and automotives. The RSA treated these products as sensitive and incapable of being competitive on the international market; on the other hand, they also represented vital sectors in the South African economy, and hence they should have been given special protection by the state, also because it was necessary, *inter alia*, to safeguard jobs. Agricultural products that are excluded from South Africa's liberalisation schedule are mainly those that are recipient of high European subsidies under Common Agriculture policy, such as beef, sugar, sweet corn.

Tab 1 Scope of Liberalisation in TDCA for South African products to the EU and European goods to South Africa After End of Transitional Period

Duty free market access for:	Cumulative Coverage
South Africa (to EU)	In 2010
Industrial goods	99.98%
Agricultural goods	62%
Partial liberalisation of agricultural goods	11.5%
Reserve list of agricultural goods	26%
The EU (to SA)	In 2012
Industrial goods	86%
Partial liberalisation of industrial goods	3%
Reserve list	11%
Agricultural goods	81%
Reserve list	19%

Source: Agreement on Trade, Development and Cooperation between the European Community and its Member States, of the one part, and the Republic of South Africa, of the other part; M. Meyn, 2003, pp. 5-8.

The European reserve list is large, comprehending 26% of all South African agricultural export products, including beef, sugar, some dairy products (incl. milk, butter, and whey, customs rates in the customs tariff for these goods are high), sweet corn, maize and maize products, rice and rice products, starches, citrus, apples, pears, grapes, bananas, tomatoes, vermouth, ethyl alcohol and fish. The most sensitive goods from the point of view of the EU are the very products, such as apples, citrus fruits and wine, in which South Africa is highly competitive. However, the EU has offered an additional, partial liberalisation of 11.5 per cent of all agricultural commodities South Africa is exporting to the EU (TDCA, Annex IV, list 5-6). For these products, such as cheese, wine, cut flowers, strawberries, canned fruits, fruit juices tariff quotas and/or reduced duties have been granted. As for agricultural products, 0.5 per cent of them have been completely excluded from the liberalisation, and this includes such products which are protected by geographical indications like port, sherry, parma ham etc. (Meyn, 2004b, p. 6). Some EU States protested against using traditional product names such as port and sherry by South African manufacturers. As a consequence, the Republic of South Africa agreed to withdraw these traditional product names within five to twenty years, not only in the case of exports to the European market, but also to all export markets and the domestic market. (Schröder, 2000, pp.14-15).

However, although meat, preserved meat products, sugar, high sugar content products as well as cereals are excluded from the TDCA, associated value added products have often not been exempted. This is the case for processed meat products, flour based products, canned fruits and jam and sugar based products (such as chocolate and biscuits) so that increased competition in the southern African market can be expected. In the case of the Republic of South Africa, the liberalisation of the local market, and consequently, providing duty-free access to certain products (such as confectionery and chocolate) while striving to protect basic agricultural products (e.g. sugar), weakened the competitive position of local companies on both the national market and regional markets.

However, if the level of protectionism manifested through customs rates before liberalisation is to be considered, then it might be claimed that the RSA should have had to open its market for EU goods to a greater extent. The EU placed 304 tariff positions on the reserve list, representing 3.4 per cent of its total imports from South Africa, while South Africa placed 120 tariff positions on the reserve list, representing 10.9 per cent of its total imports from the EU. The partial liberalisation contains at EU's side 1.7 per cent of total imports from South Africa and at South Africa's side 2.8 per cent. As a result of enforcing the provisions of the TDCA, average customs rates applied to South African goods has fell from 2.7 per cent to 1.5 per cent, and in the RSA, for EU goods – from 10 per cent to 4.3 per cent (Meyn, 2003). Furthermore, many goods from the RSA had come onto the European market under favourable conditions even before the free trade agreement was signed. It must be also highlighted that the volume of mutual trade in goods varies considerably, thus the adjustment costs for South Africa can be expected to be much higher.

3.2 Changes to Conditions for Trade between RSA and the European Union Introduced by SADC EPA

It would be difficult to present trade and contractual relations between the RSA and the European Union properly, also in the context of the new SADC EPA, without providing a general background, including also the RSA's participation in African integration agreements. This will also help to place the TDCA, and subsequently, the SADC EPA in the proper perspective. The RSA plays an important role in the world's oldest customs union – the South African Customs Union (SACU). Apart from South Africa, the union includes Botswana, Lesotho, Namibia and Swaziland (BLNS). Essentially the SACU is a customs union with a common external tariff imposed against all non-members as well as a common excise tax. The BLNS countries did not participate in the TDCA negotiations, although they have experienced the direct effects of this agreement, and also despite the fact that the SACU Protocol stipulates that no member is permitted to enter into any agreement with third countries without the consent of the other member states. This caused long-standing tension between the Republic of South Africa and the other SADC members. The free trade agreement with the RSA meant that goods delivered to this country without customs duty being imposed could be then sent further to the other SACU countries also on a duty-free basis, and could thus be offered at competitive prices – consequently driving out local suppliers. It must be highlighted that the liberalisation agreed under the TDCA is binding only upon the EU and the RSA. The common external customs tariff means that customs rate applied should be the same as customs duty levied, irrespective of a country of import. What should be also mentioned are decreasing revenues from customs duties in the countries for which such revenues are a significant source of budgetary proceeds. According to estimates, this will lead to a drop in customs revenues in all the BLNS countries by approx. 21 per cent (Greenberg, 2000, pp. 16-19). In particular, this will entail a decrease in revenues for Swaziland and Lesotho (a country without access to the sea, to which goods are imported from the RSA, and from there to Lesotho on a duty-free basis) – approx. 60 per

cent, and for Namibia – 20 per cent to 40 per cent. Botswana has been estimated to lose around 10% of its total national income as a result of the TDCA (Sandrey, 2005, p. 4).

The RSA is also a member of the South African Development Community (SADC), which includes 15 countries. A new stage in the development of mutual relations with SADC countries (and on a greater scale – with all the ACP countries) was marked by the Cotonou Partnership Agreement concluded for the period of 20 years (from March 2000 to February 2020). The Cotonou Agreement was designed to establish a comprehensive partnership with 3 pillars: development cooperation, political cooperation and economic and trade cooperation. Currently, ACP regions and the EU are negotiating so-called "Economic Partnership Agreements" (EPAs) – in essence free trade agreements – which aim to substantially liberalise all trade between the EU and the ACP group in agreement with WTO regional free trade areas. Those were supposed to be new trade agreements aimed to gradually eliminate, on a reciprocal basis, barriers to trade between the parties. The essence of these agreements is further liberalisation orientated towards the provision of services (including those from the financial sector), capital movement, the protection of property rights. This is because countries which ratified the interim EPA are obliged to enter – within six months – into negotiations of the full EPAs, the object of which is liberalisation in the aforementioned areas, which will entail tough competition from EU companies; and this can be a formidable challenge that many African (including South African) companies may not be able to handle.

In December 2004, formal negotiations with six regions were started, and these included: West Africa, Central Africa, Eastern and Southern Africa, Caribbean, SADC (Southern Africa), Pacific. Subsequently, negotiations involved yet another – the seventh – region, and it was the East African Community (EAC). Only half of the grouping's members (Angola as an observer, Botswana, Lesotho, Mozambique, Namibia, the Republic of South Africa and Swaziland) took part in the negotiations of the regional SADC EPA. Initially, the RSA had the observer status. However, the European Union, which was under pressure from neighbouring countries and the RSA, agreed to change the status of this country in negotiations. South Africa joined the Economic Partnership Agreement (EPA) negotiations as part of the Southern African Development Community Group in February 2007. This strengthened the position of the SACU in the negotiations with the EU. During the EPA negotiations, the RSA devoted attention to two areas: tariff negotiations and the rules of origin for goods. The tariff negotiations would have allowed better access to the EU market than the one set out in the TDCA.

Eventually, the negotiations over the Economic Partnership Agreements (EPAs) between the EU and the Southern African Development Community (SADC) came to an end on 15 July 2014, after more than ten years of mutual efforts. The agreement was signed by the EU and the SADC EPA group on 10 June 2016 and the European Parliament gave its consent on 14 September 2016. Pending ratification by all EU Member States, the agreement came provisionally into force as of 10 October 2016. Mozambique is in the process of submitting the ratification instrument to the Council, after which the agreement will enter provisionally into force also for this country (European Commission, 2017b).

Benefits for the European Union arising from entering into the EPAs with the African, Caribbean and Pacific countries are obvious, since they entail opening these countries to EU goods, and in the future – also to EU service providers or investors; hence the EU insisted on concluding agreements with this group of countries by threatening that preferential access to the EU market would have been revoked had the Economic Partnership Agreements been not signed within a specific time period.

The new SADC-EU EPA framework replaced the trade provisions of the existing bilateral TDCA between South Africa and the EU and will maintain the external tariffs of, and harmonise, the trading regime between the Southern African Customs Union (SACU) as a whole and the EU. While the EPA aims to provide and maintain duty-free access to the EU market, which has

been enjoyed by the BLMNS countries (this group includes also Mozambique, which negotiated the SADC EPA, but is not a member of the SACU) for several decades, for the RSA – the object of the agreement is to improve the market access conditions set out in the TDCA.

On entering into force, the SADC EPA will substituted certain elements of the TDCA. The RSA exhibits characteristics of both a developed and developing economy, thus it is excluded from several main trade provisions of the EPA. The EU offers to the SACU countries, except for the RSA, practically duty-free and quota-free access (Table 2). As a consequence, two different trading regimes with the EU (the SACU and the RSA) exist, which is definitely of no benefit to the regional integration in Africa. Therefore, almost all SA products (about 99 per cent) will have preferential market access in the EU, compared to about 95 per cent under the old agreement. About 95 per cent of the products will enter EU market without being subjected to customs duties or quantitative restrictions. The other 3 per cent will still have access, albeit partial, that is similar or improved compared to the TDCA. The SACU as a group has granted EU lower market access of 85 per cent, in line with the developmental nature of the agreement (Table 2).

Tab. 2 Degree of tariff liberalisation in tariff lines and trade volume EU – SACU

	Tariff lines	**Share of actual trade in volume (2012-2014)**
EU offer to BLMNS		
Full liberalisation	100% (except arms and ammunition, Chapter 93 of the HS)	100% (except arms and ammunition, Chapter 93 of the HS)
EU offer to South Africa		
Full liberalisation	94.9%	96.0%
Partial liberalisation	3.2%	2.7%
Excluded	1.9%	1.3%
SACU as the complete offer to EU		
Full liberalisation	84.9%	74.1%
Partial liberalisation	12.9%	12.1%
Excluded	2.2%	13.8%

Source: European Commission 2016b, p. 2.

New market access for South Africa into the EU covers the fish sector, which will be fully liberalised. Both the TDCA and the SADC EPA packages contain agricultural products to be exported by SA into the EU market under the Tariff Rate Quota (TRQ) regime. While some products are set to retain the same market access conditions as they had under the TDCA, there are a number of agricultural products that will enjoy new and/or expanded TRQs as part of the EPA package. South Africa benefits (and this refers to all the SADC EPA countries) from the TRQ on selected tariff lines (new quotas introduced under the SADC EPA) of sugar (150,000 tons), citrus jams, canned fruit, skimmed milk powder, white crystalline powder, butter, yeast and ethanol. Compared with the TDCA provisions, the quotas on canned fruit, frozen orange juice and wine (the quota for wine more than doubles from 50 million to 110 million litres) were increased. On the other hand, the quotas on frozen strawberry and canned

mixtures of tropical fruit remained unchanged (own figures based on: Department of Agriculture, Forestry and Fisheries 2016). If full and partial liberalisation is included, the SADC Economic Partnership Agreement will lead to the liberalisation of 98.7 per cent of actual exports from the Republic of South Africa to the EU (European Commission 2016a; Table 2). The new market access provisions of the SADC-EU EPA for agricultural products came into effect on 1 November 2016.

Therefore, almost all SA products (about 99 per cent) will have preferential market access in the EU, compared to about 95 per cent under the old agreement. About 96 per cent of the products will enter the EU market without being subjected to customs duties or quantitative restrictions. The other 3 per cent will still have access, albeit partial, that is similar or improved compared to the TDCA. A chapter on trade defence with bilateral safeguards allowing each party to reintroduce duties or quotas if imports from the other party disturb or threaten to disturb their economy.

Furthermore, a new element of the EPA SA (South Africa) is that traditional product names are protected (Protocol 3 of the SADC-EU EPA). The protection covers some wine, spirit and beers names as well as a number of agricultural product names (i.e. the EU protects 105 SA GI names while SA protects 253 EU GIs). The protection includes, *inter alia*, also herbal teas popular in the RSA: Roiboos, Honeybush, Karoo Lamb. (European Commission, 2016b)

In order to prevent other countries that entered into trade agreements with the ACP states from obtaining potential benefits arising from such agreements, the European Union urged that the EPA (as well as the agreement concluded with the SADC) should include the most favoured nation clause (MFN). This entails (and this was the RSA's greatest concern) restricted freedom in concluding trade agreements with major trading economies. The above restriction is stipulated in Article 28 of the SADC EPA and it limits the RSA's capacity to sign free trade agreements with third countries. This relates to major trading economies whose share in the global exports was greater than one per cent in the year preceding the date of the entry into force of the agreement, or any group of countries acting individually, collectively or through an economic integration agreement, whose share in the global exports was greater than 1.5 per cent in the year preceding the date of the entry into force of the agreement (Cotonou Agreement). This may pose a serious challenge to the Republic of South Africa in the future, as it completely reduces the country's capacity to sign agreements with other significant trading partners such as Russia, China and other BRICS countries. Consequently, the RSA's plans regarding possible agreements with those countries could be disrupted, leading to the reduction of the country's potential for growth and development, especially when one considers the fact that BRICS countries begin to play a more important role in the global economic and political environment and can be of great benefit to the Republic of South Africa. Partnership with BRICS countries is of vital importance and has a prominent role in the political aspects of various multilateral agreements under the WTO.

As regards the future rates of customs duties, a so-called "standstill clause" incorporated into the SADC EPA is of considerable relevance. The standstill clauses are included in all EPAs and mean that no new tariffs can be introduced and, once eliminated, tariffs may not be re-imposed or increased. Under the EPA, tariffs would therefore be bound at the applied rate, which is different from the WTO where applied tariff rates are often much lower than the rate at which they are bound in the WTO. In the SADC and Pacific EPA texts the obligation only applies to products subject to liberalisation.

Compared to the TDCA, a quite significant change introduced under the SADC EPA refers to the rules of origin (RoO), and to be more precise, cumulation of origin, where the "origin" of any commodity is to be determined. This is particularly relevant in the case of free trade agreements (such as the SADC EPA) which concern more than two countries, because the possibility of bilateral, diagonal or full cumulation is crucial to assessing the real effectiveness

of each preferential tariff system. Bilateral cumulation involves two partners of a free trade agreement and means that companies from one country can use products originating from another one (which belongs to an FTA) while being still eligible for preferential treatment. As for diagonal cumulation, all countries to which the same rules of origin apply under a free trade agreement can use products coming from any country that creates an FTA and are treated as if they originated from a country of export. Full cumulation involves diagonal cumulation which is extended to products processed in any country within a common area, even if a product is a non-originating product. Apart from the rules of origin and cumulation, other major issues include the de minimis rule, which defines a non-originating product, and the certification method in respect of applying for preferential access. Both the TDCA and the SADC EPA provided for bilateral cumulation (between SA and the EU and between the SADC EPA states and the EU respectively) and diagonal cumulation in ACP states, however, the difference is that the SADC EPA extends this cumulation to overseas territories of the EU (OCTs) as long as the imported products show some processing in SADC EPA states beyond "insufficient working" or value added in SADC EPA states is more than 50 per cent. Hence the cumulation is closer to full cumulation as non-originating products can also be cumulated. The SADC EPA sets out slightly more stringent de minimis requirements and expands the definition of substantial transformation to change in tariff heading, in other words, the change of tariff classification (for more information on this topic see: TDCA Protocol 1 on Rules of Origin; European Commission 2017a).

3.3 Trade in goods between South Africa and the EU

There are two ways in which changes in trade can be examined in the context of trade preferences between the European Union and South Africa. The first is by looking at the volume of exports and imports and the growth rate of bilateral trade within a given time period, while the second is by looking at relative market shares.

Fig. 1 European Union's Export and Import with South Africa in the years 2000-2016, in EUR billion
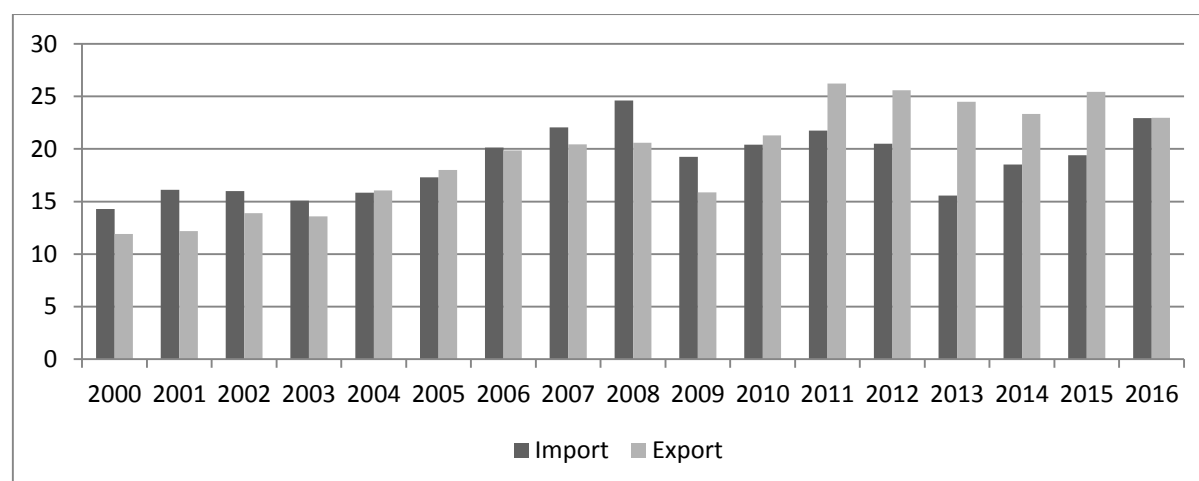
Source: own calculations based on Eurostat Comext data

At the beginning of the 20th century, imports and exports from SA in current prices showed an upward trend which continued until 2008 (when the financial crisis occurred), subsequently, a considerable drop in bilateral trade was observed; however, as from 2010, exports to SA have exceeded imports, which entails a positive balance of EU-SA trade (Fig. 1). In this case,

the value of exports and imports in current prices have not been adjusted for inflation, thus the share of bilateral trade in total exports and imports must be considered.

Fig. 2 EU-South Africa trade as percentage share of EU-extra trade, in the years 2000-2016, in per cent

The 2000 and 2001 figures indicate a growing trend in the share of imports from SA in the total EU's imports (above 1.6 per cent in 2002), the lowest value – substantially below one per cent – was reported in 2013, whereas in the consecutive years, a slightly increasing share could be observed; now it is approx. 1.3 per cent, which is smaller than at the beginning of the 20th century, following the entry into force of the TDCA (Chapter 2). By contrast, as regards the share of exports to SA in the EU's extra-exports, the trend is generally increasing, and since 2010, it has been greater than the corresponding share of imports.

Fig. 3 Export and Import of South Africa in current prices, in USD billion
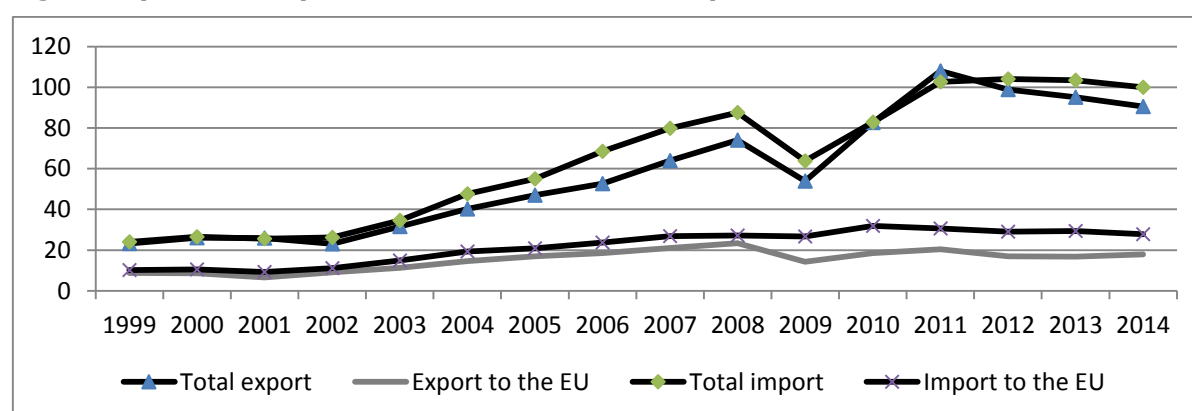
In order to observe changes after the implementation of the TDCA, it is necessary to take into account also changes in the SA's exports and imports to the EU and changes in the share of trade with the EU in the total SA's trade. Generally, both the SA's exports and imports with the EU in current prices had shown a slightly growing trend before 2008, however, the growth rate had been lower than the growth rate of the SA's total exports and imports (Fig. 3).

Subsequently, after 2009, the two consecutive years saw a clear upward trend, yet then, a drop in bilateral trade was reported again (Fig. 3 and Fig. 4).

SA exports to the EU mainly industrial goods (especially fuels and mining products, machinery and transport equipment, pearls, precious metals and articles thereof and other semi-manufactured goods), the volume of exports of these goods after the growth phase in the years 2002-2008 began to fall (Fig. 4). A similar trend can be noticed for the imports of industrial goods from the EU (these mainly include: machinery and transport equipment, chemicals and other semi-machinery), however, in this case a downward trend could be seen after 2011. It must be remembered that customs duty rates applicable to industrial goods in the EU customs tariff are low (four per cent on average), hence the TDCA provisions that abolished the duty did not improve access to the EU market considerably, nor was the trade creation effect very noticeable. By contrast, the SA's exports of goods (in current prices) to the EU and the SA's imports of goods from the EU are relatively stable and reflect a slightly growing trend (Fig. 5).

Fig. 4 South Africa's Exports to the EU, in USD thousand
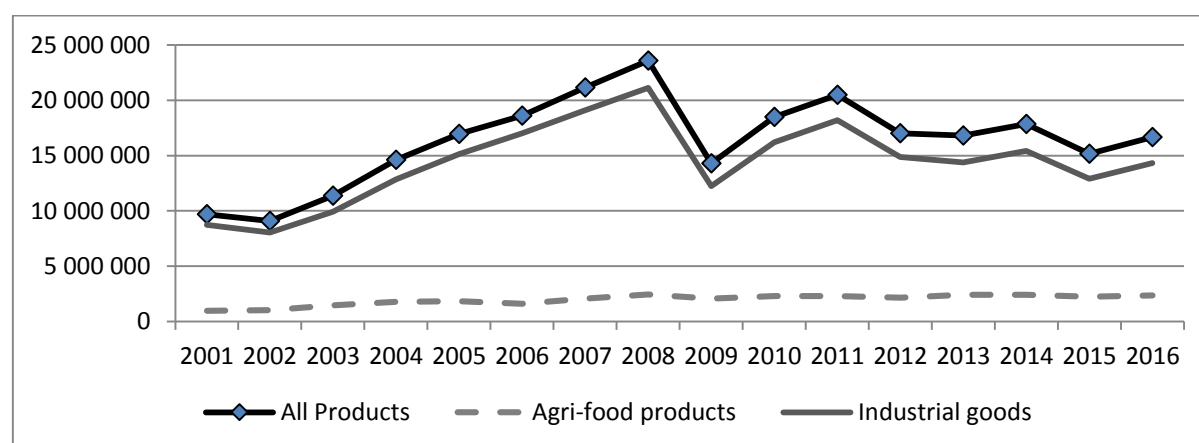
Source: own calculations based on Global Trade Atlas

Fig. 5 South Africa's Imports from the EU, in USD thousand
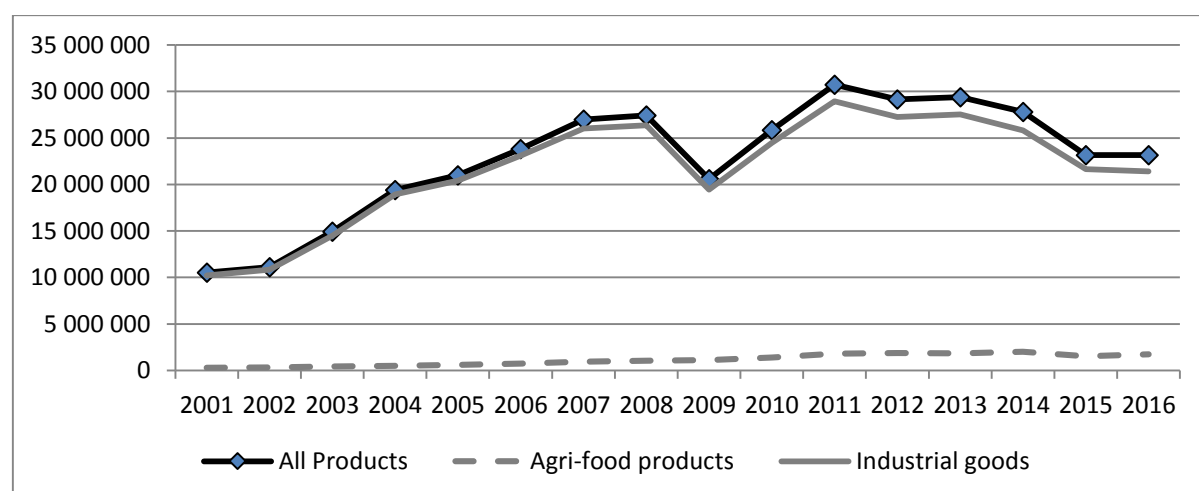
Source: own calculations based on Global Trade Atlas

For the purpose of an analysis of bilateral trade, it is useful to examine not only the value of exports and imports in current prices, but also the share in the total trade. Such an approach allows for eliminating the impact of inflation and exchange rate changes. Whereas the first year after implementing the TDCA saw an increase in the share of trade (both exports and imports) with the European Union (it was approx. 40 per cent), the consecutive years showed a downward trend – only approx. 20 per cent in 2016 for exports and 28 per cent for imports. (Fig. 6). In that period, the share of exports to Asia, and in particular to China, rose considerably (from 1.2 per cent to above ten per cent for exports and from three per cent to 15 per cent for imports). Also, increased trade with African countries could be observed in the same period, namely – a rise from 15 per cent to 30 per cent for exports and from three per cent to 13 per cent for imports (Fig. 6 and own calculations based on WTO, 2003; WTO, 2009; WTO, 2015).

Fig. 6 Share of Trade with EU in SA's Total Exports and Imports – All Goods, in per cent
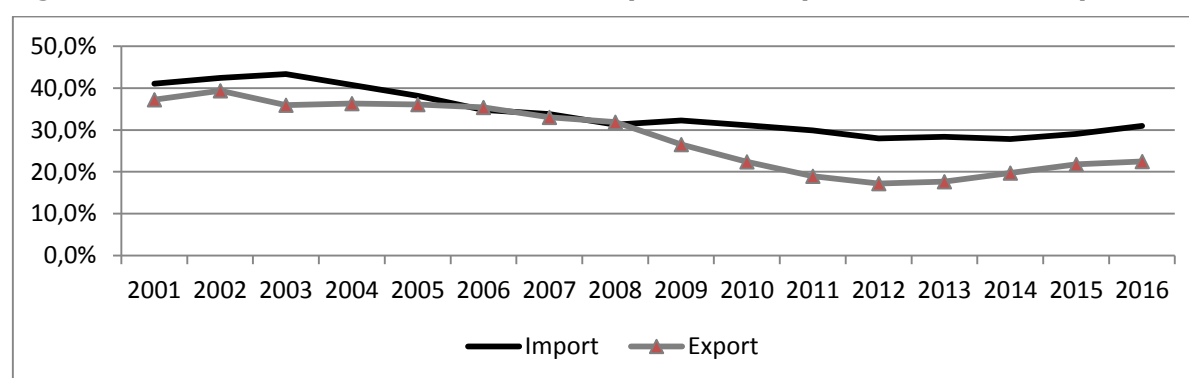
Source: own calculations based on Global Trade Atlas

The share of imports of agri-food goods from the EU in the SA's total imports is relatively stable and even has shown a slightly growing trend in recent years, from 26 per cent in 2001 to approx. 30 per cent in 2016. However, having considered exports from SA to the EU, a noticeable drop in the share in that period can be seen, from approx. 38 per cent to 27 per cent (Fig. 7).

Fig. 7 Share of Trade with EU in SA's Total Exports and Imports – Agri-food Products, in per cent
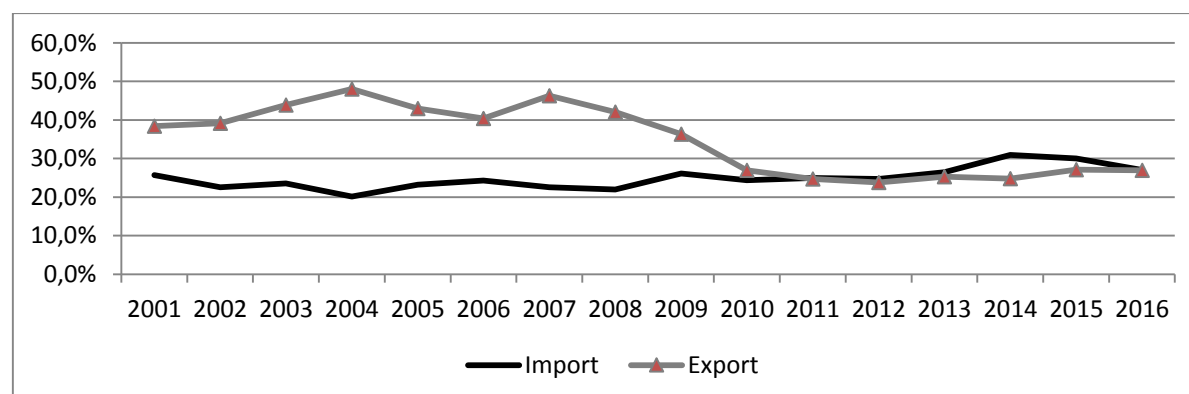
Source: own calculations based on Global Trade Atlas

As regards the share of industrial goods in trade with the EU, a downward trend can be also noticed – greater for the share of exports from SA: from 37 per cent in 2001 to 22 per cent in 2016, and for imports: from 43 per cent to 33 per cent (Fig. 8).

Fig. 8 Share of Trade with EU in SA's Total Exports and Imports – Industrial Products, in per cent
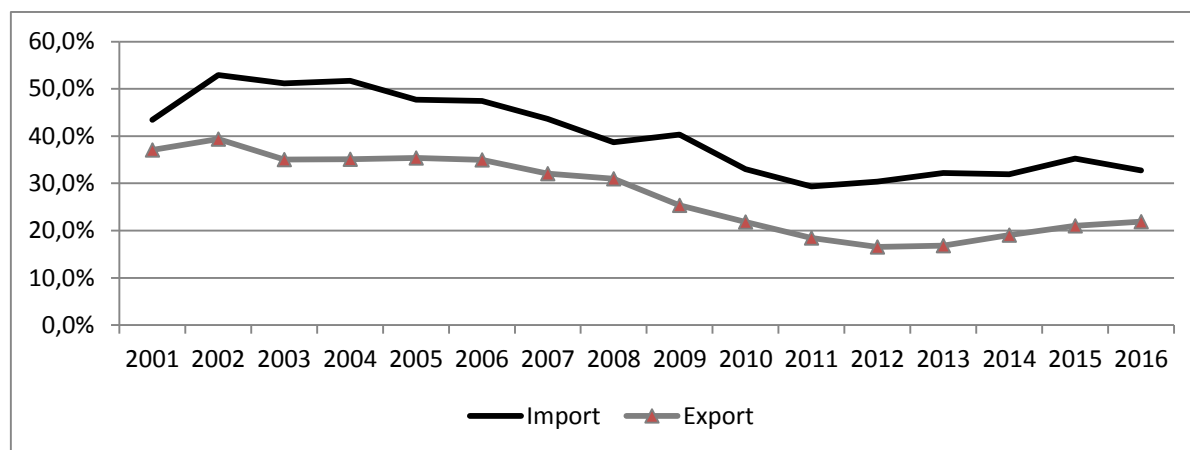
Source: own calculations based on Global Trade Atlas

CONCLUSIONS

The TDCA, as the first agreement covering agricultural goods, which was concluded by the European Union with a developing country, was first and foremost extremely relevant to how South Africa was perceived in the international scene. This was because it acted as an important signal for confirming the stability and openness of the RSA's economic policy, and was of paramount importance to potential investors and economic operators. The agreement provided for the considerable liberalisation of mutual trade, which, in particular, entailed abolishing customs duties on industrial goods imported to the EU, despite the fact that customs rates applicable in the EU to such commodities were already low. The liberalisation of trade was originally assumed to be asymmetrical for the benefit of the RSA. However, having considered the customs rates applicable before, as well as the volume and structure of bilateral trade, in fact it was the RSA that reduced customs duties to a greater extent.

Whereas the first year after implementing the TDCA saw an increase in the share of trade (both exports and imports) with the European Union (approx. 40 per cent), the consecutive years showed a downward trend – only approx. 20 per cent in 2016 for exports and 28 per cent for imports. In that period the share of exports (also imports) to Asia increased more than tenfold, in particular to China and African countries, especially the SACU states. This means that trade liberalisation between partners having different economic potential led, in fact, initially to increased mutual trade, as had been envisaged by most of researchers, however, with the passage of time and after implementing all the provisions of the agreement, this effect is no longer discernible. For several years, we have been experiencing a downturn in trade, both in absolute and relative terms (share in total exports and imports). Such a decline may result from other barriers (apart from customs duties) to trade between the RSA and the EU, e.g. technical barriers, limited opportunities for increasing the supply of agricultural products from Southern Africa, massive China's expansion in the African continent, and finally, increased trade with Southern African countries.

Signing the regional SADC EPA was of the essence for Botswana, Namibia and Swaziland, because otherwise these countries would have become beneficiaries of standard GSP, under which some of their major export goods would have been no longer eligible for preferential access to the EU market. South Africa was not put under such pressure, as it would still have continued to benefit from preferences granted under the TDCA. Nevertheless, it entered into the EPA negotiations with a view to improving EU market access conditions and strengthening regional integration in Southern Africa through applying trade regimes, which are the same as those applied by the European Union, in relations with the SADC countries. The EU granted the SACU members (apart from the Republic of South Africa) duty-free and quota-free access to its market. In practice, there is very little difference between the TDCA and the SADC EPA. The differences lie in product coverage and cumulation. "Relaxing" the rules of origin for goods is relevant to smaller BLNS countries, e.g. Lesotho, which otherwise would not be able to meet stringent rules of origin. However, as far as the product coverage is concerned, trade was liberalised with respect to goods that are essential from the RSA's perspective; consequently, normal duty-free tariff quotas were established, including, *inter alia*, sugar, wine, fruits and fruit juices. It must be emphasised, however, that due to limited opportunities for increasing supply, the majority of these quotas has not been fully used by the RSA.

The SADC EPA, which superseded the TDCA with respect to the trade-related part, will not have – as it appears – great significance for trade and will not change conditions for trade between the European Union and South Africa. Nevertheless, it will have importance for trade between the BLNS countries and the European Union, as well as for trade operations carried out within the SACU.

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The Purchase Intention of Nostalgic Brands by Polish Customers

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Abstract: The implementation of the phenomenon of nostalgia in brand management can create the emotions associated with sensations and experiences important for buyers. Nostalgic brand is a brand which is associated with close or far, own or historical past. The aim of this article is to compare the level of purchase intention in case of nostalgic and non-nostalgic brands operating in the food sector of the Polish market. The results of own empirical research conducted in 2017 on a group of 1000 Polish consumers are presented. The research results confirm higher level of purchase intention in case of studied transgenerational nostalgic brands. The research results vary depending on the demographic characteristics of the respondents.

INTRODUCTION

The nostalgic trend has become an international phenomenon and is affecting the entire marketing mix (Kessous et al., 2015). The observation of current trends in marketing management proves that the concept of nostalgia inspires scientists who analyse this phenomenon in marketing in different research contexts. The issue of the impact of nostalgia on consumers' behaviour is in consequence currently presented in leading journals, recognized by the scientific community.

At the beginning, the research concerning nostalgia was connected with the consumers' preferences towards music and movie stars (Holbrook & Schindler, 1994). Afterwards, the scientists extended the object of research on art, consumer products, fashion, furniture, cars or perfumes (Rousseau & Venter, 1999, 2000; Rindfleisch et al., 2000; Lambert-Pandraud & Laurent, 2010).

In this article, the problem of the purchase intention of nostalgic and non-nostalgic brands is discussed on an example of the brands operating in the food sector on the Polish market.

1 LITERATURE REVIEW

For the first time the phenomenon of nostalgia was defined by Swiss physician Hofer as a state of moral pain associated with the forced separation from family and social environment (Fuentenebro & Valiente, 2014). Afterwards, the notion of nostalgia was used to refer to experiences of time and as a personal and cultural practice (Meyers, 2009; Wildschut et al., 2006). The nostalgia in the consumer psychological context was prompted by Davis (1979). He described nostalgia as a "positively toned evocation of a lived past in the context of some negative feeling toward the present or impending circumstance" and introduced three levels

of nostalgia (simple, reflexive and interpreted). Based on this division, Baker and Kennedy's (1994) proposed three conditions for nostalgic experiences: real, simulated and collective.

According Kessous et al. (2015), nostalgic brands are those one that were common (popular, fashionable, or widely circulated) when one was younger (in early adulthood, adolescence, and childhood) and are still popular and preferred by the respondent whose vivid memories of them help him/her to retain strong links with his/her past. Loveland et al. (2010) define nostalgic brands as "brands that were popular in the past and are still popular now," and the non-nostalgic brands as "brands that are popular now (but were less so in the past or did not exist in the past)."

Based on the literature review, the authors assume that nostalgic brand is a brand which is associated with close or far, own or historical past. Consequently, two categories of nostalgic brands can be distinguished:

- generational brands, based on a real nostalgia (relating to the own direct and personal memories), having the individual or collective character,
- transgenerational brands, based on a real nostalgia or simulated nostalgia (referring indirectly to the individual experiences or memories of other people, as well as to the collective experiences and memories in case of historical nostalgia) having the individual or collective character.

The interest of academic and research communities focuses primarily on the analysis of:

- the impact of nostalgia on consumers behaviours in the context of demand for the products associated with the past (e.g. Belk 1990; Holbrook & Schindler, 1989; Holbrook, 1993; Loveland et al., 2010; Kessous et al., 2015),
- the impact of different categories of nostalgia on the attitudes and behaviours of consumers (e.g. Holak & Havlena, 1992; Baker & Kennedy, 1994; Goudling, 2001; Holbrook & Schindler, 1991; Holak et al., 2006; Muehling et al., 2014),
- the impact of nostalgia on the attitudes towards brands (e.g. Lacoeuilhe, 2000; Kessous & Roux, 2010, 2013)
- the use of nostalgic elements in advertising (e.g. Stern, 1992; Pascal et al., 2002; Muehling & Sprott, 2004; Reisenwitz et al., 2004; Marchegiani & Phau, 2010; Muehling & Pascal 2011; Muehling et al., 2014),
- the impact of demographic characteristics on nostalgic attitudes of consumers (e.g. Holbrook & Schindler, 1994; Rousseau & Venter, 1999, 2000),
- the impact of nostalgia on consumers' behaviours for certain product categories (e.g. Rindfleisch et al., 2000; Holbrook & Schindler, 1991; Sierra & McQuitty, 2007; Lambert-Pandraud & Laurent, 2010),
- the impact of nostalgia on the choice of packaging (e.g. Chun-Chin Chen, 2014).

The results of research conducted by foreign researchers confirm the positive impact of nostalgia on the attitudes and behaviours of consumers, especially in the area of marketing communications. It is important to confirm also the impact of nostalgia on the consumers' purchase intention.

According Wang et al. (2012), the brand image has a direct effect upon consumers' purchasing decision, especially in case when brand image bases on relational dimension. Relational brand dimension is created through a symbolic attribute of the brand with which consumers develop an interpersonal relationship over time (Aaker, 1997). This long-lasting relationship may create a sense of belonging which tends to reinforce consumers' loyalty towards the brand (Fournier, 1998). Zeithaml's (1998) study explored consumers' purchase behaviour from a psychological perspective and found that the willingness to buy the product will increase remarkably when the perceived benefits outweigh the perceived cost. At the same time, the findings of Rose et al. (2016) indicate that brand heritage positively impacts purchase intention, especially for

consumers with a low promotion focus. Moreover, it inspires positive emotions, engenders trust and facilitates brand attachment and commitment. Additionally, the results of empirical study of Sierra and McQuitty (2007) predict that both emotional and cognitive factors affect purchase intentions for nostalgic products.

Consumers, in the process of purchasing, perform actions that are called buying behaviour. These actions include attention, testing, repurchasing and loyalty (Vazifehdust et al., 2017). Most psychologists agree that the latent variable "intention" is the best predictor of the consumer's behaviour. According to Fishbein and Ajzen (1975), a consumer's decision to perform a specific behaviour is revealed by behavioural intention. Purchase intention (called also buying intention) is measured the most often by evaluation willingness of consumers to buy and willingness to pay premium for chosen brands or products (Aaker, 1991; Lacoeuille, 2000).

2 METHODOLOGY

The aim of this research was to assess the attitudes and behaviours of Polish consumers toward generational and transgenerational nostalgic brands, taking into account consumers' demographic characteristics. In this paper, the part of research results concerning the purchase intention for nostalgic and non-nostalgic brands operating in the food sector of the Polish market are presented.

The scientific problem indicates the following research question related to the nostalgic brand:

- Q1: Is purchase intention for nostalgic brands higher than for non-nostalgic brands?

The research question was developed through the formulation of following hypothesis: Intention purchase is higher in case of nostalgic brands than non-nostalgic brands, regardless of demographic consumers characteristics.

The first stage of research included identification of generational and transgenerational nostalgic brands and non-nostalgic brands. 100 respondents representing diverse demographic characteristics (age, sex, education) participated in this study. A method of the quota sampling, which is based on the knowledge of the structure of general population, was used. Research was conducted in the Łódź Province (Poland) in the fourth quarter of 2016. Respondents answered open-ended question: "Please indicate the brands associated with your life that evoke positive memories". Among the answers, only the brands indicated at least 5 times were selected. After, the list of brands was reduced by researchers to 24 brands, representing a maximum of 6 categories of products, taking into account such criteria as generational/transgenerational character of the brand and the level of brand awareness. The brands selected to the main study were targeted both on women and men. Next, the researchers created a similar list of 24 non-nostalgic brands that do not appear in the answers of respondents, representing 6 selected categories of products, characterized by an equivalent level of brand awareness and addressed both to women and men. List of 48 brands was verified through conducting a survey in a group of 100 respondents, representing different demographic characteristics (age, sex, education). Each brand was evaluated in 5-item scale. The aim was also to determine the degree of nostalgia. The results confirmed that all selected nostalgic brands cause nostalgic attitudes and in case of chosen non-nostalgic brands, the level of nostalgia is non-existent or very low. In the same time the chosen pairs of brands represent similar level of brand equities. This number of brands complies with the guidelines of Moore et al. (2002) in their study of the intergenerational influence, the guidelines of Loveland et al. (2010) in their study on preferences for nostalgic products and the guidelines of Kessous et al. (2015) in their study on consumer-brand relationship in case of nostalgic and non-nostalgic brands.

The second part of the research included the identification and assessment of Polish consumers' attitudes towards nostalgic and non-nostalgic brands identified in the first stage. A quantitative research among 1,000 Polish respondents was conducted. A method of random-quota sampling was used, which is based on the knowledge of the structure of general population. This is one of the most popular sampling methods in marketing research. Based on the data of the Polish Central Statistical Office, the sample reflects the structure of population in Poland in terms of age (over 19 years) and sex (Tab. 1).

Tab.1 Sample characteristic

	F	M
19-24	37	38
25-34	89	94
35-44	91	93
45-54	77	74
55-64	102	88
65 +	136	81
	532	**468**

Source: Polish Central Statistical Office, 2015.

According to the sizes of research samples depending on the type of cross-tabulation, the sample of 1000 respondents may be considered representative.

The indirect method of gathering information, using an online survey technique was applied. The questionnaire was pretested on a sample of 100 individuals. The final research, among 1000 respondents, was carried out in the fourth quarter of 2017. The questionnaire was created with the use of alternatives closed-ended questions and semi-closed-ended questions. Questions would have disjunctive and conjunctive character. The measurement scales were designed to assess nostalgia. Holbrook's (1993) 20 item nostalgia proneness index and Baker and Kennedy (1994) nostalgic attitudes scale were partially applied, as well as the measurement scales designed to assess attachment and attitudes towards brands, created by - among others - Aaker (1991), Lacoeuille (2000), Pascal et al. (2002) and Chun-Chin Chen (2014). To measure the level of declared purchase intention, the following statements were used: "I would choose X brand products in the first place" and "I would choose X brand products in the first place, even if it would be more expensive than others", measured on a 5-point Likert scale.

3 RESULTS AND DISCUSSION

3.1 Characteristics of nostalgic brands studied

Among the identified nostalgic brands, 8 brands represent food industry. Among the brands most frequently cited by respondents, we can distinguish 4 transgenerational brands (indicated by respondents that represent different age groups) and 4 generational brands. Among 8 nostalgic brands from food sector, identified during realisation of the study, 3 brands have the global character with the international presence and 5 can be classified as local brands. Only the group of the oldest respondents (65+) indicated in majority the local brands. Among others

groups, there were no preferences of local or global brands. 16 nostalgic and non-nostalgic brands representing food sector are presented in table 2.

Tab. 2 Nostalgic and non-nostalgic brand in food sector

Nostalgic brand	Sector	Brand type (G-generational, TG-transgenerational)	Non-nostalgic brand
Wedel	food	TG	Lindt
Wawel	food	TG	Terravita
Coca-Cola	food	TG	Sprite
Bambino-ice-cream	food	TG	Algida
EB	food	G	Żubr
Frugo	food	G	Tymbark
Milky-way	food	G	Mars
Krakus	food	G	Sokołów

Source: own elaboration.

The analysis of the research results demonstrate an advantage of nostalgic brands in consumers evaluations. Consumers respond positively to nostalgic brands. Regardless of differences in product prices, the respondents preferred to choose a nostalgic brand in all cases studied. The research results conducted among 1000 respondents confirm much higher level of purchase intention in case of transgenerational nostalgic brands. In these cases over 50% of respondents prefer the choice of nostalgic brand (Fig.1).

Fig. 1 Purchase intention of nostalgic and non-nostalgic transgenerational brands (similar prices)
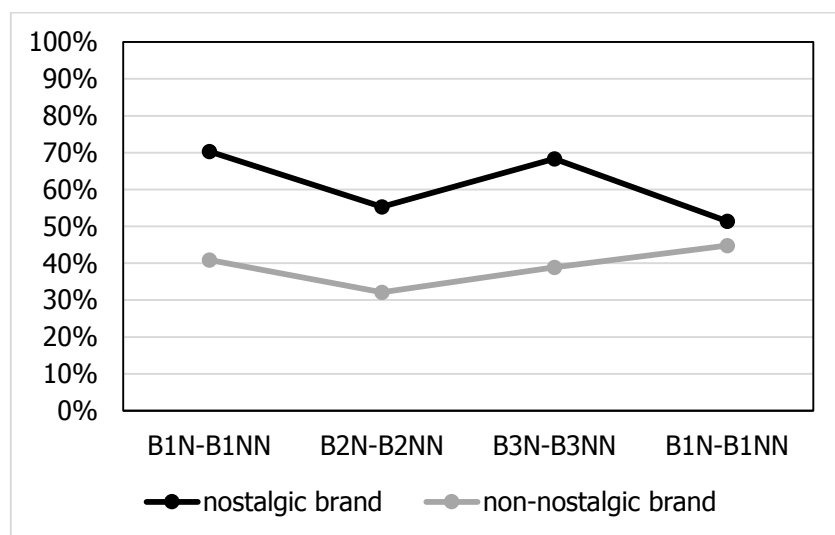
Source: own elaboration.

Accordingly, consumers prefer nostalgic brands also in the case of the application of higher prices of these products. At least 42% of respondents have declared a will to buy transgenerational nostalgic brands even if they were more expensive (Fig.2).

Fig. 2 Purchase intention of nostalgic transgenerational brands
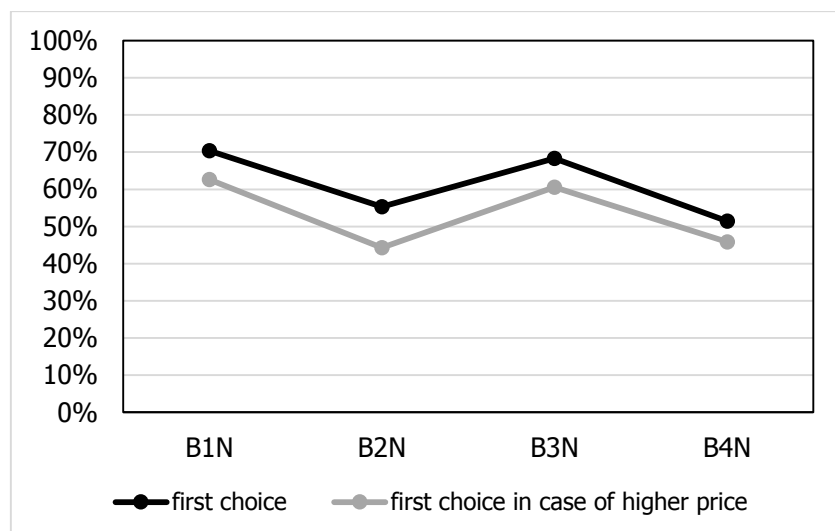
Source: own elaboration.

A descriptive statistical study was performed. Pearson's chi-square test (χ^2) was applied to sets of data to evaluate if there is a relationship between two variables. For this analysis, the significance level was 0.05 for in a 2-by-5 table. To measure the level of declared purchase intention, the 5-point Likert scale was applied. The analysis confirmed that there is a relationship between the brand character (nostalgic and non-nostalgic) and purchase intention. Similar relationship was observed in the case of the application of higher prices of these products (Tab.3).

Tab. 3 Purchase intention of transgenerational nostalgic and non-nostalgic brands (Sample: 1000; α = 0,05)

	χ^2 value Purchase intention	χ^2 value Purchase intention − higher price
B1N-B1NN	170.961	133.097
B2N-B2NN	115.365	92.632
B3N-B3NN	174.763	137.642
B4N-B4NN	12.053	24.023

Source: own elaboration.

In case of transgenerational brands, the analysis were conducted for all respondents (1000). The research results vary depending on the demographic characteristics of the respondents. In all four cases, women declared their willingness to buy a nostalgic brand more often than men. In case of transgenerational brands, older customers (45-54, 55-64 and 65+) are more willing to choose nostalgic brands (in both situations: when the prices are similar and higher). Respondents aged 35-44 choose nostalgic brands the least often. Chi-squared tests performed (the significance level: 0.05 for in a 6-by-5 table) showed also that there is statistically significant association between respondents' age and purchase intention of nostalgic transgenerational brands from food sector (Tab.4).

Tab. 4 Purchase intention of transgenerational nostalgic brands by different age groups (Sample: 1000; Age ranges: 19-24, 25-34, 35-44, 45-54, 55-64, 65+; α = 0,05)

	χ^2 Purchase intention/Age
B1N	60.040
B2N	36.756
B3N	56.002
B4N	56.116

Source: own elaboration.

In case of generational nostalgic brands, the analysis were conducted for selected age groups (35-44 for B5N, 19-24 for B6N, 25-34 for B7N, 54-65 for B8N) that indicated these brands as nostalgic ones in the first stage of research.

Fig. 3 Purchase intention of nostalgic generational brands (for selected age ranges)
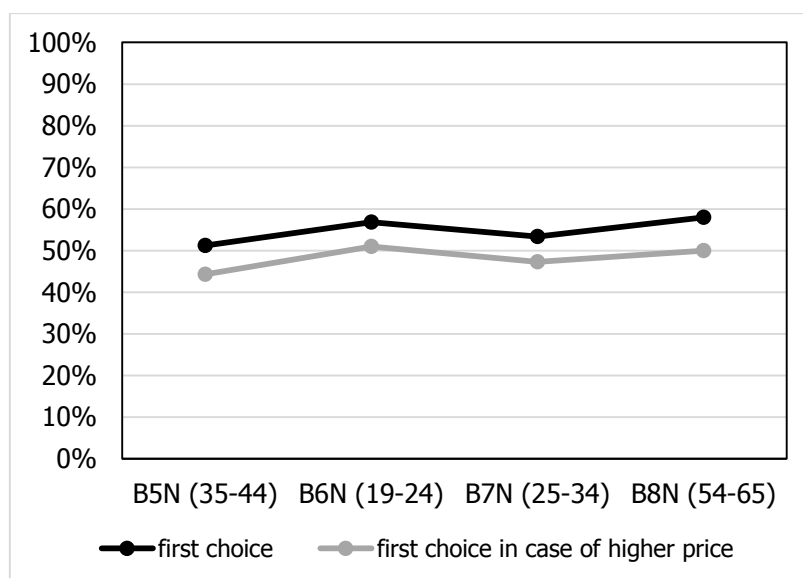
Source: own elaboration.

The research results show that over 50% of respondents (for selected age ranges) indicated nostalgic brand as the first choice and over 40% of respondents have declared a preference towards purchase of generational nostalgic brands even if their prices were higher (Fig. 3). There are important difference between the level of purchase intention declared by designated generation and other age groups.

Hypothesis predicted that intention of purchase is higher in case of nostalgic brands than non-nostalgic brands, regardless of demographic consumers characteristics. Based on all research results, it can be confirmed that hypothesis is supported, for both, transgenerational and generational nostalgic brands.

The research outcomes confirm the results of Marchegiani and Phau (2010) and Kessous et al. (2015). According to the findings of Marchegiani and Phau (2010), based on a sample of 514 respondents in Australia, the purchase intentions improve significantly with each increase

of personal nostalgia. Likewise, according to the findings of Kessous et al. (2015), based on a sample of 606 respondents in France, the nostalgic status of a brand has positive effects in terms of intention to purchase a brand as a gift and collect brand-derived products.

CONCLUSION

The implementation of the phenomenon of nostalgia in brand management can create the emotions associated with sensations and experiences important for buyers, often making reference to their own or an idealized historical past.

The results of research confirm the positive impact of nostalgia on the purchase intention in food sector, especially in case of transgenerational brands. It confirms also the hypothesis that intention purchase is higher in case of nostalgic brands than non-nostalgic brands, regardless of demographic consumers characteristics. Respondents from all age groups represent nostalgic feelings and prefer nostalgic brands.

On a managerial level, this research underlines how companies can benefit from the nostalgic character of their brands. The results of purchase intention are significantly higher for brands perceived as nostalgic than for brands perceived as non-nostalgic and this fact can be used for the brand positioning and implementation of the communication strategy.

The conclusions in this study are presented with the caveat as to the limitations of the sample (consumers from Poland). It should be also stressed that the analysis concerns only brands operating in food sector. To provide a more comprehensive picture of the evaluation of the impact of nostalgia on the purchase intention of consumers, similar studies could be done in other countries.

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The Social Innovations in Consumption – Selected Issues

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Abstract: The paper wil be concentrated on the issues of the social innovations in consumption. The social innovations in consumption comprise new products, services or initiatives, which serve meeting needs in a more productive way than the so far existing solutions. The goal of social innovation in consumption is to improve the quality of life of consumers and/or social groups and/or society as a whole. This paper concentrates on consumers and households as the main beneficiaries of these solutions in micro-scales. The aim of the paper is to present concepts and determinants of the social innovations in consumption. The primary data used in the paper are of qualitative character and they come from focus group interviews conducted in 2016 and 2017.

INTRODUCTION

We define social innovations as a new solution that meets social needs in a more effective, efficient, sustainable way than previously used solutions (Szulc-Fisher 2005).

Social innovations in consumption are associated with the development and dissemination of ideas in order to solve social problems occurring at various levels of functioning of consumption entities, i.e. at the level of the whole society, social group or individual consumer. These solutions may take the form of a specific good, service, method, process, model, social initiative or organisational form. They are designed in response to social challenges such as: aging society, climate change, scarcity of resources, poverty, social exclusion, homelessness, disability, the need to invest in children and others.

The main purpose of this study is to present the concept and examples of social innovations in consumption, their advantages and disadvantages as well as factors stimulating and limiting their development. Particular attention will be devoted to innovations occurring on the microscale, i.e. those that apply to individual consumers and their households. The study uses data from secondary and primary sources.

1 LITERATURE REVIEW

Research of consumption that has been carried out internationally enjoy long tradition (history of research into the structure of consumer spending dates back to the 19th century). At present, the research in question is frequently conducted being characterised by its diversity. The research refers to many problems. Much attention is paid to methodological efforts. On the other hand, up-to-date analytical works usually focus on particular countries, thus referring to the level and structure of consumption and tendencies of changes in time (e.g. research: Blow, Leicester, Oldfield, van Deelen, Schettkat, Gardes, Starzec, Goodman, Oldfield, Aguiar, Hurst,

Charles, Danziger, Pounder, Schoeni,; Jappelli, Pistaferri). These results cannot or even must not be directly 'translated into' Polish conditions. Each society is characterised by its unique set of features and factors of social, economic, political, historical, geographical, cultural and other nature. International comparative research that is broadly conducted usually refers to selected elements of household consumption.

In Poland, consumption research has a 100-year tradition. The research involves diversified questions including methodological and analytical ones. The very issues were and still are subject to research undertaken by numerous well recognised and respected scholars including, inter alia, .: Kramer, Bywalec, Rudnicki, Krasiński, Szulce, Piasny, Słaby, Zalega, Kiełczewski, Woś, Pałaszewska-Reindl, Bylok, Olejniczuk-Merta, Gardocka-Jałowiec. Many academic bodies, research institutions and centres for socio-economic policies are constantly carrying out analyses and diagnoses of the actual situation. They also make some forecasts concerning selected elements of value-related and quantitative consumption on micro and macro-economic levels.

Taking the above into consideration, it is necessary to highlight that the issue that is undertaken in this work - the social innovations in consumption – is characterised by its new and innovative nature in the context of the research into consumption.

Innovation is the implementation of a new or significantly improved product (artefact or service), a new or significantly improved process, a new marketing method or a new organisational method in business practices, workplace organisation or relations with the surrounding environment (Oslo Manuel, 2005, OECD/Eurostat).

The concept of innovation, often identified with modernity, modernisation and progress, concerns various dimensions and spheres of functioning of consumption entities. It is mainly related to satisfying new needs using widely understood 'innovative solutions' covering new products, services, models, markets, etc. or previously existing needs, in a more perfect, more effective way (Grzega 2016).

Consumer social innovations are also understood as new solutions in consumption behaviours, more effectively satisfying consumption needs than previously and leading to new or improved functions and social relations as well as better use of funds and resources (Bylok 2015). In the longer period of time, consumer social innovations lead to significant changes in consumption. There are new forms of consumption such as ecologization, dematerialisation, deconsumption, privatization, virtualisation, mediatisation, and marketisation (Olejniczuk-Merta 2013).

The main goals of innovation in consumption are to improve the rationality of managing all entities involved in the process of delivering products from the place of their production to the place of their final destination, and improvement of the society's quality of life (Knee 2002).

The process of creating social innovations takes place in the following stages (Wizja 2050. Innowacje społeczne 2013):

1 Identification of needs – recognition of the demand for the introduction of a given innovation,
2 Generating ideas – developing ideas responding to identified needs,
3 Checking innovation in practice – pilot implementation of innovations and introduction of possible improvements,
4 Sustaining innovation – widespread implementation of innovation, which has proved to be sufficiently good,
5 Diffusion of innovation – increasing the reach and impact of innovation,
6 Inducing systemic change – in order to exert lasting social change.

It should be added that the social dimension of innovation manifests itself both for the purposes of innovation and the means used. These innovations bring benefits not only to society but also to business by generating new areas of revenue.

In terms of the effect of change, we can distinguish the following innovations (Olejniczuk-Merta 2013):

- soft and hard (e.g. changes in the organisation of consumption to improve the quality of life; technical and technological changes);
- with a direct and indirect innovative effect (giving a measurable benefit in the form of lowering the cost of living; giving the educational effect deferred in time);
- macro, mezzo and micro (on the national scale or more widely; dedicated to specific groups of people or having individual applications).

The effects of social innovation should contribute to improving the quality of life of the population. Nevertheless, consumer innovations, that is all innovations in the sphere of consumption related to satisfying consumption needs, are not always of such a character, then they can hardly be called social. There may be a situation in which new solutions in the sphere of consumption harm other entities and/or the environment or when they take place at the expense of deterioration of people's health, wastage of resources, excessive household equipment, generating additional costs related to consumption. Positive innovations in consumption are connected with the situation in which new solutions contribute to the improvement of the quality of life of consumers, social groups, the whole society, at least the non-deterioration of the situation of other entities and the natural environment. All this is done in the context of current and future generations, and is associated with the idea of sustainable consumption, or wider sustainable development (Grzega 2017).

Innovations in consumption are of a positive nature when they result from the need for change. It does not always have to be the result of a specific need reported by the consumer. Consumption need may appear only after contact with a specific innovative solution. It is important, however, that innovations do not create artificial needs among individual consumers and the whole society. Many different factors influence the development of positive innovations in consumption. People's creativity, pro-innovative climate created by the state, knowledge of trends in consumption and consumption behaviours play a great role in this respect.

Progressive innovative solutions used in consumption can take many forms. Among them one can distinguish (Grzega 2016):

- food products – e.g. 'food in boxes' properly balanced by a dietician, vertical farms,
- non-food products – e.g. electronic sitter for the elderly, 3D printers,
- new services – e.g. mobile parcel mailing stations, hourly/daily office rental,
- platforms, applications and software – e.g. computer software for paralysed people, tracking programs, smart care platforms,
- social initiatives – e.g. skills exchange portals, FREECYCLE, time banks,
- institutions – e.g. friendly banks limiting the liability of the credit card holder for unauthorised transactions,
- infrastructural solutions – e.g. fast lanes, which can only be used by cars with more people, i.e. 3+,
- solutions to improve the health of the society – e.g. a blood-collecting coach, open-air gyms,
- business models – e.g. new healthcare models.

A special form of social innovation in consumption is shared (collaborative) consumption, which involves exchanging and sharing what one has, instead of buying new goods and services. Consumers, when they need something, look for second-hand things, borrow or rent what is

necessary. At the same time, they are willing to give away and sell things they no longer need, exchange with others and lend what they have – for free or for profit (Burgiel 2015). It is a response to the consumer lifestyle, hyper consumption, lack of care for other consumers, future generations and the natural environment. For this purpose, people undertake community actions in consumption, which take the form of collaborative consumption. i.e. groups of consumers focused on the consumption of certain goods are created, e.g. food cooperatives are created that bring together consumers who want to purchase organic products. Among consumers participating in such initiatives, there is an awareness of consumer responsibility for purchasing decisions. At the same time, social capital develops through the creation of consumer networks, social trust grows and consumer subcultures are created with their own values. Undoubtedly, all this leads to an increase in the level of participation and strengthening of interpersonal relationships. It is highly likely that collaborative consumption will become an important trend in the development of consumption in the future, because it responds to the social need of being together, in the community, and at the same time is the result of economic calculation (Bylok 2017).

2 METHODOLOGY

This study contains the outcomes of two research projects conducted, in January 2016 and October 2017.The survey had qualitative character and focused on consumers' attitu-des towards social innovations in consumption. In order to achieve information about attitudes towards innovations in consumption two focus group interviews were carried out. Each discussion was recorded and fullytranscribed. Respondents were aged between 22 and 29.

The aim of the study was to learn about examples of social innovations in consumption, their advantages and disadvantages as well as factors stimulating and limiting their development in Poland. The interview scenario included 12 specific questions on five thematic areas. The conversation was focused on various aspects of social innovation in consumption, on who their initiator is, their advantages from the point of view of various groups of entities, as well as the drawbacks and limitations of creating innovation in Poland. The discussion lasted 1.5 hours. In the analysis process, the obtained results were interpreted from the perspective of existing literature and current findings.

In 2016, the interviews were conducted with 12 deliberately selected third form students of the Faculty of Management at the University of Economics in Katowice, in 2017 with PhD students of the Faculty of Management at the University of Economics in Katowice. These were active groups of people who agreed to devote their time and attention to conducting the study. The research was carried out in Katowice. The assumption of a deliberate selection of the focus group was that the persons selected for the research had knowledge of consumption economics and innovative processes. It was important for these people to represent a new, fresh perspective on the issue of innovation in consumption. The first study involved 9 women and 3 men aged 22-24, the second 6 women aged 26-29.

3 RESULTS AND DISCUSSION

3.1 Advantages and disadvantages of consumption innovations

The introduction to the discussion and the main part of the study was to determine whether the respondents understand the concept of social innovation in consumption and whether they perceive it in everyday life. Of the 18 people, only 1 recognised that we do not see innovations surrounding us every day. Despite the fact that new products appear every day, the effects of

implementing innovations, their advantages are only seen after some time, especially those that concern society as a whole. All the other people perceive the emergence of innovations in consumption in various areas of everyday life. At the same time, they believe that there is a justified need towards creating social innovations in consumption, which results from certain challenges of the 21st century (e.g. aging population, climate change), as well as the desire to save time, money and the need for convenience. One of the respondents referred to this as follows: *'innovations in consumption facilitate life, increase the amount of free time, reduce the cost of living and improve the quality of life, so we want as many as possible.'* The respondents gave numerous examples of innovations in everyday life, such as a parking meter, smartwatch, virtual keyboard displayed on a flat surface by a laser, phone-charging benches, coin laundries, free WIFI in public transport, restaurants where we value a meal ourselves, software supporting cognitive functions of the elderly, digitalization of administration, platforms enabling free access to education, crowdsourcing, carpooling, couchsurfing, kicstarter, group shopping, co-housing, organic gardening cooperatives, bicycle initiatives, stem cell procurement, mobile blood-collection units, drinking water fountains in large cities, saving consumers' money and protecting the natural environment.

Subsequently, during the discussion, the question was asked about the advantages and disadvantages of innovation in consumption. Among the advantages/benefits of implementing new solutions in consumption, the respondents mentioned: saving time and money, facilitating life (including visible amenities for specific social groups, e.g. disabled people), solving everyday problems, improving conditions, quality and comfort of life, social integration of various market entities, improvement of the natural environment, more efficient use of resources, fuller, more tailored and faster than previously meeting needs, creating new opportunities to meet people's needs, facilitating people-to-people communication, greater diversification of the supply offer, greater product diversification, synergy effect, combating social exclusion, limiting excessive consumption and decreasing consumption costs, stimulating social development, expanding knowledge resources, increasing the level of education thanks to social educational innovations, satisfaction from cooperation between various entities responsible for creating, implementing and diffusing innovations.

Among the disadvantages/limitations of implementing innovations in consumption, there were mentioned: high costs of innovative solutions, lack of universal character (most often addressed to specific groups of recipients), necessity to take into account administrative requirements (including appropriate adaptation to legal regulations), long implementation period and the diffusion of innovations on the scale of the whole society, limited access to the latest innovative solutions (depending on various factors such as age, place of residence, state of health, education level, wealth), the problem of gathering adequate capital to implement innovation, replacement of human work with new technologies, disappearance of tradition, drive towards modernity, reduction of physical activity through excessive number of facilities and ways to passively manage time, 'indolence' of society, promoting life 'on the path of least resistance,' the risk of failure, the lack of a guarantee of a good effect, the discrepancy between expectations and outcomes, forcing certain ways of enterprises' activities, depriving enterprises of part of the profit (e.g. blablacar activity means that users abandon the services of carriers), shortening life cycles of products (due to the multiplicity of innovations), dependence on innovations leading to 'looping' in new products unnecessary for a given group of recipients, perception and assimilation of innovations based on the principle of 'compulsory use,' to 'not be left behind,' social conflicts, improper use of innovations.

3.2 Collaborative consumption as a special form of social

Considering the special nature of collaborative consumption, it was important in the direct study to determine whether this consumption could constitute a compromise between pragmatism, saving, caring for the environment and satisfying high-quality consumer needs.

Interestingly, only 12 respondents commented on this topic and their answers varied. 6 people considered collaborative consumption not to be in itself a social innovation, 'but it can constitute a compromise between these categories.' According to the respondents, shared consumption is hard to identify within innovation, as collaborative activities do not always generate benefits for all interested parties. Moreover, this phenomenon, despite new developing forms, is not new, it has accompanied us from the dawn of days (e.g. a mill built by the whole village). However, collaborative consumption can be a social innovation if it is a targeted initiative, properly organised, providing benefits to all concerned. Of course, as already mentioned, it can and even should be a compromise between such values as: pragmatism, saving, care for the natural environment and higher than the current satisfaction of consumer needs. Of great importance, however, is the appropriately shaped social awareness in all of this through increasing the availability of information provided in the media, institutions dealing with consumer education, on social networks. Other people recognised that collaborative consumption, although known and used for years, is usually a form of social innovation. It affects the improvement of social bonds, requires a large openness and acceptance of society. Importantly, it is associated with the growing awareness of the society regarding possession and use of goods. All of this by itself is a good solution and a way of life.

3.3 Prospects for the development of social innovations in consumption

The summary of the interview was the assessment of the prospects for the development of social innovations in consumption in Poland. Many respondents described these prospects as good. They emphasized the importance of a high percentage of young people with higher education in Poland claiming that *'young, educated people increasingly accept changes, thanks to their openness to the world they have access to tools and ideas coming from many different countries.'* Some have emphasized that the further fate of innovation in consumption in Poland depends, among others, on the general economic situation of the country. As socio-economic development of Poland progresses, there will be improvement in the level of wealth of the society, the social awareness of Poles will increase. Interest in implementing innovations by various investors will also grow. The prospects of the development of innovation in consumption will greatly depend on the availability of subsidies from the European Union, the development of innovative fields of study, adapted to international standards. The growing access to the Internet, environmental awareness are factors that will foster the development of innovation. Not without significance is the fact that the market of consciously shaped social innovations in consumption is a relatively young, absorptive market in Poland. Every day, many new ideas emerge, institutions dedicated to shaping innovations are constantly created, such as social innovation incubators, open idea banks, and competitions. The number of people willing to take advantage of new solutions and ideas does not decrease but systematically increases. In addition, each of us 'carries' a natural desire to improve our lives.

Among the factors stimulating the development of innovation in consumption, conducive to the creation of new, socially useful solutions leading to a more complete satisfaction of needs, the respondents mentioned mainly: technological development, availability of subsidies and funding, e.g. through the use of EU funds or social initiatives. Several people pointed to the importance of a stable political and economic situation as well as global issues, which in a way enforce the creation and implementation of innovations.

One of the respondents emphasised that *'[...] the starting point of all innovative solutions in consumption is the need itself.'* Several other people have developed this statement, recognising that changes in the system of needs conducive to the creation of new, progressive solutions result from diminished resources of free time, growing consumer requirements in terms of 'pleasant, ergonomic, or even comfortable' lifestyle, indolence, new trends in consumer behaviour such as: the desire to be young, beautiful, in good shape. Not without significance is the need to save money and time, the desire to improve the material situation of entities. Among other factors related to the demand side of the market, the respondents also mentioned: the growing level of the society's education, openness to new products, and the level of social awareness.

The aforementioned new technologies treated as an important stimulant of social innovations, according to the respondents, help to better highlight social problems, facilitate communication, develop interpersonal relations, accelerate contacts between people. They give new possibilities for implementation, diffusion, and consumption of social innovations. For example – social media can be used to promote new solutions on a large scale, they can be used to bring together change initiators, acquire fun-souls, collect opinions about the benefits and drawbacks of new solutions. Thanks to such solutions as the Internet, portals, applications, there are also new innovations – improving concepts and ideas. As an example, one of the respondents gave a mobile application connected to an electricity or water meter or gas meter that publishes consumption data on Facebook. This introduces an element of competition among portal users about who will use less.

Among the inhibiting factors, the vast majority of the respondents distinguished in the first place constraints resulting from legal regulations and excessive bureaucracy, as well as high costs of introducing and diffusing innovations. As an important barrier limiting the spread of innovations on a large scale, they also indicated difficulties in reaching all potential recipients of innovation and the lack of adequate facilities (adequate infrastructure, equipment, technology). Other factors limiting the development of innovation in Poland were: lack of social awareness and related lack of '*innovative culture*,' fear of potential users of adopting a new solution, aversion to changes, general lack of knowledge and insight, incompetence. One of the respondents stated that the problem is the entities blocking the implementation of innovations, and more specifically the companies that '*lose*' on social innovations (e.g. taxi drivers).

In summary, these barriers can be divided into several groups (Grzega 2016):

- technological barriers (lack of equipment, software, Internet access),
- economic barriers (lack of means, funds, conflict with corporations, lack of time),
- legal and administrative barriers (excessive bureaucratisation, lack of qualified personnel),
- information barriers (insufficient information on innovations, their benefits, asymmetry of information),
- social barriers (social mentality, behavioral patterns, digital exclusion, alienation, fear of establishing new contacts),
- demographic barriers (an aging population with limited ability to absorb new products),
- spatial barriers (difficult access to digital innovations in rural areas),
- educational barriers (lack of knowledge, low level of social, consumer and ecological awareness, low economic culture, limited intellectual horizons),
- cultural barriers (historically conditioned lack of Poles' confidence in changes, more willingly acquired innovations from the West than from the East, e.g. Japanese sleeping capsules),

- psychological barriers (related to stereotypes, experiences, conservatism, habits, indolence, resistance to change),
- ideological barriers (regarding ethical principles, values, beliefs, religions),
- political barriers (hindering the penetration of innovation into countries remaining in armed conflict).

CONCLUSION

Taking into account the results of qualitative research, it can be concluded that, social innovations in consumption are a response to the social needs of the 21st century. In part, they also result from satiety with consumption and consumption ideas. They seem to result from also greater environmental awareness, the need to establish social bonds, increased spatial and social mobility, as well as the increase of knowledge related to the risks of excessive consumption. The question arises whether such a new consumption, or consumption focused on solving social problems of our time, has a chance to become widespread among consumers? Answering this question, it must be emphasised that it is extremely important to disseminate information on innovative availabilities in consumption, including, first of all, knowledge of what practical solutions contribute to improving the quality of life of individuals, social groups and the whole society. It is known that people are not very willing to change the current style of consumption. People who are more willing to accept changes include people with income enabling them to acquire innovative products. People with lower income prefer to buy new, cheaper products regardless of whether they are harmful to the environment or are produced in countries with unacceptable working conditions. (Bylok 2017). In addition, the more educated, innovative and entrepreneurial the consumer is, the more innovative his consumption is, and he himself is a factor with great potential for the development of an innovative economy (Olejniczuk-Merta 2011).

Summarizing, the collected data are rather optimistic revealing respondents' positive attitudes towards different problems of innovation in consumption. The outcomes suggest also that favorable attitude towards some practices in the field of positive innovations in consumption increases. From this perspective a positive attitude represents an important prerequisite for a consumer's involvement in any activity within the social innovation in consumption. Accordingly only the changes in consumers' attitudes towards more favorable ones will allow for wider adoption of all discussed activities, which may lead to improve of standard of living our society.

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Knowledge, Opinions and Behavior of Polish Consumers towards Traditional Fruit Juice Products

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Abstract: The aim of the study was to investigate the knowledge, behavior and opinions of fruit juice consumers in relation to traditional products. For this purpose, a survey that covered a total of 640 randomly selected individuals was conducted. The results confirm a growing popularity of both conventional and traditional fruit juices. Consumers are generally interested in juices of high nutritional value sold in 1-liter multi-layer laminate packaging. Taste, naturalness and price are the most crucial factors influencing the choice of juice. Information regarding traditional juices is mostly conveyed by friends, family and the product packaging. High prices and insufficient availability limit the demand for such type of products. Consumers expect better labeling of traditional fruit juices so that they would not be confused with the mass produced ones. Moreover, selected demographic and behavioral factors affect consumer opinions and market habits.

INTRODUCTION

The sector of processed fruit and vegetables is one of the largest and most important branches of the food industry in the world. In recent years, thanks to modern technologies, an intensive development in this production area has been observed. Continuous research into improving the quality of the final product of the fruit and vegetable industry contributes to price reductions, and thus consumer satisfaction and increased demand. Juices are one of the most popular fruit and vegetable products. The demand for fruit juices in Poland and in the rest of the world is subjected to constant fluctuations, depending on: climatic conditions, geographical latitude, selling costs, cultural differences, consumer awareness and health consciousness, and even political situation. Personal preferences regarding taste also matter. For instance, in the case of orange juice, Polish consumers generally choose a more acidic taste, while the citizens of the United States prefer a more balanced taste. Similarly, in the case of apples, Polish varieties of these fruits are considered one of the most tasty in the world. However, the exception are Asian people, who prefer less sour apple juice. There is also a strong relationship between the consumption of juices and the financial situation and level of education of consumers. People with higher education have a more extensive knowledge of healthy living. They also have higher income, which undoubtedly affects the volume of purchased fruits and vegetables both fresh and processed ones. The consumption of these products is also affected by the consumer's gender. Women are more likely to consume healthy products than men (Anonymous, 2017; Markowski et al., 2015; Monteleone & Bertuccioli, 2006).

Nowadays, consumers pay more attention not only to health and nutritional value of foods, but also to their sensory attributes, quality and natural composition (Gorton & Tregear, 2008).

Therefore, traditional and regional food products gain a growing interest (Eden & Bear, 2010; Kneafsey, 2010). Their unique features are derived from specific manufacturing methods, unique composition or distinctive place of origin (Halagarda et al., 2013).

Traditional fruit juices are manufactured with the use of a pressing process. Thanks to this technology, they acquire such characteristics as: naturally cloudy appearance and color, taste and odor characteristic for the raw materials used in the production process. Because of cold pressing and low temperature of pasteurization, traditional juices are not only low-processed products but they also retain particularly high nutritional value (Heinmaa et al., 2017; Markowski et al., 2015). The entry on the List of Traditional Products of Polish Ministry Agriculture and Rural Development is a confirmation of product's traditionality. Only products which are part of the region's cultural heritage and are characterized by at least 25 years of manufacturing tradition, which should be documented accordingly, can be included on the List. However, the manufacturing methods and the specific nature of the products do not need to be related to the geographical area in which the products are manufactured (Rudawska, 2014). All manufacturers of juices registered on the List of Traditional Products declare that the manufacturing tradition in a given area or in a family goes several generations back, thus ensuring the unique character of their products (Anonymous, 2018).

The aim of the study was to investigate the opinions and behavior of fruit juice consumers in relation to traditional products. The hypothesis stating that: "consumption and shopping habits of fruit juice consumers influence their opinions and behavior regarding traditional products" has also been tested.

1 LITERATURE REVIEW

Traditional food products are an essential element of the cultural heritage. They carry a significant symbolic value for consumers, whereas their production and sales make serious economic contributions to many regions (Rudawska, 2014). A growing interest in traditional food products fits into new trends on the food market and shows the consumer appreciation of quality and trust (Żakowska-Biemans, 2012; Rudawska 2014). Although, the traditional foods have always played an important role in the history of people living in different regions and representing various cultures, the definition of traditional food is not consensual. The EuroFIR definition that was acknowledged by the Food and Agriculture Organization (FAO) states that "Traditional food is a food with a specific feature or features, which distinguish it clearly from other similar products of the same category in terms of the use of 'traditional ingredients' (raw materials of primary products) or 'traditional composition' or 'traditional type of production and/or processing method'" (Weichselbaum et al., 2009). Traditional food products can also be defined as those that are prepared in accordance with recipes passed down from generation to generation, with a small share of modern processing methods. They are distinguished by special sensory properties and are associated with the local, regional or national community (Jeżewska-Zychowicz, 2009; Żakowska-Biemans, 2012). Nevertheless, Guerrero et al. (2009) showed that consumers from different cultures and countries can, to some extent, have different image of traditional food products. Vanhonacker et al. (2010) indicate that Polish consumers identify traditional food with products that were widely consumed in the past, but over time their character changed and now are consumed primarily during celebrations or exceptional events. Studies by Sajdakowska and Żakowska-Biemans (2009) showed that consumers intuitively, correctly connect the idea of traditional food with home-made food, food that has been consumed for generations and is associated with a given culture or geographical area.

The results of the research conducted in six European countries, including Poland, prove that traditional food is perceived by consumers very positively (Lengard et al., 2011; Żakowska-

Biemans & Kuc, 2009). Polish respondents believe that traditional products are primarily characterized by high quality and unique flavor characteristics. On the other hand, they negatively assess the price level of these products (Lengard et al., 2011).

The "underlying dimensions" of traditional food concept have been analyzed in several research studies (Cayot, 2007; Guerrero et al., 2009). The attitudes, perceptions and expectations of consumers regarding traditional products (Roininen et al., 2006; Sanzo et al., 2003), their sensory properties, consumer experiences (Caporale & Monteleone, 2006; Cayot, 2007) and the challenges that they face in food markets (Jordana, 2000) have all been thoroughly studied. Although the research should take into account the characteristics of a range of foods (Hidalgo-Milpa et al., 2016); so far, no studies have concentrated on consumer behavior on the traditional juice market. Its results can have important managerial implications as producers of traditional products should have the knowledge on the consumers' opinions (Paharia et al., 2011) and habits (Rudawska, 2014). Yet, consumers may show different preferences with respect to which product features should be improved and to what extent so as to provide more satisfaction (Sanzo et al., 2003). Consumers and their individual choices have a strong impact on the food production and the supply of particular goods (Rudawska, 2014); therefore, there is a need to study factors influencing food choices. Although, consistent relationships between the profiles of traditional food consumers and their socio-demographical characteristics such as age, gender and income are shown in the literature (Vanhonacker et al., 2010; Henseleit et al., 2009), none of these studies concentrated on juice consumers.

2 METHODOLOGY

Empirical data were collected through the Internet survey among Polish respondents. The questionnaires were distributed by means of social media and survey portals. The survey covered a total of 640 individuals of different gender, age, education, financial situation and place of residence. The respondents were selected using convenience sampling method. A detailed characteristics of the respondent group is presented in Table 1. The questionnaire was pilot tested. It consisted of 17 closed questions and 5 classification (sociodemographic) questions. The juice purchase intensions, the frequency of their consumption, the volume of consumption, the preferred types and flavors of juices as well as the size and type of packaging were verified. The purchase conditions and importance of packaging information were also examined. In addition, the consumption of traditional juices, sources of information on these types of products, place of purchase, opinions about their prices and availability, as well as factors that would induce more frequent consumption were analyzed.

The data obtained from the questionnaire were analyzed with the use of R 3.3.2 package. A p-value of 0.05 was required for statistical significance. The relationship between qualitative variables was determined with the use of χ^2 test (with Yates correction for 2x2 tables) or, with Fisher exact test when the expected values in tables were low. The Student's t-test (when variables showed normal distribution) or the Mann-Whitney test (when variables showed lack of normality) were used for comparison of quantitative variables in two groups. The comparison of quantitative variables in three or more groups was performed by the analysis of variance (ANOVA) (when variables had a normal distribution in the analyzed groups), or Kruskal-Wallis test (when variables showed lack of normality). When such comparisons showed statistically significant differences, post hoc analysis was performed: Tukey's HSD test (in the case of normal distribution) or Dunn's test (in the case of lack of normality). Normality of variable distribution was tested with use of Shapiro-Wilk test.

Tab. 1 Population characteristics

Feature	Category	N	%
Gender	Female	472	73.75
	Male	168	26.25
Age	19-24	256	40.00
	25-35	224	35.00
	36-50	128	20.00
	51-65	24	3.75
	over 65	8	1.25
Education	Vocational	12	1.88
	Secondary school	180	28.12
	University	448	70.00
Place of residence	Country	136	21.25
	City up to 20 k citizens	52	8.12
	City 20-50 k citizens	64	10.00
	City 50-100 k citizens	20	3.12
	City 100-500 k citizens	76	11.88
	City over 500 k citizens	292	45.62
Financial situation	Very good	60	9.38
	Good	376	58.75
	Average	188	29.38
	Poor	16	2.50

Source: own research

3 RESULTS AND DISCUSSION

3.1 Fruit juice consumers – opinions and behavior

According to data from the European Fruit Juice Association report, juice consumption in European Union in 2016 amounted to 6008 million liters, with a decrease of 1.6% in comparison to 2015. Poland with the consumption of 543 million liters in 2016 is the fifth largest juice market in the European Union. The juice consumption in 2016 in comparison to 2015 and in contrast to the average for EU countries increased by 7.9% (Anonymous, 2017).

The results of this study show that a vast majority of respondents (79.4%) purchase and drink fruit juices, whereas 3.1% generally drink juices but they do not buy them. Only 11.3% of respondents neither buy nor drink juices. Consumption, however, does not depend on the sociodemographic characteristics of the respondents (p>0.05). Similarly, Tsakiridou et al. (2009) showed that socio-economic factors do not significantly affect consumer buying intentions of Traditional Specialities Guaranteed products. This is also confirmed by Ferzacca et al. (2013), who showed that although food is mainly bought by women, all family members are involved in purchasing decisions.

In 2016, the average consumption of fruit juices in the EU countries was on the level of 11.7 liters per capita, whereas in Poland - 14.1 liters per capita (Anonymous, 2017). The results of this study show that 23.2% of respondents who consume juices drink about 5 liters per month, 19.7% about 2 liters per month and 13.4% about 3 liters per month. As many as 19.7% of subjects consume 7.5 or more liters of juice per month, whereas 24% 1 liter or less. Sociodemographic features of the questioned subjects did not influence the volume of the juice consumption (p>0.05). This is contrary to Gantner (2010) findings, according to which young consumers drink much more juices than the older.

Analyzing the juice purchase frequency it has been found that it is a product bought by the respondents regularly. The largest group of juice consumers among subjects questioned (32.4%) buys juices several times a week, 27.5% several times a month, and 19.7% once a week. No statistically significant differences were found between the answers of respondents considering their sociodemographic characteristics (p>0.05). Obviously, the greater the amount of the juice habitually drunk by a consumer (as declared in the survey), the more frequent its consumption (p<0.001).

According to Strojewska (2013), Polish consumers are increasingly paying more attention to the quality and nutritional value of food products and consequently the consumption of fresh juices is growing. This is also confirmed by the report of the European Association of Fruit Juices. In 2016 compared to 2015, the consumption of not form concentrate juices increased by 60.9%, while the consumption of juices from concentrate rose only by 1.3%. Still, the total consumption of juice form concentrate sold in ambient temperature was almost 5 times higher than that of not form concentrate juices (391 million liters and 82 million liters, respectively) (Anonymous, 2017). In this study over half of respondents (54.3%) mostly choose juices made form concentrate. As many as 26.1% of subjects questioned prefer not from concentrate juices, including 16.2% of those who choose cold pressed juices. The rest of the respondents (19.7%) select fresh, not pasteurized juices. The sociodemographic characteristics of respondents did not affect the juice type choice (p>0.05).

The most preferred size of the juice package is that of one liter capacity (66.9% of answers). The similar number of respondents prefer 2-liter containers (11.3%) and packaging of 0.3 liters capacity (9.9%). Equally 2.1% respondents usually buy 5-liter or 3-liter packaging. The least popular type of packaging is one that has a capacity of 0.2 liters (0.7% of answers). Again the sociodemographic factors did not influence the answers of respondents (p>0.05).

When given the possibility of choosing more than one preferred packaging type, consumers mostly liked that made of a multilayer laminate (63.3% of answers). In the second place, the respondents chose glass bottles (19% of answers). It should be noted that bottles made of glass were mostly preferred by the respondents drinking moderate amounts of juice (2-3 liters per month) and least favored by the people consuming more than 5 liter of juice a month (p=0.033). The least favored packaging types included plastic bottle (11.4% of answers) and "bag in box" (6.3% of answers). This is in accordance with the results of the research conducted by Ucherek (2011) which also pointed to the laminate packaging as the most preferred one by consumers (69% of answers). The glass packaging was the second choice (33% of answers). The sociodemographic characteristics of respondents in this study did not affect the choice of a packaging system/type (p>0.05). Similar results were obtained by Czarnowska et al. (2014). As many as 75.5% of respondents chose a laminate packaging and 24.5% a glass one. The data of the European Fruit Juice Association from 2015 indicate that consumers choose laminated packaging (59.1% of sales), followed by that made of plastic (25% of sales) and glass (19.5% of sales) (Anonymous, 2016). Nevertheless, these data concern not only juices, but also nectars.

Due to the fact that Polish traditional juices are produced only from fruits grown locally, respondents were asked to exhibit their preferences only regarding products from domestic

fruits. The most popular juice is that made of apples (43.7% of replies). As many as 23.9% subjects prefer mixed fruit juices, whereas 12% double-fruit ones and 7.8% juices with an addition of vegetables. Juices made of plums (0.7% of answers), pears (2.8% of answers), raspberries (4.2% of answers) and blackcurrants (4.9% of answers) are the least popular juices. Sociodemographic features of the questioned subjects did not influence the volume of the juice consumption (p>0.05). According to the 2016 report of the European Fruit Juice Association (Anonymous, 2016), the most popular juices in Poland include: orange juices (24.5% of sales in 2015), apple juices (23.1% of sales in 2015), vegetable juices (17.1% of sales in 2015) and flavor mixes (12.6% of sales in 2015).

Fig. 1 The importance of the factors determining the juice choice
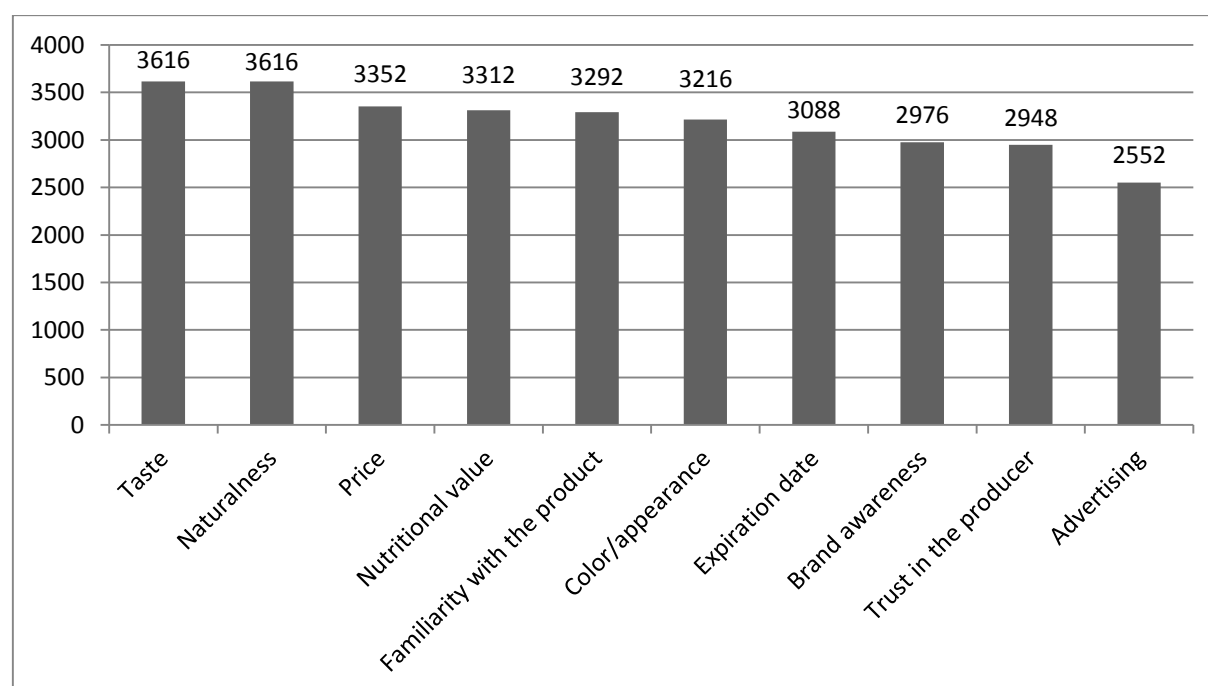
Results are presented with the use of a rank scale

Source: own research

According to Bruhn (2007) and Verbeke (2006), consumers in the food market are primarily looking for benefits such as good taste, comfort of use and pro-health effects. Similarly in the case of local foods they seek for freshness, quality and taste (Khan & Prior, 2010). Figure 1 shows the importance of the factors that determine the choice of juice. According to the subjects surveyed, the most important feature when selecting particular juice is its taste and naturalness. Similar results were obtained by Żakowska-Biemans (2012) in a survey on traditional foods and Rybowska and Chełstowska (2007) in regional food surveys. Other factors in this study, which determine the preference for a particular juice type are: its price, nutritional value and the familiarity with the selected product. According to the respondents, the information provided by manufacturers through advertising is of the least importance when making purchasing decisions. The research Ucherek (2011) pointed to the decisive role of juice taste (63% of indications), its price (46% of indications), consumer habits (31% of indications), brand (24% of indications), health benefits (23% of indications), expiration date (9% of indications), attractive packaging (2% of indications), advertisement (1% of indications). On the other hand, results of the survey by Czarnowska et al. (2014) indicated the dominant role of price in the selection of juices. In this study statistically significant

differences between the preferences of male and female respondents were identified. Women attach more meaning to familiarity with brand than men (p=0.047), whereas product price is more important to men (p=0.044). Khan and Prior (2010) on the other hand showed that freshness is of utmost importance for women, whereas quality for men. In this research brand awareness was more important for citizens of the medium-sized and big cities than for rural dwellers (p=0.037). Moreover, the age of respondents influenced the perceived significance of product naturalness. This feature was significantly more important to respondents in the age of 25-35 than for subjects aged 24 or less (p=0.015). Thus, for people aged 24 or less and over 35, the most important juice feature is its taste, whereas for people aged 25-35 years its naturalness. The expiration date was a significantly less important juice feature for people in very good financial situation than for other respondents (p=0.014). It is also worth noting that for people of a very good financial standing the price of juice had the most significant meaning when making purchasing decisions, whereas for other groups of subjects questioned the product naturalness was the most important. The education level did not have an impact on the opinions regarding the most essential characteristics of juices (p>0.05).

The results of this study also show that the vast majority (91.6%) of juice consumers are familiar with the information presented on the juice packaging. Only 8.5% of subjects ignore data on fruit juice composition, origin, method of manufacture and storage conditions. The sociodemographic factors did not influence the answers of respondents (p>0.05).

3.2 Traditional juice products – consumer knowledge, behavior and opinions

The results of the research show that 54.2% of subjects questioned consume traditional juices. This is a significantly lower number than in the survey by Żakowska-Biemans (2012), where 95% of respondents declared consumption of traditional products. However, in this study as many as 16.9% of respondents were not sure whether the juices they drank were traditional or not. Moreover, it was noted that the financial situation significantly influenced traditional juice consumption (p=0.017). The better the financial status of respondents, the larger share of people declaring traditional juice drinking was identified. The preferences regarding the juice production method did not influence the consumption of traditional products (p>0.05).

The largest group of traditional juice consumers (31.2%) drink them several times a month, whereas 10.4% once a week and only 1.3% daily. As many as 16.9% consume them several times a week and 16.9% once in a few months. Therefore, it can be stated that traditional juices are chosen by consumers and consumed in a regular manner, not just during fairs or festivals. The research Żakowska-Biemans and Kuc (2009) showed that 38% of the subjects questioned declared buying regional or traditional food products once a month and 34% once a week. According to the results of this study, the gender of the respondents influenced consumption frequency (p=0.009). In comparison to women, a larger share of men declare frequent consumption of traditional juices. However, at the same time a larger share of male respondents drink juices more seldom than in the case of female subjects. Women prefer moderate consumption of traditional juices (several times a month) - 39% of indications. The statistical analysis has also revealed that the older the respondents are, the higher the frequency of traditional juice consumption is (p=0.047).

According to the research results, friends and family members are the main sources of information regarding traditional juices (Fig. 2), especially for those who drink these products regularly (p=0.014). The respondents also look for such information at the points of sale, during traditional food fairs and on the Internet. In the research by Żakowska-Biemans and Kuc (2009), however, respondents indicated television and press followed by family and friends as the main sources of information about traditional products. Similarly, in the study by Khan and Prior (2010) consumers indicated local television in the first place, followed by local press,

leaflets and magazines. It should be noted that in the discussed research, male respondents more often than women learn about traditional juices from professional literature (p=0.019). Nevertheless, almost half of the traditional juice consumers (46.8%) do not look for such data at all. These respondents were mostly unsure if they drink traditional juices or not (p<0.001). Similarly, Khan and Prior (2010) showed that 35% of the subjects questioned were not interested in finding more about local products.

Fig. 2 Sources of information on traditional juices
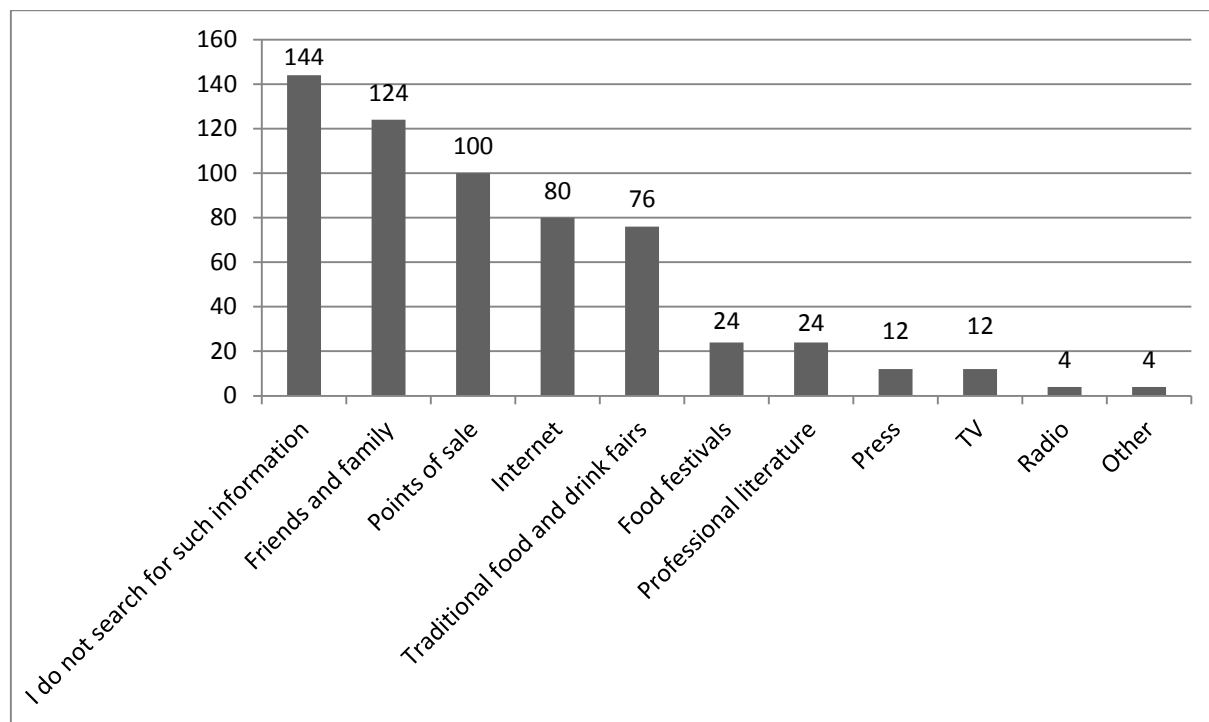
The graph shows the number of indications

Source: own research

Krajewski and Zabrocki (2008) noted that only 4% of the survey participants identified their level of knowledge of traditional and regional products as good. On the other hand, research of Chudy and Gierałtowska (2013) conducted in the years 2010-2012, showed that 82% of respondents were able to distinguish the traditional or regional product from the others. In this study the respondents who purchase traditional juices stated that they identified them mainly on the basis of information placed on the product packaging or provided in the leaflet (Fig. 3). They also use their own knowledge and experience. Many respondents also pointed to the information obtained from the seller. In addition, the subjects surveyed associated traditional products with a specialized store or a special, dedicated place in the shop. Moreover, the respondents aged 25-35 years are most likely to trust the seller that the product is traditional, whereas those over 35 years of age are least likely (p=0.007). Additionally, the more juice the respondents drink, the more trust in data given by the vendor they have (p=0.046). The results also revealed that people with vocational and secondary education more often than those with higher education use specialist shops to make sure that the product is traditional (p=0.004). The subjects living in large cities more than the rest of the respondents trust the information regarding product traditionality given in the leaflet or on the packaging (p=0.008).

Fig. 3 Means of traditional juices identification
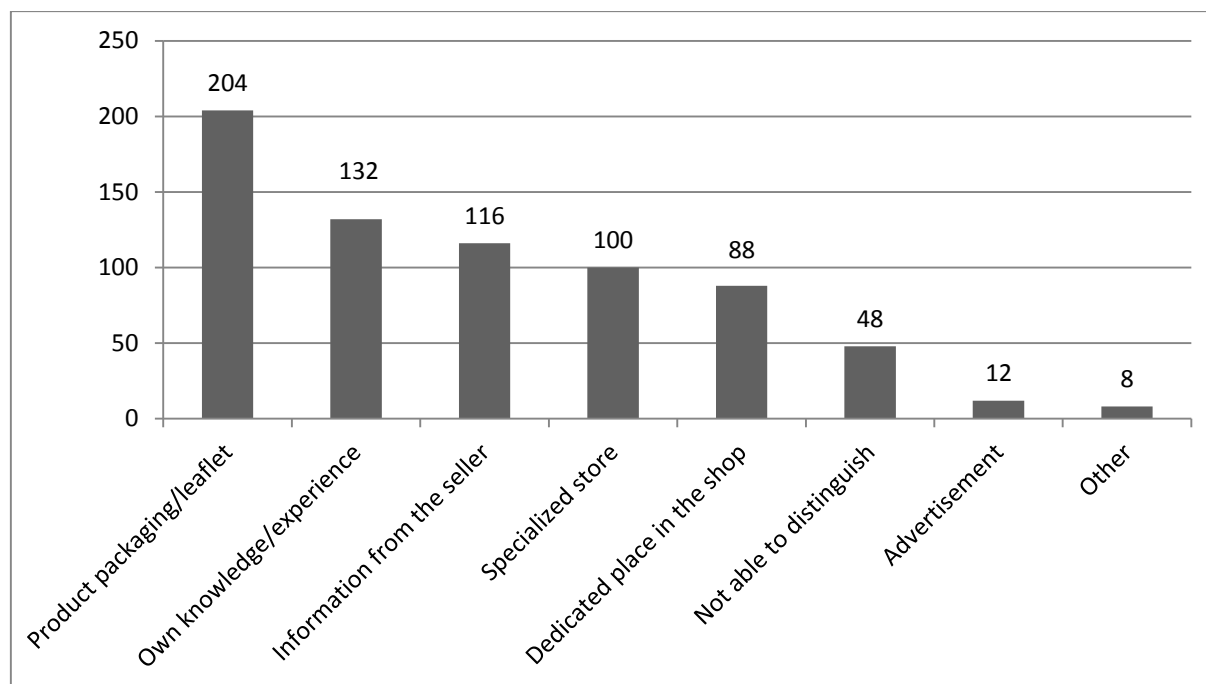
The graph shows the number of indications

Source: own research

The point of sale is a situational factor that may have an influence on consumer preferences (Paustian et al., 2016). The most common place of purchase of traditional juices is the supermarket (37.6% of indications). Secondly, respondents specified a specialist shop (19.8% of answers). Other shopping places included stands at fairs or festivals (14.9% of indications), local shops (10.9% of indications), marketplaces (8.9% of answers) and producer stores (5% of answers). Sociodemographic factors did not influence the place of purchase (p>0.05). The results of Żakowska-Biemans (2012) studies showed that consumers usually buy traditional food first and foremost in nearby stores and then in supermarkets, bazaars, marketplaces and in specialty stores. The research conducted in Germany showed that even in the case of traditional meat products retailers play predominant role (Paustian et al., 2016). Correspondingly, Khan and Prior (2010) revealed that respondents expect greater availability of local products in supermarkets. Nonetheless, according to Vanhonacker et al. (2010) consumers from other European countries most often purchase traditional and regional products directly from their manufacturers.

The price of food is an important criterion of its choice (Jeżewska-Zychowicz, 2009; Rudawska, 2014) and it may even override the importance of preferences (Zander & Hamm, 2010). Nearly two thirds of respondents (65.4%) in this study rated traditional juice prices as too high, whereas 34.7% as reasonable. None of the subjects questioned indicated that the prices are too low. According to Chambers et al. (2007), price can be a serious barrier for purchasing more local food products. This was also confirmed by Lengard et al. (2011) and Żakowska-Biemans and Kuc (2009). According to the latter study, 58% of respondents said that the prices of traditional and regional products were high or very high. Nonetheless, according to Żakowska-Biemans (2012) and Groves (2001) higher prices make traditional products treated as exceptional and of the high quality. The lower price could lead to the depreciation of their image (Miśniakiewicz & Halagarda, 2013). Moreover, the AC Nielsen report shows that 80% of Polish consumers agree that the quality of products is important when making purchasing

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decisions. The price was indicated by 65% respondents (Pankowiak, 2013). In this study the age influences consumer perception of traditional juice price levels. The respondents over the age of 35 were more convinced than younger subjects that the prices are appropriate. The younger consumers mostly believed that the prices are too high (p=0.022). Nevertheless, the opinions regarding traditional juice prices did not influence the frequency of their consumption and place of their purchase (p>0.05). This is contrary to the results of Grunert (2006) and Umberger et al. (2009) showing high price sensitivity of consumers doing shopping in discount stores.

According to more than half of respondents (51.5%), the availability of traditional juices is sufficient, whereas 19.8% assessed it as good and 5% as very good. As many as 23.8% of survey respondents rated it as insufficient. None of the sociodemographic factors had any influence on the opinions regarding availability of traditional juices (p>0.05). It is worth noting that the opinion regarding product availability does not depend on the usual place of purchase (p>0.05). The results of the survey by Żakowska-Biemans and Kuc (2009) showed that the lack of availability of regional products was the main cause of their non-consumption (62% of indications).

There are multiple factors that affect food choice process (Vabo & Hansen, 2014). The main factors that would prompt respondents to more frequent consumption of traditional juices are lower prices (30% of indications) and greater availability (25.4% of indications). The same expectations of consumers are also confirmed by Żakowska-Biemans and Kuc (2009) and Khan and Prior (2010). Similar conclusions were also drawn regarding organic products sold in Poland (Bryła, 2016). As declared by the subjects surveyed, in this study traditional products should also be labeled in such a way that they can be easily identified and differentiated from products produced on a mass scale (17.4% of indications). The survey results conducted by Khan and Prior (2010) confirm that consumers expect clearer labeling. This is also in line with the results of the research by Aprile et al. (2009) which showed that consumers are confused with the meaning of EU food quality labels. Moreover, the results of the discussed research show that the quality of traditional products should be confirmed by a certificate (11.2% of indications) and their assortment could be extended (9.1%). According to Rudawska (2014), high prices of traditional products might become more acceptable when products are labelled with quality marks. In this study, for women more often than for men, a convincing argument for choosing traditional juices would be a quality certificate (p=0.01). The results of the survey also showed that people over the age of 35 are more likely to believe that no argument can convince them to drink more traditional juices than the other respondents (p=0.05). At the same time they are less convinced than other groups that price may be such an argument (p<0.001). The lower price would of course satisfy predominantly those who think that the prices of traditional juices are too high (p=0.003). Additionally, it was shown that with rising age the belief that the greater availability of traditional juices would positively affect their consumption decreases (p=0.014).

CONCLUSIONS

The outcomes of this study have important implications for better management of companies involved in production and sales of traditional products, particularly with regard to future promotional activities. Hence, they can contribute to the sustainable development of local enterprises. The research results show that fruit juices are popular among consumers. Over 82.5% of respondents drink such products. What is more, most of the subjects questioned consume them regularly, at least once a week (79.6%) and in the volume of 2 liters per month or more (76.1%). The fact that almost half of the respondents (45.8%) prefer not from concentrate or fresh juices indicates a high level of consumer awareness regarding nutritional value of food products. The consumers favor one liter packaging (66.9% of answers),

preferably made of a multilayer laminate (63.3% of answers) or glass (19% of answers). Apple juice is the most popular juice made of raw materials available in Poland (43.7% of replies). When selecting a particular juice in a shop, consumers consider mainly its taste and naturalness, followed by other factors such as: price, nutritional value and the familiarity with the product. It was also shown that the majority of consumers questioned (91.6%) are familiar with the information presented on the juice packaging. Traditional juices are popular among Polish consumers as they are habitually drunk by over half of the juice consumers surveyed (54.2%). They are consumed frequently, at least once a week by 59.7% of respondents. Friends and family members are the main sources of information on traditional juices. The respondents also search for such information at the points of sale, during traditional food fairs and on the Internet. Traditional juices are predominately identified on the basis of information contained on the product packaging or in the leaflet. Respondents also use their own knowledge and experience, and the information obtained from the seller in this respect. The traditional juices are mostly bought in the easy to reach places such as supermarkets (37.6% of indications) or specialist shops (19.8% of answers). The high prices and only sufficient availability limit demand for these types of products. Despite these aspects, the respondents would expect improved product labeling so as to better distinguish traditional juices from mass scale products.

The tested hypothesis saying that: "consumption and shopping habits of fruit juice consumers influence their opinions and behavior regarding traditional products" was merely partially confirmed. The statistical analysis demonstrated that only the volume of juice consumed affected the trust in the information given by the product seller. All of the other factors did not show any statistical significance. However, some demographic factors affected consumer opinions regarding the following: the importance of the factors determining the juice choice, traditional juice consumption, the sources of information on traditional juices and the means of their identification, opinions about price levels, and the main factors that would enhance more frequent consumption of traditional juices. It was also noted that glass bottles are typically preferred by the respondents drinking moderate amounts of juice (2-3 liters per month).

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Antecedents of Green Purchase Behavior in Indonesia

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Abstract: The objective of this paper is to investigate factors affecting green purchase intention and behavior within young consumers in Indonesia. 140 responses from respondents were collected in West Jakarta. The results of the study found that green purchase intention and willingness to pay had the largest influence on green purchase behavior. Green trust was influenced by green purchase value. Meanwhile green purchase intention was influenced by several variables e.g. Environmental knowledge, ecolabel ling and government initiative. This study is expected to have implications for marketers in formulating a certain strategy in marketing green products that can increase their competitive advantage.

INTRODUCTION

There is a growing awareness of environmental issues in Indonesia. It is reflected with urban communities' various activities related to the issues e.g. Earth Day, Bike to Work, and Car Free Day, Go green, paid plastic bagsprogram etc.

As one of the most populous countries in the world, there is a great potential marketof environmental friendly products in Indonesia. It is deemed very important to identify factors affecting green purchase behavior of consumers in Indonesia.

Today's companies, should not only focuson profit, but should also care to the planet, society and the environment to achieve their sustainability.

The concern towards the environment and society has led to the emergence of sustainable development which focuses on the need to promote sustainability and advocates the form of development which could reduce negative impact on the environment and society. Sustainable development further encourages green consumption ((Joshi and Rahman, 2015).

Green is a synonym for environmentally friendly, environmentally responsible andeco-friendly (Manakotla andJauhari, 2007). Green vision could helpmarketers to design marketing strategies that meet the needs of green consumers (D'Souza, 2004).

Environmentally responsible purchasing is very important as unplanned purchasing of goods can severely damage the environment (Joshi and Rahman, 2015). Consumers possess the capability to prevent or decrease environmental damage by purchasing green products.

Previous studies (Suki, N.M, 2016; Lee,K;2009; Hartmann and Ibanez ,2006; Juwaheer et al. 2012; Konuk 2015, Yadav and Pathak 2016 indicated that a lot of studies regarding green marketing had been conducted in western countries, however lack of studies had been done in Asian settings such as Indonesia.

Thus, the aim of this study is to examine factors affecting green purchase intention and behavior toward environmentally friendly products or green products within young consumers in Indonesia.

From literature it is revealed that there are several previous studies regarding green behavior of customers (Khare ,2014;Mostafa, 2007; D'Souza 2004), ;Chan and Lau,2002;doPaco and Raposo,2009;Lee,2008;Chen and Chai,2010;Laroche, M et.al,2001).

A few studies have been conducted regarding environment-friendly consumers; their attitude and behavior have been done in Indonesia.

1 LITERATURE REVIEW

1.1 Green perceived value and green trust

In today's competitive environment customer perceived value is regarded as a key source of competitive advantage (e.g. Eggert &Ulaga, 2002; Gale, 1994; Payne & Holt, 2001). Consumers' perceived value is referred to as consumers' overall assessment regardingwhat is received and what is given or sacrificed (Zeithaml, 1988). Based onChen and Chang (2012), green perceived value is related to consumer'soverall evaluation of the net benefit of a product or service between what is received and what is given based on the consumer's environmental desires, sustainable expectations, and green needs. Perceived value is defined as a consumer's overall evaluation of the net benefit of a product or service based on a consumer's evaluation (Bolton and Drew, 1991; Pattersonand Spreng, 1997). Previous research has extensively studied perceived value because it has a positive influence on marketing performance (Sweeney et al., 1999).

Green perceived value isdefined asa consumer's overall evaluation of the net benefit of aproduct or service between what is received and what is given based on the consumer's environmental desires, sustainable expectations, and green needs (Spreng, 1997).

Trust is referred to as willingness of an exchange partner in that case one is confidence (Morgan and Hunt, 1994; Moorman, Deshpande and Zaltman, 1993).

In relation to environmental consciousness, Chen (2010) defines green trust as a willingness to depend on one object based on the belief or expectation resulting from its credibility, benevolence, and ability about environmental performance.

Previous studies found that there was a positive relationship between green perceived value and green trust (Chen, et al, 2012; Eid, 2011 and Sirdeshmukh et al, 2002).

Lee et al (2011) stated that trust is a major influence of consumer behavior. Harris and Goode (2010) also indicate that consumer purchase intention is influenced by consumer trust. Furthermore Chen et al (2012) found that green trust has an influence on green purchase intention. Therefore the following hypotheses are proposed:

H1:   Green perceivedvalue will have an influence on green trust.

H2:   Green trust will have an influence on green purchase intention.

1.2 Environmental knowledge

Environmentalknowledge is defined as the knowledge regarding what people know about the environment (Mostafa, 2007). Meanwhile, Chan and Lau (2000) found that environmental knowledge as the extend of knowledge a person has regarding environmental issues. Previous

studies found that environmental knowledge of consumers was positively influenced green purchase intentionand green purchase behavior (Eze etal, 2013; Chan et al, 2000; Aman et al, 2012). Therefore the current study hypothesized that:

H3: There is a relationship between environmental knowledge and green purchase Intention.

H4: There is a relationship between environmental knowledge and green purchase behavior.

1.3 Perceived effectiveness of environmental behavior

Consumers' belief in their ability to effectively solve environmental problems has been related to their purchase of green products (Samdahl and Robertson, 1989), and is one of the strongest predictors of ecologically conscious behavior (Roberts, 1996).

Sinnappan and Rahman (2011) define perceived effectiveness of environmental behavior as a person's perception that if each individual involves himself /herself in pro-environmental behaviors he/she would contribute a lot to the environment. Perceived effectiveness of environmental behavior is also known as perceived consumer effectiveness. According to Kim and Choi (2005), individual with a strong belief that environmental behavior will generate a positive outcomes; will be more interested in doing the behavior to support its care for the environment. Moisander (2007) says that the consumer will act pro-actively if felt the actions were effective for protecting the environment. Consumers, who believe that they can make a difference by engaging in environmental protection, will buy green products to reduce the harm to the environment (Sinnappan and Rahman, 2011). In their research, Sinnappan and Rahman (2011) found that perceived effectiveness of environmental behavior as one of strongest predictors of green purchasing behavior in Malaysia. This is similar to Lee (2008) which founds perceived effectiveness of environmental behavior as one of the strongest predictor of green purchasing behavior in Hong Kong. Based on the literature concerning these variables then the following hypothesis is proposed:

H5: There is a relationship between Perceived effectiveness of environmental behavior and green purchase behavior.

1.4 Ecolabelling

Ecolabelling or eco-certification informs consumers regarding green characteristics of the product and motivates them to purchase green product (Yang et al, 2010). Reliable information should be available in a sample and user friendly way through product labels (Padel and Foster, 2005; Connel, 2010). It might build consumer trust and motivate more sustainable purchase (Rahbar and Wahid, 2011).

The ecolabels are increasingly used by marketers to promote the identification of green products (D'Souza et al, 2006). Loureiro and Lotade (2005) suggested that consumers have shown their willingness to pay higher premiumfor ecolabelled products.

Few studies have studied the relationship of ecolabelling and purchase intention and green behavior (D'Souza,2004;Whitson et al,2004).Previous studies suggested that ecolabelling motivates consumers to purchase green products (Harris, 2007; Young et al,2010;Joshi et al, 2016). A study of Chekima et al (2015) found that eco-label had a significant influence on purchase intention. Hence the following hypotheses are proposed:

H6: There is a relationship of ecolabelling and purchase intention.

H7: There is a relationship of ecolabelling and green purchase behavior.

1.5 Willingness to Pay

Price remains to be cited as the major reason for not buying organic food.Bray et al (2011), Glenn et al (2013), Carrington (2014) identified that higher price as one of the reasons for lack of consumption behavior. Furthermore Barbarossa and Pastore (2014) found that higher price and scare availability were the main barriers to green purchasing.Price is one of the main attributes on which purchasing decisions are based (Gadema and Oglethorpe, 2011; Mai and Hoffmann, 2012). Consumers perceive that high prices as a barrier to green consumption (Gleim et al., 2013; Paul and Rana, 2012; Vega-Zamora et al., 2014). Consumers with environmental concerns are less sensitive to price (Olson, 2013; Tanner et al,, 2003) and are willing to accept trade-offs between environmental benefitsand higher costs (Laroche et al., 2001). Moser (2015) found that willingness to pay was the strongest predictor of green purchase behavior .Therefore; it is proposed the following hypothesis:

H8: There is a relationship of consumers' willingness to pay for green product attributes and green purchase behavior.

1.6 Government initiative

The government's role is another predictor of green purchase behavior (Pimita and Rahman, 2011; Tsen et al, 2006). Government initiative is referred to as initiative of national government (Dekmeyer, 2008). A study of Mei et al, 2012 found that government initiative had the strongest influence on green purchase intention among Malaysia consumers. Chan (2001) defined green purchase intention as a specific kind of eco-friendly behavior that consumers perform to reflect their concern to the environment. Hence the following hypotheses are proposed:

H9: There is a relationship of government initiative and green purchase intention.

H10: There is a relationship of government initiative and green purchase behavior.

1.7 Green Purchasing

Recently, the number of green consumers has been increasing (Makeower, 2009). According to Dagher and Itani (2012, 2014), consumers are trying to help sustaintheir environment by indicating green purchasingbehavior. Consumers are aware of the significant effect that their purchasing behavior has on the environment (Wahid, Rahbar & Shyan, 2011).

Green purchasing refers to the purchase of environmentally friendly products and avoiding products that harm the environment (Chan, 2001). This green purchasing is frequently measured as green purchase intention and behavior (Joshi et al, 2015). Green purchase intention is conceptualized as consumers; willingness to purchase green products. Green purchase behavior reflects the motivational elements that could influence green purchase behavior (Ramayah etal, 2010).

Studies on green purchase intention showed that intention is a strong predictor of green purchase behavior as intention strongly affects the likelihood of decision to buy the product (Chen, 2010). Therefore the following hypotheses are proposed:

H11: There is a relationship of green purchase intention and green purchase behavior.

The overall conceptual framework is presented in Figure 1.

Fig.1 Conceptual Framework
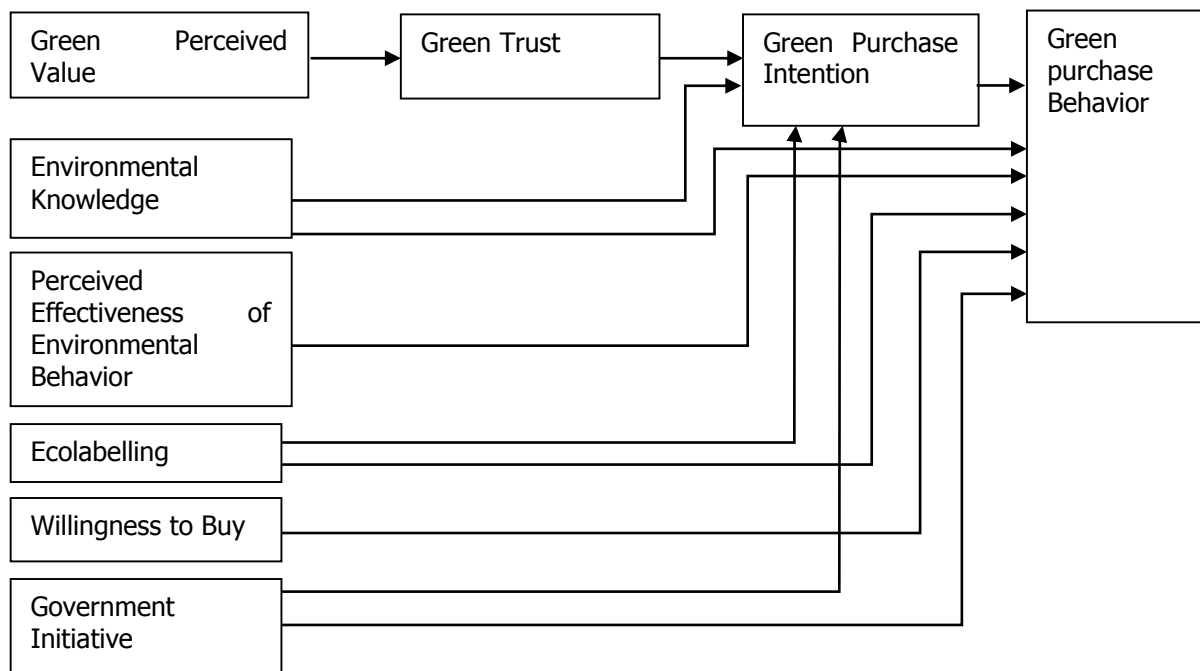
2 METHODOLOGY

Sample

A purposive sample was used in term of familiarity with green purchase experiences.

The questionnaire was distributed among 200 respondents (Master of management students of a private university in Jakarta) participated in this study. These respondents are selected based on their understanding about green marketing. Before distributing the questionnaire the object of study and questions were explain to the respondents. From 200 responses collected, 140 valid responses were used for further analysis.

Measures

Environmental knowledge - three items were used to measure environmental knowledge or perceived environmental knowledge. The items adapted from Joshi et al (2015).The sample items are:

1. I know I buy products and packages that are environmentally safe.

2. I know more about recycling than the average person.

Perceived effectiveness of environmental behavior - two items were used to measure perceived effectiveness of environmental behavior. The items were adapted from Uddin and Khan (2016):

1. I think I carry out some pro-environmental behavior in my everyday life, it would contribute a lot to our environment.

2. supporting environmental protection makes me more socially acceptable.

Eco-labelling - four items were used to measure ecolabelling. The items were adapted from Joshi and Rahman (2016). The sample items:

1. Whenever possible I buy products packaged in reusable containers.

2. I purchase the green products if they are certified by environmental organization.

3. I trust the eco-friendly claims in the advertisements.

4. Marketers must advertise the environmental aspects of their products.

5. Government must make eco labelling mandatory.

Government initiatives - four items were used to measure government initiatives. The items were adapted from Mei et al (2012). The sample items are:

1. Environmental protection is the responsibility of the government.

2. The government should subsidize research on technology for recycling waste products.

3. Government should enforce environmental rules and regulations.

Green purchase behavior - four items were used to measure government initiatives. The items were adapted from Uddin and Khan (2016). The sample items are:

1. I buy environmentally friendly products even if they are moreexpensive.

2. I buy environment friendly products.

3. I can pay extra to get green energy before considering buying a product.

4. I look for the seal certifying that it is environmentally safe.

Green trust - three items were used to measure green trust. The items were adapted from Chen (2010), The items are:

1. I believe that this products environmental image is reliable.

2. I think that this product's functionality is generally dependable.

3. Overall, I believe that this product's environmental claim is trustworthy.

Green Purchase Intention (Mei et al, 2012)

1. I would definitely intend to buy those products thatare environmental friendly.

2. I would absolutely consider buying those productsthat is environmental friendly.

3. I would absolutely plan to buy those products thatare environmental friendly.

Willingness to pay (Moser, 2015)

1. I am willing to pay more for environmentally friendly packaging.

2. I am willing to pay more for environmentally friendly electronic products.

3 RESULTS AND DISCUSSION

Following the two-step approach, a measurement model was first estimated using a confirmatory factor analysis (CFA).Each measurement item was loaded on its prior construct. The instrument reliability was assessed using Cronbach's alpha. The alpha values range from 0.79-0.88.

Convergent validity meets the requirements in this study all the items had relatively high factor loadings on the underlying construct, the values range from 0.70 to 0.87. Overall model fit for CFA was asses using the Chi-square test and a goodness of-fit-indices. Since the Chi-square test is significant (indicating the model a poor fit ,χ=768.31,p=0.000), others indices of fit were assessed i.e. Comparative Fit Index (CFI),the Normed Fit Index (NFI), Root Mean Square Error (RMSEA) indicated the measurement model fit the data well (CFI=0.910), NFI=0.902, RMSEA=0.02).

As the second step, the proposed structural model was assessed. On the basis of CFI=0.95, NFI=0.90, RMSEA=0.57) indicated that the model fit was acceptable.

Green perceived value was found to be significantly and positively influenced green trust (β=0.58, t=7.98) thus Hypothesis 1 was supported. The results of the current study were consistent with the finding of previous studies (Chen, et al, 2012; Eid, 2011 and Sirdeshmukh et al, 2002).

Table 1 Results of Hypotheses Testing

Hypothesized relationship	Standardized coefficient	t-value	Results
H1 Green Perceived ➡ ValueGreen Trust	0.37	6.52*	Supported
H2 Green Trust ⟶ Green Purchase intention	0.49	5.56**	Supported
H3 Environmental Knowledge ➡ Green Purchase Behavior	0.43	7.55**	Supported
H4 Environmental Knowledge ➡ Green Purchase Behavior	0.36	6.32**	Supported
H5 Perceived Effectiveness of environmentally Behavior ➡Green Purchase Behavior	0.23	3.73*	Supported
H6 Ecolabelling ➡ Green Purchase Intention	0.35	3.22*	Supported
H7 Ecolabelling ➡ GreenPurchase Behavior	0.30	5.27*	Supported
H8 Willingness to Pay ➡ Green Purchase Behavior	0.48	6.61*	Supported
H9 Government Initiative ➡ Green Purchase Intention	0.23	3.38*	Supported
H10 Government Initiative ➡ Green Purchase behavior	0.30	5.39*	Supported
H11 Green purchase Intention Gereen ➡ Purchase Behavior	0.37	6.55*	Supported

*p<0.01   **<0.05

Green trust was also had a significant influence on green purchase intention (β=0.39; t=5.56).Thus hypothesis 2 was supported. The results were consistent with Lee et al (2011), stated that trust is a major influence of consumer behavior. Harris and Goode (2010) also indicate that consumer purchase intention is influenced by consumer trust. Furthermore it was consistent with Chen et al (2012)

The next predictor variables of green purchase intention i.e. Environmental knowledge, perceived effectiveness of environmental behavior, ecolabelling, willingness to pay and government initiative) were also found significantly influenced green purchase intention and green purchase behavior (β=0.43, t=3.55; β=0.36, t=5.32; β=0.23, t=.3.75; β=0.31, t=5.22; β=0.30,t=5.27; β=0.48.t=6.61, β=0.23, t=3.38; β=0.30, β=5.39). Finally green purchase intention was also influenced green purchase behavior (β=0.37, t=6.55). Thus hypothesis 3,4,5,6,7,8,9,10 were supported.

The results of Hypothesis 3 and 4 were consistent with Chan and Lau (2000) who found that environmental knowledge as the extend of knowledge a person has regarding environmental

issues. It was also consistent with other previous studies which found that environmental knowledge of consumers was positively influenced green purchase intention and green purchase behavior (Eze etal, 2013; Chan et al, 2000; Aman et al, 2012).

Results of Hypothesis 5 is consistent with findings of Sinnappan and Rahman (2011), and Lee (2008), who found that perceived effectiveness of environmental behavior as one of strongest predictors of green purchasing behavior .

The results of Hypothesis 6 and 7 were consistent with finding of previous studies Few studies (D'Souza, 2004; Whitson et al, 2004; Harris, 2007; Young et al, 2010; Joshi et al, 2016), it was also consistent with Chekima et al (2015).

The results of hypothesis 8 was consistent with findings of Moser (2015) who found that willingness to pay was the strongest predictor of green purchase behavior.

The results of hypotheses 9 and 10 supported the findings of Mei et al, 2012. Finally the results of hypotheses 11 was consistent with findings of Chen (2011), which found that intention is a strong predictor of green purchase behavior.

CONCLUSION

The present study validated a model that predicts the antecedents and consequents of green trust towards electronic products among Indonesian consumers. Green trust and willingness to pay revealed has the strongest effect on green purchase intention. Meanwhile green purchase intention and willingness to pay had the largest influence on green purchase behavior.

This research provides insights for green products' marketers indicating that green purchase intention and willingness to pay are the most important determinant of green purchase behavior, meanwhile green trust itself was influenced by green perceived value. On the other hand green purchase intention was influence by several variables e.g. environmental knowledge, perceived effectiveness of environmental behavior, ecolabelling willingness to pay and government initiative. The findings of this study suggest that marketers need to consider green perceived value to create green trust and pricing of the product should be match with consumer willingness to pay.

There are several limitations of this study. First we did not classify the green products based on its specific category. The product chosen for this study is only electronic products which are familiar by the students. Second, the respondents in this study were only students . Future study could consider another segments of consumers with different characteristics and integrate another variables such as consumer's demographics that could influence consumer's purchase behavior into the research model.

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Relationship between the Knowledge Economy and the Education System in the Context of Intercultural Communication

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Abstract: Recent changes in the philosophy and practice of the national education systems have taken many forms. The education system is increasingly becoming a primary source of economic growth in knowledge-based economies. This paper addresses the question of what the current relationship between the knowledge economy and the education system is. This paper therefore aims to provide a review of the available literature to date regarding the cultural differences in learning styles in the context of Hofstede's cultural dimensions to discover the role of intercultural communication and the benefits of a knowledge-based economy, as these benefits affect the communication. Comparative examination of these questions provides different descriptions of an education project partnership in the Czech Republic and Ukraine. It involves not only international collaboration in research incentives, but also includes citizen science and corporate social responsibility, which aims to improve the knowledge and attitudes of all the stakeholders in the education system. An interesting extension of this study would be the replication of Hofstede's dimensions in both countries. This could be beneficial for the successful collaboration of students and citizens in research science.

INTRODUCTION

The Czechs have a long and successful tradition of cooperation in education and culture with foreign countries. It has been suggested that they will engage in various forms of activities, initiatives and collaboration with the Member states, including Member states in Central, Eastern and South Eastern Europe.

However, recent changes in the philosophy and practice of the national education systems have taken many forms. The focus of this paper will be on the knowledge triangle, as well as friendly education research innovation, as a basis for sustainable economic prosperity and social inclusion in the context of intercultural communication.

Friendly education research innovation aimed at preparing students for the world of work was adopted by the Organisation for Economic Co-operation and Development (1996a, 1996b) when it launched studies on how the world of work. Citizen science itself has existed since the beginning of scientific practice, development technology, data processing and visualisation. The communication of ideas and results through the new media is creating a wide range of new opportunities for young people in scientific research, particularly in the context of

intercultural communication. This is part of the touristic initiatives to provide ecological education for citizens. The research provides evidence about cross-cultural teaching and learning. Cultural differences among students or citizens have been the most frequently studied topics generating publications in the field of the learning process. The foundation for much of the cross-cultural research is the pioneering work of Geert Hofstede (1980, 2001) and Mooij and Hofstede (2011). They identified five cultural dimensions. Briefly, those dimensions are: power distance (the tolerance for class differentials in society); individualism (the degree to which the welfare of individuals is valued more than the that of the group); masculinity (achievement orientation, competition and materialism); uncertainty avoidance (intolerance for risk); and last, long-term orientation (stability, thrift, respect for tradition, and future oriented) and Confucianism (dynamic of long-term-short-term orientation). The assignment of these cultural dimensions is an effective way to distinguish people from various nations.

Currently, international projects in the European countries related to the issue of citizen science involving the participation of the public and students from the European countries are being implemented and supported pursuant to the European Union's Horizon 2020 Programme. A project for young people aimed at innovative ways to make science education and scientific careers attractive to young people, entitled "Next Generation Science Challenges Using Digital and Social Media to Make Science Education and Careers Attractive for Young People", is an example of the knowledge triangle in the context of intercultural communications and CRS in the European Union. SciChallenge is an innovative project targeted at promoting interest and education in the STEM areas (Science, Technology, Engineering, Math), as well as career opportunities in these fields. The project is conceptualised as a digital contest in which young people between 10 and 20 years old develop their own projects, ideas and visions in a particular STEM field. In order to be attractive to this target group, it integrates social media in all steps of the contest through the platform. In order to support the contest, several Engagement Channels were implemented in the platform. They include profiles of research-intensive companies and organisations. Additionally, the platform also offers a directory of available internships, scientific events and other awareness modules. Therefore, the main goal of the SciChallenge project is to motivate and inspire young people about STEM and to introduce innovative and effective teaching and education methods in schools.

Thus, change in the education system is increasingly becoming a primary source of economic growth in knowledge-based economies. A knowledge-based economy and intercultural communication are creating a new society in which we need to consider the current level of the relationship between the knowledge economy and the education systems. The changes in the philosophy and practice of multiculturalism in education, and in educational policy in general, are related to the new imperatives of globalisation as perceived by neoliberal politicians and educators. The international project "SciChallenge" is an innovative programme aimed at promoting interest and education in the STEM areas (Science, Technology, Engineering, Math) and in education methods in schools.

A comparative examination of these questions will provide different descriptions of an education project partnership in the Czech Republic, specifically in the aforementioned project, SciChallenge, in which a Czech university is a partner, and another intercultural initiative in Ukraine. This paper therefore aims to provide a review of the available literature to date regarding the cultural differences in learning styles in the context of Hofstede's cultural dimensions to discover the role of intercultural communication and the benefits of a knowledge-based economy, as these benefits affect the communication. Lastly, this paper illustrates the STEM project and the international partnerships in Ukraine.

1 LITERATURE REVIEW

1.1 Theoretical and empirical framework

Learning is one of the most important of all the components of the contemporary knowledge-based economy. With the development of computing power and technology, the internet has become an essential medium for knowledge transfer among all stakeholders (i.e. academia, the public, governments, entrepreneurs).

Such communication relies both on the content that is communicated and on the relationship that exists between the communication parties, as noted by Cronjé (2011). He explained that according Dodd (1995), intercultural communication is a process of reducing uncertainty about messages and relationships. Cronjé (2011) presented a study on the cross-cultural communicative experiences of professors from South Africa and students from Sudan during a two-year Internet-supported master's course on Computers in Education. The unique approach of the study was its use of a qualitative interpretation of Hofstede's cultural dimensions rather than a quantitative approach. In this empirical study, Cronjé found that dimensions such as power distance and uncertainty avoidance tended to amplify each other, while together, they resulted in a movement away from individualism towards collectivism. He noted three key issues which should have an impact when cultures meet: the reduction of communicative uncertainty, the construction of shared meaning, and the appropriate use of technology.

In another study related to the role that culture plays in the way individuals learn, Joy and Kolb (2009) conducted their examination based on cultural clusters and individual cultural dimensions. They provided evidence that the specialisation of education seems to have a larger effect on learning styles. They found that variables related to education, e.g., the level of education and the area of specialisation, have the largest impact on learning styles. This finding is important to the field of education. They found that educators need to be aware that conditioning by certain cultures may complement the learning style requirements of certain areas of specialisation, whereas it might clash with some other specialisations. They concluded that in addressing the new challenges facing organisations, such as sustainability, which require paradigm shifts in understanding and resolving problems, these multicultural teams are becoming much more multidisciplinary as well. These teams must understand each other's sense making and problem-solving approaches, as well as how their cultures and areas of specialisation might have predisposed them to certain approaches.

Sondergaard (1994) and Corbitt et al. (2004) confirmed that Hofstede's cultural dimensions have been widely used and accepted in various disciplines. Further, Zakour (2004) indicated that these dimensions have been validated, directly or indirectly, by many other researchers in different settings. Between 1980 and 2014, Hofstede's cultural dimensions have been cited more than 1900 times in the Business Source Primer (Mazanec et al., 2015). Through a combination of primary and secondary data, Hofstede (1980, 2001) evaluated 66 nations, creating cultural index scores and ordinal rankings for four and five constructs. The dimensions of the culture are Power Distance (PD), Individualism/Collectivism (IC), Uncertainty Avoidance (UA) and Masculinity/Femininity (MF).

Power Distance is the "measure of the interpersonal power or influence between (a superior) and (a subordinate) as perceived by the (subordinate)" (Hofstede, 1991, p. 71). Societies that are high in power distance tend to value social hierarchies. They do not give individuals the freedom to do whatever they want or make own decisions. It is important for them to do what is socially correct and proper. The hierarchical systems of such societies assign roles to ensure socially responsible behaviour (Schwartz, 1999). The power distance dimension refers to the inequality of the distribution of power in a country. In societies that are low in power distance,

the social relationships are not hierarchically arranged. An individual is respected and appreciated for what he or she can offer (House et al., 2004). The education system is student-centred, and the students are encouraged to question and experiment. The members of such societies may not hesitate to engage in active experimentation (Hofstede, 2001).

Uncertainty Avoidance describes the extent to which individuals feel threatened by uncertain or unknown situations. It is defined as "the degree to which members of a society feel uncomfortable with uncertainty by relying on established social norms, rituals, and bureaucratic practices" (House et al., 2004, p. 11). Uncertainty avoiding societies create laws and rules in order to reduce ambiguity and unpredictability. From the scientific view, they favour deduction and the formulation of general principles first, before applying them to specific situations (Hofstede, 2001). They are more resistant to change, and breaking rules is not tolerated (House et al., 2004). There is a fear of failure and a preference for tasks with sure outcomes, clear guidelines and less risk. In education, both teachers and students are more comfortable with the structured learning situations with clear objectives and timetables. They like learning situations with one correct answer, and they reward accuracy (Hofstede, 2001). Hoppe (1990) and Yamazaki (2005) have found evidence for a positive relation between uncertainty avoidance and reflective observation. Members of societies that are less uncertainty avoidant are more comfortable with ambiguity, chaos, novelty and convenience. They view that which is different as curious. They are more tolerant of breaking rules, less resistant to change and innovation, and willing to take risks. They believe in individuals' ability to influence their lives and those of others. In education, they prefer open-ended learning situations in which there is room for a sense of empiricism, relativity, and original and unconventional ideas. The members of such societies may find it easier to learn from concrete experiences and active experimentation. The strong uncertainty avoidance cultures are characterised by low risk taking, minimal innovation, stability, and conservative and thorough planning.

Individualism/Collectivism defines "societies in which the interests of the individual prevail over the interest of the group" versus "societies in which the interests of the group prevail over the interest of the individual" (Hofstede, 1991, p. 50). Collectivism perhaps is the most widely used dimension to differentiate between cultures (Joy & Kolb, 2009). People in individualistic countries are more concerned with themselves, while people in collectivist countries conform more readily to the norms of the group. Individuals in individualistic countries feel free to express their own views. Further, in a less collectivist and more individualistic culture, the individual is the recognised social unit. The freedom to pursue individual pleasure and individual initiative and achievement are accepted values. Communication is context independent. They have a positive attitude toward trying new things (Hofstede, 1997; House et al., 2004; Triandis, 1994).

Masculinity/Femininity focuses on the differences between social roles attributed to men and women, and the expected behaviour of the two genders. Masculine cultures focus on achievements and success. Feminine cultures are characterised by solidarity, equality, and consensus seeking, and are concerned about social relationships. According to Hofstede (1991), organisations in masculine cultures focus on rewards, recognition, training and improvement of the individual. In cultures that place more emphasis on gender equality, gender stereotypes and gender roles may be less pervasive, making the lived experiences of men and women more homogenous. Women may be as just as educated and may be employed in the same occupations as men (Joy & Kolb, 2009).

Many innovative projects are important opportunities for both young students and all citizens. We can see how important collaboration on a team science project is for successful intercultural understanding. Increasing awareness about the interactive nature of science research for students and immigrants will improve communication outside the field for non-

science citizens or visitors from abroad. Thus, it is a necessary to be more adaptive to address the new challenges.

2 METHODOLOGY

A comparative examination of research questions will provide different descriptions of an education project partnership in the Czech Republic, specifically the project, SciChallenge, in which a Czech university is a partner, and another intercultural initiative in Ukraine. This paper therefore aims to provide a review of the available literature to date regarding the cultural differences in learning styles in the context of Hofstede's cultural dimensions to discover the role of intercultural communication and the benefits of a knowledge-based economy, as these benefits affect the communication.

3 RESULTS AND DISCUSSION

In the field of education, in liberal societies, multiculturalism is concerned with the creation of a certain kind of individual, i.e. one who is tolerant of differences; however, the differences are framed within certain national parameters and are controlled by the institutions of the state. According to a study related to educating the national citizen in neoliberal times by Mitchell (2003) addressing computerisation in the education and policy of three countries – England, Canada and the United states, multiculturalism in education has shifted from a concern with the formation of tolerant and democratic national citizens who can work with and through differences to a more strategic use of diversity to gain a competitive advantage in the global marketplace.

3.1 Multiculturalism in education and in educational policy in general

Currently, higher education institutions in Ukraine comprehend that without effective international cooperation in the field of education and science, it is impossible to qualitatively develop national higher education. The globalisation of world processes increases the requirement for quality in the training of specialists and the availability of their respective skills and qualifications. Globalisation and internationalisation in the field of education are being generated by the growing need for international economic activity and intercultural understanding, which, in turn, is produced by the global nature of the world's processes and means of sharing knowledge, technology and information. This is an objective process that is dynamically developing. Considering the tendencies toward internationalisation in the field of higher education, the recognition of educational programmes through international accreditations, including regional ones, determines the development of cooperation between higher education institutions in the establishment of globally recognised principles for the quality of higher education.

The internationalisation of higher education is acquiring the features of a qualitatively new stage, integration, which is creating the potential to meet a three-pronged challenge: achieving a level of higher education that will meet the needs of modern international society; equalising the level of national educational systems; and training skilled personnel for the national economy. The integration of higher education is characterised by the comprehensive convergence of the national educational systems, their complementarity, the transformation of higher education into a globally open social system with civilised values and goals, the inextricable link between its components and elements, the systemic nature of the elements themselves, and the variability of regulatory regulation (Obolenskaya & Tsirkun, 2016).

The most notable form of the internationalisation of higher education is the mobility of students – the increase in the number of students studying abroad. The reason for the growth in the number of students studying abroad is the increase in the market processes (Meshko & Prysvitla, 2015). The international educational services market is transforming into a rapidly expanding sector of the economy, the central elements of which are the international marketing of universities and educational programmes with international accreditation. The second most important form of the internationalisation of higher education is the mobility of scholars (post-graduate students and doctoral students) and teaching staff, which is due to both educational and research activity. The essence of the globalisation and integration processes in the field of higher education and the peculiarities of their forms for the higher education of Ukraine are considered, respectively, in the writings of Obolenskaya and Tsirkun (2016), Khomeriki (2012) and Chbalala (2015).

Ukrainian higher education is striving to work within the framework of Horizon 2020 and Erasmus + to conduct research and to enhance the academic mobility of teachers. For instance, 83 organisations from Ukraine receive 17.23 million euros from the EU as part of the Horizon 2020 programme. Among those organisations are higher education institutions, research organisations, and private sector entities. In total, 505 Ukrainian organisations participated in the preparation of 915 project proposals, with the expectation of a contribution of 312.81 million euro from the European Commission. These results classify Ukraine in sixth place among the Associated Countries, closely following Serbia and Iceland in both the amount of participation and the contributions gained from the European Commission. At the same time, Ukraine's results in the amount of participation and the European Commission contributions gained were three times greater than those of Tunisia, Bosnia-Herzegovina or Moldova. The potential of the country is greater, however. Further reforms are required in Ukraine to create more favourable conditions for the intensification of cooperation between Ukrainian science and industry and its partners from the EU and the other countries involved in Horizon 2020 (Grishnova, 2014), because Ukraine became a new member of Associated Countries in March 2015. Since then, Ukrainian organizations have been able to fully participate in Horizon 2020 on equeal terms with the EU Member State and other Associated Countries (European Union, 2018)

3.2 Education in STEM areas

In addition, STEM-education is actively being implemented in Ukraine. Part of the project developed a regulation to support the introduction of STEM education, and accordingly, a regional network center for STEM has been created to regularly hold scientific workshops and other activities to improve the skills of the teaching staff in innovative activities for the STEM fields, among other things.

As mentioned in the Introduction section, SciChallenge is an innovative project to promote interest and education in the STEM areas (Science, Technology, Engineering, Math), as well as career opportunities in these fields while collaborating with students from different countries. The project is conceptualised as a digital contest, whereby young people between 10 and 20 years old develop their own projects, ideas and visions of a particular STEM field. In order to be attractive to this target group, it integrates social media in all steps of the contest through its platform. In order to support the contest, several Engagement Channels were implemented in the platform. This includes profiles of research-intensive companies and organisations. The platform also offers a directory of available internships, scientific events and other awareness modules. Therefore, the main goal of the SciChallenge project is to motivate and inspire young people to become interested in STEM and to introduce innovative and effective teaching and education methods in schools. It is well known that education in the fields of the (natural) sciences, technology, engineering and mathematics is closely linked

with economic prosperity in the modern global economy. To address this issue and to increase the number of students in these fields, it is important for students to establish a link between theoretical knowledge and its application in solving real life problems, even very early in their learning experience. Although the innovative project expands beyond classical education, the benefits can particularly be seen in the creation of social identities and the reorganisation of the relationship between capitalist economic development, the state and its citizen-subjects.

3.3 The corporate social responsibility of educational institutions

Modern Ukrainian higher education institutions emphasise the need for the implementation of corporate social responsibility in educational institutions, which should be an initiative for the overall restructuring of society through the participation of students as a particularly active segment of the population.

In 2014, the Czech government chose a conceptual approach to this issue in the reform of the university system. A key part of this is the strategic document, "National Action Plan for the Corporate Social Responsibility of Organizations in the Czech Republic." The aim of the strategic document, prepared under the authority of the Ministry of Industry and Trade in cooperation with other stakeholders, is to contribute to the development of the concept of CSR in the Czech Republic and its positive impact on the society, economic development and competitiveness of the Czech Republic.

As noted by Grishnova (2014), the essence of university social responsibility is expressed in the performance of functions, the responsible creation of high-quality educational services, acting as a model employer, active participation in social relations in society and the local community, and fairness in economic and political relations with its state and business partners. A socially responsible university promotes social responsibility in society through its transparent and ethical activities, high quality education, and the education of students and graduates. The social responsibility of the university must be built on an understanding of the needs of society. When considering higher education as a market commodity, universities should ensure that there is decent competition and that possible barriers to the development and dissemination of professional knowledge are overcome. In addition, it should promote the culture level, and the health and well-being of society on the path to globalisation. This is necessary to formulate the principles of sustainable development and the implementation of socially responsible activities in young students.

The results of the implementation of such an initiative may be as follows: the improvement of the qualifications of university graduates to the level necessary to meet the requirements of the modern labour market, the increase in youth employment, and the improvement of the health and well-being of the community as a whole. Among the benefits of the implementation of CSR in universities, CSR can impact the educational system through the reduction of the following risk factors: unlawful arrangements, ineligible partners, inadequate faculty training, inadequate care for students, unhealthy lifestyles and inactive public opinion.

Thus, the corporate social responsibility of the university is based on an understanding of the needs of society, reducing barriers to the development and distribution of professional knowledge, and increasing the level of culture, health and wellness of its students and graduates. When considering higher education as a market commodity, universities should ensure decent competition and the growth of social and reputable capital on the path to globalisation. Regarding this aspect, the implementation of the practice of social and responsible activities is crucial.

Thus, the dissemination of ideas for sustainable development is an impetus for the introduction of socially responsible activities in educational institutions. Compared to Ukrainian educational

institutions, for which corporate social responsibility issues are relatively new, foreign universities have already developed this area to a high standard. Today, the role of universities lies not only in the provision of educational services and the development of scientific research, but also in the thorough development of the individual and the promotion of the sustainable development of society.

After analysing the development of CSR among higher education institutions in Ukraine, it can be concluded that this sphere of activity is relatively poorly developed among such educational institutions and is insufficiently presented. In order to coincide with the rest of the world, the main directions of the social activities conducted by domestic universities should be charity, environmental care, and educational activities for the population. However, there are many uncoordinated and imperfect activities. Furthermore, none of the Ukrainian universities have a special unit or at least a post specifically designed for the development of social responsibility. This is because there is a low level of awareness among the leadership of universities about the necessity for the implementation of social responsibility. Further, there is an insufficient level of awareness in educational institutions about the benefits of implementing this activity. As a result, there is little interest in its implementation; a lack of a unified approach to the implementation of the concept of development of social responsibility; terminological uncertainty, etc.

In any case, from the perspective of CRS, Pamies and Papaoikonomou (2016), in their study regarding the social role of firms and their responsibilities to society in the context of the role of universities, emphasised that universities are multilevel learning environments. Thus, there is a need to look beyond formal curricular content and pay more attention to implicit dimensions of the learning process in order to create significant learning. They proposed an integrative and holistic approach to guide the integration of ethics, corporate social responsibility and sustainability in management education. Today, this is more important for the university education system globally.

To sum up, the social responsibility of universities is primarily implemented through the constructive role that they must play in society. Universities should develop a "learning society" in Ukraine. At the same time, this role should be in line with the strategic challenges facing modern universities in changing the world for the better. Therefore, the mission of the modern university should not be only global and national, but also local, fulfilling a clearly useful role for the local community in place where it is physically located and increasing the economic awareness of the citizens.

CONCLUSION

Recent changes in the philosophy and practice of the national education systems in Ukraine and the Czech Republic have taken many forms. The focus of this paper is on the knowledge triangle, which comprehends friendly education research innovation as the basis for sustainable economic prosperity and social inclusion in the context of intercultural communication.

First, this research also provides evidence integrating Ukraine in the European research area. Ukrainian higher education is subject to the framework of Horizon 2020 and Erasmus + in conducting research and in the academic mobility of teachers.

Second, this paper addresses the question of what the current relationship between the knowledge economy and the education system is. It involves not only international collaboration in research incentives, but also includes citizen science and corporate social responsibility, which aims to improve the knowledge and attitudes of all the stakeholders in the education system. A comparative examination of the international innovations in the

educational system allows an evaluation of the general relationship of the national education systems and the knowledge economy to date. Modern Ukrainian higher education institutions emphasise the need for the implementation of corporate social responsibility by educational institutions, which should include initiatives for the overall restructuring of society through the participation of students as a particularly active segment of the population. CSR is a key part of the strategic document, "National Action Plan for the Corporate Social Responsibility of Organizations in the Czech Republic." The aim of this strategic document, prepared under the authority of the Ministry of Industry and Trade in cooperation with other stakeholders, is to contribute to the development of the concept of CSR in the Czech Republic and its positive impact on the society, economic development and competitiveness of the Czech Republic, which is beneficial for all stakeholders.

Third, based on a review of the available literature related to the cultural differences in learning style in the context of Hofstede's cultural dimensions aimed at discovering the role of collaborations among different cultures in the research, and at the same time, the STEM initiatives for young students, we conclude that in collaborations on international projects, the adoption of the values represented by the Hofstede dimensions will reduce the time spent by participants addressing cross-cultural differences. Hence, multicultural teams are becoming much more multidisciplinary, because these teams must be able to understand each other. Thus, all the international initiatives are playing a key role in multicultural communication. We found that science education research may have progressively become an important field recognised by the international academic community.

Last, the social responsibility of universities is primarily based on the constructive role that they must play in society. Universities should develop a "learning society" in Ukraine and in the Czech Republic. At the same time, this role should be in line with the strategic challenges facing modern universities in changing the world for the better. Therefore, the mission of the modern university should be not only global and national, but also local, fulfilling a clearly useful role for the local community in the place where it is physically located and increasing the economic awareness of the citizens.

An interesting extension of this study would be the replication of Hofstede's dimensions in both countries. This could be beneficial for the successful collaboration of students and citizens in research science. In the content of capitalist economic development, the state and its citizen-subjects it's a previous issue of current Danube Transnational Programme Capitalisation Strategy. Although the innovative project expands beyond classical education, the benefits can particularly be seen in the creation of social identities and the reorganisation of the relationship between capitalist economic development, the state and its citizen-subjects.

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Regulation of the Pharmaceutical Services Market in Poland from the Perspective of Market Failure

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Abstract: The concepts of state interference in economic processes do not presume a general replacement of the market mechanism by an alternative mechanism of the state, but only reduction of the market failure, defined as inefficient market allocation of resources. The state should only perform tasks and functions that the market does not fulfill or does it in an unproductive way. In this context, particular attention should be paid to the regulation of the pharmaceutical services market, as referring to basic personal human rights, i.e. life and health, as well as the profession of pharmacist as a profession of public trust. The provision of pharmaceutical services in Poland is subject to regulation on the basis of the Pharmaceutical Law. The subject of the article is the analysis and assessment of selected legal regulations, taking into account the economic aspect of changes in the regulation of the pharmaceutical services market in Poland.

INTRODUCTION

On the European Union market, which is based on a free-competition mechanism, there are numerous changes due to the impact of micro-, meso- and macroeconomic factors. On the one hand, these changes are accompanied by positive effects in the form of development of enterprises, both those already operating on the internal market, as well as those whose strategic objective is to enter this market and economic activity in the long-term perspective. The desired effects of competition on the European single market are, above all, compliance with free competition rules, limiting entry barriers, elimination of customs difficulties, consistent eradication of monopolistic practices, inflow of foreign direct investments and resulting increase in production, creating conditions for public procurement and the pursuit of suppliers to uniform purchase prices and acquiring products at prices accepted from the country where they are the lowest (Adamkiewicz-Drwiłło, 2010). On the other hand, however, not all market processes can be considered as a desirable effect of competition. It is pointed out then that the market economy, in which the basic regulator of the ongoing processes is competition, is burdened with certain imperfections. The imperfections of the market system in such a situation become a justification for replacing or supplementing of the market mechanism based on a free competition, by other decision-making processes, such as state intervention. This intervention should follow the principle of proportionality and be in adequate relation to the objectives assumed, including, in particular, protection of the public interest. The indicated condition is significant in the area of services related to the range of personal human rights, including health, carried out in the field of the profession of public trust, which

is the profession of a pharmacist. The primacy of the public objective achievement should not lead to the depreciation of the economic objective to the extent undermining the economic security of the conducted activity or generating an unjustified level of business risk.

1 LITERATURE REVIEW

The theory of market failure was initially based on the concepts of welfare economics, which concerned the search for the efficiency of resource allocation in the meaning of Pareto. In neoclassical economics, the Pareto optimum constituted such allocation of resources, the change of which can not improve the situation of any individual without the deterioration of the situation of another individual, and the improvement of the situation of one individual can not be achieved without reducing the welfare of another individual. The basic points of welfare economics assume effectiveness in the Pareto approach of every economy in which there is market competition and the ability to achieve through the mechanism of market competition any efficient allocation of resources in the meaning of Pareto, making an appropriate change in the initial income distribution. Pareto optimum is therefore crucial to the question of whether perfectly competitive markets lead to optimal allocation of resources. At the beginning of the 20th century, such considerations were introduced to economic analysis by A.C. Pigou, who developed the problem of distinguishing between social utility and individual utility, creating grounds for justifying state intervention due to the phenomenon of external effects (Pigou, 2017). He showed that the functions of enterprise marginal costs may not accurately reflect social costs of production, and individual demand curves may not accurately reflect the social benefits of consumption. In his research, Pigou focused on the existing span between private and social benefits and between private and social costs. The costs that are considered by the enterprise when determining activities to maximize profits are private costs incurred by the enterprise. On the other hand, the enterprise does not incur social costs which are related to the conducted activity (e.g. pollution of the environment), which means that there is a difference between the private cost and the social cost in extreme situations. The free market will therefore produce a surplus of goods whose social marginal cost is higher than the private marginal cost. The occurrence of the above spans, i.e. external effects, as a result of which the market demand and supply curves do not reflect adequately social benefits and costs, is a justification for undertaking specific actions by the state.

Therefore, under certain conditions, a market in which there is free competition ensures efficient allocation of resources in the meaning of Pareto, and the justification for state intervention on the market appears when these conditions are not met. J.E. Stiglitz points to the existence of six reasons that cause the market mechanism may not lead to effective allocation of resources in the meaning of Pareto, naming these causes as types of market failure (Stiglitz, 2000). These are: unreliability of competition, existence of public goods and externalities, lack or incompleteness of certain markets, imperfect information as well as unemployment and other macroeconomic distortions. Stiglitz also points out that even if the market is effective in the meaning of Pareto, there are two more reasons justifying the state intervention. First of all, market competition can lead to division of income undesirable from a social point of view. Secondly, state intervention is justified when entities do not act in their own genuine interest. This last argument for the state intervention in an efficient economy in the meaning of Pareto is an expression of paternalism, or the view that the state should intervene because it knows better than the citizens what is better for them. In other words, in some cases, entities make wrong decisions about consumed goods, which justifies the state introduction of regulations limiting the consumption of certain goods, as well as offering other goods by the state, called socially desirable goods (*merit goods*).

The theoretical basis for the concept of market failure was formulated in the 1950s by P.A. Samuelson, J. Medea and F. Bator (Cowen & Crampton, 2002). P. Samuelson considered in

the field of welfare economics, among others, the concept of public goods and their effective allocation (Samuelson, 1954), whereas in the F. Batora's view of market failure it is the inability of the price mechanism to maintain the desired and stop the undesired activities (Clifford, 2006). The imperfection of the market means a deviation from the conditions of perfect competition and completeness of markets, that is, the existence of markets for all goods and services that would ensure efficiency in Pareto's terms (Acocella, 2002). The functioning of contemporary markets is far from the model of perfect competition, so promoted by the classics and neoclassics, which is perfectly illustrated by J.E. Stiglitz, who stated that "[...] the hand that Smith wrote about is invisible simply because it does not exist, and if it exists, it is paralyzed" (Stiglitz, 2003, Stiglitz, 2004).

The theory of market failure has been developed with the assumptions of the new institutional economics, which derives from the postulates proposed by R. Coase to introduce into the economic analysis the concept of transaction costs, i.e. costs related to the use of the price mechanism, which are the main reason for the formation of enterprises (Coase, 1937). Transaction costs are the costs of social coordination or the costs of market functioning, which means that on the one hand they are defined as all costs related to the transfer of ownership from one exchange participant to another, and on the other hand, these costs include the costs of seeking information and partners, negotiating contract terms, resolving any claims related to contract performance, as well as costs related to uncertainty regarding, for example, a price change. Coase indicated that since the use of the price mechanism entails certain costs (e.g. costs related to searching and processing information necessary to determine market prices, costs of negotiating and concluding contracts, and costs related to controlling their implementation), it seems rational to replace the market mechanism with administrative coordination.

According to Coase, an enterprise is created when its internal coordination system is less expensive than the one that appeals to the market mechanism. In other words, in an economic system that is based on economic freedom and competition, the condition for the existence of an enterprise as a "small planned society" is to fulfil a coordination function at a lower cost than the transaction costs necessary to obtain given goods by the market. This meant that in the case of high transaction costs, coordination within the enterprise tends to replace market regulation. However, if the costs of organization within the enterprise are higher than transaction costs, regulation through the market mechanism regains its superior character in relation to administrative regulations. This led to the market and the enterprise being recognized as alternative and complementary ways of coordination. Optimal management of the enterprise was therefore a result of comparing the costs of coordination within the company and transaction costs related to the use of the market, while the enterprise itself is a tool to reduce the costs of market functioning. From the point of view of marginal analysis, this meant that the enterprise internalizes transactions until the internal marginal cost of management equals the marginal cost of market transactions. These assumptions led to the conclusion that an effective competition system is necessary not only for the existence of given markets, but it is also necessary to shape the proper scope of the planning process within the enterprise and thus to minimize management costs.

The Coase theorem implies that the use of explicitly defined and clearly determined property rights in markets with external effects allows entities to negotiate lower costs, thanks to which transaction costs are insignificant (Coase, 1960). As a result, the allocation of resources will be effective, because only in a situation where transaction costs are high and thus limit the ability of entities to make mutually beneficial transactions, the market allocation of resources is disturbed by the transfer of property rights, and state regulation may reduce these costs. However, it is important to also consider a situation when the introduction of regulation may limit the benefits from the transaction, if this regulation imposes higher costs on market participants. This means that state intervention is effective only when there are transaction

costs, and the costs resulting from the need to adapt to regulation do not outweigh the benefits of regulated behaviour.

The new institutional economics comes from the conviction that the factor defining the way individuals operate, and in effect the operation of the entire socio-economic system, are institutions, that is, the rules created as a result of striving to organize human interactions and reducing uncertainty. The rules of conduct for people in social life are introduced by both formal and informal institutions in order to limit opportunistic behaviour (North, 2004). The former include legal norms regulating political and economic relations, among which ownership and contract law play a significant role. Informal institutions are resulting from cultural heritage moral norms, customs, traditions, religious beliefs and mentality of individuals. This concept indicates that institutions allow to reduce uncertainty when entering into transactions between entities, while at the same time reducing the transaction costs between contractors. The role of the state here is to reduce transaction costs by introducing a system of economic and social legal contracts or social principles that will allow for simple rules and low transaction costs.

2 METHODOLOGY

The subject of this article is the analysis of statutory changes in the field of pharmaceutical activity performed in 2017, which in a fundamental way determined the regulation of the pharmaceutical services market in Poland. Conducted considerations were included in the context of the market failure theory, taking into account the specific nature of the pharmacy activity as a public health protection facility, justifying the increased state interference in shaping the pharmaceutical services market and rules for conducting pharmacy activity. The article uses the method of analysing legal regulation.

3 RESULTS AND DISCUSSION

The functioning rules of the pharmaceutical services market in Poland are subject to the regulation of the Pharmaceutical Law of September 6, 2001 (consolidated text OJ of 2017, item 2211, hereinafter: a.p.l. or Pharmaceutical Law). According to art. 1 par. 1 of the Act, this act regulates 1) the principles and procedure for the admission of medicinal products to the market, taking into account in particular the requirements regarding the quality, effectiveness and safety of their use; 2) conditions for conducting clinical tests on medicinal products; 3) conditions for the manufacture of medicinal products; 4) requirements regarding advertising of medicinal products; 5) conditions of trade in medicinal products; 6) requirements for pharmacies, pharmaceutical wholesalers and non-pharmacy sales outlets; 7) organization and functioning rules of the supervision system over the safety of using medicinal products and monitoring the safety of their use; 8) tasks of the Pharmaceutical Inspection and the powers of its authorities. The regulation of the rules for conducting retail trade in medicinal products and medical devices, carried out by generally accessible pharmacies should be considered as particularly important from the point of view of the availability of the medicinal product and the health protection of the patient. When considering the issues of the pharmaceutical services market in the context of conducting pharmacy activity, it should be highlighted that according to art. 86 par. 1 and 2 a.p.l. the pharmacy is a public health protection facility, in which the entitled persons provide, in particular, pharmaceutical services consisting of 1) issuing medicinal products and medical devices, specified in separate regulations; 2) preparing magistral drugs, within a period of not more than 48 hours of submitting the prescription by the patient, and in the case of prescription for a magistral drug containing narcotic drugs or labelled "to be issued immediately" - within 4 hours; 3) preparing pharmacy drugs; 4) providing information on medicinal products and medical devices.

Conducting pharmacy activity is characterized by dualism determined by the implementation of two types of goals, i.e. an economic goal and a public goal. A generally accessible pharmacy as a public health protection facility is at the same time an enterprise, and therefore a self-financing unit whose activity is subject to the constitutional principle of economic activity freedom.

Running a generally accessible pharmacy constitutes under Polish law a subject of national rationing expressing the obligation to obtain by the entity intending to undertake pharmacy activity a permit to run a pharmacy issued by a provincial pharmaceutical inspector and to submit pharmacy activity to the supervision of the State Pharmaceutical Inspection authorities. Restricting the freedom of pharmacy activity should be considered justified in the context of ensuring the correct and full implementation of the objective of protecting public health and the highest standard of pharmaceutical services in the area of the most important of human personal rights, i.e. health. The concession character of the pharmacy business is also correlated with the essence of the pharmaceutical service as a professional activity performed professionally by a pharmacist within the profession of public trust. Restrictions on the freedom of pharmacy activity by subjecting it to the authority and supervision of state organs are in accordance with the provisions of the Constitution of the Republic of Poland (consolidated text OJ of 1997 No. 78, item 483 with amendments, hereinafter: C.R.P.). According to art. 22 C.R.P restricting the freedom of economic activity is permissible, but only on the basis of the Act and only due to important public reason. The above issue is the subject of the Constitutional Tribunal judgement, which indicated that restricting the freedom of economic activity can not be done freely, and *"justifying interference in the constitutionally guaranteed freedom of economic activity can be done by only an important public interest, referred respectively to the principle of proportionality"* (Constitutional Tribunal, 2014). In this context, it is also worth citing the view outlined in the doctrine of constitutional law, according to which *"in any case, when the implementation of a given objective can be sufficiently ensured by introducing certain statutory restrictions on the freedom to conduct a business, the legislator is not allowed in order to pursue this objective to introduce restrictions on its implementation"* (Ogonowski, 2012).

The total number of legal solutions indicated is of special importance in the assessment of changes in the regulation of the pharmaceutical services market in Poland made in 2017. On 25/06/2017, the Act of April 7, 2017 entered into force amending the Pharmaceutical Law Act (OJ of 2017, item 1015, hereinafter: a.a.p.l.). The Act introduced restrictions in the scope of undertaking pharmacy activity, including subjective, geographical and demographic limitations, transforming in a substantial way the existing principles of pharmacy activity, and thus the pharmaceutical services market. By way of introduction, it should be pointed out that the Pharmaceutical Law provisions before the indicated amendment came into force, i.e. from the date the Act came into force on October 1 2002, always linked the right to run a pharmacy with issuing the authorization by a public administration authority. The legislator did not perceive the need to subjective limitation of the right to run pharmacies solely to the group of persons having the right to practice as a pharmacist, seeing the guarantee of proper provision of pharmaceutical services in the obligation to employ by a pharmacy business operator a pharmacist holding a specific professional experience as a pharmacy manager (in accordance with art. 88 par. 2 a.p.l., the pharmacy manager may be a pharmacist who has at least a 5-year work experience in a pharmacy or a 3-year work experience in a pharmacy, if he has a pharmacy specialization). Furthermore, in accordance with art. 90 a.p.l., only pharmacists and pharmaceutical technicians could and can still work in a pharmacy while performing professional activities within the limits of their professional qualifications. Frequently occurring separateness between the recipient of the permit to operate a pharmacy and the recipient of the right to practice as a pharmacist, was in correlation with the position of the Constitutional Tribunal, according to which *"the mere fact that someone may be subject to rights and*

obligations resulting from business activity in the form of running a pharmacy cannot conclude that without having specialist knowledge it is dangerous for legally protected goods. This danger may result only from factual activities, and these are strictly regulated and restricted within running a pharmacy to persons with appropriate qualifications. There are a number of activities within running a pharmacy, which may be carried out by the business entity itself (e.g. renting premises, entering into a delivery agreement with a wholesaler and its implementation, determining staff wages and providing a payment, transporting drugs, etc.) However, these activities do not bring danger to legally protected goods and thus they do not require pharmaceutical expertise. Therefore, in order to take legal action regarding pharmaceuticals it is not necessary to have specialist knowledge to avoid the danger to legally protected goods. The lack of such knowledge can at most expose the business entity to economic losses" (Constitutional Tribunal, 1992). Taking the above into consideration, it could be concluded that there is no justification for introducing a subjective restriction of the right to undertake pharmacy activity, and the existing solutions fully meet the objectives set. However, the legislator decided to make a significant exclusion in this respect. Pursuant to the amendment to art. 99 par. 4 a.p.l. the right to obtain a pharmacy permit has been limited, and the application for it may now be submitted by: 1) a pharmacist with the right to practice as a sole proprietor; 2) general partnership or a partner company whose business activity is only to run pharmacies, and in which associates (partners) are only pharmacists with the right to practice. The introduced change has a significant effect in two areas of undertaking pharmacy operations. Firstly, it excludes the possibility of obtaining a license to run a pharmacy by a non-pharmacist. Secondly, it reduces the scope of forms of running a business, appropriate for undertaking pharmacy activity. According to art. 99 par. 4 a.p.l. within the meaning before the amendment to the act, the right to obtain a license for running a pharmacy was held by a natural person, a legal person and a commercial law company without legal personality. The legislator, therefore, not only did not limit the scope of entities authorized to obtain a permit, but allowed the undertaking of pharmacy activities in each form of running a business, including in the form of limited companies (that are legal persons), i.e. limited liability companies and joint-stock companies. The change of Pharmaceutical Law has limited the scope of forms of conducting pharmacy activities only to: 1) sole proprietorship, 2) general partnership, and 3) partner company, i.e. forms binding business activity with responsibility of the entrepreneur entire property. When assessing the above changes, it is necessary to consider both the aspect of their legal admissibility and the desirability understood as correlation of the adequacy of the adopted solutions with the expected protection of the public interest. Limiting the constitutionally guaranteed freedom of economic activity, however permissible, requires special care in the substantive justification of the change. In accordance with the position of the Constitutional Tribunal *"it is in the interest of state to (...) create a legal framework for business transactions that minimize the adverse effects of free market mechanisms, if these effects are manifested in the sphere indifferent to the state because of the protection of universally recognized values. In spite of the above, the legislator can not rationalize the freedom of business activity in any way, and art. 22 of the Constitution sets two conditions in this regard: in the formal sphere it requires the restriction to be introduced by law, and in the material sphere – that it should be justified by "an important public interest". The << important public interest >> - although it is a grading category – can not be interpreted extensively or lead to the restriction of another separate law, and the constitutionally permissible limitation must be substantively justified so that in conflict with the principle of free economic activity the axiological bill prevails in its favour"* (Constitutional Tribunal, 2008). Referring the limitation of the economic activity freedom to pharmaceutical activity, the position of the Court of Justice of the European Union should be appointed, according to which *"with reference to the operator of a pharmacy who holds a diploma of a pharmacist, it can not be denied that they seek profit, as well as other people. However, it is recognized that as professional pharmacists, they run a pharmacy not only for profit, but also*

to fulfil their professional duties. Their private interest in making profits is, therefore, limited by their education, professional experience and the responsibility which they have, given that a possible violation of legal provisions or rules of professional ethics not only reduces the value of their investment, but also undermines their professional existence. Unlike pharmacists, non-pharmacists by definition do not have the education, experience and responsibility equivalent to those of pharmacists. In these circumstances, it should be noted that they do not provide the same guarantees as those provided by pharmacists. Consequently, a Member State may, within the scope of its discretion referred to in point 36 of the present judgement, consider that, unlike a facility operated by a pharmacist, running a pharmacy by a non-pharmacist may pose a threat to public health, in particular to reliability and retail quality of medicinal products distribution (...) " (Court of Justice, 2009). The change made in the Pharmaceutical Law, therefore, contributes to the scope of the permissible restriction of the economic activity freedom, however, leading doubts about the adequacy of the adopted solutions with regard to the assumed objectives. Fully supporting the conviction that the implementation of services included in the scope of public trust activities, in this case a pharmacist, is carried out in particular with the highest level of diligence in case when the implementation of these activities remains in the sole autonomy and decisiveness of the person performing the profession of public trust, however, it is impossible to move away from legal conditions determining the principles of restricting constitutional freedoms. Without regard for the primacy of implementing by a pharmacy the superior goal of protecting public health, running a pharmacy is an activity covered by specific legal protection. In accordance with the justification of the parliamentary draft law amending the Act – Pharmaceutical Law, the necessity to change the Pharmaceutical Law was dictated by the sum and scale of recorded infringements in the field of pharmacies activities, including: 1) the risk of monopolization of the pharmaceutical market by large international entrepreneurs, as a result of violating the statutory prohibition of concentration of pharmacies above the permissible limit of 1% in the voivodship; 2) elimination of small Polish entrepreneurs running pharmacies from the market, 3) development of the inverted drug distribution chain; 3) degradation of the role and importance of the pharmacist profession; 4) insufficient number of pharmacists, to the extent providing the appropriate level of services; 5) lack of effective mechanisms harmonizing the objectives and principles of the pharmacy activity as a public health protection facility with the goals and principles governing the action of an entrepreneur running a business in the form of a generally accessible pharmacy. Without denying the accuracy of the observations made, it should be noted that they largely refer to the ineffectiveness of supervision of pharmacy operations and difficulties in enforcing the existing law, rather than the weaknesses of the law as such. The law provides for a number of solutions and sanctions appropriate for a given type of violation. For example, in the pre-change approach to the Pharmaceutical Law, the art. 86a of Act a.p.l. formulated a prohibition on the inverted distribution of medicinal products, stating that it is forbidden to dispose of medicinal products by a generally accessible pharmacy or pharmacy outlet of a pharmaceutical wholesaler, another public pharmacy or another pharmacy outlet. The infringement of the above prohibition constituted, in accordance with art. 103 par. 1 point 2 a.p.l. basis for withdrawal by the voivodship pharmaceutical inspector of the permission to operate a pharmacy, as well as, pursuant to art. 126b, a.p.l. an offence punishable by a fine, restriction of liberty or imprisonment of up to 2 years. The above-mentioned provisions remained in force unchanged.

In the light of the above indications, it is particularly controversial to as it was mentioned limit the scope of pharmacy activity forms, binding running a pharmacy with the personal property liability of a pharmacist as an entrepreneur. Forms of activity guaranteeing the most advantageous business model of its recapitalization, i.e. the forms of: a limited partnership, a limited liability company and a joint-stock company were excluded from the scope of admissible forms of running a pharmacy. As a consequence, a person currently undertaking pharmacy activities is obliged to invest own funds or operate basing on the scope of financial

services most often in the banking sector. What is particularly important, the above restriction applies only to people who undertake running a pharmacy after the Pharmaceutical Law amendment, while the permits for running generally accessible pharmacies issued prior to the date of entry into force of the Pharmaceutical Law are still valid, including the current form of conducting business activity. The resulting change therefore generates a significant polarization of the pharmacy market, to entities that have taken up pharmacy business before the amendment of the act or who, before the amendment of the act, at least applied for the pharmacy permit (and the entities can operate on the current basis, including in forms with reduced property risk and more favourable financing model) and to entities that applied for a license to operate a pharmacy after the amendment came into force and are obliged to operate in forms involving the full liability of the person running the pharmacy and limiting the scope of financing sources of its activities.

In pursuit of the statutory stricter regulation of the pharmaceutical services market, the legislator also limited the number of pharmacies operated by one entity and restrictions on the location structure of pharmacies determined by the demographic and geographic index, while the aforementioned restrictions apply only to permits for running a pharmacy issued after the amendment of the Act. It should be noted that Pharmaceutical law, in pre-legislative terms, limited the number of pharmacies operated on a quantitative scale basis in the voivodship, i.e. pursuant to art. 99 par. 3 point 2 and 3 a.p.l., according to which the license for running a pharmacy does not appear if: 1) the entity applying for a permit operates more than 1% of generally accessible pharmacies in the area of voivodship, or entities directly or indirectly controlled by the entity, in particular subsidiaries within the meaning of the provisions on competition and consumer protection, jointly hold more than 1% of pharmacies in the area of voivodship, or 2) the entity applying for a permit is a member of a capital group within the meaning of the Act on competition and consumer protection, whose members operate in the area of voivodship more than 1% of generally accessible pharmacies. The indicated restriction, currently in force unchanged, has significantly improved on the basis of art. 99 par. 3a points 1-3, a.p.l., according to which the pharmacy permit shall not be issued if the applicant, associate or partner of the applicant company: 1) is an associate, and also a partner, in a company or companies that jointly run at least 4 generally accessible pharmacies or 2) runs at least 4 generally accessible pharmacies or an entity or entities controlled by them directly or indirectly, in particular a subsidiary or subsidiaries within the meaning of the provisions on competition and consumer protection, conduct at least 4 generally accessible pharmacies, or 3) is a member of the capital group within the meaning of the act on competition and consumer protection, whose members jointly hold at least 4 generally accessible pharmacies. The indicated restriction significantly reduces the possibility of market expansion, in particular of entrepreneurs with a network of pharmacies, which should be considered as a manifestation of striving to strengthen the quality of services at the expense of the quantitative factor. The adopted solution only affirms and consolidates the existing situation, within which entrepreneurs who have developed the structure of pharmacies run, determining the local or regional market of pharmacy services, will remain in a dominant position. Limiting the number of pharmacies concerns only permits for running pharmacies issued after the amendment of the Act. As a consequence, entities that have developed the structure of pharmacies run to a number far exceeding the indicated ratio of 4 pharmacies, may still carry out pharmaceutical activities in the current organizational and subjective structure, and the restriction indicated only has the effect of preventing the further development of this structure. This solution could be regarded as anti-monopolistic if it were not for the effect of simultaneously significant limitation of the development of new pharmacy activity structures, and thus reducing the market competitiveness factor. The limitation of the development and dynamics of changes in the pharmacy market is particularly reflected in the restriction of the pharmacies location due to the demographic and geographical coefficient, introduced pursuant to the amendment of the Act. According to art. 99 par. 3b a.p.l., the permission to run a pharmacy is issued if, on

the day of submitting the application for a permit, the number of residents in a given municipality, calculated per one generally accessible pharmacy, is at least 3,000 people and the distance from the planned location of the pharmacy to the nearest generally available pharmacy, counted between the entrances to the dispensing areas of pharmacies in a straight line, is at least 500 meters. It should be added that in accordance with art. 99 par. 3c the number of inhabitants is determined as the number of population actually residing in the area of a given municipality, as of 31 December of the year preceding the year in which the entity applying for the pharmacy permit submitted an application for a permit. The indicated provision raises certain difficulties in the interpretation and application, including in particular the possibility of conducting annual statistical surveys determining the number of residents in each municipality as of 31 December. However, leaving the strictly legal restrictions, it should be noted that with the existing structure of the pharmacies location, the use of the indicated demographic and geographical coefficient may result in excluding the location of new pharmacies. This solution may also lead to the termination of pharmacy operation in the event that the person running the pharmacy loses legal title to the premises and is forced to change the place of its operation, and the demographic or location coefficient will make it impossible to establish a new location.

Taking into account the whole of the considerations made, the changes in the regulation of the pharmacy market and, consequently, pharmaceutical services in Poland, should be considered as having a legal basis, but at the same time debatable in terms of adequacy of adopted solutions in relation to the assumed objectives. While recognizing the primacy of implementing by a pharmacy the protecting public health goal over the economic goal is not doubtful, the nature and effect of the statutory changes raise the question of their importance for strengthening the public goal at the expense of the economic goal. However, the final answer requires determining the consequences of changes in the long-term.

CONCLUSION

The concepts of state interference in economic processes do not assume a general replacement of the market mechanism by an alternative mechanism of the state, but only the reduction of market failures, which are understood as inefficient market allocation of resources. The state should carry out the tasks and functions, which the market does not meet at all or does it in an ineffective way. The theory of market failure shows that the market mechanism can be disrupted and, consequently, does not lead to a balance situation in the meaning of Pareto. The main causes of market failure include problems related to market power, external effects, the existence of public goods and imperfect information. The strength of the market is connected with the improper structure of competitors or suppliers and recipients, and in practice it is most often reflected in a situation when one or several enterprises have large market power, thus acting in the absence of competition (e.g. a monopolistic or oligopolistic market). Such a state of non-competition on the market leads to an increase in the prices of individual goods and services. On the other hand, external effects in the form of benefits or external costs cause that the activity of market participants has a positive or negative impact on third parties. A similar situation occurs in the case of public goods, which by their nature benefit all entities, because they can not be excluded from using them. The benefits of public goods are indivisible, which results in the inability to restrict access to them to entities that refuse to pay for them. Hence, the allocation of resources for the production of public goods is insufficient, because private entities in accordance with the principle of maximizing profit can not generate adequate income from their production. This means that in a normal market situation companies are not really interested in producing public goods, which implies the need for them to be provided by the state.

State interference in the market mechanism is also justified due to incomplete information on the market or its asymmetry. According to J.E. Stiglitz in the case of imperfect information and incomplete market, the functioning of the market mechanism is most imperfect (Stiglitz, 2006, Stiglitz, 2017). He emphasized that since even a small asymmetry of information can lead to serious disturbances in market balance, without the intervention of institutions limiting this asymmetry, the market allocation mechanism may be ineffective, which legitimises the correction by the state of market imperfections. The result of imperfect information and asymmetry of information can be transaction costs, agency costs, moral hazard or negative selection, which in turn lead to ineffective market results.

Coase's new approach to the problem of social and private production costs leads to a modification of the conclusions regarding the involvement of the state in the economy. It undermines the assumptions on which A.C. Pigou analysis was based regarding the discrepancy between social and private cost, and consequently weakens the arguments justifying the interference of the state in the market mechanism in the event of negative external effects. Negative external effects can not be a determinant of state intervention, if they are considered as a problem of choice in conditions of resource scarcity. This thesis implied that in the absence of transaction costs, negotiations taking place as part of the exchange process, which is understood as exchange of property rights between entities or transfer of legal rights, lead to maximization of prosperity, which takes place regardless of responsibility distribution for external effects. Free market allocation of resources is therefore justified when there are no transaction costs, which in relation to reality is a purely theoretical assumption. Therefore, Coase theorem is not to be equated with the claim that state interference in economic processes can not lead to increased prosperity, but rather with the claim that the effectiveness of state intervention should not be assumed in advance, because it entails costs to be considered in relation to the benefits of applying certain state regulations.

Referring the above claims to the regulation of the pharmaceutical services market, it should be recognized that due to the special nature of pharmaceutical services, as of the profession of public trust and concerning the most important sphere of human life, i.e. health, the application of the increased state intervention mechanism should be considered justified and with constitutional legal basis. However, the implemented solutions should remain closely related to their impact on strengthening the public purpose protection. Restricting the freedom of economic activity, including in particular the right to take it, should be in direct relation with ensuring the highest standard of pharmaceutical services provision. Making changes that do not meet the above assumption may be considered unjustified. As a consequence, it may lead to limiting the benefits of the market competitiveness principles while at the same time lack of strengthening the protection of public health, and perhaps also indirectly to weakening the implementation of this objective.

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Social and Eco-labelling as a Tool of CSR in the Textile and Clothing Industry – the Case of Poland

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Abstract: The negative impact of the textile and clothing industry on both society and environment cannot be ignored. Social and environmental problems caused by the industry are raising consumer awareness and attracting media interest. As a result of that interest and the activities of non-profit organisations, international society demands responsible behaviour from the industry. In order to respond to such pressure, the textile and clothing companies have started to regulate their operations and communicate about them. One of the most popular ways of communicating social responsibility of the textile and clothing organisations is through social and eco-labelling. The aim of this article is to review the CSR approach, adopted by the textile and clothing industry, with a special focus on social and eco-labelling as the "public face" of that approach. Analysis of the Polish textile and clothing industry will be conducted and the recommendations will be formulated on the basis of social and eco-labelling usage, as a tool of the CSR communication.

INTRODUCTION

The textile and clothing industry is highly labour-intensive and resource–intensive, and that is why it creates numerous social and environmental problems. Companies look for cheap workforce all around the globe, therefore, the production process is commonly transferred to those countries with dense population and low wages, such as China and India (Diviney and Lillywhite, 2007). What is more problematic, according to SOMO and the AntiSlavery International reports, is that people producing clothes regularly experience human rights' violations. The sector is also said to be challenging child labour and modern slavery in the form of bonded labour (FashionUnited, 2016).

While consumption is often used as a key driver for economic growth, it also causes environmental problems (Sheth et al., 2011). According to Forbes, consumers purchase 400% more clothing today, then they did 20 years ago. Worldwide shoppers consume approximately 73 million tonnes of textiles a year. From a negative environmental impact, starting at the beginning of the supply chain with the production of fibres, to the end of the product life-cycle as fashion, whilst becoming more and more disposable, the industry is considered to be the second biggest water polluter after agriculture, and the second dirtiest industry after big oil (EcoWatch, 2015).

As shown by the 2015 Cone Communications/Ebiquity Global CSR Study, textile and clothing organisations cannot conduct their business without their ecological footprint and social (mostly labour working conditions) impact being watched by consumers. 9 out of every 10 consumers expect companies to operate responsibly to address social and environmental issues. A study also indicates that 81% of consumers would make personal sacrifices to

address social and environmental issues. On the other hand, the OECD research evaluating the quality of CSR communication with customers found that textile and clothing manufacturers employ almost all available CSR tools, and they are more successful in doing this, than the other analysed sectors and industries (Fliess et al., 2007).

The purpose of this paper is to analyse the usage of eco and social labelling as a widely recognised CSR information source for customers, with the focus on the CSR labelling that applies to textile and clothing products. The literature review will present a brief overview of the textile and clothing industry, and further present the key social and environmental challenges that the industry creates. Furthermore, the eco and social labelling will be presented with a special focus on the CSR labels dedicated to the textile and clothing industry. Finally, analysis of the social and eco labelling in the Polish textile and clothing industry will be conducted, and the recommendations will be formulated on the basis of social and eco-labelling usage, as a tool of the CSR communication.

1 LITERATURE REVIEW

The "Literature review" section will define and shortly characterise the textile and clothing industry globally and in Poland. Then the social and environmental impact of the industry will be presented. Finally, the development of the eco and social labels as the CSR communications tools will be discussed.

1.1 The textile and clothing industry

According to the European Union, the textile and clothing industry is: "a diverse and heterogeneous industry which covers a great number of activities from the transformation of raw materials into fibres, yarns, and fabrics, that in turn, enter into the production of e.g. hi-tech synthetic textiles, wool, bed-linen, industrial filters, geo-textiles, and clothing, and are used in multiple applications e.g. garments, sports equipment, household, furniture, civil engineering (construction, automobiles, and aircraft), and medical textiles (European Commission, 2011, p. 5)."

The global fashion industry (which includes clothing, textiles, footwear, and luxury goods) is worth an estimated $3 trillion (Companies & Markets, 2013), and according to McKinsey, (2015), has "outperformed the overall market and every other sector across geographies for more than a decade" — more profitable than even high-growth sectors like technology and telecommunications. According to statistics, around 57,8 million people work within the clothing and textiles sector worldwide (ILO 2014).

The textile and clothing sector is also of high importance for the European manufacturing industry, playing a crucial role in the national economies and social well-being in many regions of Europe. The sector accounts for a 3% share of value added, and a 6% share of employment in total manufacturing in Europe. The sector in the EU is based around small businesses. Companies with less than 50 employees account for more than 90% of the workforces, and produce almost 60% of the value added. According to data from 2013, there were 185, 000 companies in the industry, employing 1.7 million people. In reality, many of those 1.7 million workers in the region live in poverty, face perilous work conditions, including forced overtime, and have accumulated significant debts. These European sweatshops employ cheap, yet experienced and qualified workers (Paluszek, 2015).

The Polish textile and clothing industry has a long tradition, but after 1990, its scale and significance was gradually diminishing, due to the country's economic transformation. However, the Polish textile and clothing industry has still a strong position in the EU, ranking

8th in terms of sales volume, 3rd in employment, and 2nd in the number of companies. (Paluszek, 2015). In 2013, the sales volume was estimated at around 6,5 billion PLN, and the clothing companies employed 97, 2 thousand people (in 1991, it was over 600 thousand employees). As with the EU, the industry is very fragmented - about 86% of clothing producers are referred to as small enterprises, employing less than 50 workers. A problematic factor is that most of them produce in the OPT system (Outward Processing Trade), which means that clothes are only made in Poland, according to the designs of foreign companies, using their materials, and often also their machines. As presented in the Clean Clothes Campaign research, due to a highly skilled workforce and proximity to the selling markets, Polish clothing factories are mostly contracted to manufacture high quality clothes for foreign brands. The lack of their own brands drives the management of clothing companies' "cost savings" connected with an "increasing efficiency" approach, which leads to excessively low wages, health hazards, poor legal protection in case of illness, and the fact that holiday leave rights are rarely exercised (Paluszek, 2015).

1.2 The social and environmental impact of the textile and clothing industry

Several authors and organisations have analysed the textile and clothing industry (Allwood et al. (2006), Ross (2009), Dickson et al. (2009), Gwilt and Rissanen (2011), Gardetti and Torres (2013), and concluded that as "one of the most global industries in the world, with closely co-ordinated production and distribution lines spread out in regions, with great variations in government regulation, employment and environmental protection, and wage levels," (Perry and Towers, 2013, p. 7), the textile and clothing industry creates multiple environmental and social challenges.

As a labour-intensive industry, it might be associated with child labour, modern slavery, and mostly commonly, violation of human rights through dreadful working conditions, putting health and safety of the workers in danger through the whole supply chain. CSR issues, especially regarding labour rights, in the textile and clothing industry, gained widespread attention after the deadliest disaster in the history of the industry in 2013, when the Rana Plaza, factories producing clothing for Western brands, collapsed, killing 1,137 people (Institute for Global Labour and Human Rights, 2014). After the catastrophe, governments, businesses and activists became more concerned with the labour rights and transparency in supply chains (Chandran, 2016).

As a resource-intensive sector, it generates negative impact, starting with fibre production, which uses pesticides, oil and causes the wastage of large amounts of water. More than 20% of the registered levels of water pollution has been caused by the textile industry in China, Turkey, and Indonesia. The percentage of water level pollution is also the same in the Eastern European area, for example, in Romania and Bulgaria, and in Macedonia, with even more than 44 % (Paraschiv, Tudor & Petrariu, 2015). Cotton, as the world's most commonly used natural fibre, also has devastating effects on the environment, and more consumers are becoming aware of this. Cotton is extremely water-intensive, specifically requiring 6,400-15,500 litres per pound of cotton. Whilst only 2.4 % of the world's cropland is planted with cotton, it consumes 10% of all agricultural chemicals and 25% of insecticides. Some genetically modified varieties, which are resistant to some insects and tolerant of some herbicides, now make up more than 20% of the world's cotton crop (EcoWatch, 2015). Spinning, dyeing yarn, weaving, finishing and tailoring, all with the engagement of chemical products, create this waste of water and energy.

Martinez and del Bosque (2014) state, that the biggest concern about the environmental aspect is coming from fast growth in consumption. That can affect, for example, environmental breakdown risks and limits for ecosystem resources. In 2015, the worldwide consumption of

textiles reached about 73 million tonnes, and is expected to grow at nearly 4% annually, through to 2025, but only 20% of textiles are recycled each year around the world. In the UK, for instance, roughly two million tonnes of clothing and textiles are thrown away every year, and merely 16% of that waste is ever reused (WRAP, 2015).

Ülkü and Hsuan, (2017), have highlighted the fact that consumers are more and more aware and demanding as concerns environmentally friendly products, and that leads to growing pressure for companies to compete and operate with socially responsible products. However, companies can become truly socially responsible, only through the integration of social, environmental, ethical, consumer, and human rights' concerns into their business strategy and operations, and by following the law (European Commission, 2017). According to Dickson and Eckamn, in the case of the textile and clothing business, CSR involves:

- An orientation encompassing the environment, its people, the apparel/textile products made and consumed, and the systematic impact that production, marketing, and consumption of these products and their component parts has on multiple stakeholders and the environment.
- A philosophy that balances ethics/morality with profitability, which is achieved through accountability-based business decisions and strategies.
- A desire for outcomes that positively affect, or do very little harm, to the world and its people (Dickson and Eckman, 2006, p. 188).

Due to the structure of the textile and clothing industry, a company cannot claim its commitment to CSR, when multiple violations are present in its supply chain. Perry and Towers, (2013), postulate that an enterprise is only as socially responsible as its supply chain. Managers must choose the right suppliers that will fulfil their duties, but also uphold responsible behaviours and address social and environmental issues.

On the other hand, being socially responsible can be a key competitive advantage in the textile and clothing industry. If, for example, the company is able to create a green or ecological brand image amongst its consumers, that positively affects on the value of the brand, it can thus, also have an effect on the economic good (Bekk et al., 2015). Leading fast fashion brands such as H&M, Nike, and C&A, have already promised, that all their cotton products will be organic or made from so-called better cotton by the year, 2020. Those brands have already noticed that, nowadays, whilst many consumers are aware of buying organic food, there is also a trend to buy organic fabrics and textiles. In the year, 2013, Organic labels conducted a survey of 420 respondents, and 12% declared that they would prefer organic cotton products (PRNewswire, 2015). Textile and clothing industry companies could increase the percentage of customers preferring organic cotton products and other socially responsible products, by conducting educational campaigns, as well as using eco and social labels.

1.3 Eco and social labels

Labels are "any words, particulars, trademarks, brand names, pictorial matter, or symbols, on any packaging, document, noticeboard, or collar, accompanying or referring to a product (EEC REG 2092/91)" (Fliess et al., 2007, p. 20). CSR labelling is recognised as an effective tool of the CSR communication (Uusitalo and Oksanen, 2004, Howard and Allen, 2006; Fliess et al., 2007;). CSR labels can be classified, using several criteria:

a) the issue covered - we can differentiate between environmental (e.g. organic), social justice (e.g. Fair Trade), and animal welfare (e.g. cruelty free) (Hartlieb and Jones, 2009).
b) the quality - the International Organisation for Standardisation (ISO) categorises CSR labels into three types.

- Type I CSR labels are process-based, third-party labelling schemes (e.g. the Eco label).
- Type II CSR labels are self-declarations – that is, general claims (e.g. ozone friendly) appearing in a written or symbolic (pictorial) form, not backed up by a third party.
- Type III CSR labels are performance-based, third-party labelling schemes (e.g. Fair Trade), (D'Souza et al., 2007; Galarraga, 2002).

c) the awarding body - we can differentiate between a self-awarded or self-declared, industry body, NGO-led, partnerships (most frequently between business and NGOs), or governmental labels (Zadek et al., 1998).

According to Subrata, (2008), social and eco-labels can achieve several goals, such as improving sales or the image of a labelled product or brand; building consumer awareness about the environmental impact of products; improving the quality of the environment; and encouraging the sustainable management of resources. However, the most important goal of social or eco labelling is to support the demand and supply of those products that cause less harm to the environment, thereby stimulating the potential for market-driven social and/or environmental improvement (Subrata 2008).

Eco-labels serve a key role in transmitting information about standardised and certified processes related to a product (Thomas, 2008; Moore et al., 2009; Sherbourne, 2009), and are believed to be market-based, cost-effective, flexible, and consumer-driven instruments, which includes the consumer and consumption patterns in the solution to environmental problems (Austgulen et al, 2013). In 2018, worldwide, we can find 464 eco-labels, which can be very confusing and signals the possibility of using them more as a marketing than a CSR tool. That is why there is a need for standardisation of eco labels, in order to avoid miscellaneous and misleading labels, which might be used only to "greenwash" products, so they look more sustainable than in reality (Moore et al., 2009).

Compared with the ecological labels, social labels are relatively new. Most of the social labels that are applied today, were created in the 1990s (Dickson, 2001). It is difficult to estimate the number of social labels, but as the negative social impact of globalisation is one of the key concerns of the CSR agenda, we can assume that the number will be dynamically growing. The key goal of the social label is to confirm the company or brand respect for workers' rights, occupational health and safety rules, as well as its involvement in the well-being of local communities, and in fair terms of trade. Many social labelling systems have been designed, to provide consumers living in developed countries, with information about producers operating in developing countries (Koszewska, 2011).

The enthusiasm for launching new social or environmental labelling standards, both third-party and self-controlled, creates consumer confusion. A survey done by the Norwegian National Institute for Consumer Research (Sifo), indicates that the Norwegian consumers find it difficult to understand what each label stands for (Austgulen et al, 2013). In addition, retailers, brands, and textile manufacturers, find it difficult to navigate through the growing number of various standards (Eco-textile labelling guide, 2014). The textile industry, in particular, is now facing an explosion of various textile labelling concepts - of the 464 eco-labels identified worldwide, 108 are cover textiles (Ecolabel Index, 2018). Fortunately, the integration process is already taking place, especially with textile standards having similar aims, such as Global Organic Textile Standard (GOTS), which is an international organic cotton standard that has emerged, and is harmonised by various organic cotton labelling standards from Britain, the US, and Germany (GOTS, 2013).

One of the emerging trends is developing the labels by retailers themselves, especially practised by the key fast fashion brands, such as Mango (Committed), Zara (Join Life), C&A (BIO C&A), H&M – (Conscious), KappAhl – (Green Choice – representing the group of 7 eco – labels, namely: organic fibres, recycled fibres, from more sustainable cotton sources, vegetable

tanned leather, Tencel®, organic cotton, and organic cotton blended). The fast fashion brands also introduce labels that can be defined as eco-education labels, which support their customers in more sustainable usage of the products – for example, Clever Carer label introduced by H&M).

Although labelling is a generally accepted and welcomed source of information that can present a company as a socially responsible organisation, its influence on most consumers continues to be relatively weak. Despite the potential of a label to become a source of competitive advantages, only a limited number of brands have a label. According to Fliess et al., (2007), CSR labelled products represent niche markets, accounting often for no more than 2% of consumption of the relevant category of products. This scenario is also the case for Poland. According to Rudnicka, (2014), labels are important for only 12,88% of Polish customers as the key decision-making factor. On the other hand, certain eco and social labels are rather well known by them: 53.47 % of respondents (n=466) know the Fair Trade label; whilst 34.76% are familiar with the EU's Ecolabel; 20,39% recognise the GOTS label; and 16,74% are no strangers to the STANDARD 100 by OEKO-TEX. Those results are consistent with the research conducted by Koszewska, (2011), according to which, the best-known CSR label is the EU's Ecolabel (every fifth Polish consumer noticed the label attached to textile products), followed by the GOTS label, recognised by almost 19% of Polish consumers, and closely followed by the STANDARD 100 by OEKO-TEX, acknowledged by 18.2% of Polish consumers.

2 METHODOLOGY

In order to evaluate the usage of eco and social labels in the Polish textile and clothing industry, the data was collected from two sources. First, the usage of the eco and social labelling was evaluated among the 20 biggest Polish companies operating in the textile and clothing sector, and listed on the Warsaw Stock Exchange Clothing index. On the WIG clothing index, 23 companies are listed, but the ones representing cosmetics and jewellery sectors were excluded. The study examined the official company webpages of the companies covered by the study, to find out whether the companies offer any eco or social label.

The second source of data was the webpages of the six organisations granting eco and social labels. This is due to the industry's fragmentation – (about 86% of clothing producers are referred to as small enterprises, employing less than 50 workers). It was assumed that those companies would use labels more frequently, as they often serve the niche markets. As the list of social and eco- labels, as presented in the Literature Review section, is very long, the research focused on the three most popular labels in its category, namely EU Ecolabel, the Global Organic Textile Standard (GOTS), and the STANDARD 100 by OEKO-TEX®, in the eco-label category; and Fair Trade, Fair Wear Foundation and GoodWave in the social labels category. The aim of the examination was to assess the number of Polish companies that have obtained certain labels.

3 RESULTS AND DISCUSSION

Table 1 presents the data gathered in the first stage of the study – the analysis of the 20 companies listed on the WIG Clothing index. The results are very pessimistic, as among the biggest companies of the textile and the clothing industry, only one company has eco and social labels. It should be mentioned that the company is LPP – which was one of the companies, for whom production was conducted in the Rana Plaza factory (The Cropp brand labels were found after the catastrophe).

Tab. 1 Eco and social labels offered by Polish textile and clothing companies listed on the WIG Clothing index.

	BYTOM	CCC	CDRL	ESOTIQ	GINOROS	INTERSPP	LPP	LUBAWA	MONNARI	PRIMAMO	PROCHNI	PROTEKT	REDAN	SANWIL	SILVANO	SOLAR	TXM	VISTULA	WITTCHEN	WOJAS
Eco-labels	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0	0
Social labels	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0

Source: Own study

Tab. 2 presents the results of the second stage of the analysis, from the perspective of the organisations granting eco and social labels. No Polish product from the textile and clothing industry offers the EU's Ecolabel, and only 14 products offer the GOTS label. In the case of the Standard 100 by OEKO-TEX, we have 151 certified products, but only 32 are classified as end-user, ready made goods. The situation looks even worse when it comes to social labels – as only one company offers the Fair Trade label, and only 2 companies offer GoodWave labels. No company offers the Fair Wear Foundation label.

The textile and clothing industry is considered to be one of the most globalised, and with the very long supply chain, it includes: obtaining and processing raw materials; i.e. the preparation and production of natural and manufactured textile fibres; the production of yarns and fabrics; finishing activities which give textiles visual, physical and aesthetic properties that consumers demand; and finally, transformation of the textiles into garments that can be either fashion or non-fashion garments (the so-called 'clothing industry') (Gardetti and Torres, 2013). As a result, the industry creates a number of environmental and social challenges, which have led to a range of initiatives to address the situation. More and more firms seem to understand that growing consumer awareness demands respect from the brands, in terms of the principles of ethical conduct, people, and the natural environment. Certification, such as social and eco-labels, plays an important role in giving credible assurance to end consumers that products comply with social and environmental standards.

Analysis of the social and eco labels usage, by the Polish textile and clothing industry, has revealed that CSR labels are a rarely used tool among Polish companies. Only one of the 20 biggest clothing companies offers the CSR labels. CSR labels are also rare among small companies. Only 3 companies offer social labels, and less than 50 end-user products offer eco-labels.

The above results allow the formulation of the two main recommendations. Firstly, social and eco labelling should be used for competitive advantage. As it is difficult, within the textile and clothing industry, to compete by the price of the product or its design – it can be relatively easier to win consumers by offering sustainable products. Sustainable brands have now gained in importance, and many clothing companies, often small and medium enterprises (SMEs), have not only introduced various social or eco- labels on their clothes, but also created entire collections or positioned themselves as socially and eco-friendlier brands (Sifo, 2013). Secondly, CSR labels should become an important tool to navigate the customer's shopping process. As 70 to 80 percent of purchase decisions are made in the retail shop (Berglund & Boson, 2010), CSR labels can support the decision making, assuming that, with time, more environmentally friendly and socially responsible products will be produced and introduced to the market. Simultaneously, it must be highlighted that consumers have a limited knowledge

of eco- and social labels, and of what each label stands for. The growing number of CSR labels only serves to aggravates this situation. That is why companies willing to use those labels, must also engage in the education of their customers.

Tab. 2 Eco and Social Labels offered by Polish products/companies.

Name of the label	Characteristics of the label	Number of labelled products/companies
Eco – labels (product related)		
EU Ecolabel	EU certificate granted to textile products, which meet criteria that guarantee: limited use of substances harmful to health and the environment, reduction in water and air pollution, colour resistance to perspiration, washing, wet and dry rubbing, and light exposure	0 products
The Global Organic Textile Standard (GOTS)	Recognised as the world's leading processing standard for textiles made from organic fibres. It defines high-level environmental criteria along the entire organic textiles supply chain, and requires compliance with social criteria as well.	14 products
The STANDARD 100 by OEKO-TEX®	A worldwide, consistent, independent testing and certification system for raw, semi-finished, and finished textile products at all processing levels, as well as accessory materials used. Examples of articles that can be certified: raw and dyed/finished yarns, woven and knitted fabrics, accessories, such as buttons, zip fasteners, sewing threads or labels, ready-made articles of various types.	151 products
Social – labels (company related)		
Fair Trade	The international Fairtrade system - made up of Fairtrade International and its member organisations - represents the world's largest and most recognised fair-trade system. Fairtrade International licenses the use of the Fairtrade Textile Production Mark, to companies that build fully certified supply chains, in accordance with the Fairtrade Textile Standard, the Fairtrade Fibre Crops Standard, and/or the Trade Standard.	1 company
Fair Wear Foundation	Fair Wear Foundation works with brands, factories, trade unions, NGOs, and sometimes governments, to verify and improve workplace conditions in 11 production countries in Asia, Europe, and Africa. FWF's more than 80 member companies represent over 120 brands, and are based in Europe; the members' products are sold in over 20,000 retail outlets in more than 80 countries around the world.	0 companies
GoodWave	This label replaced the Rugmark label in 2009. The aim of the GoodWave is to combat illegal child labour in the rug industry, demand adequate wages and working hours, as well as safe and hygienic working conditions in the rug industry, organise social and educational programmes for former child workers, control the adherence to minimum environmental standards.	2 companies

Source: Own study

Some limitations of this study need highlighting. First, only the 20 biggest companies were researched, and only by the analysis of their webpage content. Second, the data collection was limited to a certain number of eco- and social labels, so we cannot generalise our results in relation to the whole CSR labelling context and, as a consequence, more specific research is needed in this area. Consequently, future research should be focused on the consumer's approach to the eco- and social labels, and the barriers on the companies' side to offering eco and social labels most appreciated by customers.

CONCLUSIONS

Social and environmental problems caused by the textile and clothing industry are well defined and widely discussed but difficult to eliminated as the industry is labour- intensive and resource-intensive. On the other hand, building strong brands without customer trust and positive attitude is impossible. That is why the textile and clothing brands employ most of the available CSR tools, including eco and social labelling, often industry specific. Unfortunately, those practices are not implemented globally. In case of Polish textile and clothing industry CSR labels are rarely used - only 3 companies offer social labels, and less than 50 end-user products offer eco-labels. What is more, only one of the 20 biggest clothing companies offers the CSR labels. As according to the 2015 Cone Communications/Ebiquity Global CSR Study 9 out of every 10 consumers expect companies to operate responsibly to address social and environmental issues two general recommendations for the Polish textile and clothing companies were formulated. Firstly, social and eco labelling should be used for competitive advantage. Secondly, CSR labels should become an important tool to navigate the customer's shopping process.

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Market Orientation and Performance in the Context of SMEs: Subjective Measures or Objectivity of Financial Statements?

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Abstract: A considerable number of studies proved a significant relationship between market orientation and performance. However, other studies reported contradictory findings. One of the factors influencing the strengths of the market orientation-performance link seems to be the character of performance measures applied (subjective vs. objective). This study examines the link between market orientation (measured with the MKTOR scale) and performance in the context of 300 Czech manufacturing SMEs, applying both subjective and objective performance measures (overall and competitive performance assessment or ROA respectively). There was discovered a significant relationship between market orientation and subjective performance, while no relationship was found between market orientation and objective performance. Contrary to the existing literature, the relationship between subjective and objective performance was detected as weak.

INTRODUCTION

The market orientation (MO) concept has been already widely studied for almost 30 years. Its practical implementation faced and still faces some issues (Van Raaij and Stoelhorst, 2008) but it gradually found its place in the business practice. MO is not only a domain of big companies, but its application is general. Although the studies of MO were targeting at the beginning mostly larger companies, the focus in the last decade shifted also to the world of SMEs, which create a backbone of most world economies. The studies amongst SMEs showed some benefits of being more market oriented (e.g., Reijonen et al., 2012). We believe, that MO is a substantial fundament for application of marketing as defined by American marketing association (2013) in SMEs and that they could benefit from the application of both MO and marketing. As increasing of MO level requires some additional effort and costs from SMEs, there must be also some attractive benefit side of MO, to justify the investment. The strong benefit for owners and top managers would most likely be the increased performance of their business.

This study investigates in depth the MO-performance link in the context of SMEs using different approaches to performance measurement (subjective vs. objective performance measures). The conceptual framework is shown in the Figure 1.

Figure 1   The conceptual framework
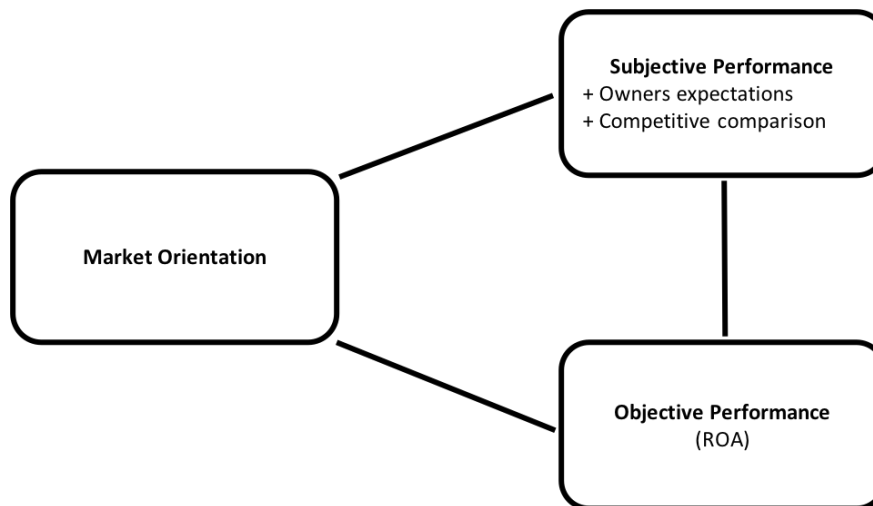
Source: Authors

1 LITERATURE REVIEW

As the concept of MO has been in the objective of researchers for almost three decades, their focus evolved over the years gradually from conceptualization and measurement through its antecedents and effects to its practical implementation. This long and gradual development of the field resulted in some fundamental works specific for each development phase over the time, most of which are still considered as valid and relevant. They are extensively used as a background for the new studies and are also widely cited by latter authors. It means that to cover sufficiently the MO related field literature a balanced mix of fundamental historical and recent studies has to be put forward (e.g. Hajipour et al., 2012)

There is historically a number of alternative definitions for the concept of MO. In fact, most of the studies over the years used the following two definitions (Van Raaij and Stoelhorst, 2008). It may be defined as a degree to which companies generate market intelligence, disseminate it internally and respond to gathered market information appropriately (Kohli and Jaworski, 1990). From slightly different angle, this construct can also be perceived as an organizational culture assuming that creating value for customers is the key driver of business performance (Narver and Slater, 1990). It means that the concept of MO is close to the adoption of the marketing concept as a business philosophy (Gonzalez-Benito et al., 2009).

The review of the previous studies is split into several distinct parts. First, that covers the literature studying the MO-performance link, second, that investigates the research on the diversity of results when using subjective vs. objective performance measures, and finally, that investigates the researched link in the context of SMEs. Based on this literature review the hypotheses for this study are put forward.

1.1 Market orientation and company performance

Over the last three decades, a considerable number of studies confirmed a significant positive relationship between MO and company performance (e.g., Narver and Slater, 1990; Deng and Dart, 1994; Pitt et al., 1996; Avlonitis and Gounaris, 1997; Horng and Chen, 1998; Pulendran et al., 2000; Akimova, 2000; Agarwal et al., 2003; González-Benito et al., 2009 and many others).

The direct MO-performance link was reported also by Kirca et al. (2005). Based on meta-analysis of empirical findings from the MO literature Kirca et al. reported a significant positive association between MO and performance.

However, although the majority of studies found a positive association of MO and performance (as summed up e.g. by González-Benito and González-Benito, 2005), some researchers reported nonsignificant, ambiguous, mixed, indirect or even negative effects (e.g., Esslemont and Lewis, 1991; Diamantopoulos and Hart, 1993; Jaworski and Kohli, 1993; Au and Tse, 1995; Bhuian, 1997; Tse, 1998; Han et al., 1998; Frösén et al., 2016).

These discrepancies seem to arise at least partly from the methodological deficiencies in this stream of marketing literature, among others with respect to measurement of performance. Whereas studies, which found a positive link between MO and performance, typically used subjective performance measures, those studies with opposite outcomes often applied objective measures of performance. This tendency does not apply to all studies, but it is still remarkable, as documented e.g. by Dawes (1999), Ward et al. (2006) or González-Benito and González-Benito (2005).

"Subjective performance measures" usually involve the situations, when company's performance is derived using a scale with anchors such as for example "very poor" to "very good", usually in relation to competitors or industry (Dawes, 1999). In other words, subjective performance is measured using judgements about company performance relative to competitors (or industry), which are self-reported by the company managers.

In contrast, "objective performance measures" typically include absolute values of ROA, ROE, sales growth, market share and the like. These financial figures are in some cases gathered directly from the respondents (i.e. they are self-reported), whereas in other cases are gathered from secondary sources (Harris, 2001).

Among the studies, which failed to find a significant relationship between MO and performance is the study of Esslemont and Lewis (1991). Using objective performance measures, they found no evidence of the relationship studied.

Similarly, Diamantopoulos and Hart (1993) realized a study among manufacturing companies using objective performance measures and found somewhat ambiguous evidence of the MO-performance relationship.

In their influential study, Jaworski and Kohli (1993) found mixed effects of MO on performance. MO was positively associated with subjective performance measure, but it was not associated with objective measure of performance (market share).

Au and Tse (1995) surveyed hotels in Hong Kong and New Zealand using objective performance measure of hotels' occupancy rate and found no apparent relationship between MO and business performance.

In addition, the study of Bhuian (1997) found no link between MO and performance in case of banks in Saudi Arabia (using three objective performance measures).

Similarly, Tse (1998) found no significant relationship between MO and business performance in case of large Hong Kong property developers (using objective performance measures from an external database).

Han et al. (1998) realized a study among US banks using an objective performance measure (net income growth gained from financial reports). Relationship between MO and performance in their study was positive but nonsignificant. However, they found an indirect relationship (mediated by innovation).

Frösén et al. (2016) researched Finnish companies using objective performance measure (profit margin acquired from an external database). According to the regression analyses, they

found that MO does not contribute to business performance. However, it is interesting to note that when using fuzzy-set qualitative comparative analysis, high MO was present in all high-performance configurations.

On the other hand, it should be added that even in the case of subjective performance measures MO-performance link sometimes failed, as it was e.g., in the study of Greenley (1995) or Appiah-Adu (1998). Another example is the study of Grewal and Tansuhaj (2001) who investigated the link between MO and subjective performance measures in the context of Thai firms suffering from economic crisis and found even an adverse effect of MO on firm performance. Similarly, there are also some studies proving existence of MO-performance relationship applying objective performance measures (e.g., Ruekert, 1992).

It still seems that the MO – performance relationship is typically stronger for studies using subjective performance measures than for studies using objective ones. This conclusion is supported also by the meta-analysis of Kirca et al. (2005) or by the literature review of González-Benito and González-Benito (2005). Therefore, this issue deserves more attention.

1.2 Objective vs. subjective performance measures

Most studies focused on the MO-performance link relied on subjective performance measures (González-Benito and González-Benito, 2005). There seem to be good reasons for this preference as there are many obstacles connected with the use of objective performance measures.

Objective performance measures may not be appropriate especially because they may be difficult to obtain, may not be reliable (because of the secondary sources quality), may differ distinctly across industries, may not capture complex dimensions of performance and may not be suitable for taking into account lagged effects (González-Benito and González-Benito, 2005). These obstacles seem to be even more serious in the context of smaller companies. For instance, SMEs may not want to reveal their actual financial performance to the public or may manipulate the data to avoid taxes (Zulkiffli, 2014). Compared to that, subjective performance measures are cost effective and allow comparisons across different industries and contexts (e.g., Vij and Bedi, 2016).

However, it has been questioned if subjective self-reported measures are valid, because managers may tend to overestimate performance of their companies (e.g., Harris, 2001). Moreover, when applying subjective measures to capture both constructs, error in self-perceptions of company performance can be correlated with measures of management (i.e. MO), even if these management measures are uncorrelated with the objective performance measure (e.g., Meier and O'Toole, 2013).

Because of potential bias associated with the use of subjective performance measures, several studies have examined the link between the subjective performance measures and the objective ones. These studies mostly found significant correlations between objective and subjective performance measures (e.g., Venkatraman and Ramanujam, 1987; Hart and Banbury, 1994; Dawes, 1999; Harris, 2001, Vij and Bedi, 2016; and others).

However, the correlations found seem to be still far from perfect. For example, Dawes (1999) found correlation between the objective and subjective measures "only" of 0.51. Furthermore, some of the studies, which investigated the link between objective and subjective performance measures, used self-reported objective measures, which may be biased in a similar way as subjective measures (Harris, 2001).

Therefore, it was recommended by several researchers to use both types of performance measures in the studies focused on MO-performance relationship (e.g., Harris, 2001; Dawes, 1999; Kirca et al., 2005).

Studies using both subjective and objective performance measures exist but are rather minor (González-Benito and González-Benito, 2005). Even though these studies use different measurement approaches, they still seem to evidence lower effect of MO on performance in case of objective measures than in case of subjective measures (e.g., Jaworski and Kohli, 1993; Selnes et al., 1996).

However, in rare cases, researchers reported also different findings. For example, Harris (2001) found no direct relationship between MO and both subjective and objective performance measures (sales growth and profitability). MO was positively associated with performance measures only under certain environmental conditions (narrower in case of objective measures). Similarly, Voss and Voss (2000) found no relationship of customer and competitor orientations with subjective performance, and ambiguous relationships in case of objective performance.

1.3 Market orientation and SMEs performance

A few years ago, the critics pointed out that the majority of studies focused on MO-performance link had been done in the context of large companies (e.g., Blankson and Cheng, 2005). However, this criticism seems to be no more justified as relatively many studies among SMEs have been carried out since then.

Majority of studies among SMEs found a positive association between MO and performance. However, it is important to note that these studies in the vast majority relied on subjective performance measures. Among such studies are the one of Pelham and Wilson (1996) realized among US SMEs or the study of Appiah-Adu and Singh (1998) who found a positive effect of customer orientation on performance in case of SMEs in the UK.

Similarly, Pelham (2000) found a significant correlation of MO and subjective measures of performance among small US manufacturing firms. In his study, MO had the strongest positive relationship with performance, compared to strategy selection, firm size, or industry characteristics. Furthermore, MO was negatively correlated with a firm size. Pelham therefore suggests that MO may provide smaller firms with a potential competitive advantage over larger firms.

Reijonen et al. (2012) investigated the level of MO in case of Finnish SMEs using subjective performance measures. They found that growing firms are significantly more market-oriented than are declining and stable firms.

Laukkanen et al. (2013) collected data from Hungarian and Finnish SMEs. They found a highly significant effect of MO on business growth in both countries (using subjective performance measure).

Among other studies which found a positive significant relationship between MO and subjective performance measures are for example the study of Li et al. (2008) realized on a sample of Chinese SMEs, the study of Yadav and Tripathi (2014) realized on a small sample of Indian manufacturing SMEs, the studies of Mokhtar et al. (2014) and Affendy et al. (2015) realized on samples of Malaysian SMEs or the study of Dubihlela and Dhurup (2015) realized on a sample of SMEs in South Africa.

There are also studies, which failed to find a significant direct relationship between MO and SMEs subjective performance measures. For instance, Keskin (2006) and Mehmet et al. (2006) realized studies among SMEs in Turkey and found only indirect effects of MO on performance.

Similar findings come also from the recent study of Haryanto et al. (2017) among SMEs in Indonesia.

In addition, Laukkanen et al. (2016) using responses from Finnish entrepreneurs found no direct effects of MO on financial performance (using subjective measures of performance). In their study MO influenced performance only indirectly through brand orientation and brand performance.

It seems that the findings of MO-performance link are in the case of SMEs similarly inconclusive, as it was in the case of studies realized on larger firms or on samples including firms of different sizes. Furthermore, it seems that in case of SMEs, studies relied on subjective performance measures even more extensively than it was in the case of other contexts. Studies using objective performance measures in the context of SMEs seem to be scarce or even non-existent. To our knowledge, the same is true for studies among SMEs, which would apply both subjective and objective measures of performance at the same time.

2 METHODOLOGY

2.1 Research hypotheses

This study aims to replicate and extend existing research of MO-performance relationship with the following focus: 1) examining the link between MO and performance in the context of SMEs; 2) examining MO-performance relationship when both subjective and objective performance measures are applied simultaneously.

Majority of studies using subjective measures performance in the context of SMEs found a positive association of MO and performance. We therefore set the following hypotheses:

H1: *MO is positively linked with subjective performance.*

Studies using objective measures of performance in the context of SMEs seem to be scarce. However, studies among larger companies or companies of different sizes applying objective performance measures were typically less successful in finding significant direct relationship between MO and company performance. Despite this, studies using both types of performance measures found relatively strong relationship between subjective and objective performance. Therefore, we expect to find a weaker direct MO-performance link than in case of subjective performance measures, but still a positive one. We set the following hypotheses:

H2: *MO is positively linked with objective performance.*

Because the existing studies reported strong relationship between subjective and objective performance, we further expect the following:

H3: *Subjective performance measures are correlated with objective performance measures.*

2.2 Sample, data collection, measures and statistical methods applied

The random sample of 300 Czech SMEs was chosen from the database Bisnode Albertina based on the following criteria: manufacturing as a major business activity (category C of the CZ-NACE classification of economic activities), number of employees 10-249 (SMEs but micro-firms excluded), operating in the Czech market and a reliable telephone contact. The selection revealed 10319 Czech firms in the database matching the criteria.

The survey data was collected via telephone interviews between October 16 and 27, 2017. We considered the method as a more efficient way compared to the e-mail or online surveys, mostly in terms of its speed, interactivity, proper targeting of respondents and higher expected response rate. The main limitation of the method seemed to be the number of questions in the survey and the potential drop in the response rate. To assure smooth and professional collection of the data we employed an experienced and well equipped local market research agency Ipsos. There were 3125 firms contacted with a response rate of 9.6%.

In line with the majority of existing studies, we adopted a single-respondent approach within a firm aiming at the top management level. The respondents self-reported their position in the firm at the beginning of the interview. 64 % of respondents were recruited from the N level (owners or CEOs), the remaining 36 % were managers from the N-1 level (sales, marketing or finance managers/directors).

To measure MO and its three components we adopted the original MO scale of Narver and Slater (1990), referred to as MKTOR. There were several reasons for it. It is one of the most used scales in the history of MO research, so the results could be compared with some similar previous studies. It views MO as an organizational culture to deliver a superior value to customers, thus corresponds very well with the current concept and definition of marketing (AMA, 2013). It also outperforms MARKOR scale (Kohli et al., 1993) in explaining variations in business performance (Oczkowski and Farrell, 1998). Overall score of MO consisted of 15 items (as the original) including a minor modification of the original MKTOR. The competitor orientation component was extended to 5 items by adding the regular monitoring of competitors marketing activities (Gray et al., 1998; Deng and Dart, 1994). This item seemed to be of importance and showed in the study of Reijonen et al. (2012) very high factor loading. The interfunctional coordination component was narrowed to 4 items by excluding sharing of resources with other business units. This item had very low factor loading in the original study of Narver and Slater (1990) and more importantly was less relevant in the world of most SMEs, as they are not usually organized to business units. The customer orientation items stayed in line with the original MKTOR scale and also with the studies of Deng and Dart (1994), Gray at al. (1998) and Reijonen et al. (2012). All three constructs were measured using 7-point Likert scales, ranging from "strongly agree" (1) to "strongly disagree" (7).

To measure subjective performance, we used two items – the evaluation of a firm overall performance compared to internal expectations (in fact the owner's satisfaction) and the evaluation of a firm overall performance compared to its competitors. The items were chosen intentionally to reflect both the internal and the external factors. The final score of the subjective performance was counted as an average of both rated items. We measured the individual items with 7-point Likert scale ranging from "excellent performance" (1) to "catastrophic performance" (7).

It is difficult to find a common denominator for objective performance measures across the very heterogeneous sub-sectors of the manufacturing industry. The best way to approach the issue seems to be to use the investment criteria like ROI, ROE, ROA or ROS (e.g., Narver and Slater, 1990; Hooley et al., 2000). Top managers and owners are usually familiar with them and they serve as a measure of general business success (Hooley 2000). The survey data was therefore additionally complemented with the objective performance measures of the

responding firms taken from the Bisnode Albertina database (financial statements of 2016). We primarily extracted from the database ROE, ROA (from EBIT) and ROS of the firms, but as they are from principle (and also our own test within the study) very strongly correlated, we reduced it only to ROA (from EBIT) as a measure of ROI.

We used the Spearman correlation coefficient for our hypotheses testing. We applied this method as a nonparametric measure of rank correlation (statistical dependence between the rankings of two variables) because thus we did not have to fulfil the strict assumptions of parametric Pearson correlation.

We should admit here that this study design has also some noteworthy methodological limitations. First, our data is based on the subjective assessment of a single informant from each company. We did not exclude a potential priming effect of MO evaluation on the subjective performance evaluation within the survey. We also did not count with potential lagged effects in the relationship between MO and performance. Another limitation could be the specific national character of the sample.

3 RESULTS AND DISCUSSION

We tested statistical null hypotheses of independence between variables MO and subjective performance (H1a). The hypothesis of independence between these two variables was refused ($p<0.01$). Spearman correlation coefficient was 0.350 that points to weak positive dependence (Table 1). Thus, hypothesis H1a was confirmed.

Table 1 Non-parametric Spearman correlation coefficient (hypothesis of independence was refused on p<0,01 against one side hypothesis of positive dependence)**

	Market orientation	Subjective performance	Objective performance
Market orientation	1	0,350**	0,002
Subjective performance		1	0,217**
Objective performance			1

Source: Authors

Spearman correlation coefficient between MO and objective measures of performance was 0.02, which indicates independence between these two variables. We can therefore reject H2.

With respect to H3, we refused the statistical hypothesis of independence between variables subjective performance and objective performance against alternative hypothesis of positive dependence ($p<0.01$). Spearman correlation coefficient (0.217) indicates weak positive dependence between these two measures of performance. We can thus confirm our hypothesis H3.

The results of this study are summarized in Table 2. We confirmed the hypothesis H1. This finding seems to be in consistence with the existing literature. In the case of hypothesis H3, we found only a weak relationship between subjective and objective performance, which does not seem to fully correspond with the current literature.

We rejected the hypotheses H2. These findings are consistent with some studies (e.g., Jaworski and Kohli, 1993), at the same time they seem contradictory to other studies (e.g., Ruekert, 1992). Our findings thus support the evidence that when applying objective performance measures the direct MO-performance link fails to be found.

Table 2 Results

Hypothesis	Result
H1 MO is positively linked with subjective performance	**Confirmed**
H2 MO is positively linked with objective performance	**Rejected**
H3 Subjective performance measures are correlated with objective performance measures	**Confirmed**

Source: Authors

CONCLUSION

This study contributes to the existing literature on MO in the following ways. First, we found further evidence of direct MO-performance link in the context of SMEs, though only in the case of subjective performance measures. The chosen objective performance measure (ROA from EBIT) showed no relationship of this kind. Second, contrary to the existing literature we found only a weak relationship between subjective and objective performance measures.

The explanation for the nonexistent link between MO and objective performance measures such as ROA seems to be the irrelevance of such measures in the context of SMEs, as proposed e.g. by Zulkiffli (2014) or González-Benito and González-Benito (2005). It is also likely that smaller SMEs do not have very sophisticated finance management and corporate governance systems and measure their performance differently. It may also be that owners and management of SMEs modify the picture of a firm in the financial statements within the process of tax optimization. It is also a public secret that owners of SMEs could often withdraw cash out of the financial statements to support their families and lifestyle - a typical situation revealed during SMEs acquisitions. In the mentioned precedent cases the official financial statements show very distorted picture of a firm, so they are not relevant as a basis for the measures of an SME performance. Further investigation would be necessary to support these hypotheses and also to find common objective measures of performance applicable to SMEs across the various sectors, if they exist.

Another possible explanation of our results lies in the overall concept of the link between MO and performance. Higher levels of MO create most likely better conditions for a firm performance and growth (e.g., Reijonen et al., 2012), but not alone (e.g., Frösén et al., 2016). If we apply the MO definition by Narver and Slater (1990) then the high level of MO means, that a firm is fully dedicated to delivering superior value to its customers. At the same time, it does not say, how to create, communicate and deliver the value to customers – this is a domain of marketing (AMA, 2013) or marketing/brand management (e.g., Laukkanen et al., 2016). The dedication itself also does not mean, that the marketing process will be automatically successful and will lead to better performance in the market due to numerous internal and external factors. It seems that the link between MO and performance is more complicated and there are many mediators and moderators involved. It would be probably wise to explore them in more detail. It also looks that an appropriate level of MO is necessary but not sufficient condition for delivering excellent performance of a firm (e.g., Frösén et al., 2016). We can also hypothesize here that there is a marginal benefit of a level of MO, so from

a specific level achieved the contribution to a firm performance is minimized. The described complexity of the relationship between MO and performance could be the reason for non-consistent results across the mentioned studies.

The link between objective and subjective performance looks relatively obvious at first sight. We can assume that the owners and the top managers are familiar with the financial statements (and corresponding objective performance measures) of a firm (e.g., Hooley et al., 2000) and the knowledge of it should influence their subjective performance evaluation for the firm (not vice versa), which was confirmed also by previous studies. Of course, all of that only on condition that their financial statements and derived objective performance measures reflect truly the firm business reality. As we put in doubt consistent relevance of the objective performance measures (e.g., ROA) in the studied SMEs, it could very well explain why we found only a weak link between objective and subjective performance of a firm.

We also cannot suspend the possibility that our findings may be affected by methodological insufficiencies with respect to measuring the level of MO as well as subjective performance. All subjective measures can suffer from bias, in our study both MO and performance are measured by self-perceptions of a single respondent (Meier and O'Toole, 2013). Some authors were even questioning validity of the MKTOR scale (e.g., Roersen et al., 2013). We should be aware it is not a thorough audit or a diagnostic tool (Van Raaij and Stoelhorst, 2008). Although not without flaws, the scale was used in the field for already three decades, so it became one of the common standards. There are unfortunately no such standards for subjective performance measures. The chosen angles of different studies often vary, and their results could be difficult to compare.

It unfortunately seems, that our findings are not very conclusive about performance benefits of higher MO and therefore do not support directly the reasoning for MO implementation or elevation in SMEs.

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Culture as a Factor Influencing Creativity

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Abstract: Thanks to the new technologies such as artificial intelligence, natural language processing or blockchain, the sources of international competitiveness shift towards better social and emotional skills of workforce as well as more advanced cognitive capabilities, such as logical reasoning or creativity. Some authors emphasize the role of economic creativity. It has been proved that more economic creativity leads to greater innovation implementation. Therefore we study what factors have influence on creativity and consequently the success of nations in the international competition in the era driven by new forms of automation. We point at the role of culture and we verify the influence of particular national cultural dimensions on creativity using correlation and regression analyses. We found that countries with higher level of Power Distance, Uncertainty Avoidance or Masculinity show lower level of creative outputs. On the contrary, with higher level of both Individualism and Long-term Orientation, the level of creative outputs increases.

Keywords: culture, creativity, competitiveness, technologies

JEL Classification codes: O33, Z10

INTRODUCTION

In the technology-driven era, the role of the creativity in achieving competitiveness on international markets is increasing. Properly skilled workforce represents one of the traditional sources of international competitiveness (Baláž, Hamara & Sopková, 2015). According to the latest report of McKinsey Global Institute on workforce transitions, „automation, digital platforms, and other innovations are changing the fundamental nature of work. Workers of the future will spend more time on activities that machines are less capable of, such as managing people, applying expertise, and communicating with others. They will spend less time on predictable physical activities and on collecting and processing data, where machines already exceed human performance. The skills and capabilities required will also shift, requiring more social and emotional skills and more advanced cognitive capabilities, such as logical reasoning and creativity. Enabling individuals to learn marketable new skills throughout their lifetime will be a critical challenge - and for some countries, the central challenge" (McKinsey Global Institute, 2017). Wezowski points to the fact that new technologies such as machine learning, artificial intelligence, natural language processing or block chain enable increased productivity and efficiency. What remains to people is creativity and ability to create new things (Wezowski, 2017). Leslie et al. found that economic creativity positively influences innovation implementation which positively influences national prosperity (Williams & McGuire, 2010). They conceptualize economic creativity as any form of creativity that results in a codified knowledge with a potential economic value to a nation. Elliot and Nakata emphasize the link between creativity and product innovation: "In today's global business environment, where multinational companies are pressed to increase revenues in order to survive, creativity may hold the key to ensuring their new product development efforts lead to innovations with worldwide appeal" (Elliot & Nakata, 2013). In this paper we therefore study what may influence

creativity and consequently the success of nations in international competition in the era driven by new forms of automation.

1 LITERATURE REVIEW

In the literature, creativity is defined in terms of person, product or process. The "person" approach refers to the abilities that are most characteristic of creative people. However, most definitions use the creative product approach. Creative products are characterized by novelty and appropriateness. "Creativity refers to those insights, ideas, problem solutions, or products that are both novel and useful/appropriate – novel in that they are uncommon, statistically infrequent, and judged to be original, and useful/appropriate because the insight, idea, or product fits the problem and makes sense" (Amabile, 1996).

Lot of the research (mostly psychological) has been devoted to sources of creativity (see e.g. (Elias, 2012; Andriani & Cattani, 2016 or Gorup & Podjed, 2017). Although there is no single answer to the question, what influences human creativity, it is accepted that cultural values of people of a nation might influence the propensity to create (Williams & McGuire, 2010; Zorkóciová et al., 2016). Probably the best known research of both national and organizational culture is that of Hofstede. He defines culture with a computer metaphor: "Culture is the software of our minds. We need shared software in order to communicate. So culture is about what we share with those around us" (Hofstede, 2017a). Hofstede explains cultural differences among nations using six dimensions of culture (see Table 1).

Tab. 1 Dimensions of culture

Dimension	Explanation
Individualism	Extent to which people feel independent, as opposed to being interdependent as members of larger wholes.
Power Distance	Extent to which the less powerful members of organizations and institutions (like the family) accept and expect that power is distributed unequally.
Masculinity	Extent to which the use of force in endorsed socially.
Uncertainty Avoidance	Deals with a society's tolerance for uncertainty and ambiguity. It has to do with anxiety and distrust in the face of the unknown, and conversely, with a wish to have fixed habits and rituals, and to know the truth.
Long-term Orientation	Deals with change. In a long-time-oriented culture, the basic notion about the world is that it is in flux, and preparing for the future is always needed.
Indulgence	Is about the good things in life. In an indulgent culture it is good to be free. Doing what your impulses want you to do, is good. Friends are important and life makes sense.

Source: Hofstede, 2017b.

What is important, Hofstede does not only define particular national cultural dimensions, he also measures them. Despite limitations and criticism of Hofstede's approach (Hofstede, 2002), it is widely used in various research studies (Kirkman, Lowe & Gibson, 2006).

2 METHODOLOGY

The aim of this paper is to study how a culture may influence creativity, using statistical models where culture represents an independent variable and creativity is a dependent variable. For the independent variable, we follow the analysis and quantification of culture into the cultural dimensions by Hofstede, as indicated above. As far as creativity is concerned, there are various quantitative indicators available, such as the Global Creativity Index calculated by The Martin Prosperity Institute, The Creative Community Index that stems from a collaborative project between the Knight Foundation, Americans for the Arts, the City of San Jose Office of Cultural Affairs and Cultural Initiatives Silicon Valley or The European Creativity Index developed by KEA European Affairs (for more see Correia & Costa, 2014). We decided to use the Sub-Index of Creative Outputs (ICO) calculated within the framework of the Global Innovation Index co-published by Cornell University, INSEAD, and the World Intellectual Property Organization for several reasons described below.

Indicators of the ICO are based mostly on hard data. Only two survey questions were included in the ICO 2017 edition (1. In your country, to what extent do ICTs enable new business models? 2. In your country, to what extent do ICTs enable new organizational models?) Moreover, data are available for 127 countries representing 92.5% of global population. The ICO score is calculated as the weighted average of a set of individual indicators that are presented in Table 2.

Tab. 2 Composition of the Sub-Index of Creative Outputs

Sub-Index of Creative Outputs		
Intangible assets	**Creative goods and services**	**Online creativity**
- Trademark application class count by origin - Industrial designs by origin - ICTs and business model creation - ICTs and organizational model creation	- Cultural and creative services exports - National feature films produced - Global entertainment and media market - Printing and publishing output Creative goods exports	- Generic top-level domains - Country-code top-level domains - Wikipedia yearly edits - Video uploads on YouTube

Source: The Global Innovation Index, 2017.

To verify the existence of relationship between a particular national cultural dimension and the SICO on the sample of the OECD countries, we use quantitative statistical methods, namely the descriptive, correlation and multiple regression analysis. In addition to the variables of the particular cultural dimensions (as presented in Table 1) and the SICO (as presented in Table 2), we enhanced the correlation analysis by a control variable of GDP p. c. (The World Bank, 2017) whereby we assume a two-year delay in the GDP p. c. impact on the level of creative outputs.

3 RESULTS AND DISCUSSION

The descriptive statistics of variables is shown in Table 3. The analysis was performed for the OECD member countries, however, for the Indulgence dimension, the observation was not available for Israel. This fact led to a certain decrease in statistical significance of our analyses.

For our purpose, it was interesting to describe heterogeneity and to identify extreme values. Already the descriptive statistics indicated that there were countries in the analyzed population whose variable values were outside the standardized standard distribution. The positive skewness indicated the positive, right-sided asymmetry. There is a larger number of countries with a variable value less than average. This situation was determined for the variables of Power Distance, Masculinity and Long-term Orientation. The negative, left-sided asymmetry was measured for the variables of Individualism, Uncertainty Avoidance and Indulgence.

It was interesting to observe kurtosis as well. The value larger than 1 was achieved for the variable of GDP, i.e. there were countries with values high above the standardized standard distribution of the OECD countries. On the other hand, kurtosis for the cultural dimensions and for the Creative Outputs index was without significant extremes outside the standardized standard distribution. The variable of Creative Outputs was almost homogeneous for 2016 for analyzed countries.

Tab. 3 Descriptive Statistics

	N	Mean	Median	Min.	Max.	Std.Dev.	Skew.	Kurt.
Power_Distance	35	46.9	40.00	11.0	100.0	19.8	0.4	0.2
Individualism	35	60.46	63.00	18.0	91.0	19.8	-0.6	-0.5
Masculinity	35	48.51	52.00	5.0	100.0	25.4	0.0	-0.7
Uncertainty_Avoidance	35	67.23	70.00	23.0	100.0	21.1	-0.3	-0.9
Long_Term_Orientation	35	52.14	49.00	21.0	100.0	21.3	0.4	-0.8
Indulgence	34	52.26	55.50	13.0	97.0	19.6	-0.1	-0.5
GDP_p_c_curr_USD_2014	35	41445.72	42696.78	10303.7	116612.9	24553.7	1.1	1.6
Creative_Outputs_2016	35	48.25	47.50	29.9	69.5	9.3	0.2	0.0

Source: Own calculation based on The Global Innovation Index, 2017; G. Hofstede, 2017b and The World Bank, 2017.

In order to determine the direction and relationship strength between the variables, we created a correlation matrix, as shown in Table 4. The more individualistic cultures and countries with higher values of Indulgence dimension were reaching higher economic level, as measured by the GDP, however, the relationship strength between these variables was just at a medium level. On the opposite, lower economic level was reached by countries with higher values of Power Distance and Uncertainty Avoidance.

As regards the Creative Outputs Index, we found that countries with higher value of Power Distance and Uncertainty Avoidance were reaching lower level of the Creative Outputs Index, and that the Index level rose with increased level of the Individualism dimension. The strength of these relationships was only at a medium level again, therefore we decided to perform a multiple regression analysis in a tabular as well as graphical form.

Table 5 presents the multiple regression analysis. The model as a whole is statistically significant on the basis of the F-statistics, explaining 48% of data. We accepted the estimate of constant and of the variables of Power Distance, Masculinity and Long-term Orientation, however, the Masculinity was estimated at a marginal statistical significance on the basis of the t-value.

Tab. 4 Correlation Matrix

Variable	Correlations: Marked correlations are significant at p < ,10000	
	GDP_p_c_curr_USD_2014	Creative_Outputs_2016
Power_Distance	*-0,5645 ****	*-0,5950 ****
	N=35	*N=35*
	p=0,000	*p=0,000*
Individualism	*0,4606 ****	*0,4708 ****
	N=35	*N=35*
	p=0,005	*p=0,004*
Masculinity	-0,1457	*-0,3066 **
	N=35	*N=35*
	p=0,404	*p=0,073*
Uncertainty_Avoidance	*-0,4977 ****	*-0,5778 ****
	N=35	*N=35*
	p=0,002	*p=0,000*
Long_Term_Orientation	-0,0546	0,0971
	N=35	N=35
	p=0,755	p=0,579
Indulgence	*0,4192 ***	0,2135
	N=34	N=34
	p=0,014	p=0,225

Source: Own calculation based on The Global Innovation Index, 2017; G. Hofstede, 2017b and The World Bank, 2017.

Legend: *** estimation with 99 % probability, ** 95 % probability, * 90 % probability.

The lineal regression equation had the following form:

Creative_Outputs_2016 = b1 * Power_Distance (1)

$$+ b2 * \text{Individualism}$$

$$+ b3 * \text{Masculinity}$$

$$+ b4 * \text{Uncertainty\_Avoidance}$$

$$+ b5 * \text{Long\_Term\_Orientation}$$

$$+ b6 * \text{Indulgence}$$

$$+ \text{constant}$$

With the value increase of the Power Distance cultural dimension by 1 point, we expect a decrease of the Creative Outputs Index by 0.16 point. An indirect relationship is expected also for the Masculinity dimension, specifically by 0.10 point. Contrary to that, we assume an increase of the Index by 0.16 point together with an increase of the Long-term Orientation cultural dimension by 1 point. Due to low statistical significance of estimates for the variables

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of Individualism, Uncertainty Avoidance and Indulgence, we investigated the relationships using the graphical regression analysis. In result of low relevance between the Creative Outputs Index and the Indulgence dimension, we do not confirm the hypothesis of mutual dependence of these variables.

Tab. 5 Multiple Regression Analysis

N=34	Regression Summary for Dependent Variable: Creative_Outputs_2016 R= 0,75618128 R^2= 0,57181014 Adjusted R^2= 0,47665683 F(6,27)=6,0094 p<0,00043 Std.Error of estimate: 6,7301				
	b	Std.Err. (of b)	t(27)	p-value	Valid (N)
Intercept	*50,74*	*12,70*	*4,00*	*0,00*	
Power_Distance	*-0,16*	*0,08*	*-2,03*	*0,05*	*35*
Individualism	0,08	0,08	0,92	0,37	35
Masculinity	*-0,10*	*0,05*	*-1,85*	*0,08*	*35*
Uncertainty_Avoidance	-0,11	0,08	-1,32	0,20	35
Long_Term_Orientation	*0,16*	*0,07*	*2,43*	*0,02*	*35*
Indulgence	0,07	0,08	0,89	0,38	34

Source: Own calculation based on The Global Innovation Index, 2017; G. Hofstede, 2017b and The World Bank, 2017.

Figure 1 presents a scatterplot with histograms between Individualism and the Creative Outputs Index. The lineal regression equation was estimated with 99% probability, explaining 22.17 % of observations, having the form of:

Crative_Outputs_2016 = b1 * Individualism + constant   (2)

We attribute the low relevance to extreme observations that led to decreased relevance of the model. On the other hand, the analysis enabled us to identify Iceland and Luxembourg reaching high values of the Index and of the Individualism dimension at 60 points level. This means that individualistic characteristics are moderately prevalent. Chile and Mexico reach the lowest Index level, both countries being collectivistic.

The extreme observations reduce also the relevance of the model presented in the Figure 2. The regression line was estimated with 99% probability, explaining 33.38 % data, having the form of:

Creative_Outputs_2016 = b1 * Uncertainty_Avoidance + constant   (3)

Applying the method of simple observation, we are accepting the estimate of the regression equation. We expect a decrease of the Index level by 0.25 points with an increase of the Uncertainty Avoidance cultural dimension.

Fig. 1 Scatterplot with Histograms

Scatterplot with Histograms of Creative_Outputs_2016 against Individualism
Scatterplot = 34,8904+0,221*x

r = 0,4708; p = 0,0043; r² = 0,2217
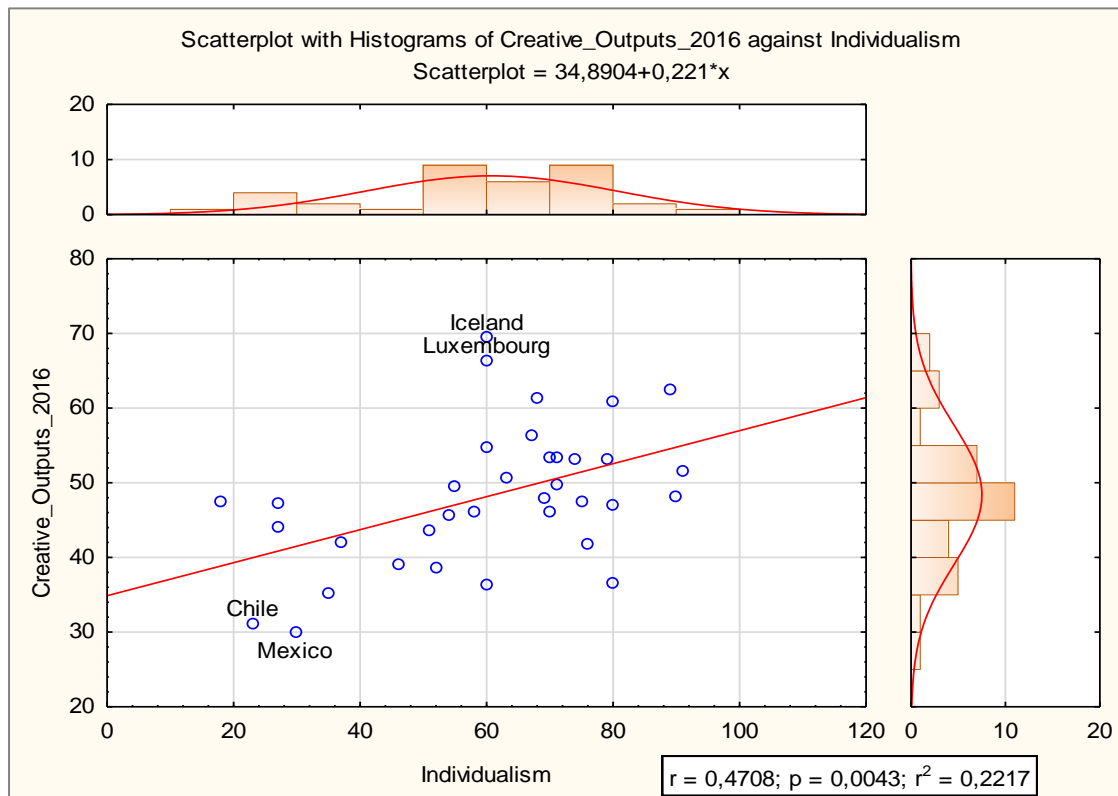
Source: Own processing

Fig. 2 Scatterplot with Histograms

Scatterplot with Histograms of Creative_Outputs_2016 against Uncertainty_Avoidance
Scatterplot = 65,3631-0,2546*x

r = -0,5778; p = 0,0003; r² = 0,3338
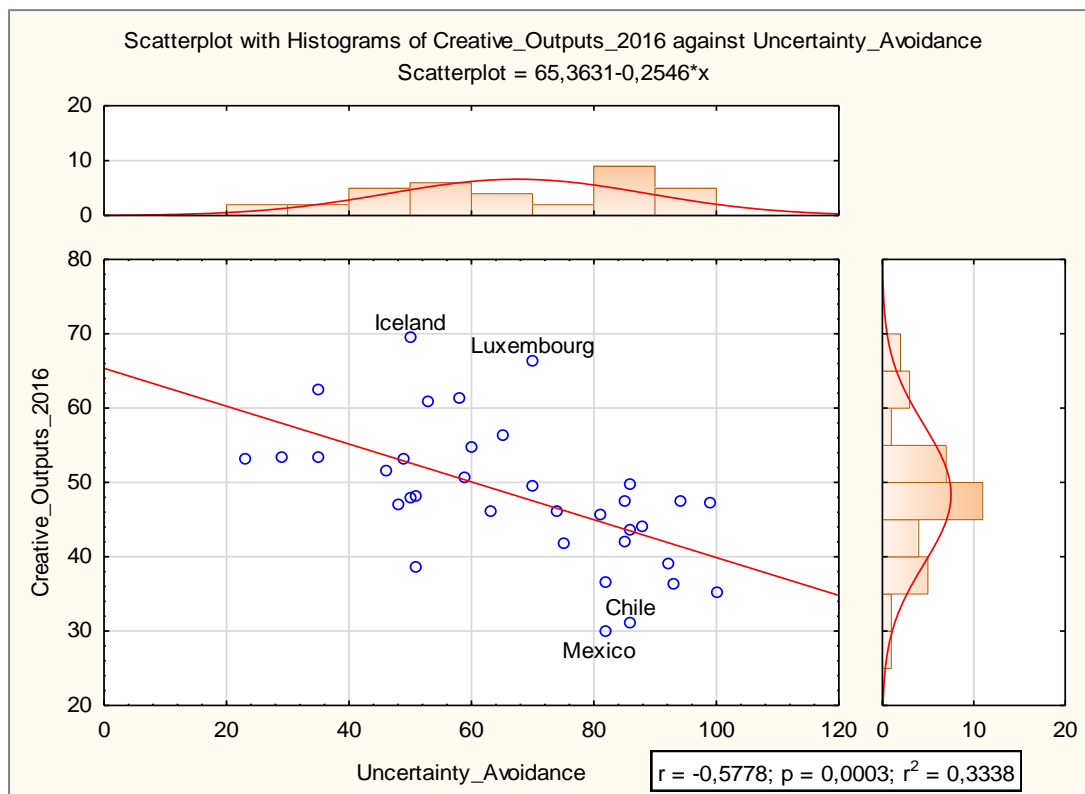
Source: Own processing

CONCLUSION

The aim of this paper was to study what factors may have influence on creativity and consequently the success of nations in international competition in the era driven by new forms of automation. We focused on the role of culture and verified the influence of particular national cultural dimensions defined and quantified by Hofstede. We analysed the relationship between culture and the level of creative output on the sample of OECD countries because they represent a relatively homogeneous group of countries. We found that countries with higher level of Power Distance, Uncertainty Avoidance or Masculinity show lower level of creative outputs. On the contrary, with higher level of both Individualism and Long-term Orientation, the level of creative outputs increases. The relationship between Indulgence and the Index of Creative Outputs is statistically insignificant, indicating that the cultural dimension of indulgence does not influence the level of creative outputs. For further research, we recommend to study the influence of culture on creativity within specific countries and consequently formulate recommendations for the policy of governments as well as the for business sector in order to increase the efficiency of economic outputs. In this context it is useful to point to the fact that in the literature culture is mostly considered to be rigid. However, some authors (e. g. Akanji, 2017) suggest changes in educational system in order to influence national culture.

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Mobile Health – Attitudes for Using Mobile Applications Designed to Monitor Health. The Study of Consumer Behaviour of Seniors and Generation Y

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Abstract: Mobile refers to the practice of medicine and public health supported by mobile devices such as mobile phones, tablets, personal digital assistants and wireless infrastructure. Within digital health, mHealth encompasses all applications of telecommunications and multimedia technologies for the delivery of healthcare and health information. Mobile health applications process a wealth of information about a person's lifestyle. This article presents partial results of the research aimed at identifying attitudes towards the use of mobile applications for health check. Data are based on primary research that has been done on the selected segment of seniors and Generation Y. The analysis of research results shows that attitudes towards mobile health are rather neutral to negative in the generation of seniors compared to Generation Y.

Keywords: mHealth, Senior, Generation Y, Consumer Behaviour

JEL Classification codes: M31

INTRODUCTION

Smart devices and wearable technologies are becoming increasingly popular throughout society. The increased penetration of smartphones and expanding wireless network coverage provides digital health systems with new possibilities to address challenges associated with accessibility, quality, effectiveness, efficiency and cost of healthcare.

The market for mobile apps has developed very rapidly in recent years to become a key driver of mHealth. It's no surprise that the number of individuals using these devices to monitor and manage their health is now in the hundreds of millions.

Mobile Health refers to the concept of mobile self-care – consumer technologies like smartphone and tablet apps that enable consumers to capture their own health data, without a clinician's assistance or interpretation. The survey World Health Organization (WHO) showed that one of the more recent healthcare drivers in the EU is that of systems, which promote personalized care through wearable, portable, or implantable systems and give patients a more active role (celled personal health systems). (WHO, 2011)

Deloitte's research has shown that over 260 000 existing mobile apps for health monitoring use at least about 70% of people around the world. (Deloitte, 2017) The market of mobile health apps, mobile solutions via connected devices (such as cardiac monitoring, diabetes management devices), health and wellness apps (focusing on exercise, weight loss, sleep and meditation) and medical reference apps is expected to grow to $20.7 billion by 2018. (COCIR, 2013).

The goal of the paper is to present the partial results of research study aimed at identifying attitudes towards the use of mobile health-control applications and related consumer behaviour in the selected segment of seniors and Generation Y.

1 LITERATURE REVIEW

The healthcare systems in Europe are facing new challenges such as the ageing of the population, and increased budgetary pressure. According to the World Health Organization (WHO), the aging population is increasing faster than any other. (WHO, 2011) The global population aged 60 years or over numbered 962 million in 2017, more than twice as large as in 1980 when there were 382 million older persons worldwide. The number of older persons is expected to double again by 2050, when it is projected to reach nearly 2,1 billion. In Europe, 25% of the population is already aged 60 years or over. That proportion is projected to reach 35% in 2050 and to remain around that level in the second half of the century. (United Nation, 2017) This means that healthcare expenditure is expected to grow to 8,5 % of GDP in 2060 (from 7,2% in 2010) as a result of demographic ageing alone, and to higher levels if additional factors are taken into account. (COCIR, 2013)

In this context, mHealth could be one of the tools to tackle these challenges by contributing to a more patient – focused healthcare, and supporting the shift towards prevention while at the same time improving the efficiency of the system. In recent years mHealth has emerged as a complementary way of delivering healthcare building on the ubiquitous connectivity of mobile networks and the proliferation of smartphones and tablets. Attention to prevention has the potential to improve people's quality of life and even extend life expectancy and could be accelerated by finding novel ways of promoting "healthy behaviours".

1.1 Mobile Health

Mobile Health (hereafter "mHealth") is a sub-segment of eHealth and covers medical and public health practice supported by mobile devices. It especially includes the use of mobile communication devices for health and well-being services and information purposes as well as mobile health applications. (Boehm, 2011)

As defined by WHO, mobile health includes *"medical and public health practice supported by mobile devices, such as mobile phones, patient monitoring devices, personal digital assistants (PDAs), and other wireless devices."* (WHO, 2011)

It also includes applications (hereafter "apps") such as lifestyle and wellbeing apps that may connect to medical devices or sensors (e.g. bracelets or watches) as well as personal guidance systems, health information and medication reminders provided by sms and telemedicine provided wirelessly. Prominent examples of apps are communication, information and motivation tools, such as medication reminders or tools offering fitness and dietary recommendations.

Benefits of mobile Health

There are many advantages of using mHealth, including its versatility across all areas of healthcare and its potential to improve the health monitoring of at-risk patients. Trough sensors and mobile apps, mHealth allows the collection of considerable medical, physiological, lifestyle, daily activity and environmental data. In this respect, mHealth is not intended to replace healthcare professionals who remain central to providing healthcare but rather is considered to be a supportive tool for the management and provision of healthcare. Mobile

Health solutions support the changing role of patients from a rather passive, to a more participative role while enhancing their responsibility over their own health through sensors that detect and report vital signs, and mobile apps that encourage them to adhere to diet and medication. It can also raise citizens' awareness of health issues through easy-to-understand information about their health condition and how to live with it, thus helping them take more informed decision on their health.

A study (2011) revealed that only 23% of consumers have used any sort of mHealth solution. 67% said they would like to do "nothing at all" on their mobile phone in support of their health and 77% had never used their phone for health-related activities. (Boehm, 2011)

According to the IMS Institute for Healthcare Informatics (2013) for consumers are very popular applications used to appropriate diet, exercise end other wellness, but it is questionable whether the most of them do more than provide information.

The US Food and Drug Administration (FDA) estimates that roughly 500 million people globally are already using personal healthcare applications. This number is predicted to grow rapidly to over 1 billion by 2018. (Moyle, 2015)

In 2015, a nationwide research of 1604 cell phone users was conducted in the US to explore the use of medical applications among cell phone owners. This study examined health app usage among a socioeconomically and geographically diverse sample of US mobile phone users. A little over half (58,23%) of mobile phone users had downloaded a health - related mobile app. Fitness and nutrition were the most common categories of health apps used, with most respondents using them at least daily. A fairly large proportion of respondents, however, had not used health apps. Common reasons for not doing so were lack of interest, cost and concern about apps collecting their data. Persons more likely to use health apps tended to be younger, tended to have higher income and greater education, were Latino/Hispanic, and had a BMI in the obese range. (Krebs & Duncan, 2015)

1.2 Seniors

The current seniors are in particular representatives of the generations of Swing (Silent Generation) born before 1946 and Baby Boomers born in 1946 – 1964. Generations of people defined by birth year have similar characteristics in terms of events occurring at the same or similar stage in their life. Two generations are the oldest generations that still live.

According to research (Köppl, 2008, Köppl, 2011), most of the younger people under the definition of seniority (according to WHO, 60+, according to some EU materials already at the age of 50+ end the mature age and the early age begins). The definition of seniors differs, but Herzmann and Petrová (2005), along with other authors, state that the determinants of changes in seniors' life are the life stages of the individual.

Specifics of age-related consumer behaviour are determined in particular by change in values, physical abilities, deteriorating health status, changing mental abilities, and overall change in lifestyle due to change in economic activity. Seniors have the most money spent on food and non-alcoholic beverages, housing, electricity and gas. (Lesáková, 2014) Additional resources are available to cover health care and payments for various products of curative and preventive care.

Kruse et al. (2016) they say that seniors are all the more open to new trends. Two older generations, Swing and Baby Boomers are taking mobile technologies, and some estimate that by 2020, 69% of those over 60 will own the mobile device. While Baby Boomers traditionally did not grow with technology, they cannot be considered unconsciously in technology. In fact, most of Baby Boomer is found in technology and is an active user of the internet and social

media. (Chaloupek, 2014) According to the Pew Research Center, 83 % of younger boomers (51-59) and 76% of older boomers (60-69) use the internet. Despite the high use of the internet. (Chambers, 2016)

The Ericsson ConsumerLab study (2014) revealed that seniors who use communication technologies feel younger, more informed. The report talks about the first generation of seniors using a wide range of communication technologies. Seniors are using modern technology more and more because the current generation of 65 – 75 years old has already been in contact with digital devices during their working lives. On the other hand many older than 75 years of age have not reached the massive introduction of mobile technologies, the internet and computers in their active working lives, so they do not use it extensively or extensively on the day. It is obviously the last generation that does not work at all or very little with communication technologies. (Ericsson, 2014)

1.3 Generation Y

Generation Y (also known as Millennials, Digital Natives, Generation Me, Generation Rent and Echo Boomers) are generational cohort born roughly between 1980 – 2000. Generation Y were born into an emerging world of technology and have grown up surrounded by smart phones, laptops, tablets and other gadgets. They are the first generation in history that have grown up totally immersed in a world of digital technology, which has shaped their identities and created lasting political, social and cultural attitudes.

A study Millennials+ focused on lifestyle, values, beliefs, life attitudes and behaviour of young people conducted by the agency Kantar TNS Slovakia in 2014 on a sample of 1 500 young people aged 12-16 years, showed that generation of young people is not so carefree, as it appears and with technology lives, sleeps and breathes. The study showed that young people live on the internet, spending an average of four hours a day. Thanks to its availability, they constantly communicate and socialize to their friends. Touch screens are for the young, of course, the smartphone owns 78% of them. (Kantar TNS Slovakia, 2014)

In general, Generation Y is known as generating great expectations. It is open to new trend, information and lifestyle.

Gurau (2012) describes Generation Y as selfish, yet environmentally conscious and fascinated consumers' technologies, with spending significantly higher than previous generations. Vokounová (2013) studied the Generation Y values and sees the current "Y" as consumers understanding the eco-challenges but not very willing to change their habits to improve the current state. Many Millennialists not only turn to nature when they are sick but also look at overall healthy living as a way to prevent disease. They want to be in good health. Fitness blogs provide Millennials with constant ideas and information to live a healthy lifestyle. Technology is also constantly coming up with new applications to achieve health objectives. Millennials are the generation most likely to take into account the environment and sustainability when it comes to health. (6 Health Trends Among Generation Y, 2015)

When it comes to finding healthcare providers, they see information from multiple sources, including online research and their large social networks (both online and offline). Because this generation is considered "digital natives", they frequently use telehealth and mHealth applications. This generation wants a personalized experience and the ability to connect with physicians via technology. (Chamber, 2016)

2 METHODOLOGY

This paper presents the partial results of the research study aimed at identifying attitudes towards the use of mobile health-control applications and related consumer behaviour in the selected segment of seniors and Generation Y. Data, which formed the basis for the analysis, were gathered in 2017. The hybrid research, whose partial results are reported, used method of semi-structured interviews that were conducted with more than four hundred respondents of Generation Y and seniors from all region of Slovakia. It was an interview based on prepared scenario where participants had opportunity to respond freely to the questions monitoring their acceptance of new mHealth applications, their attitudes towards health-control applications, and the perception of changes caused by mobile applications in 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 were analysed by qualitative analysis – forming codes using the GTM method), then all interviews (n=422) were analysed again (using the identified codes) and structured to give comparable results.

The research had the aim to answer the following research questions:

Q1: What are the attitudes and awareness of seniors about mobile health applications compared to Generation Y?

Q2: Are there significant differences between seniors and Generation Y to the extent they use mobile health applications?

3 RESULTS AND DISCUSSION

3.1 Attitudes towards mobile health applications

In looking at the answer to the first question, we focused on monitoring attitudes and knowledge about mobile health applications. We were wondering if seniors are aware of mobile healthcare applications compared to Generation Y. The research results in Table 1 have shown, as well as the chi-square test (n = 422, p = 0,000) confirmed that 93,5% of seniors knows no mobile health applications. As can be seen from Table 2 to 97% of seniors did not test mobile health applications.

Compared to Generation Y, 64,4% of respondents recognize mobile health applications and 49% of youngsters have already tested such mobile healthcare applications. Significant differences in knowledge and attitudes towards mobile health applications between seniors and Y generation have been confirmed. (Results in Table 1, Table 2)

Research has shown that 83% of seniors used primarily to control their condition as medical products to use at home (eg. pressure gauge).

We found significant generational differences in the attitudes to the use of a mobile phone for health check, as confirmed by the chi-square test (p = 0,000). Cross-tabulation 3 shows that 69,5% of seniors cannot imagine that their mobile phone check their health status. Compared to Generation Y where 77,5% of respondents can imagine using a mobile phone for monitor their health.

Tab. 1 Cross-tabulation Generations vs. Knowledge of mobile health applications

		You know health mobile apps?		Total
		YES	NO	
Generation Y	Count	143	79	222
	%	64,4%	35,6%	100,0%
Seniors	Count	13	187	200
	%	6,5%	93,5%	100,0%
Total	Count	156	266	422
	%	37,0%	63,0%	100,0%

Chi-square test (p= 0,00)

Source: Author research result

Tab. 2 Cross-tabulation Generations vs. Testing of a mobile health applications

		You have tried mobile health applications?		Total
		YES	NO	
Generation Y	**Count**	109	113	222
	%	49,1%	50,9%	100,0%
Seniors	**Count**	6	194	200
	%	3,0%	97,0%	100,0%
Total	**Count**	115	307	422
	%	27,3%	72,7%	100,0%

Chi-square test (p= 0,00)

Source: Author research results

Tab. 3 Cross-tabulation Generations vs. Use of a mobile phone to control health

		Use of a mobile phone to control health		Total
		YES	NO	
Generation Y	Count	172	50	222
	%	77,5%	22,5%	100,0%
Seniors	Count	61	139	200
	%	30,5%	69,5%	100,0%
Total	Count	233	189	422
	%	55,2%	44,8%	100,0%

Chi-square test (p= 0,00)

Source: Author research results

3.2 The use of mobile health applications

Consequently, we investigated the behaviour of consumers in the use of mobile healthcare applications. The question of how much would they like to have their mobile phone monitor their health. Of the seniors, only 20% said that they liked it, negatively expressed more than 30%, and the rest of the seniors could not comment. More than 50% of respondents Generation Y said positive or very positive about the ability to use mobile apps to monitor their health.

As can be seen from Table 4, only 28% of seniors would be willing to go through a mobile app for nutrition and health care. Compared white Generation Y, up to 62,2% of youngsters were positive. When measuring the statistical significance of the chi-quadrate relationship, the significance of p=0,000 was achieved.

Tab. 4 Cross-tabulation Generations vs. Using Mobile Health Apps

		Would you be willing to use mobile health apps?		Total
		YES	NO	
Generation Y	Count	138	84	222
	%	62,2%	37,8%	100,0%
Seniors	Count	56	144	200
	%	28,0%	72,0%	100,0%
Total	Count	194	228	422
	%	46,0%	54,0%	100,0%

Chi-square test (p= 0,00)

Source: Author research results

Tab. 5 Cross-tabulation Generations vs. Consumer Behavior

		Would you use applications tailored to the consumer?		Total
		YES	NO	
Generation Y	Count	154	68	222
	%	69,4%	30,6%	100,0%
Seniors	Count	58	142	200
	%	29,0%	71,0%	100,0%
Total	Count	212	210	422
	%	50,2%	49,8%	100,0%

Chi-square test (p= 0,00)

Source: Author research results

Statistically significant differences have been confirmed, even when using such mobile applications tailored to the needs of the consumer. It has also been confirmed that only 29% of seniors would benefit from such applications compared to generation Y, where up to 69,4%

of respondents would use such applications. These statistically significant differences were confirmed by the chi-quadratic test, where at n=422, p=0,000. (Results in Table 5)

Research has confirmed that mobile health applications would be used by more university educated consumers, 55% of those with secondary education, of whom 41% would use these applications. It has also been confirmed that these applications would be used by consumers living in cities rather than in country areas. When measuring the statistical significance of the relationship, the significance of p = 0,009 was achieved.

Research has shown that more women (53%) would be advised by mobile applications on dietary and health care issues compared to men. More than 60% of men would not do so. Chi-quadrate test confirms these statistically significant differences in the relationship between men and women (p=0,004).

CONCLUSION

The partial results of research on the selected 60+ and Generation Y ages 18-38 years living in Slovakia gave us a clear answer to both research questions to find out what are the attitudes and knowledge of seniors about mobile of healthcare applications compared to the Generation Y. In context to consumer behaviour, we have identified significant differences between seniors and Generation Y to the extent that they use mobile health applications.

As it emerged from the qualitative as well as the quantitative analysis of the comparison of the examined segments, Slovak seniors do not have knowledge about mobile apps monitors' health. They have never tried them. Compared to Generation Y, where more than half of young respondents know about mobile health applications, they have also tried them. Most Slovak seniors use only domestically-available health products to control their health.

More than half of surveyed seniors cannot imagine watching your health using your mobile phone. Their attitudes towards using mobile applications monitoring their health are rather negative or neutral compared to the Generation Y, who can imagine to monitoring their state of health through mobile applications and even using them. Mobile applications tailored to the consumer, which should help them monitor the health and advice in areas such as diet used by most consumers of Generation Y compared with seniors.

The research also showed that the use of mobile applications in mobile health envision more women than men and the same willingness to show consumers living in cities with a university education.

Mobile health has a new and rapidly evolving area that has the potential to contribute to transforming health care and improving its quality and efficiency. Consider to the low awareness of mobile health applications in Slovak seniors, it will be necessary to increase their awareness by emphasizing the benefits of using mobile healthcare as a way of improving their quality of life and a healthier lifestyle. It is also important that the proposed applications are simple and usable by seniors, not just Generation Y.

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How to Achieve a Unique Online Shopping Experience for Czech Consumers?

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Abstract: Organizations understand that e-commerce is a highly potential sales channel offering many advantagens in comparison to traditional retail. They are also aware of the importance of being online as more consumers have an access to the Internet. It is not a competitive advantage anymore, it is a must. On the other hand, there are retailers, which are forced by market demand to open e-commerce websites. Finally, there are purely online businesses. The one thing that all three parties have in common is the issue of understanding how people shop online to provide the best online shopping experience. The main objective of this article is to shape a profile of a typical Czech online shopper based on an online questionnaire. Additionally, the most common patterns of online shopping behaviour of online shoppers are defined, the main issues, that current Czech e-commerce has to face are identified, and also suggestions for future research are presented.

THE RESEARCH PROBLEM

Retail digitalization is an emerging phenomenon with a great impact on organization's performance. If an organization wants to capitalize on opportunities brought by retail digitalization, they need to fully support it. Organizations understand that being online offer significant cost decrease in comparison to traditional retail and enable different ways of communication to consumers. The way towards effective e-commerce business is not easy and there are several challenges that the organization, if it is a supplier, e-retailer or e-tailer, has to face. One of those challenges is the organization need of re-aligning itself with the customers and their requirements in order to stay relevant for them. It is important that all activities are aligned to achieve the same objective, which is serving the customer (Bones & Hammersley, 2015). If we have a closer look to the Czech e-commerce market, the Czech Republic represents a very small part of global e-commerce business. Digiral buzz words such as e-commerce still sounded quite exotic for Czech organizations only few years ago. Nowadays, the Czech e-commerce market is considered as one of the best performing market with a very high growth potential. In 2017, Czech e-business achieved more than 10 % of total retail business. The Czech Republic is one of the five European countries, which have the highest share of e-business in its economy. Therefore, the growth potential is enormous.

Even though, e-retailers and e-tailers, which operate in the Czech e-commerce market, are very customer-centric and their main goal is a satisfied customer leaving good reviews, they are not able to precisely describe what is the online shopping experience that an average Czech online shopping consumer is looking for. To increase basket size, improve conversion, and drive customer loyalty, e-retailers and e-tailers must evolve the shopping experience to

meet changing consumer expectations (Label Insight, 2017). Czech consumers are a specific and very cautious shoppers, especially when it comes to online shopping. In order to be perfectly customer-centric, e-retailers and e-tailers have to understand how an average Czech consumer shops online, what are the benefits they are looking for and what are the biggest fears that they try to overcome. It is not only about fixing the basics of individual product pages anymore, but the problem is how to improve total online shopping experience from targeting on social media via paid campaigns, entering the e-shop, making purchase, all the way to retargeting in personalized newsletters. Online shopping is a very complex process, but it gives organizations unique data on their customers, which should be used effectively and fully to create unique tailored and personalized online shopping experience.

1 LITERATURE REVIEW

According to the latest studies (APEK, 2017), e-commerce in the Czech Republic is performing very well. For a detailed picture, total e-commerce turnover for 2017 was 115 milliard CZK (Hospodářské noviny, 2018). With this result, Czech e-business achieved 10 % of total retail business with 18 % growth rate, which represents a very important milestone in Czech e-business (Vetyška, 2018). This significant growth is caused by two main reasons: decrease in differences between offline and online shopping and online market penetration by new e-retailers, which have started using e-commerce as an additional sales channel (Braverman, 2018). Another important reason is that Czech consumers trust online shopping much more than ever before (APEK, 2017).

When we look into other European countries and their e-commerce turnover, the best example is Denmark, where e-business represents 24 % of total retail turnover, which is an exceptional example. There is 4.7 million people living in Denmark, who are more than 15 years old, out of which 4.6 million people are regular Internet users, out of which 3.7 million are shopping online (APEK, 2017). Having a closer look at the Czech population, based on the latest data grouped by organizations focusing on Czech e-commerce environment, there is 8 million Internet users living in the Czech Republic out of which 6 million people are active online shoppers (Kašpar, 2018). Moreover, the popularity of online shopping is increasing in the Czech Republic. Only 15 % of Czech consumers made an online purchase in 2007, but the percentage rapidly grew throughout the years – in 2010, 25 % of Czech consumers made an online purchase, and in 2016, over 43 % of Czech consumers made an online purchase. There is only 3 % of Czech population, which is active on the Internet, but they have never made an online purchase (Novák, 2017).

Online shopping is popular not only among young generations, but they still play the most important role for e-retailers and e-tailers. Regarding the persona of the Czech online shopper, the most online active category is aged between 25-34 years and the biggest incentive is price. According to Jan Vetyška, price is a fundamental attribute for 51 % of Czech online shoppers. The average Czech online shopper uses a price comparison tools before they purchase (e.g. Heureka). 48 % of Czech online shoppers always use price comparison tools, but the reason is not to find the cheapest product. There are other important features that consumer expects to find in an e-shop. This statement is supported by the fact that 60 % of them is seaking for transparent and complete product information, its availability and detailed delivery services (Vetyška, 2017). The most popular way of payment is still cash on delivery. However, its popularity is gradually decreasing. Czech online shoppers prefer delivery directly to brick stores, where they personally pick up the order and pay in cash. The number of online shoppers using online payment methods is gradually increasing. The most usual process of online shopping for a Czech online shopper is to search for products or service on their mobile devices and then make purchase by using desktop. The Czech Republic follows the global trend meaning that 60 % of online purchases is made via desktop and 40 % via mobile devices.

Moreover, the popularity of shopping via mobile devices is gradually increasing in the Czech Republic (Novák, 2017).

In terms of categories, the biggest growth was captured within electronics, grocery, clothing and fashion and cosmetics categories, where grocery category grew by 57 % followed by 40 % growth rate of clothing and fashion and 36 % growth rate of cosmetics category (Heureka, 2018). Regarding customer services in Czech e-commerce, one of the biggest strength is delivery service. Czech e-shops offer the same day delivery, which is not very common in any other countries, where e-commerce represents a big part of total retail business. The average delivery time reduced from 5-6 days in 2002 to 2.5 days in 2017 (Novák, 2017). Czech e-shops and their services are high-quality and they rank among the best e-shops within all European market. Moreover, Czech e-shops offer bigger selection of products and services every year.

E-commerce websites are the fourth most visited platform right after news and databases. However, Czech e-commerce market still hasn't reached its full potential and there are opportunities to grow (Novák, 2017). But what are these opportunities and how to use them?

2 METHODOLOGY

For the purpose of the diploma thesis and of this article, a quantitative research approach has been chosen, which is a suitable approach for an analysis of measurable attributes of a large number of respondents. This research method enables to fully picture the image of an average Czech online shopper as well as to understand the perception of online shopping of Czech consumers. The quantitative research method is represented by an online questionnaire to investigate the relevant audience – Internet users. Since the data are collected directly from consumers, this is considered as a primary marketing research. There was no targeted sample of the online questionnaire. Therefore, everyone could have participated in the research. However, this quantitative research does not investigate what is the ideal online shopping experience for an average Czech consumer, but drawing a persona of an average Czech online shopper, which create the basis for starting a qualitative research leading to creation of personalized online shopping experience.

The questionnaire consists of 22 questions. The first question is a screening type of question, which purpose is to eliminate respondents, who are not shopping online. The aim is to find out why they prefer shopping in brick stores rather than shopping in e-shop. These respondents are eliminated from further research as they would not be able to answer following questions to successfully finish the questionnaire or their answers would not be relevant. The crucial part of the questionnaire focuses on questions analysing features of online shopping process and trying to indentify consumer preferences. The first questions are focused on the frequency of online shopping, where respondent chooses from six answers, and type of device they used. Personal computer, tablet and mobile devices are emphasized. Moreover, respondent can type in his/her own answer. The next question is analysing the type of products bought by online consumers. At this point, respondents are exhibited to many different products, that are being sold online, and they can choose minimum of one and maximum of three answers with the possibility to type product or service, which is not offered in the questionnaire. Following questions are more focused on preferences in online shopping, its advantages and disadvantages and influencers of decision-making process during online shopping such as signs of trust and distrust, type of payment and delivery and design of e-shop. There are used dichotomous and multiple choice type of questions nominal and ordinal. The last part of the questionnaire is devoted to identifying type of questions to create profile of respondents, namely, gender, age, place of living, education and level of salary.

Before starting the questionnaire, pilotage is conducted with few respondents. The purpose of this marketing research pre-phase is to modify the questionnaire to make it understandable

for respondents and also to add more options, especially to the questions, where respondents are asked to choose from many offered answers. The questionnaire is created on Vyplnto.cz portal, Czech platform for online questionnaire distribution, and distributed via e-mail and social media platforms such as Facebook, Twitter and LinkedIn. The initial targeted response number is a minimum of 300. Given that the questionnaire is intended solely for Czech consumers, who are shopping online aged between 18 to 60 years old, it is not considered to distribute it in other ways. The assumption is that nowadays most people are actively using or know how to use the Internet.

The biggest limitation of this research is sampling. Most of the respondents are younger people, who it is easier to approach via online tools. On the other hand, older age categories are very difficult to reach due to their limited online presence and digital knowledge. Therefore, results of the online questionnaire can be misleading as the majority of respondents are represented by young categories. Also, no specific target group made up solely of consumers, who are actively shopping online, has been selected. This is the reason why respondents, who are shopping only in stores, were excluded from the research. These three limitations should be considered and diminished when conducting next more detailed and long-term study.

3 EVALUATION OF DATA

During time period from 2.1.2017 – 31.1.2017, 374 responds were acquired in total. However, there is 37 respondents, who were eliminated from further research due to their statement they shop only in stores and do not prefer shopping online. As has been already mentioned, these respondents are not considered to be a subject of the research. As a result, final number of relevant responses is 337. The purpose of the online questionnaire is to evaluate if online shopping behaviour of Czech consumers has shifted from proven price-driven to more convenience-driven type of shopping behaviour. Also, this quantitative research sets a scene for further detailed qualitative research on ideal online shopping experience.

The biggest category of online shopping consumers is aged between 26 and 35 years (43 %). Regarding categories aged over 46 years, which represent 6 % of respondents, they are becoming more confident in using digital tools and the percentage is expected to increase. Due to unequal gender participation, it cannot be identified, which gender prefers to shop online. Finally, how does a typical Czech online shopper look like based on this online research? Because both genders were not represented equally (61 % women and 39 % men), we cannot say which gender shops online more. However, a typical Czech online shopper is aged between 25-34 years with a university degree living in a large Czech city with less than 400 000 citizens. He/she is shopping electronics, shoes, clothes and accessories. In terms of services, he/she spends money on tickets to cultural or sport events. His/her average year online spending is between 11 000 and 60 000 CZK. His/her salary is somewhere between 26 000 and 35 000 CZK and he/she has been shopping online for more than 5 years.

The most preferred way of shopping is a combination of online and offline channels. However, bigger percentage is dedicated to e-shops, which represent a favoured shopping channel by 26 % of respondents, whereas shopping in stores is preferred only by 10 %. Most of the respondents are shopping online at least once in a week and 28 % of respondents is shopping online few times during a week. Even though the biggest decision-making influencer is still price (for more than 50 % of respondents), promotional offers are not perceived as an advantage of online shopping. This can be caused by not enough personalized offers, which are unattractive for consumers. The results on advantages of online shopping are very balanced and most of the respondents perceive online shopping as a more complex way of shopping. It can mean that online shopping is not only about purchasing products online, but they also expect to use and receive additional services (e.g. same day delivery), which is stated

by more than 50 % of respondents. As the biggest disadvantage is considered the impossibility to try out the product when purchasing online (for 61 % of respondents). This is also an opportunity for e-retailers and e-tailers to help consumers find the right product by implementing optimised online merchandising and create new innovative ideas on how to make online shopping more real. Concerning product page, the biggest influencer of decision-making process are reviews. There are many opportunities on how to acquire reviews from the cheapest to the very expensive. Reviews are also marked as the most important sign of credibility. The right product page layout and availability of information are both necessary features of a successful e-shop, which is supported by 86 % of respondents, who left e-shop due to lack of information or unattractive design. Furthermore, design is also an important sign of credibility in positive and negative sense.

Considering the reasons why Czech consumers are shopping online, they differ across all age categories. However, if the results are consolidated, the biggest reason is the advantage of being able to compare prices across many e-retailers and e-tailers at the same time via price comparison tools. The second biggest reason is the comfort of shopping from home with the same day delivery. This advantage is noticed especially among older age categories. Based on the online research, the biggest category, which is purchased online is clothes. Also, consumers purchase electronics, grocery, cosmetics and beauty products. Regarding the biggest influencing factors of online shopping for Czech consumers, reviews scored significantly higher than price and optimized online merchandising. This online word of mouth is very powerful across global e-commerce market, not only in the Czech Republic. The more reviews e-shop has the less traffic e-shop needs to produce. However, when taking a closer look, if Czech online shopper sees the same product in many e-shops, he/she will purchase the one with the lowest price. In this case, reviews scored as a second most important decision-making influencer. Czech e-shops offer a wider selection of products and services than in brick stores and this is the reason why respondents prefer to shop online.

What is still being the biggest concern of Czech online consumers? Online shopping is still connected to fraud and it is considered as a risky activity in the Czech Republic. The most concerned category are Czech consumers, who grew up in the era without the Internet and were shopping in traditional brick store. In addition, Czech consumers take the risk of online fraud very seriously. Due to this caution, a very small number of Internet users among older category of Czech online shoppers has been found. There are also few disadvantages connected to online shopping among online consumers such as impossibility to physically try the product out together with possible problems related to product return or exchange. An interesting drawback of e-commerce stated by 30 % of respondents is a the uncertainty of product image being in compliance with the real product they get. Misuse of personal data while online shopping is another issue connected to e-commerce, which is also a focus of many legal and legislative institution. It is perceived as a disadvantage by 25 % of Czech online consumers.

4 CONCLUSION AND RECOMMENDATIONS

The main result of the quantitative research indicates that there is still a tendency of Czech online consumers to consider price as the most influencing shopping factor of their decision-making process when shopping online. However, Czech consumers are seeking comfort and convenience while shopping and online shopping represents the most convenient way of shopping for them. On the other hand, price still plays an important role, therefore the importance of price comparison tools is still very high. Another issue is that distrust has a negative effect on perception of online shopping. However, online shopping is being more popular on the Czech market. Moreover, Czech consumers express more positive attitude towards online shopping. This statement is supported by the following facts. The most

preffered way of shopping is a combination of online and offline channels. However, larger percentage is dedicated solely to e-shops, whereas shopping in brick stores is preferred by smaller number of consumers. Also, most respondents are shopping online at least once in a week. This frequency is a very positive indicator for future growth of Czech e-commerce. Regarding age categories, the most important result is that it is expected that percentages of all age categories are going to change very quickly due to an increase in technology and Internet literacy, because people see online shopping as a great tool to save time and they feel the urgency to know how to shop online or using digital tools in general. Also, positive reputation of Czech e-shops is increasing, which can be seen in a slight decrease of concerns regarding online payments among Czech consumers in all age categories. Respondents put emphasis on reviews as an important factor while online shopping. Also, e-retailers and e-tailers are more aware of a need to collect reviews and provide online shoppers with more product information. Both of these have an immense impact on online shopping experience. The biggest disadvantage is the inability of try the products out.

Now, when the persona of a Czech online shopper is visualized and the most important features of online shopping has been identified, the next step is to completely portrait his/her desired online shopping experience by conducting detailed qualitative research. The suggested main objective of an ideal shopping experience is to grow basket size, improve conversion, drive repeat visits and loyalty by optimising online shopping experience.

5 FUTURE RESEARCH

The phenomenon of customer online shopping experience appears to be a massive focus on e-commerce agenda. The objective of improvement of online shopping experience cannot be achieved by simple quantitative online research. To further analyse online shopping behaviour of Czech consumers, e-commerce user experience research is highly recommended. User experience research is recommended to be a one-on-one usability testing, diary-based longitudinal study, where people will be recorded and watched when shopping online. This will give the full and real online shopping experience. The researchers will track what visitors (online shoppers) do on the website, at what they are looking, where they spend most of their time and how they are engaged with the website. Finally, after evaluation all the date acquired during this research, the organization will be provided with the following information:

1. Key usability findings
2. Guidelines for acquiring customer interest and how to encourage them to browse throught the website
3. How to give customers the product information they want to see, at the right time and at appropriate level of detail
4. How to increase e-commerce transactions given by simple checkout experience
5. How to design search to simplify search process for a customer and increase profitability
6. How to help customers to feel confident when shopping online
7. How to get customer to easily find your e-shop
8. How to improve customer service and increase customer loyalty
9. How to collect data and use them correctly

This quantitative research will outline detailed recommendations for significantly improving online shopping experience, drive traffic, increase conversion and support consumer loyalty.

Another area for a detailed research is online shopping via mobile devices also called m-commerce and what is the potential of m-commerce in the Czech Republic. According to the results from the quantitative research, 22 % of respondents are shopping online via mobile device in comparison to 63 % of respondents shopping via desktop device. However, some e-retailers and e-tailers register an enormous shift from desktop online shopping to online shopping via mobile devices in the last few years. In 2012, it was only 13 % of people who were able to access the Internet via mobile. In 2017, it is more than 50 % of them. Also more than half of online visits in the Czech Republic are made via mobile phone. Globally, approximately 60 % of online purchases are coming through desktop devices and 40 % through mobile devices. Therefore, m-commerce has the potential to become the preffered channel for online shopping in the Czech Republic (Novák, 2017). M-commerce is changing online shopping habits of online consumers. Therefore, every e-shop has to be aware of making mobile shopping experience as user friendly as possible. This can be done by making e-shops easily accessible and user friendly for mobile users. It might sound basic, but the main issue of current m-commerce is that websites are not fully mobile optimized. Missing out this simple feature often means losing online shoppers and losing sales. M-commerce may look like a cliche, but it is still not properly handled by Czech e-commerce market and therefore, mobile shopping experience research is recommended to be included within total e-commerce user experience research.

Innovative future trend for Czech e-commerce market is voice commerce, currently being a hot topic in leading e-commerce countries such as the United Kingdom or Denmark. There is a great buzz around chat bots, digital voice assistants like Alexa or Google Home. These tools represent a new shift in e-commerce development worldwide, but it is only a matter of time when this trend penetrates the Czech e-commerce market. Given the Czech consumer's rising level of comfort, it is the right time to get a head start and prepare for another wave of digital development, because widespread adoption of voice commerce is inevitable. More imporantly, it is a massive opportunity to grab. People has already discovered the massive convenience, ease and speed of voice commerce and it is expected that they start relying on it when shopping online. How to make voice commerce work for Czech e-commerce is a question that should be further examined and is recommended to be included within total e-commerce user experience research.

Finally, how the nearest future e-commerce in the Czech Republic will look like? Online shopping will not completely replace traditional way of shopping in brick stores, even though the number of online shoppers is expected to increase as well as number of online stores. Most of Czech e-businesses are not planning to invest money into building new brick stores or even increase the size of their current brick stores. This fact shows that building brick stores would constitute disadvantageous investment because of the success of e-business. The importance of e-commerce is going to grow and online shopping experience of Czech consumers will represent an important component. That's why online shopping behaviour will vary and change due to quickly changing e-commerce environment. The e-commerce environment is very specific in the Czech Republic. There is many small e-shops rather than few big ones that would dominate the e-commerce market. Therefore, Czech e-commerce market is not as much saturated as the Western European e-commerce markets, where the e-commerce market is very competitive. On the other hand, the percentage of online shoppers in Eastern European countries is very low, so it represents a high potential market for all e-retailers and e-tailers. The other opportunities for Czech e-shops are seen in optimization of current communication channels, especially social media, as well as trying out completely new channels. Currently, the biggest concern for e-businesses is Czech legal and legislative authorities, which are making data acquisition processes even more challenging. Another opportunity/concern is a possibility of new giant worlwide e-commerce players to enter the market (e.g. Amazon).

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Benchmarking Central European Rail Freight Transport

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Abstract: Strategies supporting sustainable development of rail freight transport are widely respected. Their future visions were accurately described in the EC´s White paper from March 2011. Despite continuous investment and constant development of rail freight transport in Central Europe there is a significant role of limiting factors. For this reason the research question of this paper focuses on an analysis of available resources pointing to shortcomings and potential for performance improvement. Benchmarking is used as a tool to compare performance levels of rail freight carriers in Central European region and of best performing rail freight carriers in other EU states. The paper points out the persistent differences in efficiency of activities of rail freight transport providers operating in Central Europe.

INTRODUCTION

Cross-border transport is important for the operation of the EU single market and is crucial to fulfil freedoms set down in the EU principals - the free movement of goods and provision of service across the Union. The adopted rules give all transport service providers equal access to all national markets within the EU. However slow the process of integrating national transport providers into the European structure was, as Member States were unwilling to give up national control, in recent decades, integrated transport has become one of the most important areas where the EU has played an important role. Rail freight transport is one of the key areas of the common European transport policy. The ability to move goods safely, quickly and cost-efficiently from one market to another is important factor for the development of international and domestic trade and economic growth. The rapid increase in global trade and the deepening integration of the enlarged EU, alongside a range of new economic practices (just-in-time deliveries), may explain the fast growth of freight transport within the EU.

Rail freight transport is doubtless more efficient than the other means of transport considered in terms of ton-kilometers hauled per unit of energy consumed. However, moving goods by rail often involves trans-shipment costs, particularly when the shipper or receiver lacks direct rail access. The above mentioned disadvantages are compensated by the effort of carriers to exclude the reloading of the goods through different special techniques such as unit trains or containerization. In many countries, railroads are built and used to transport one type of goods or one commodity from one specific inland point to another, usually to an ocean port. Special rail freight cars are frequently used for this type of transport. The freight trains are very efficient, energy saving and environmentally friendly, but their usability is reduced by lack of flexibility.

The volume of goods transported in the European Union by rail has been relatively stable in the last two decades and regularly achieved the volume of about 400 billion ton-kilometers

per year. Having regard the growing volume of goods carried by road, the importance of the rail cargo transport gradually decreases. Rail freight transport ensure currently about 10% of the total volume of cargo transport services in the EU. Despite the many measures taken to enhance the position of rail cargo transport, the development of this transport branch is not satisfactory. The current situation is accurately described by the European Court of Auditor´s report of 2016, which has a concise title: "Rail freight transport in the EU: still not on the right track". However, the rail freight transport has seen a number of positive changes over the last 20 years, such as increasing transport volume of high-quality goods or standardized units (containers). Wider usage by customers, however, is still limited by lower flexibility of transportation corporations, lower productivity of labor and higher freight charges, comparing with the road transport.

The aim of this paper is to examine the situation in the railway cargo transport in Central Europe and to determine the factors that have a major influence on its further development. The research question in this article is asked as follows: How efficient are Central European rail freight carriers compared with each other? The article is based on the analysis of the rail freight sector in Central European countries, namely: the Czech Republic, Slovakia, Poland, Austria and Germany, the Hungarian railway freight transport is intentionally excluded from the analysis, as it is provided mostly by the Austrian freight carrier. The above-mentioned analysis of the current situation is carried out using the benchmarking method, the trends are only named with regards to the limited scope of the paper. For answering the research question only publicly available data are used.

1 LITERATURE REVIEW

Rail freight transport in Central Europe

At first glance the position of rail freight transport in Central Europe is relatively favorable comparing with the other EU Member States. While the average share of rail cargo transport in the total volume of freight transport in the EU is around 17.5%, this share is above average in all Central European countries – 17% in Poland, 20% in the Czech Republic, 20% in Slovakia, 21% in Hungary, 23% in Germany and even 42% in Austria (The European Court of Auditor´s report, 2016). This positive situation is surely caused by long tradition of this kind of transport in Central Europe.

Rail transport in Central Europe is characterized by technical and infrastructural diversity, due to the tradition dating back to the middle of the 19th century. Rail freight carriers in Central European countries have undergone similar historical developments, all of them were originally state owned. This position has resulted in a lack of international integration and has reduced their chances of offering flexible, reliable, and efficient services. Cross-border traffic is also complicated by different forms and voltages of electric traction, different track gauges, incompatible signaling and warning systems varying from country to country and lengthy border checking. The technical level and quality of the railway network was largely influenced by the Second World War and the creation of the Iron Curtain throughout Central Europe. For this reason, the railway network in the western part of Central Europe is better maintained and technically better equipped.

In recent years important changes in European rail freight transport have occurred, such as containerization, increase in the use of unit and shuttle trains, which are characteristic for Central Europe as well. However, in spite of these transformation, it is still difficult to improve the competitive position of rail freight transport. It was proved that rail freight market share increases are closely related to the level of service offered, particularly with respect to transit

times and reliability of arrivals (Ferreira, 1997). The significant reductions in transit times require large increases in both the number of connections and the operating costs, as well (Keaton, 1991). The high frequencies of trains have also contributed to a strong performance for rail freight transport in some countries, for example in Austria and Switzerland (FitzRoy and Smith, 1995). The factors that may hamper the development of new rail freight markets were also identified, as for example insufficient network connectivity or limited track capacity for freight movements (Barthel and Woxenius, 2004). All of mentioned studies reveal that it is difficult to improve the competitive position of rail freight transport and underline an urgent need for seeking ways to improve the efficiency and effectiveness of current rail freight transport operations.

The market of rail transport services could be divided according to the mode of transported freight as follows:

- The dry bulk sector includes cargo transport, which is shipped in large, unpackaged amounts as for example gravel, sand, coal, recyclable waste, wood and agricultural products.
- The liquid bulk sector (or tanker transport) shipping mainly chemicals and fuels.
- The sector of intermodal transport unit includes ISO containers, semi-trailers on railcars, the rolling road (transport of complete trucks and trailers by train), and swap bodies (lightweight containers of relatively low tare weight).
- The railcar loads sector that ensures transport of large parts and semi-manufactured articles, as for example structural steel, cars, agricultural machines (Community of European Railways, 2003).

Tab. 1 Rail freight transport in Central Europe

	Czech Republic	Slovakia	Poland	Germany	Austria
Total length of railway lines in km	9 463	3 626	18 429	33 380	4 417
Land area in mil. km^2	77 210	48 086	306 190	348 900	82 523
Population in mil.	10,561	5,429	37,948	82,668	8,747
Rail freight transport in mil. tkm (∗)	15 261	8 439	50 603	112 629	20 266
Total GDP in mil. €	195 305	89 769	471 364	3 477 796	390 800

Source: Eurostat 2015(∗), 2016.

The rail freight transport market can also be analyzed on the basis of the provided transport services. Following types of services are usually offered:

- Shuttle trains are composed mainly of maritime containers that operate at regular time intervals between always the same places of uploading and unloading.
- Mixed trains provide movement of continental containers, trailers on the railcars, packaged agricultural products, loose materials and cars. These types of trains are composed of several relatively smaller shipments that together form a train.
- Unit or block trains transport usually chemicals, oil, ore, coal and another dry bulk, and heavy loads, as well. This type of trains operates only for movement of a single client's

cargo. For cost consideration the minimum length of these trains is about twenty railcars. The advantage of their use is in the offering of shorter departure-to-destination transit time, as no trans-shipment during the transport is needed (Konings and Kreutzberger, 2001).

The basic characteristics of the railway network in Central European countries are mentioned in Table 1.

2 METHODOLOGY

Effectiveness of rail freight transport

A characteristic feature of effectiveness is a direct relation between input, process, output, and result. Input consists of resources such as finances, power, or employees that are given to production means or projects that allows it to be effected. Effectiveness might be measured by comparing the amount or value of goods or services (out-put) with the time and financial means spent on producing them and the number of employees involved in their production (in-put). Process can also be defined as a sum of actions that are carried out in order to achieve a specific result. Effectiveness can be understood as an ability of outputs to satisfy the specific needs of customers, what is the case of rail freight transport as well (Kim and Marlow, 2001). The efficacy assessment in this paper is therefore based on an analysis of selected in-put/out-put indicators and their relationship.

It can be said that the profitability of a transport companies depends on the ability to efficiently use all available in-puts (means of production, labor force) to achieve optimal out-puts (transport capacity, sales). Processes in the freight transport ought to be organized in order to achieve maximum possible results with a minimum possible costs. If a company fails to produce the maximum possible performance at minimal possible costs, it is inefficient. Various reasons may result this situation, for example too many inputs are used or the combination of them is not convenient. The employees may not have motivation to behave optimally, or the shareholders assume that their profits are maximized, while this is not the case. The optimal output may not be reached for the reason of unexpected events (such as weather), state regulations or lack of information, as well (McCarthy, 2001).

Benchmarking of rail freight transport companies

The measurement of efficiency has received considerable attention in recent decades. One of the suitable methods that provides insight into relative efficiency performance is benchmarking.

Benchmarking is a method based on the comparison of selected subjects in the market and determining which one is better and which one is worse in terms of efficiency. To achieve successful results the meaningful indicators must be selected for benchmarking project. The quantity, quality and capabilities of the indicators must be well known and can therefore be used as a basis for comparison. Benchmarking can therefore be characterized as a process of comparing selected indicators across companies and evaluating the results of this comparison. The results of benchmarking are then implemented in the process of performance improvement. (Nenadál et al., 2011) The efficiency analysis used in this paper includes several indicators of effectiveness that provide various views on the operation of rail freight providers. The evaluation of railway freight transport providers is based on relative mutual comparison: which company is the best in rail freight sales, respectively which has the best cost performance.

Benchmarking, originated in 80´s, has gradually evolved into contemporary multiple forms, relying on more complex tasks and making use of international comparisons (Hong et al., 2012). The move towards a holistic approach is supported by Wong et Wong (2008) who analyzed trends in supply chain benchmarking. In this case complex approach always goes beyond the frame of single company. Supply chain benchmarking requires decision-making in collaboration, elaborated strategy, system orientation, and moving towards international standards. Hong et al. (2012) highlight the need to benchmark global industry standards.

Benchmarking studies among rail transport companies have been focused either on the use of benchmarking by rail freight companies (Menachof et Wassenberg, 2000; Islam et al., 2013) or on benchmarking of various performance measures of rail companies (Wiegmans et Donders, 2007; Merkert et al., 2010; Bhanot et Singh, 2014; Sharma et al., 2016; Joo et al., 2017). Depending on what kind of performance measures have been analyzed input and output measures have been used. In the above mentioned studies, following inputs are included: staff (employees), railcars, costs (including rolling stock or working expenses), number of TEU´s and track length. Among outputs, the most often included are: freight-tons, freight tons-km, revenue, sales or net profit, train accidents, punctuality or public complaints. In previous studies, limitations for benchmarking such as data availability, limited number of inputs, limited number of companies involved, various network length operated by national rail transport companies, different work culture among companies and challenges have been identified.

Tab. 2 Inputs, outputs and limitations in benchmarking performance measures of rail transport companies

Inputs	Outputs	Limitations
Employees	Freight-tons	Data availability
Railcars	Freight-tons-km	Limited number of inputs
Costs	Revenues	Limited number of companies
Number of TEU´s	Punctuality	Various network length
Track length	Public complaints	Different work culture and challenges
Traction units	Train accidents	Technical limitations
Number of shuttle or unit trains	Climate protection	

Source: Wiegmans et Donders, 2007; Merkert et al., 2010; Bhanot et Singh, 2014; Sharma et al., 2016; Joo et al., 2017.

The analysis is largely inspired by Wiegmans and Donders study, uses similar benchmarks, but focuses on Central European space and the significant rail freight carriers operating in that area. Overview of selected providers and their basic characteristics are mentioned below:

- ČD Cargo is the largest Czech rail freight provider operating mostly at domestic market with the market share of about 65%.
- ZSSK Cargo operates mainly on the Slovak market and benefits from a dominant position resulting in about 90% of the market share.
- PKP Cargo is one of the largest European freight carriers with a 55% share on the domestic market. The company faces strong competition of DB Cargo on local markets.

- DB Cargo is the most important European rail freight forwarder with 22% market share in European rail cargo transport. The company is also the shareholder of many others European rail cargo providers, the domestic market share is around 50%.
- Rail Cargo Group ÖBB is also one of the leading rail freight providers in Europe relying on the domestic markets of Austria (market share about 75%) and Hungary (market share about 50%).

(Estimation of market shares is based on figures mentioned in the annual reports of 2016.)

3 RESULTS AND DISCUSSION

Efficiency analysis was aimed at comparing the indicators obtained from the publicly available data from largest rail freight providers in Central European countries - the Czech Republic, Slovakia, Poland, Germany and Austria. The initial database consists of five most important Central European rail freight transport companies. Hungary was not deliberately included in the study, as the cargo transport is largely provided by Austrian cargo carrier.

Tab. 3 Rail freight transport in Central Europe – results achieved in 2016

	ČD Cargo	ZSSK Cargo	PKP Cargo	DB Cargo	Rail Cargo Group
Transport performance in mil. t.	65,5	35,6	111,5	277,4	109, 1
Transport performance in mil. tkm	11 282	7 072	28 500	94 698	28 800
Sales in mil. €	435,7	265,4	1 002,5	4 560	2 079
Number of drive units (locomotives) in pcs	859	595	2 361	2 870	1 033
Number of railcars in pcs	24 500	13 088	60 954	84 827	21 533
Number of employees	6 978	5 794	23 000	29 671	8 315

Source: Annual reports of 2016: ČD Cargo, ZSSK Cargo, PKP Cargo, DB Cargo, Rail Cargo Group ÖBB.

Firstly, the benchmarking is focused on employees. The available data show only the total number of employees, their structure (number of drivers, transshipment personnel or management) is not taken into account. Although it would be interesting to enlarge the research to the individual group of employees, the data unfortunately are not available. However, the total number of employees has gradually decreased over the past two decades.

The benchmarking tons/employee suggests that the most efficient is the company that moves the biggest volume of freight to one employee. Good results expressed as a volume of transported cargo in tons do not always mean good performance in overall sales and profit. Consequently, the amount of transported cargo may be more accurately expressed by transport of cargo at a specific distance in tkm/employee. Large volumes multiplied with short distances give the same results (in terms of tkm) as small volumes multiplied with long distances. Rail freight carriers naturally concentrate their activities on large volumes on long distances. In terms of financial results, small volumes on long distances may offer opportunities thanks to less transshipment costs, longer shipment length, and longer driving time, although smaller volumes may be transported by road transport. The sales/employee indicator is decisive for expressing efficiency, although it may be distorted by a number of the

other factors. The ideal result is, of course, maximum sales with a minimum number of employees.

For employees/traction unit, at first glance, it may seem that the value of this indicator should be as low as possible. Sales increase, however, may require an extension of services, which may need a larger number of employees. Minimizing the number of employees/railcar seems to be the optimal strategy for this indicator. However, a strategy focusing on maximum sales may require the enlargement of services, in particular services more employee-intensive. Therefore more customer services may be offered in case of more employees per a railcar

The second step of the benchmarking is focused on the sales performance of the companies. The available data shows the total (domestic and foreign) sales of the companies, not only cargo transport but different kinds of accompanying services as well. Benchmarking does not take into account the requirements of sales, which may be different for bulk transport compared with containers, or serviceability required by small customers compared to large ones. The sales/employee indicator is based on the assumption that the best performing results are achieved by the company with the highest sales volume per employee.

Tab. 4 Comparative indicators, 2016 (absolute numbers)

	ČD Cargo	ZSSK	PKP Cargo	DB Cargo	Rail Cargo Group
Tons/employee	9 387	6 144	4 848	9 349	13 121
Mil. tkm/employee	1,62	1,23	1,24	3,19	3,46
Sales in K €/employee	62,4	45, 8	43,6	153,7	255,4
Employee/traction unit	8,12	9,74	9,75	10,3	8,05
Employee/railcar	0,28	0,44	0,38	0,35	0,39
Sales/ton in €	6,65	7,46	8,99	16,44	19,06
Sales/tkm in eur	38,61	37,53	35,18	48,15	72,18
Sales/traction unit in K €	507	446	425	1 589	2 013
Sales/railcar in K €	17,8	20,3	16,4	53,8	96,5
Tons/railcar in K tons	2,67	2,72	1,83	3,27	5,07
tkm/railcar in K tkm	460,5	540,3	467,5	1 116,4	1 337,5

Source: Annual reports of 2016: ČD Cargo, ZSSK Cargo, PKP Cargo, DB Cargo, Rail Cargo Group ÖBB.

The sales/ton indicator provides some insight into the sales quality. Some authors are of the opinion that cost-effective freight companies (employee performance) are less efficient in terms of sales (Cantos et Maudos, 2001). The data in the table does not confirm this claim. In order to assess the quality of sales, it is necessary to consider not only the transported volume but also the transport distance, expressed in tkm. The sales/traction unit (locomotive) indicator is seemingly understandable and is based on the requirement of maximum sales per unit, but does not take into account the range and quality of the services provided. Rail freight operators report only the total number of traction units in usage. For this reason the benchmarking analysis cannot take into account differences in their technical performances.

Benchmarking focused on railcars is based on their total number, regardless of the type of the railcar (for example covered hoppers, intermodal, tank wagons). It would be also interesting to interconnect type of railcars to traffic mode (coal, containers, intermodal, etc.), type of service (shuttle, mixed or unit trains), but these data unfortunately are not available. The data include only an inventory status, regardless of whether the railcars are actually moving, or are inactive (in repair). They also do not include hiring or leasing transactions. In any case rail freight carriers look after an adequate number and optimal structure of railcars, as increasing of their number usually leads to their less intensive usage.

Comparative indicators were evaluated and the results summarized in Table 5. The paper has been focused on answering the question: How efficient are Central European rail freight transport providers in mutual comparison?

Tab. 5 Comparative indicators - overview of benchmarking position

	ČD Cargo	ZSSK	PKP Cargo	DB Cargo	Rail Cargo Group
Tons/employee	2	4	5	3	1
Mil. tkm/employee	3	5	4	2	1
Sales in K €/employee	3	4	5	2	1
Employee/traction unit	2	4	3	5	1
Employee/railcar	1	5	3	2	4
Sales/ton in €	5	4	3	2	1
Sales/tkm in eur	3	4	5	2	1
Sales/traction unit in K €	3	4	5	2	1
Sales/railcar in K €	4	3	5	2	1
Tons/railcar in K tons	4	3	5	2	1
Tkm/railcar in K tkm	5	3	4	2	1

Based on the vast majority of indicators, it can be said that the highest level of efficiency is achieved by Rail Cargo Group ÖBB. Relatively weaker result, shown by the indicator employee/railcar, may be caused by the fact that Rail Cargo Group provides large number of services related to transport mode Rolling Motorway, quite often used in Austria. Rail Cargo Austria benefits from a dominant position on domestic market and does not have to face local competition, as is the case of DB Cargo. DB Cargo has been solving for many years the consequences of the merger with railway provider from former East Germany, what undoubtedly affected the efficiency of its operation. An excellent performance is in case of DB Cargo also achieved through the activities within all European countries. For these reasons most of DB Cargo results are apparently better than those of the remaining three carriers from Czech Republic, Slovakia and Poland.

As for this three rail freight carriers, their benchmarking indicators are placed on evidently lower level. Relatively best results within these countries are achieved by ČD Cargo. ZSSK Cargo's activities are heavily influenced by the crisis in Ukraine, which has stopped the freight

transit on east-west direction since 2014. The results of PKP Cargo are strongly influenced by the fact that more than a quarter of Polish cargo transport (especially those profitable) is being provided by German carrier DB cargo. The efficiency of both companies is also limited by necessity to convert the track gauge from 1435 mm to 1520 mm when transporting the goods from/to the former Soviet Union countries.

CONCLUSION

The results of this study are based on figures solely obtained from publicly available sources, mostly from annual reports published by large rail freight transport providers, which may be partly distorted. For this reason the conclusions ought to be formulated in a very prudent way.

In any case, the figures point out a significant difference between the results of carriers in the former EU countries - Rail Cargo Group ÖBB, DB Cargo and the results of carriers in the new EU Member States - ČD Cargo, ZSSK, Cargo and PKP Cargo (Table 5).

It can be said that even after the two decades that have passed from the fall of the Iron Curtain, Eastern European carriers have not succeeded to remove all existing technical and economic barriers to the operation of rail transport. The difference is also obvious when comparing the results of Rail Cargo Austria and DB Cargo, where the German company was severely confronted with the consequences of merger with a railway company from the former East Germany. A number of barriers, such as insufficient capability of the railway network, obsolete traction network and signaling equipment, driving units and railcars, lower professional level of staff and many others, have not been fully eliminated.

Another problem of the study results is that not all of the publicly available figures of all the companies are fully accurate and reliable. Some of the in-put figures (such as the number of traction units or railcars) may by distorted by listing the inventory status, not the number of units used in a real operation. This may explain the distortion of the indicators employee/traction unit and employee/railcar. However, as a whole, the figures show the performance of the largest Central European rail freight companies in a sufficiently reliable way. The benchmarking suggests that efficiency improvements are necessary and desirable for some companies, especially from new EU countries. Specific operating conditions between the rail freight providers (e.g. different types of provided services, investments amount, network characteristics) may explain only a part of the efficiency differences between one another.

The paper shows a significant differences in efficiency of analyzed rail freight carriers operating in Central Europe. The results of carriers operating in the Czech Republic, Slovakia and Poland show visible gaps against the competitors in Germany and Austria, which should be removed step-by-step. Mitigating of mentioned gaps will be difficult and lengthy, but possible. The basic premise is to modernize the railway network and increase throughput of selected transport corridors. Another important task is to extend offer and improve quality of transport services submitted by local carriers. Wide implementation of shuttle trains and unit (block) trains should be a matter of course. Significant reserves are also found in the usage of modern logistics means, such as rolling motorways or rolling stock, which significantly increase transport efficiency and are environmentally friendly. An example of their effective usage can be found, for example, in Austria or Switzerland.

Benchmarking, as a method used in this paper, shows only the current situation and does not allow predictions of further development, which may be the topic of the next research. In the forthcoming survey, it would also be interesting to aim an attention on the rail freight transport of Belarus and Ukraine, as important transit corridors for trade with post-Soviet territories and Southeast Asia (including the New Silk road). In these cases, worse availability and usability

of data may be expected. An interesting sight should also be given to the Hungarian rail cargo transport, due to the significant engagement of foreign carrier on the local market, or a view of the Slovenian rail cargo transport with regards to transit traffic to the ports of Koper and Trieste. The research of this kind losses, of course, its Central European focusing.

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Consumer Awareness about Electromobility

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Abstract: The aim of the presented paper is to observe the consumer awareness about electromobility in Slovakia. The basis for identification of consumer awareness in electromobility is represented by the results of primary pre-research that we conducted by the inquiry method through the standardized online questionnaire in August 2017. We focused on three topics: (1) consumer interest in environmental protection; (2) consumer awareness and knowledge about electromobility; and (3) consumer buying behaviour in the context of electromobility development. The paper is dedicated to the analysis of partial results concerning the consumer awareness and knowledge of electromobility. Presented results provide policy makers, car producers, retailers of electric cars with useful information about the key elements of consumer awareness in order to promote the electric vehicles efficiently and to develop electromobility.

INTRODUCTION

Automotive industry is currently changing and the global trends indicate that electromobility is the future of transportation. There is no doubt about mass implementation of electric vehicles in transportation, we only cannot exactly predict when it will happen.

At present, the development of electromobility is accompanied by a number of challenges that still require significant improvement, for example the range, weight and/or lifetime of vehicle batteries. According to Schill et al. (2015), purchasing an electric vehicle also remains a relatively expensive undertaking for customers while the range of available models is limited and the level of acceptance among car users remains largely uncertain. More significant growth of electric vehicle market is limited especially by high purchase price and short driving range of electric vehicles; long charging time of batteries; and insufficiently developed network of charging stations. However, these indicators are being continuously developed and improved.

According to International Energy Agency IEA report (2017), the number of charging stations is rapidly increasing around the world – in 2010 there were only 20,000 charging stations worldwide, but in 2016 the number of charging stations has surpassed 2 million. To foster fast development of electromobility, technological advances in the production of batteries are required. The battery capacity, which determines the electric car driving range, is increasing. At the same time, the prices of electric vehicles decreases. IEA has stressed that the growth of electromobility requires a coordinated support of electric cars and simultaneous investments in the production and distribution of electricity. The benefits of electromobility development do not accrue only to the climate – the reduced level of pollution and noise will also have a positive impact on the human health and quality of life especially in agglomerations and cities. Another important advantage is the decreasing of oil consumption (Sipiński & Bolesta, n.d.).

Electric vehicles have become a new alternative in the automotive industry. The electromobility development is primarily supported by increasing effort to protect environment through emission and noise reduction in agglomerations, by notable technological advances and the growth oil prices (Beaume and Midler, 2009).

Janquera et al. (2016) argue that despite these positive effects, electric vehicles commercializing has been attempted without any important level of success. The advantages of this "green technology" are widely recognized, but the constraints remain. Electric vehicles as a pro-environmental or green technology have to be widely perceived by consumers as more valuable than conventional products (Pickett-Baker and Ozaki, 2008). In order to gain competitive advantage in the long period, the promotion activities have to be focused on the most traditional attributes and environmental aspects at the same time (Jansson, 2011).

Electric vehicles represent innovative technologies powered by electricity from the electrical grid. Based on the used technologies, they are classified into four types: (1) plug-in hybrid vehicles (PHEVs) which are powered by battery electricity for an initial distance and otherwise, they are powered by an internal combustion engine running on petrol (gasoline) or diesel until the battery is recharged; (2) hybrid electric vehicles (HEVs); (3) extended-ranged battery electric vehicles (E-REVs); and (4) battery electric vehicles which are powered solely by electric energy and require regular recharging to operate because they have no internal combustion engine (Wang et al., 2017).

The presented paper contributes to the research on the topic of electromobility in three ways: (1) it provides new information about consumers' awareness of electromobility; (2) it is one of the first published research results in this topic in the Slovakia; and (3) it provides policy makers, car producers, retailers of electric cars with useful information about the key elements of consumer awareness that can help them to promote the electric vehicles efficiently and to develop electromobility.

1 LITERATURE REVIEW

As we mentioned before, the successful development of electromobility and electric vehicle market depends on wide range of factors. There are several reasons to promote the market penetration of electric vehicles. The range of potential benefits goes from operating cost savings, higher efficiency, through greenhouse gas emissions reductions, local air quality improvements, traffic noise reductions to local or national employment effects resulted from the development and production of electric vehicles and the use of domestically-produced electricity (State Government of Victoria, 2013).

To support electromobility and electric vehicle market development, private and public sectors are globally applying various measures that include: (1) financial measures (fiscal incentives) such as fuel and registration tax exemptions, purchase bonuses, state subsidies (ACEA, 2017); and (2) nonfinancial measures such as information campaigns, research funding, the use of bus lanes and restricted parking areas for electric vehicles, etc. We point out that the promotion measures have to meet the expectations of the consumers. Successful measures have to be accepted and appreciated by the majority of consumers. It has been proven that the use of different promotion measures can enhance the market share of electric vehicles substantially by 2030 (Bühne et al., 2015). In general, market-incentive measures are able to prompt consumers to adopt new technologies by means of economic incentives (Popp, 2002; Park, 2015). Various market-incentive measures, including feed-in tariffs, tax credits, subsidies, and carbon trades, are applied in many countries to foster electric vehicles and other green technologies at the market (Zhang et al., 2016).

On the other hand, according to results of some studies (European Parliament, 2010; Tsang et al., 2012; Transportation Research Board and National Research Council, 2013), it is currently necessary to overcome many obstacles and challenges:

- To improve battery technology (costs, energy density, recycling, etc.);
- To solve availability and preparedness of relevant industrial capacity (business models, new vehicle models, etc.);
- To develop charging infrastructure;
- To improve capacity and connectivity of electric grid;
- To solve issues concerning the impacts on energy efficiency and greenhouse gas emissions (electricity mix, load management etc.); and
- Standardization issues (charging plug, billing systems, data protocol etc.)

Some other studies (Beaume & Midler, 2009; Glerum et al., 2013; Bühne et al. 2015; Junquera et al., 2016) identify disadvantages that have been pointed out as obstacles in the development of electromobility: limited range of electric vehicles and the necessary time to recharge the battery, etc. Aggeri et al. (2009) found out that the path to implementation of green technologies in the automotive industry should explore new marketing, technological and business model concepts.).

The above mentioned factors can play a major role for the market penetration of electric vehicles, but the customers' requirements and expectations are the most decisive aspects for electromobility development. According to Bühne et al. (2015), especially customer´s purchase decision determines whether the electromobility will be successful.

Previously published research results show, that potential customers have high expectations regarding the comfort and range of an electric vehicle. Density of charging stations network and financial measures such as tax and energy cost reductions are vital prerequisites in order to convince them to buy an electric vehicle (Bühne et al., 2015).

Hidrue et al. (2011) also insisted that consumers' main concerns about electric vehicles are long recharging time, driving range limitation, and high price. The studies published by Heffner et al. (2006), and Turrentine and Kurani (2007) claim that driving range limitation and vehicle costs - both of which can be caused by the high cost of battery - were major obstacles for higher adoption of electric vehicles over the past years. Results also indicate that the higher a consumer's perception of the price of electric vehicles and the longer charging times are, the less a consumer's willingness to buy a new electric car is (Junquera et al., 2016).

Despite the high level of consumer awareness about electric vehicles, consumers have insufficient information about the costs of electric vehicles. Only one third of consumers think that operational costs of electric vehicles are lower comparing to conventional cars. This lack of information can represent the obstacle for a broad electromobility development. The results also show that a majority of the European consumers adopt a wait-and-see policy: experience, knowledge and trust are important in their purchase decisions. Although, consumers are generally aware of electric vehicles and rather open minded towards them, they are critical about their environmental benefits. Furthermore, consumers prefer lower or average purchasing prices and higher CO_2 emissions to environmentally-friendly cars. Only a small number of consumers is willing to pay a double price in order to have a car with zero CO_2 emissions (Bühne, et al. 2015). This finding is supported by Caulfied et al. (2010) whose research results indicate that consumers purchasing a new car tend not to consider greenhouse gas emissions to be particularly important in their purchasing decisions.

Many previously published studies are concentrated on various aspects of electromobility: current state and trends, opportunities, obstacles and barriers for development (Bühne et al., 2015; Beaume & Midler, 2009; Glerum et al., 2013; Daňo & Rehák, 2018; Aggeri et al., 2009, Schill et al., 2015; Kim et al., 2017; Nosi et al., 2017, Zhang et al. 2016), consumer awareness

and perception of electric vehicles, their technical specifications such as charging times, price, driving range; and/or consumer attitudes toward new technologies (Caulfied et al., 2010; Junquera et al, 2016; Kim et al., 2017; Wang et al., 2017, Nosi et al., 2017; Morton et al.,).

2 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 a method of analysis and synthesis, a method of induction and deduction, abstraction and concretization, but also a 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.

The basis for identification of consumer awareness in electromobility is represented by the results of primary pre-research that we conducted by the inquiry method through the standardized online questionnaire in August 2017. We focused on three topics: (1) consumer interest in environmental protection; (2) consumer awareness and knowledge about electromobility; and (3) consumer buying behaviour in the context of electromobility development. However, this paper focuses on the analysis of partial results concerning the consumer awareness and knowledge about electromobility. Based on the pre-research partial results, the aim of the presented paper is to observe the consumer awareness about electromobility in Slovakia. We set the following research questions:

Are consumers aware about electromobility?

What is the level of consumer awareness about electromobility?

How consumers perceive the impact of electromobility development on environmental protection?

What are the most important barriers of mass implementation of electromobility in passenger transportation?

The questionnaire consisted of 24 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 93 questionnaires. We can consider our results to be representative. We calculated the sample size of 71 respondents with confidence level 95%, margin of error 7% and population proportion 0.9.

3 RESULTS AND DISCUSSION

In this part of the paper, we present partial results of the pre-research which provide us with answers to the research questions and also testify to consumer awareness and knowledge about electromobility.

A total of 93 consumers participated in the pre-research, of which 48 (51.61%) were men and 45 (48.39%) women. In terms of age structure (see fig. 1), there was the largest representation of consumers aged 26 –35 (36, i.e. 38.71%) and 36 –50-year-olds (28, i.e. 30.11%). 18 –25-year-olds were represented by 23 consumers (i.e. 24.73%), and more than 51-year-olds by 6 consumers (i.e. 6.45%). In terms of net monthly household income, there were three levels of income with similar representation of consumers: 22 consumers (i.e.

23.66%) declared €1,501 – 2,000; 21 (22.58%) consumers declared €1,001 – 1,500 and the same amount of consumers (21, i.e. 22.58%) more than €2,500.

Fig. 1 Age structure of respondents

6; 6.45%
23; 24.73%
28; 30.11%
36; 38.71%

- 18 - 25-year-olds
- 26 - 23-year-olds
- 36 - 50-year-olds
- 51 - 60-year-olds

n=93
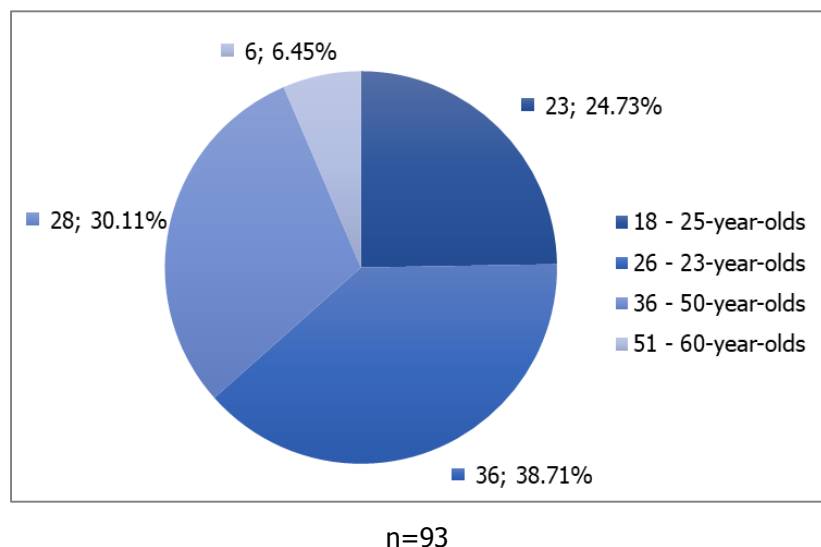
Source: own results

The research results show us that 90% of consumers in Slovakia use car as a means of transport. Furthermore, a half of consumers (51, i.e. 54.84%) use the car for private and business purposes regularly (Drábik & Krnáčová, 2018). We consider these results to be significant for further development of electromobility since more than half of consumers can be potential customers of electric cars in the future.

Are consumers aware about electromobility?

In our pre-research, at first we were concerned on the consumer knowledge of the term "electromobility". As results in tab. 2 show, majority of consumers (80.65%) have knowledge of electromobility. Naturally, it applies for more men than women.

Tab. 2 Do you know the term electromobility?

	Men	Women	Total
Yes	44 47,31%	31 33,33%	75 80,65%
No, I have never heard it before	2 2,15%	3 3,23%	5 5,38%
I do not know / I cannot remember	2 2,15%	11 11,83%	13 13,98%
Total	48 51,61%	45 48,39%	93 100,00%

Source: own results

Through the research, we wanted to find to what extent consumers are aware about and/or interested in electromobility. Research results (see fig. 2) indicate that vast majority of consumers are interested in electromobility. One half of the consumers (50.54%) sometimes pay attention to the news on electromobility and 23.66% of consumers regularly follow up on news on electromobility. In our opinion the declared consumer interest in electromobility represents the primary prerequisite for development of electromobility.

Fig. 2   Consumer interest in electromobility

n=93
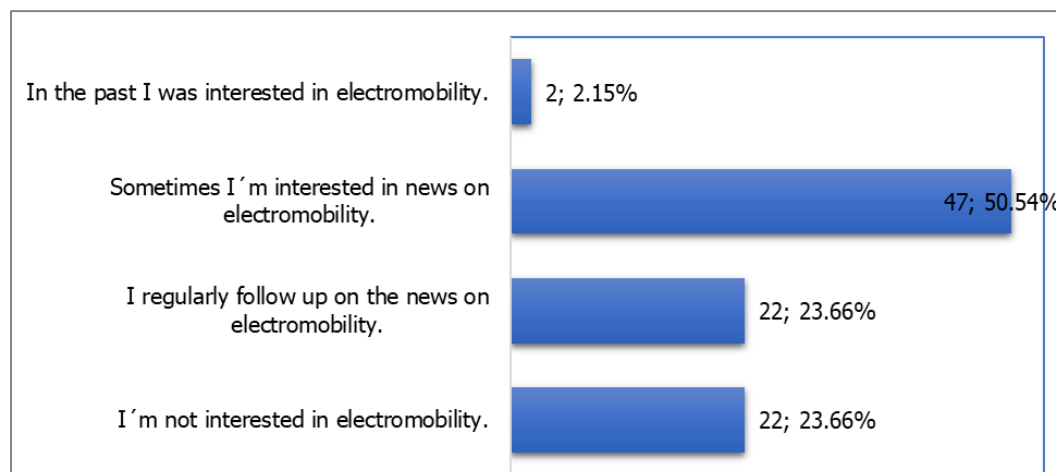
Source: own results

Additionally, 87.10% of consumers know any electric car (see Fig. 3). The data in the tab. 3 show that the most famous electric vehicle brand, respectively car producer is Tesla. Vast majority of consumers (87.65%) reported Tesla as the car producer they know and at the same time, 77.78% of consumers indicated Tesla on the first place.

Fig. 3   Do you know any electric car producer?

n=93
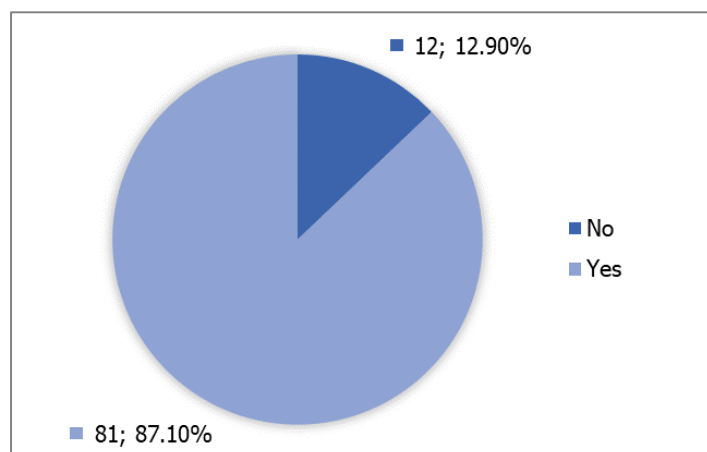
Source: own results

When evaluating the pre-research, we focused on car brands that were included in the TOP5 positions by consumers. Some consumers' answers contained other brands, i.e. Honda, Kia, Lexus, Peugeot or Mitsubishi but they were not included in the top positions. Comparing our results to Junquera´s et al. (2016), the most known brands linked to electric car in Spain are Toyota, Renault and BMW, of which only Toyota and BMW were placed by consumers in the Slovak rankings.

Tab. 3 The most known car brands

Car producer	Number of respondents	Position 1	Position 2	Position 3	Position 4	Position 5
Tesla	71 87.65%	63 77.78%	7 8.64%	1 1.23%	-	-
Volkswagen	21 25.93%	4 4.94%	6 7.41%	4 4.9	6 7.41%	1 1.23%
Toyota	18 22.22%	5 6.17%	9 11.11%	2 2.47%	1 1.23%	1 1.23%
BMW	18 22.22%	3 3.70%	8 9.88%	4 4.94%	2 2.47%	1 1.23%
Nissan	11 13.58%	2 2.47%	2 2.47%	6 7.41%	1 1.23%	-

n=81

Source: own results

Furthermore, 29.03% of consumers declared that they know someone (friends/relatives) who drives electric vehicle. About their knowledge about electric car, the 27% of all respondents have sometimes had experience of driving an electric vehicle.

Fig. 4 Do you know someone who owns and/or drives electric car?

27; 29.03%

66; 70.97%

- Yes, I know some people that drive an electric car
- No

n=93
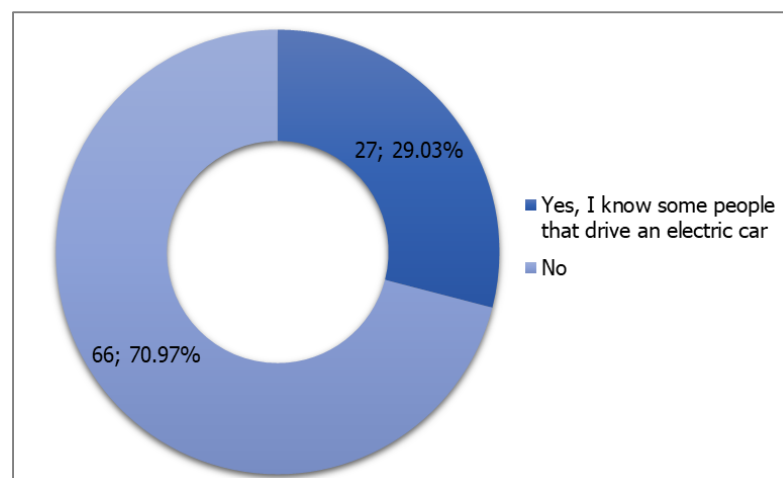
Source: own results

What are the most important barriers of mass implementation of electromobility in passenger transportation?

We have to pay special attention to barriers identified by consumers, to remove them or improve in order to support electromobility. As results in table 4 show, from the consumers' point of view the most important barriers are: (1) high price of electric cars, (2) economic and political interests of mining companies and producers of conventional fuels, and (3) network of charging stations alongside road infrastructure.

Tab. 4 Barriers of the mass implementation of electromobility

Barrier	1 - Yes, certainly	2 - Yes, probably	I do not know	3 - No, probably not	4 - No, certainly not	Average
1 High price of electric cars	52 55.91%	29 31.18%	5 5.38%	5 5.38%	2 2.15%	1.43
2 Economic and political interests of mining companies and producers of conventional fuels	39 41.94%	32 34.41%	12 12.90%	9 9.68%	1 1.08%	1.44
3 Network of charging stations alongside road infrastructure	50 53.76%	34 36.56%	3 3.23%	6 6.45%	0 0.00%	1.46
4 All-electric range of batteries, i.e. short driving range per one charging cycle, too	33 35.48%	43 46.24%	10 10.75%	7 7.53%	0 0.00%	1.51
5 Disinterest of consumers caused by their low awareness about electric vehicles	14 15.05%	31 33.33%	23 24.73%	23 24.73%	2 2.15%	1.65
6 Low power drive	8 8.60%	19 20.43%	20 21.51%	31 33.33%	15 16.13%	2.14

n=93

Source: own results

We pinpoint the results concerning the disinterest of consumers caused by their low awareness about electric vehicles that were evaluated by average value of 1.65. It means that half of the consumers consider disinterest caused by low consumer awareness as one of the most important barrier of mass implementation of electromobility.

How consumers perceive the impact of electromobility development on environmental protection?

We expected that consumers interested in electromobility should know its benefits to reduce environmental pollution. Therefore, we focused on their opinion about the impact of electromobility development on environmental pollution. The results illustrated in fig. 5 reveal that 87.10% of consumer think that electromobility will partially help to reduce environmental pollution by transport. Comparing the results to study of Junquera et al. (2016), Spanish consumers are more critical about the environmental benefits of electric cars. Almost one fourth of consumers agreed that electric cars will not help to solve environmental problems.

The potential of electric cars to reduce (local) air pollution was recognized by two thirds of the consumers.

Fig. 5 Impact of electromobility development on environmental pollution by transport

- 12; 12.90%
- Electromobility will partially help to reduce environmental pollution by transport.
- No, electromobility will not significantly affect environmental pollution.
- 81; 87.10%

n=93
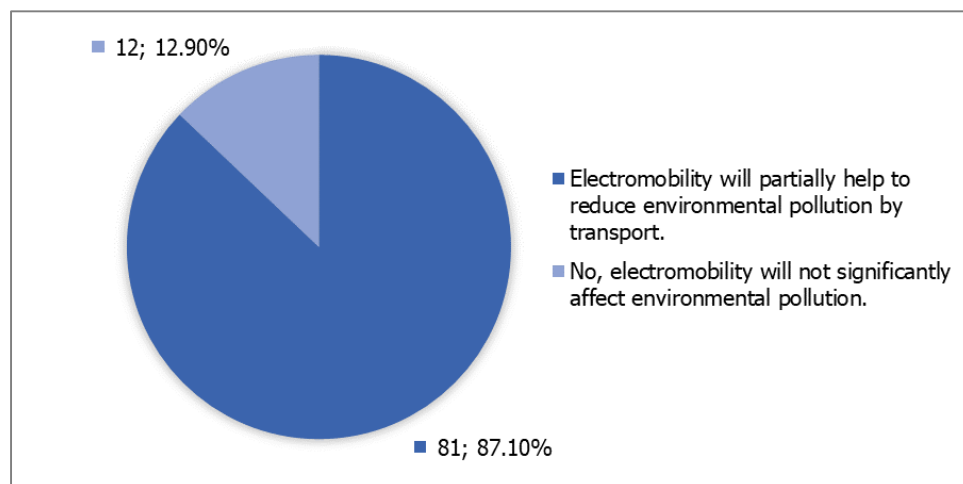
Source: own results

Furthermore, since 60.22% of consumers are interested in energy sources that are used for vehicles drive, we evaluate these results positively (see fig. 6). The fact that their choice does not depend on the used energy source of electric vehicle relates to current trends and possibilities at the car market and/or public transportation. However, we think it is positive signal for electromobility development. The total of 27.96% consumers that do not pay attention to the alternative fuel vehicles correspond to the number of consumers that are not interested in electromobility (see fig. 2)

Fig. 6 Do consumers pay attention to if the vehicles use alternative energy sources?

- 26; 27.96%
- Yes, but my choice does not depend on it.
- Yes, I prefer vehicles with alternative energy sources.
- No, I´m not interested in.
- 56; 60.22%
- 11; 11.83%

n=93

Source: own results

198
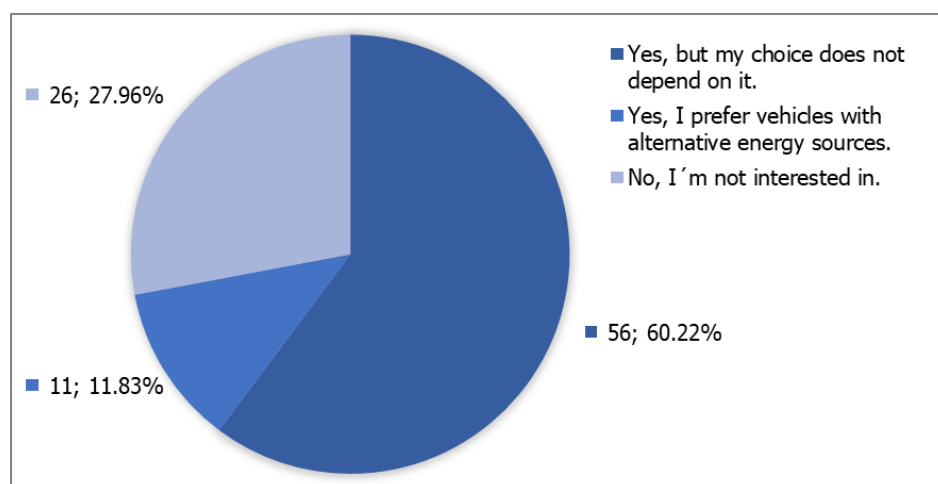
CONCLUSION

Although, there are many published European studies dedicated to various aspect of electromobility development, we identified a lack of information focused on the consumer awareness, knowledge or attitude in the field of electromobility in Slovakia. Therefore, we decided to conduct research focused on consumer interest, awareness, knowledge and their behaviour in the context of electromobility development. It is a preliminary work which is a basis for future deeper research in this field. Based on the results of pre-research, the aim of the presented paper was to observe the consumer awareness about electromobility in Slovakia.

We conclude that majority of consumers (80.65%) have knowledge of the term electromobility. Research results also revealed that vast majority of consumers are interested in the electromobility - 50.54% of them sometimes pay attention to and other 23.66% of consumers regularly follow up on news on electromobility. In our opinion the declared consumer interest in electromobility represents the primary prerequisite for development of electromobility. Regarding the consumer awareness of electric vehicle brands, vast majority of consumers (87.65%) reported Tesla as the most known and at the same time, 77.78% of consumers indicated Tesla on the first place. Furthermore, we expected that consumers interested in electromobility should know its benefits to environmental protection. Vast majority of consumers (87.10%) think that electromobility will partially help to reduce environmental pollution by transport. The result of 60.22% of consumers interested in energy sources that are used for vehicles drive is also positive signal for the growth of electric vehicle market. The total of 27.96% consumers that do not pay attention to the alternative fuel vehicles correspond to the number of consumers that are not interested in electromobility.

In terms of consumer awareness of electromobility development we paid special attention to barriers of mass implementation of electromobility in urban transport. The results indicate that high price of electric cars, economic and political interests of mining companies and producers of conventional fuels, and network of charging stations alongside road infrastructure are perceived by Slovak consumers as the most important barriers. We pinpoint that half of the consumers consider also disinterest caused by low consumer awareness as one of the most important barriers.

Finally, in our opinion, presented results provide policy makers, car producers, retailers of electric cars with useful information about the key elements of consumer awareness that can help them to promote the electric vehicles efficiently and to develop electromobility.

ACKNOWLEDGEMENT

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Importance-Performance Analysis in Customer Satisfaction Assessment

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Abstract: The goal of the paper is to identify the impact of retail attributes on food shopping experience in mature customers segment during their food procurement process, to reveal attributes with greatest impact on the overall satisfaction and finally, to apply the importance-performance analysis (IPA) in assessing complex customer satisfaction. To achieve the research goals a 3-step methodology is applied, starting with identification of retail satisfaction attributes. Second step is devoted to the detection of performance-importance data and final part includes development of an IPA grid and strategies recommended for particular attributes. The special feature of our research involves modification of traditional IPA analysis, based on replacing the self-stated importance by more reliable indicators. The application of the IPA method enables to distinguish between items that add value to summary satisfaction and those items that are perceived by customers to be deficient. Measuring satisfaction by applying the IPA can improve decision-making quality and advice managers where to focus their efforts.

Keywords: customer satisfaction, importance-performance analysis, retail management.

JEL Classification codes: M30

INTRODUCTION

Development of customer satisfaction, as a precondition of survival in a competitive market place, has been discussed frequently in recent years. The emphasis on satisfaction is not only a natural consequence of severe global competition, but also - and predominantly - an essential goal of the whole business. Companies satisfying their customers achieve better results, while those with dissatisfied customers, fail. These findings are valid across various consumer goods (Giese & Cote, 2000), services and store selection (Javanti et al., 2004).

Customers evaluate shopping experiences and arrive at „satisfaction judgments" by comparing what they really get to what they expected (Payne, 2008; Schiffman & Kanuk, 2010). It has been documented (Buttle, 2004), that customer satisfaction is an important factor driving positive word of mouth, repurchase rate and loyalty (Schewe, 1988). Loyalty as a tendency of customers to stay with a store or a brand, is closely related to satisfaction and finally to store profitability. The dissatisfaction of consumers can result in negative word of mouth and lost sales. Giese & Cote (Giese & Cote, 2000) argue that satisfying customers is more important than short term profit goals, because as long as customers are satisfied, the business has a perspective of profit for the future.

The goal of the presented paper is threefold: 1) to identify the attributes with positive and negative impact upon food shopping experience in older customers segment during their food procurement process, 2) to reveal attributes with greatest impact on the overall perceived satisfaction in the segment of older shoppers, 3) based on the importance-performance analysis (IPA) results to propose some recommendations for retail management aiming at better consideration and meeting the expectations of the older people. The key question raised

in our research is „what are the critical points perceived by seniors in their overall shopping satisfaction".

1 LITERATURE REVIEW

Several authors (Goodwin & McElwee, 1999; Lambert, 1979; Lesakova, 2013) define customer satisfaction as the ability of an organization to provide a service performance that exceeds the customer expectations. In order to satisfy consumers, retailers need to understand the particular attributes of satisfaction, because customers can derive satisfaction from diverse satisfaction attributes (Peterson & Wilson, 1992).

Analyzing the customer satisfaction, marketing managers need to be focused not only on individual satisfaction attributes, but mainly on gaining a clear insight into the complex relationships among overall satisfaction rating and various individual performance attributes (French & Gordon, 2015). The purpose of such an insight is to identify the areas (processes, attributes, indicators) that need improvement and that most significantly affect the relationship with the customer. Cronin, Brady and Hult (2000) suggest that any evaluation of customer satisfaction that takes into account only individual attributes, is not complete. A set of attributes provides a complex tool for explaining the different aspects of customer satisfaction in a store in terms of the whole – total – overall experience of satisfaction with a particular store.

Building satisfaction is especially important in the retail sector (Hayley & Lumbers, 2008). Retailers develop their business in a highly competitive environment, where competitors are located in a small distance of one another, knowing that if they do not satisfy customers wants properly, these customers will very quickly find another store that fulfills their expectations (Oates et al., 1996). With regard to food retailing, consumers face an array of stores in which to shop and the level of choice that exists is immense. Therefore the constant feedback from seniors´ attitudes towards the stores where they conduct their purchasing is vital for retailers survival. Satisfaction here is achieved by knowing customer´s needs and requirements, and adapting the processes and systems so that customer expectations are consistently met or exceeded.

However, what appears relatively simple at first sight – asking customers to evaluate the satisfaction with firm´s performance – is in fact much more difficult in practice and companies often find a lack of discrimination in customer responses or highly skewed results (indicating a majority of positive or high satisfaction rates). What seems to be a key problem is determining an appropriate scale for measuring satisfaction (Cronin & Taylor, 1992) and determining the critical performance factors driving overall satisfaction or dissatisfaction.

Particular attributes of customer satisfaction in retailing are represented by the physical, human and operational resources / attributes that impact the customers´ perception of the retail store and that may patronize a specific store (Thang & Tan, 2002).

These attributes include 6 areas:

Products – Attribute Area 1. Following attributes within the category product serve as an attraction to the store: product quality, freshness of products, large product variety, practical packaging. Packaging has an impact on the decision-making process in the purchase, because it determines product image, communicates product information, protects the product, determines shelf life.

Price – Attribute Area 2. Price is one of the most important aspects of satisfaction in older people segment While price is often used to attract consumers, affordability (lower /

reasonable prices) in conjunction with quality, contribute to consumers´ perception of service value.

Promotion – Attribute Area 3. Marketing communication with the aim of advertising store products and enhancing store image belongs to distinctive elements of store attraction (Schiffman & Kanuk, 2010).

Sales personnel – Attribute Area 4. Employees with the courtesy, empathy, experience and knowledge, with a customer-oriented approach, are frequently cited to be a critical factor in encouraging positive word-of-mouth.

Store environment (Place) – Attribute Area 5. The store environment could contribute to customer satisfaction with such attributes as: well organized store design / layout, convenience of store location, comfortable and clean trolleys, pleasant environment, store cleanliness and practical shelf layout.

Processes and services – Attribute Area 6. Customer satisfaction with retail stores involves various additional services such as complaint handling, internet access, free parking places, etc., that contribute to customers´ positive perception of the store. This may even lead to patronizing a store that is not the cheapest, the nearest, or the most impressive (Goodwin &McElwee, 1999).

Crompton & Love (1995) discuss the pragmatic perspective of including in the satisfaction analysis not only the performance of individual attributes, but also attribute importance considerations. They state that valuable insights may be lost to the organization if only performance measures are used. There is the possibility of sub-optimal investment of resources in efforts to improve quality. The authors capture the theoretical perspective, when they conclude that „such investment of resources may only be wise if those attributes are relatively important to customers" (Crompton & Love, 1995).

Our research of shopping satisfaction is focused on the seniors´ age group. The purchase behavior of older consumers differs somewhat from that of their younger counterparts. Several authors (Moschis et al., 2004; Pettigrew et al., 2005; Hayley & Lumbers, 2008) 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. With advancing age seniors experience a decline in appetite, food intake and dietary adequacy (Oates et al., 1996), as well as a decreasing ability to taste and smell, chewing difficulties and limited dexterity. Given the range of noted differences, retailers need to give them serious consideration and use them to differentiate their services to different consumer segments (Lee & Kotler, 2015).

2 METHODOLOGY

To achieve the research goals, we apply a 3-step methodology, starting with identification of attributes that impact the food shopping satisfaction in seniors segment. Second step is devoted to the detection of performance-importance data (attribute´s measures) and final part includes development of an IPA grid and strategies recommended for particular attributes.

The key method used in our research is importance-performance analysis (IPA), which is an assessment technique and tool for management decisions. Our research involves modification of traditional IPA analysis, that may enhance the capability of the traditional approach. The modification is based on replacing the self stated importance (as it is used in traditional importance-performance analysis) by more reliable indicators.

The use of self-stated importance has been criticized by various researchers as an „ambiguous and unreliable concept" (Oh & Parks, 1997). Because of the tendency of customers to rate

almost every factor as important, it is reasonable to determine importance in an indirect way by indicating variables that are significantly related to an overall measure of satisfaction. Statistical techniques like correlation, regression, discriminant analysis have been mainly used for this purpose (Chu, 2002). In our paper we use the association tests between two rank order variables, that is „attribute performance" and „degree of overall satisfaction". To quantify the attribute´s impact on the overall satisfaction, we use the Cramer´s V coefficient (1), which measures the power of an attribute.

Cramer´s V is computed for the contingency table corresponding with the attribute. It is based on the value of the chí square statistic for a table with 5 rows and 5 columns and for a given number of respondents n (n = 466). Cramer´s V will range from 0 to 1. A high value of V indicates a high degree of association. An attribute receives a high degree of satisfaction impact and importance, when the Cramer´s V has a large value, indicating a high degree of association. Perfect dependence between variables corresponds to the case, when V = 1. On the contrary, V = 0 in case of no association between variables.

$$V = \sqrt{\frac{\emptyset^2}{\min(r-1)\,(c-1)}} \tag{1}$$

$$\emptyset = \sqrt{\frac{\chi^2}{n}} \tag{2}$$

In the visual matrix presentation of the IPA results also the placement of the grind-lines in the matrix presentation plays an important role. Interpretation, decisions and subsequent strategy plans are based on the placement of attributes in the quadrants determined by the placement of the grind-lines (Mount, 1997). The strict interpretation is that key main importance in action planning have those attributes that are in the „concentrate here" quadrant. Where the horizontal and vertical axis intersect, will have significant impact on the findings and subsequent responses. Some authors (Martilla & James, 1977) argue that the placement of the gridlines is „a mater of judgment". In case of the absence of low performance and importance scores, Martilla and James (1977) suggest „moving the axes over one position on the scale". Hence, we should keep in mind the relative meaning of the grid´s quadrants, which are: quadrant I: Concentrate here (high importance, low performance), quadrant II: Keep up the good work (high importance, high performance), quadrant III: Possible overkill (low importance, high performance) and quadrant IV: Low priority (low importance, low performance). The quadrants can be used to generate recommendations by differentiating between them.

The questionnaire was distributed to 466 respondents (seniors aged 65+) and consisted of 2 parts. The core part of the questionnaire was respondents´ assessment of the performance of individual satisfaction attributes. On a five-point scale respondents rated their satisfaction with 20 individual attributes (belonging to six areas of satisfaction) in that retail store, where they mostly purchase their grocery products. They expressed the satisfaction with individual attributes in their real life. Mean and standard deviation were calculated for each attribute. In the second part of the questionnaire seniors rated their overall satisfaction with a store (summary measure). They were asked to express on a 5-point scale their agreement with the statement „I am satisfied with a store, where I mostly conduct my food shopping". Finally, the Cramer´s V coefficient of each attribute performance and the summary item „I am satisfied with a store, where I mostly conduct my food shopping", was calculated and used as a derived importance measure for each attribute.

3 RESULTS AND DISCUSSION

Satisfaction analysis aims to identify company performance on a set of criteria (Moschis, 2003). A common way is to compute the percentage of respondents that are satisfied with the particular attribute. However, this information does not reveal customer priorities. If the company wants to identify the areas for satisfaction improvement, then focusing effort on the lowest performance scores may or may not lead to the best allocation of resources. Therefore, also focus on attribute importance in satisfaction development is necessary. By combining the performance and importance scores of the attributes in an IPA matrix, areas with a different impact on overall customer satisfaction can be revealed.

Tab. 1 Performance of satisfaction attributes

Attr. code	Satisfaction attributes	Satisfaction performance	
		Mean	St.Dev.
	Product - AA1		
A11	Freshness of products	4,08	0,66
A12	High quality products	4,12	0,78
A13	Large product variety	4,16	0,55
A14	Practical packaging	3,94	0,78
	Price – AA2		
A21	Lower prices, cheaper products	3,72	0,84
A22	Frequent discounts / sales	3,62	0,80
	Promotion – AA3		
A31	Regular promotions / demonstrations	4,02	0,54
A32	Regular advertising	4,08	0,78
	Personnel –AA4		
A41	Friendly staff with commitment	3,96	0,68
A42	Knowledgeable and professional staff	3,94	0,82
A43	Efficient staff assistance	3,90	0,88
A44	Staff uniform	3,98	0,56
	Physical Store Environment –AA5		
A51	Convenient store location	4,08	0,52
A52	Comfortable and clean trolleys	3,98	0,48
A53	Pleasant environment	3,96	0,92
A55	Well-organized store design / layout	3,98	0,54
A56	Store cleanliness	4,28	0,36
A57	Practical shelf layout	3,91	0,72
	Processes and services – AA6		
A61	Short queues at cashiers	4,00	0,42
A63	Complaint system	3,42	0,60
	Summary item		
SI	Overall satisfaction with the store	4,04	0,56

Source: own calculation

Several scales can be used to measure a customer´s perception of attribute performance (Devlin et al., 1995). The most common way is to indicate the performance on a quantitative scale. Another way is to investigate respondent´s perceptions by using a requirements scale (meets my requirements, exceeds my requirements, deficient – does not meet my requirements) (Myers, 1991). The former method has been applied in our research.

Performance rating of individual attributes of customer satisfaction (Table 1) with the particular store indicates that nearly three quarters of the participants were satisfied or highly satisfied with the performance of the attributes that were: 1) physical store environment: convenience of store location (73, 3 %); cleanliness of store (82,2 %); 2) product-related: quality of products (80,0 %), large assortment (81,2 %) and freshness of products (76,6 %). Most of the product related attributes were rated as satisfying. The majority of older people expressed satisfaction with the range and variety (81 %) of product choice in the store. Similar to this finding, quality and freshness were rated with 80 % to be satisfying. Participants were mostly dissatisfied with price-related aspects and staff in particular. A significant percentage indicates that friendly approach (46,4 %) and politeness (42,5 %) are often disappointing. Unlike to our expectations, store location which is frequently cited in the literature to be a critical factor influencing store choice, was rated in our research positively. Reporting „practical packaging" among lowest performing attributes relates to the quantity of packaged food. The quantities of food normally packaged are mostly reported as being too large for older people with smaller appetites, particularly when the food is bought for one person.

Table 2 presents only the performance means of the ten lowest performing items. In the analysis of this level, the analysts typically work from the „bottom up" in formulating responses and strategy plans. Using this approach, the „top five" items (the lowest scoring five items) for analysis would be: 1) complaint system (3,42); 2) frequent discounts / bargains in store (3,62); 3) lower prices / cheaper products (3,72); 4) efficient staff assistance (3,90) and 5) practical shelf lay-out (3,91).

Tab. 2 Performance means for lowest 10 performing attributes

Attribute	Performance mean
Complaint system	3,42
Frequent discounts /bargains in store	3,62
Lower prices / cheaper products	3,72
Efficient staff assistance	3,9
Practical shelf layout	3,91
Knowledgeable and professional staff	3,94
Practical packaging	3,94
Friendly staff with commitment	3,96
Pleasant environment	3,96
Staff uniform	3,98

Source: own calculation

An analysis of the individual attributes of customer satisfaction reveals the items that display the highest impact on the overall satisfaction, hence considered as important and relevant to improve the outcomes (Table 3), are:

1. product-related: high quality products and freshness of products
2. price-related: lower prices, frequent discounts / sales
3. physical store environment-related: well-organised store design, practical shelf lay-out
4. processes and services-related: minimum waiting time at cashiers.

Tab. 3 Modified importance-performance analysis (MIPA)

Attr. code	Satisfaction attributes	Performance Mean	Cramer´s V
	Product - AA1		
A11	Freshness of products	4,08	0,583
A12	High quality products	4,12	0,606
A13	Large product variety	4,16	0,546
A14	Practical packaging	3,94	0,298
	Price – AA2		
A21	Lower prices, cheaper products	3,72	0,599
A22	Frequent discounts / sales	3,62	0,535
	Promotion – AA3		
A31	Regular promotions / demonstrations	4,02	0,214
A32	Regular advertising	4,08	0,280
	Personnel –AA4		
A41	Friendly staff with commitment	3,96	0,510
A42	Knowledgeable and professional staff	3,94	0,514
A43	Efficient staff assistance	3,90	0,524
A44	Staff uniform	3,98	0,298
	Physical Store Environment –AA5		
A51	Convenient store location	4,08	0,462
A52	Comfortable and clean trolleys	3,98	0,490
A53	Pleasant environment	3,96	0,488
A55	Well-organised store design / layout	3,98	0,579
A56	Store cleanless	4,28	0,440
A57	Practical shelf layout	3,91	0,538
	Processes and services – AA6		
A61	Short queues at cashiers	4,00	0,532
A63	Complaint system	3,42	0,504
	Summary item		
SI	Overall satisfaction with the store	4,04	

Source: own calculation

Two attribute areas have been identified to display the highest importance on seniors´ shopping satisfaction: attribute area price policy (AA2) and attribute area personnel policy (AA4). Price is recognized as being decisive factor to older people, particularly for those with low incomes. Seniors obviously perceive the price of foods to be high not only because of their low pensions, but also because of high tax-level on foods in the country.

Even though the staff and service are crucial and highly important in ensuring satisfaction among customers, the retailer staff were reported with only 16 % with „very satisfied" a 25 % with „satisfied". This is a crucial finding, as poor service and unhelpful staff can have an immediate negative effect on customers and decreases the likelihood of their loyalty to that store. Regular advertising and demonstrations, staff uniforms or practical packaging were determined to be least important.

In order to develop the MIPA grid (Figure 1), the importance values of an attribute will be represented by the V coefficients corresponding with that attribute (on the axis y). The performance coordinate (axis x) of an attribute is given by the value of individual attribute performance. Point of intersection for performance axis x determines value 4 (according the the requirements of retail managers on the performance benchmark) and for importance axis y it is the value of C>0,5.

Fig. 1 Modified importance-performance grid (MIPG)
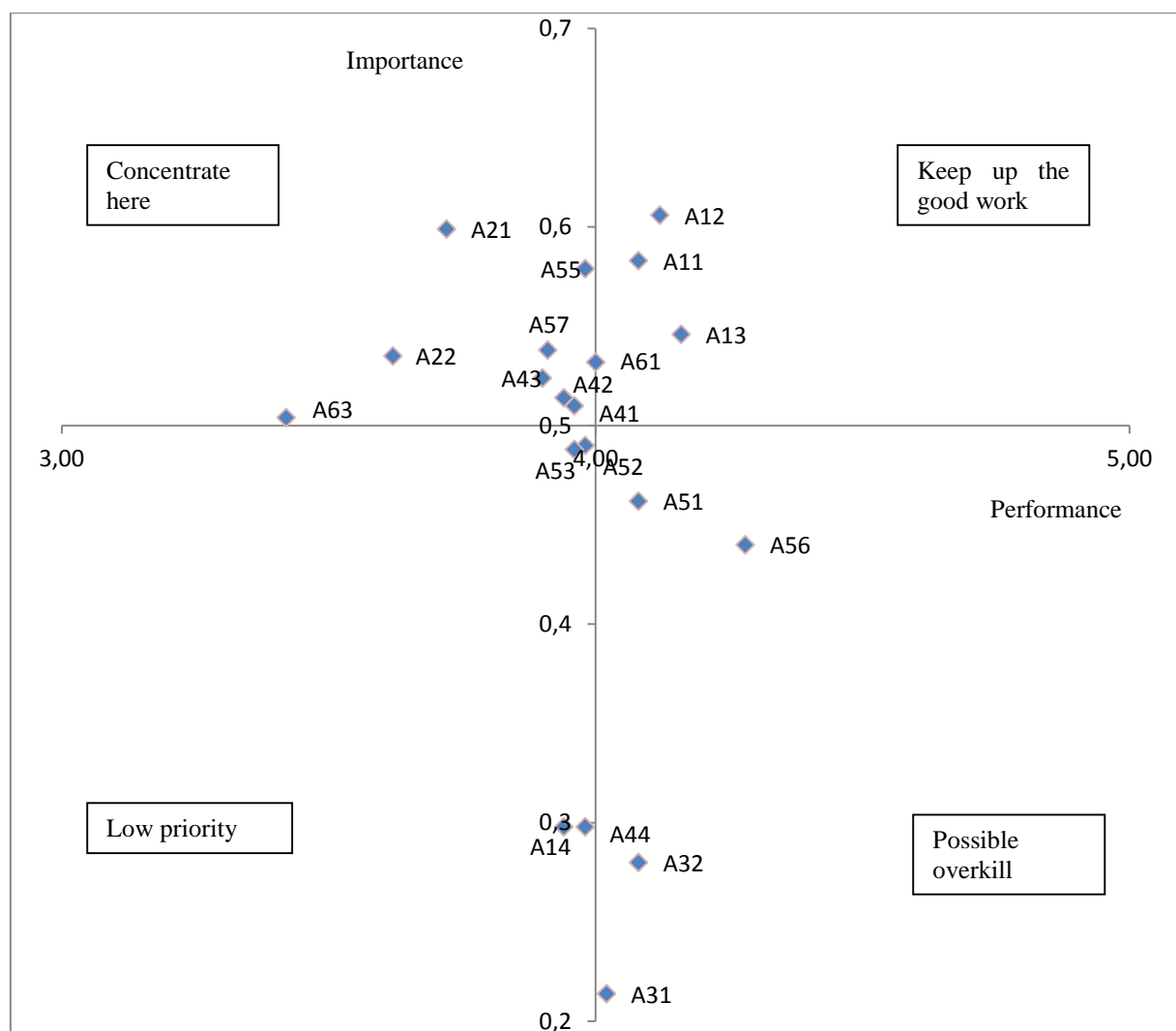
Source: own calculation

In our exploration adding the modified importance measure C to the mean performance of individual attributes resulted in a matrix presentation shown in Figure 1. There are eight attributes that fall into the „Concentrate here" quadrant: 1) lower prices / cheaper products;

2) frequent discounts / sales; 3) friendly staff with commitment; 4) knowledgeable and professional staff; 5) efficient staff assistance; 6) well-organized store design / layout; 7) practical shelf lay-out; 8) complaint system. An analysis that follows strict interpretation would concentrate on these eight items. Seniors perceive these attributes as very important, but the perceptions of performance levels are below average. Therefore further improvement efforts should be concentrated here. It is important to note that not all of the lowest performing items noted in Table 2, are in the „concentrate here" quadrant. Hence, an analysis based on a performance-only presentation would miss some of the items in the „concentrate here" quadrant.

The attributes, where the retail should keep its good position, are the product-related aspects: freshness, quality and broad assortment of foods, as well as short queues at checking points. They are situated in quadrant II „Keep up the good work". All these retail benefits are the strengths of the stores and should keep up the good work in maintaining confidence of their customers, as otherwise, these benefits might risk falling into the „Concentrate here" quadrant.

Low impact of the promotion attributes such as regular advertising or demonstrations, on the overall satisfaction should be taken into account, when considering allocation of resources. (quadrant III „Possible overkill"). Here, the customers are satisfied with the attributes performance, but all the continuous effort in delivering those benefits to the customers will be futile, if customers are already content. Therefore, present efforts on these attributes in this quadrant are questionable and retail managers should consider allocating resources elsewhere, especially on the attributes in the „Concentrate here" quadrant.

Four items were located in the „Low priority" quadrant, with low values of performance and importance impact: practical packaging, staff uniform, pleasant external environment and comfortable and clean trolleys. Any of the attributes that fall into this quadrant possess low importance value and pose no threat to the store.

An analysis using the derived importance-performance method suggests that the issues that are most critical for follow-up retail strategy actions are: 1) price policy 2) personnel policy aimed on professional and polite behavior towards seniors, and 3) effective design and lay-out of the store.

CONCLUSION

In the presented paper the impact of individual store attributes on the overall satisfaction level was explained. An improvement of traditional IPA to modified IPA method was applied improving the satisfaction analysis and revealing in which way determinant attributes affect overall consumer satisfaction in seniors´ segment. The validity of our MIPA methodology lays in the interpretation and identification of the most significant attributes demanding actions by management. In this sense modified importance-performance analysis brings a statistical logic to what is traditionally a visual interpretation. The research was able to distinguish between items that add value to summary satisfaction and the items that are perceived by seniors to be deficient. Measuring satisfaction attributes by applying the MIPA tells managers where to focus their efforts. The suggested method can improve decision-making quality at the attribute level.

Two attribute areas – namely personnel policy and price policy – can be identified as crucial in terms of customer satisfaction. A significant correlation of knowledgeable and helpful staff and value for money (price relative to quality) with overall store satisfaction indicates the importance of affordability in conjunction with the need for a well organized store.

The attributes that are used to describe the factors of customer satisfaction, that is, attributes of price policy, staff behaviour and shopping convenience confirm the importance of the context

in a discussion of satisfaction development in Slovak grocery retail and suggest that strategies specifically designed for the grocery retail could be beneficial to enhance customer satisfaction.

The findings presented here can assist in translating results into action. Using the MIPA method, the retail management can focus on the critical points in follow-up actions as well as on items which are lower-rated in MIPA.

Further research on quantifying satisfaction importance is required to confirm (or refuse) the results of the current investigation. Research is also needed to evaluate the impact of the measurement scales / indicators for performance and satisfaction. Nevertheless, the research presented might also bring some clarification to issues which have been left in the past to the subjective interpretation of the analyst.

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The Success of Pirate Party Brand: a Performativity Perspective

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Abstract: In 2017 Czech national election the Pirate party become the third party in parliament. The success of the Party in the Czech context is peculiar because the Czech Pirate Party emerged as a brand, which can overturn typical ephemeral and marginal success of other Pirate Parties in Europe. This can be related to contextual factors such as political crisis, but also to a process of more intensive branding. The Pirate Party Brand by travelling across countries does not only find a more fertile ground but the brand is also adapting and changing in different contexts. Nonetheless, the same core brand element retains intact. The present paper offers an analysis, which helps to unpack the condition of the success in the Czech Republic. By taking a brand performativity perspective (Nakassis 2012, Lucarelli and Hallin 2015, von Wallpach et al 2016) and using the Czech case as main empirical example, the present paper suggests how political brands should be considered as loose assemblage glocally moulded and flexible in which different brand core elements could change its hierarchical position in the brand offering.

INTRODUCTION

Christine Williams (2012) in her short article about the analysis of different article titles published in the last 20 years, has suggested that the internet, new media and other types of technological and communicative devices have increasingly become a present topic in political brandings research stream (see also Chadwick, 2006). Despite flourishing studies, the role and impact of information technology follow a major assumption: informational technology is a 'facilitator' that can be used by political strategist in moving voting behaviours, by individual and group in expressing a political opinion, as well as for politicians for opportunities for political engagement.

Such one-sided and unproblematic view is firmly anchored in the widespread individualist and human-centric understanding of informational technology present in the political branding literature; a view which on one hand takes for granted the nature of *branding* as a linear form of communication, and on the other missed to recognize how information technology is *active* in the process of political production and consumption.

The Pirate Party, originally founded in Sweden in 2000 around the topic of file-sharing, is the ideal example of how informational technology both emerges as political cleavage (Rokkan 1956), and represents the foundational agentic context, in which a political movement becomes a political brand on its own (Reeves et al 2006; Miegel and Olsson 208, Smith and

French 2009). In the case of the Pirate Party, this means in fact that not only informational technology is the political cleavage upon which the party is grounded (i.e. its end), but also that information technology is the token which leading to its development (i.e. its mean) to success. This success, however, is not merely linked to this double nature of information technology, or in other words its fundamental agentic context, but also as can be observed in the Czech 2017 Elections, by the emergence of the party as a brand and the development of a networked- culture which had the power to overturn typical ephemeral and marginal success of other Pirate Party in Europe (Cammaerts, 2015)

It follows that the Pirate Party emerged as *Brand* in a process of transformation from pure movement, to movement-party, finally to brand-party also and because it's full engagement with the double nature of informational technology. This transformation is not only given by travelling across countries, but also to the transformation of the process of branding and marketing adapting and changing in different contexts. If on one hand, the success of Pirate Party globally has differed greatly, on the other hand, the process, in which branding performs, varies despite the brand element remaining intact. In this context, the present paper offers an analysis, which helps to unpack the condition of the success in the Czech Republic. By taking a brand performativity perspective (Nakassis 2012, Lucarelli and Hallin 2015, von Wallpach et al 2016) and using the Czech case the as main empirical example, the present paper suggests how political brands should be considered as loose, glocally moulded and flexible socio-material assemblages, in which different brand core elements (informational technology) could change its hierarchical position in the brand offering.

1 LITERATURE REVIEW

In the political branding research literature, there are several studies that engage with the concept of political brands (see Pitch 2014 for a review). Despite the common approach is to adopt traditional product and corporation model in political brands research (see Pitch and Dean 2013) there are few studies that recognize how political brands given their political nature instead should be rather treated as systems of signs, in which politico-cultural meanings are negotiated (Graham and Speed 2011). Graham and Speed (2011) and therefore political branding activities conceptualized, as a form of political-cultural branding, because their reliance is based on the creation of attachment via rituals, symbols, communities and subcultures. If this is not maybe totally new in political party studies (e.g. Rokkan cleaveges theory) what is interesting in the case of contemporary political brands, they argue, is that political parties and political products by being affected by the "brand management philosophy", they are not only changing their nature and rationale but also changing the nature of how, where and when politics is performed (see also Marsh & Fawcett, 2011) and by whom and why is it performed, which is mainly given by the highly fragmented nature of contemporary consumer culture (see Lury, 1996).

Thus, the advantage of such a understanding of political branding is the fact that instead of looking at political brands as holistic corporate-like organizations, or as a service and a product to be constructed around certain offerings, it highlights that the process of brand formation is a rather dynamic and not manageable process, where different actors, such as consumers, but also intermediaries, are creative readers of the marketer-developed meanings (e.g. McAlexander, Schouten and Koenig, 2002; Peñaloza and Mish, 2011). Given the important activities they perform, they are the main actors in inventing and creating different contents from what is intended by the marketer by transforming and resisting the original meaning offered by the producers (Thompson, 2011). Such approach implies that consumption practices can be seen as political and moral practices (Thompson, 2011) in which the consumers and intermediaries resist the imposition of brand meanings by brand managers (i.e. in this case Party Leaders or Party Strategist) but, where it has also been suggested the

way those political practices are expressed and performed is not always highly scenic and pronounced (Ulver-Sneistrup, Askegaard and Kristensen, 2011). It follows that the process of branding is constructed across social contexts, where consumers can use conventional meanings to adopt a critical stance (e.g. Kates, 2004; Thompson and Arsel, 2004). The communication, both of messages and of political ideas, is not easily controlled by the producers (i.e. political leaders or political strategist producing political polls), but because of major recent developments in interactive technology, consumers and different intermediaries are gaining more control over the brand meaning (Fisher and Smith, 2011) In the new interactive and informational society, the importance of the web and of the interactive technology has been suggested to be crucial in the co-creation of brand meanings (Pongsakornrungsilp and Schroeder, 2011).

1.1 Political branding and informational technology: a performative approach

Brands are increasingly becoming a crucial factor in economic, social and political terms to the extent that they are becoming the device for immaterial labour in a postmodern society (Arvidsson, 2005), so powerful that they are endowed with their own performative activity (Lury, 2004). Having performative power, thus brands are considered as complex ecosystems in which different types of actors and elements at different levels interact in the circle of production and consumption (Bergvall, 2006), and in which their relationship between some set of brand instances, or tokens, and their material qualities (e.g. brand identity) are characterized by its immaterial qualities (Nakassis 2012) in which different actors interactions are materializing as form of citation in which the final purpose is not the material quality per se (i.e. brand identity) but the performing of relationality among different actors self-identity.

Such approach to political brands could be described as a performative approach. Away from being a unified approach it has some core ideas; it reject of an ostensive view of brands as defined by its components, i.e. images, identities, audiences, as they are added over time based on a chronological understanding of the process of emergence, it offers a performative view in which brands are socio- materially created, and not an entity with a core identity and projected image based on perception as suggested in traditional brand and political brand management literature (see Pitch and Dean, 2015).

Branding is an activity that is not only related to the production of signs or symbols within which different audiences interact (Holt 2004), but they are rather a platform in which trajectories of diverse practices, technologies and ideas are intersecting (Lash and Lury, 2007). A political party, and its political products, similarly should be seen as constituting the performative action, which allows shaping a political brand in different forms in different tempo-spatial framing. It follows that different spatiotemporal materializations of the brand such as logotypes, policy documents, web pages, media forum, can be seen as sites for the exchange and communication of information between producers and consumers, the society, the economy and the public realm. What is appearing is thus a brand that is emerging as a loose socio-material assemblage that mediates between different stakeholders and inhabits several communities of practices at once. Furthermore, rather than simply being dependent on the management of it, as suggested by traditional brand management research (e.g. Balmer, 2001; Brodie and De Chernatony, 2009), the brand is plastic to adapt to locality, yet robust to maintain a common identity and image across various sites (Lury, 2009).

The present paper suggests how such process is even more accentuated both thanks and due to (mobile) informational age, where images, representation, bits, human and non-human are in continuous interaction and embeddedness. This is also true because a brand is performative in the sense that is forming a socio-technological node (Pirate Party) acting as coordinating function and inter-connectivity with several actors (Oyan and Ryan 2016) which is based on

material-semiotics (Lucarelli and Hallin 2016) based on citation (Nakassis 2012). Political brands thus are spatiotemporal socio-material materializations, which are both embedded and being facilitated in their materialization by the cultural and technological context in which they are acting upon (see Bajde 2013).

Political brands in this case, according to performative approach should at the same time be an assemblage constituting its own co-texture of action (Lury 2009), but also as a token composing the socio-material assemblage acting a as market shaping device actualising the reality envisioned (i.e. brand's world-as-assemblage) (Oyans and Ryan 2015). Its performative quality, are materializing and enacted via a communicative process based on socio-materiality (Lucarelli and Hallin 2015).

1.2 Operationalizing a performative approach in the informational age

In order to spell out a performative approach that would allow encapsulating the conditions upon which the Czech Party emerged as a Brand, the present paper draws mainly from the work of Terranova (2004) in regard to her seminal work on politics of communication. By drawing on Terranova, first branding is a matter of political communication and materiality (technology), thus entailing an analysis of branding, which would focus on tracing technological associations of different agents (i.e. on social media, on traditional media, inside file-sharing and hackers groups, inside Linux and other software communities); and second entitling "branding" the basis of interaction, researchers are able to trace the trajectory of the object under study (e.g. Pirate Party) because they can focus on interrupted transformations and intervention (i.e. political manifestos, images, the internet, popular culture) which seldom transports faithfully the message, in our case Pirate Party as file sharing party; via communication.

For Terranova (2004) communication, information and technology are not separated dimensions but all constitute the same hybrid assemblage, which is a part of and creates an informational dynamic society. This means also that in terms of branding rather than only a technological "thing" that humans use/do in order to make life more efficient or enjoyable, branding is also a "thing" living which interacting with humans, where the immaterial content of communication and the materiality of technology coalesce. This is happening, as pointed by Terranova, via the creation of new "material" network culture (Terranova, 2004) that is both network physics (i.e. the process of differentiation, emergence, openness) and network politics (i.e. active engagement in dynamics of communication flows) allowing the formation of network brand (sub)culture similar, yet technologically different, to traditional brand (sub)cultures (eg. McAlexander, Schouten and Koenig, 2002). A difference between the two, it is here argued,. is that the information technology is both the means and end of a type of networked sub-culture. In the case of Pirate Party it is represented on one hand, worldwide by a pure socio-material technological network of different agents and nodes (European pirate parties, file sharing groups, social media platforms), and on the other hand locally, as in the Czech Case, as political brands emerging due to institutionalizing and successfully engagement of the network by the engagement with the political dimension of information technology (i.e. creation of digital-based political discussion) .

2 METHODOLOGY

The present paper is based on a case study on the Pirate party emergence. It based on netnographic approach (Kozinets 2002), studying the Pirate party's archives, discussions in online forums, Pirate party's members' social media posts and the related discussions. The netnographic method proved to be ideal to study this case, as the Pirate party's main

ideological pillars are the transparency of communication and public availability of all information. Thus, all of the strategic, as well as more mundane, communication and information on the party is readily available online, allowing access to all relevant information regarding the party's foundation, product formation, brand emergence and communication.

3 RESULTS AND DISCUSSION

3.1 The Emergence of Pirate Party and the centrality of information technology

The Czech Pirate party was founded in 2009, following the sentence on the Pirate Bay founders in Sweden and inspired by the tenets of the Swedish Piratpartiet. Its foundation stemmed from a petition initiated by Jiri Kaderavek, a programmer specialized in open-source technologies, on abclinuxu forum, on the webpage www.pirati.cz. From its very inception, transparency and free information were at the centre of attention, while information technology served both as a backdrop for this initiative, as its medium and its profound knowledge as a key asset of the founders and the organization itself. In the discussion following the post, the founder explains his motivations, which revolve around the theme of freedom of information, information technology and the inadequacy of the traditional political representation to meet its challenges:

"The Pirate Bay sentence was the last drop. Lately, all sorts of people think they have the right to decide what we can know, how our personal data will be managed, the whole internet is beginning to be spied on. Because we cannot rely on the traditional political elites, we must try to form a new political force." (Jiri Kaderavek, abclinuxu forum)

The fact that this post was communicated to the forum connecting Linux users is quite significant, as Linux is the open-source operating system preferred by those familiar with information technology. Indeed, it is only usable by those who are familiar with computer programming.

Following the call, it took two days to collect more than the necessary 1000 signatures for a political party foundation. Information technology, freedom of information remained at the centre of the Pirate party's activities, as shown also by the party's mission stated in its statute:

"The mission of the Czech Pirate party is firstly to promote the basic human right to freely share received information and the right for the protection of privacy as the reflection of the altered reality of the information society in 21st century. For this purpose, it is necessary to revise the copy monopoly so that it cannot become the pretext for attacking the freedom of the Internet." (Pirate party statute)

3.2 The creation of (techno)culture via the presence and interaction in the internet-space

The centrality of information technology also has its implications for the functioning of the organization and for the creation of a microcosm around the Pirate party/brand. The communication within the organization is effectuated through their online forum, which also plays a key role in the design of the content and identity of the party. Within the forum, there is a public section, which serves for discussions with the general audience (consumers), and a private section, which serves as the communication of the members of the party.

The online forum is a key component of the entire culture of the Pirate party, as it serves as a medium of in-party referendums about the future direction of the party itself, but also as a discussion platform to evaluate the work of the leaders. Since the Pirate party entered the parliament, it also serves to collectively draft up law proposals and collectively comment on

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legislation being discussed in the parliament, strengthening the engagement of all the members and possibly all citizens, as anyone registered in the forum can be part of the discussion. The online forum is the central vehicle of in-party transparency and information sharing, thus fulfilling the main goals of the party/brand, while also contributing mightily to its identity, indeed almost embodying its identity. Information technology here works not only as the key raison d'etre of the party but also as an enabling medium. Technology is understood as a means of democracy (rather than demagogy), but only its profound knowledge and its skilled use allow the party to use it in a novel way, which ultimately defines who the party is.

The online forum is the party's "core" technological/identity asset, which, however, is not readily consumed by the general public (as opposed to the members or highly engaged public). The party's technologically savvy identity thus perspires into all other activities. As an example of the use of technology for the interaction with the "consumer", there is the simple use of Google calendars. All the Pirate party's events are noted in an online Google calendar, which can be seen on the official webpage. The listed events range from country-wide member meetings only open to members to playing board games with a Pirate M.P. where anyone can pop-in. All events being listed online allows the public to engage with the party, approach it actively or passively.

Fig. 1 Pirate Party Online Calendar

Source: https://www.pirati.cz/pripoj-se/kalendar/
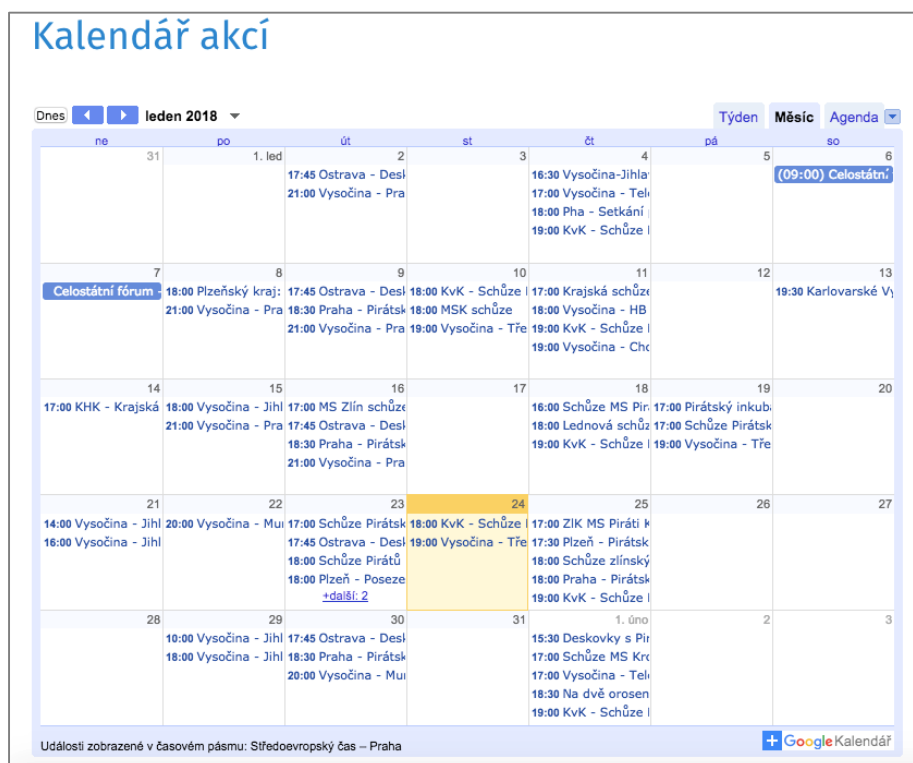
It is quite evident, how the technology facilitates the co-creation of the meaning of the party/brand by the party itself and its consumers (voters, potential voters/members). The ease with which the consumer (voter) can interact with the party's content, e.g. discuss legislation, find the events and participate in them, allows the Pirate party's meaning to be truly co-constructed also in the wider sense and scope.

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3.3 The emergence of the party as a brand (via the use of marketing practices)

Information technology was also instrumental in the emergence of The Pirate party as a brand, both as a part of its core identity and as the vehicle of its communication. Again, it was the online forum, which has played a key role in the self-reflexive definition of the organization's identity from the very beginning. Reading the online forum, it is clear that from 2009, the brand and its external elements had been part of a lively discussion among party members and sympathizers. The slogan "The Internet is our sea," for example, has been proposed by a user Milan72 as a part of the online discussion in April 2009 and has been used ever since.

What becomes clear from studying the forum's content is that the members of the party had been very conscious about the necessity for creating a brand with a clear content and communication and that this brand has emerged as a result of a member-wide discussion, in which the information technology has played the role of the intermediary.

As an example of how the visual identity has emerged through a co-creative process, it is shown in the following quote how the logotype (a logo with an explanatory writing) has been created. While this quote relates to a particular aspect of the visual identity, the process was similar for the whole brand.

"As in the case of the original graphics manual we made a public call for proposals. The competition to define the Pirate logotype, which was supposed to be based on the agreed logo and the graphics manual, started on 24th May 2012 and the call was made public through all our channels. The deadline was on 9th June 2012 and we received 19 proposals, all of which met the given criteria.

[…]the same day we submitted all these proposals to the party-wide discussion to find out which of them are worth developing further. In a poll, where all the members and registered supporters could have voted, we found out that the most popular is the proposal no. 5 (about 26% of voters) and proposal no. 1. About 6% of people did not support any of the proposals." (Jakub Michalek, 3/8/2012, online forum)

Although a visual identity reflecting the brand was created, it was later simplified, in order to allow members to use it in a more flexible fashion rendering the members more active co-creators of the identity.

"When we were preparing the graphics manual, we were working with the presumption of creating a corporate identity, which will be strictly required. But in practice, this turned out to be not working. Our manual contains some elements, which are uselessly limiting and don't allow the graphics enough space to express themselves […]." (Jakub Michalek, online forum, 3/8/2012)

3.4 Enlargement of agenda based on information technology to appeal to general public

While the program of the Pirate party started out as internet-centred, it was quickly enlarged to encompass all areas of political interest. Yet, information technology stayed at the centre of attention as the particular area of expertise. As one of the Pirate politicians put it in the online forum while discussing the slogan "Internet is our sea":

"[The slogan] expresses the reality of the 21st century and at will be increasingly relevant. It is like with our name and program. First, everybody blamed us for having just one topic (although we don't). Now our topic becomes crucial for the whole society. People are starting to realize that almost everyone is a Pirate (copying is not stealing) and that our program (2010 election) deals with the most important things (freedom, transparency, direct democracy,

internet use). Internet pervades all these areas. Internet will be the most widely used production means in the 21ˢᵗ century, a means of entertainment and of society management." (Ivo Vasicek, 6/2/2012, online forum)

Accordingly, the Pirate party's program stems from the ideals of transparency and freedom given by information technology. The party's collective, deep knowledge of information technology then allows translating these ideas into specific program propositions.

CONCLUSION

In 2017 Czech national election the Pirate party become the third party in parliament. The success of the party echoed across Europe broadcasted by several international media. Still, the success of the party in the Czech Republic is not entirely unique. The Pirate Party, originally founded in Sweden in 2000 around the topic of file-sharing, spread across Europe becoming a political brand on its own (Reeves et al 2006; Miegel and Olsson, Smith and French 2009). Despite a moderate success in EU election in Sweden 2004 and in German in 2008, Pirate party has never received so much support and ability to make a substantial breakthrough and appeal to the electorate.

The success of the Party in the Czech context is peculiar because apart from a similar example in regards to Iceland 2016 Election, the Czech Pirate Party emerged as a brand which can overturn typical ephemeral and marginal success of other Pirate Party in Europe. In fact despite differences (Cammaerts 2015) once can recognize that both in Iceland and in the Czech Republic its success and presence in the political landscape is more longstanding. This can be related to contextual factor as political crisis following Iceland post-State-bankruptcy, but also as in the present paper has suggested due to a process of more intensive branding.

The Pirate Party Brand, by travelling across countries, as pointed in the present paper does not only find in the Czech Republic a more fertile ground for its success, but rather this success comes as results of both extensive branding and the emerged of the formation of network brand (sub)culture similar, yet technologically different, to traditional brand (sub)cultures (e.g. McAlexander, Schouten and Koenig, 2002). In this regards while having similar feature to brand publics (see Arvidsson and Caliandro 2015), with the difference that if one hand in brand public informational technology is just a platform (i.e. a means of interaction) only on one product or corporation, on the other hand in the case of Pirate Party, the informational technology is the "brand-net" per se, thus being both the means and end of a type of the networked sub-cultures across countries and context. It follows that the success of Pirate Party in Czech Republic is given by the double nature of informational technology, which combined with extensive branding give rise to branded network techno-culture which worldwide is constituted by a pure socio-material technological network of different agents and nodes (pirate parties in different context and countries, file sharing groups, social media platforms), and on the other hand locally, as in the Czech Case, is a political brands emerging due to institutionalizing and successfully engagement of the network by the engagement with the political dimension of information technology (i.e. creation of digital based political discussion).

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Consumers' Expectations and Behavior towards Confectionery Products. Polish Market Case Study

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Abstract: Confectionery industry is one of the most dynamically growing and innovative food sectors in Poland. The research concerns the relationship between consumer expectations for confectionery products, their motivations (health, pleasure, eating habits, price) and behavior on the confectionery market. The study was based on the analysis of secondary sources and on online survey of 1255 Polish consumers. 93% of questioned people declared to be confectionery products consumers. 85% of them expect innovations in this sector. Pro-healthness, crossing and prosumption are the trends, the implementation of which will keep consumers interested in confectionery products. Most of the current innovations are of a secondary nature, including changes in the composition and size of products. Obtained research results provide guidance for those who are trying to develop and innovate on the confectionery market based on consumer motivations and behaviors.

Keywords: confectionery products, consumer expectations and behavior, innovative sweets, Polish confectionery market, market research

JEL Classification codes: M31, O31, I12

INTRODUCTION

The confectionery sector includes sugar-based products (hard candies, mints, caramels, gums and jelly beans, medical sweets, gel foams, lollipops, nougat and liquorice), chocolate products (milk chocolate, dark chocolate and white chocolate), biscuits and cakes (i.e. shortbread cookies, wafers, gingerbreads), salty and sweet snacks and other, e.g. chewing gum (Godshall, 2015).

The global confectionery market is growing at a steady rate of about 1.5% per year. In 2017, its value amounted to nearly 180 billion dollars, which is 2.7 billion dollars more than in 2016. It is predicted that by 2022 it will increase to 232 billion dollars. The Polish confectionery market has been developing steadily since the 1990s. It is worth about 3.2 billion dollars and grows at an average annual rate of 3-5%. It should be emphasized that 1/3 of Polish production of sweets is exported mainly to Great Britain, Germany, the Czech Republic and France. Currently, Poland is the 8th largest exporter and 14 importer of sweets in the world. With nearly 39 million inhabitants, is the third-largest consumer market in Central and Eastern Europe (CEE), behind Russia and Ukraine. It is estimated that the target value of the Polish confectionery market will reach 4.4 billion dollars in 2018 (Zmiejko et al., 2017).

It has a large potential. Despite a systematic increase in value, Poles still consume three times less sweets (3 kg a year, half of which is chocolate products) than e.g. the average German (9-10 kg per year) (Zmiejko et al., 2017).

The largest segment of confectionery market in Poland is chocolate products sector, which constitute 50% of the total market value. According to forecasts, the value of this market in

2018 will increase by another 17%. The second largest part of confectionery market is snacks (sweet ans salty) sector, which accounts for 19% of the market. The "private label" products are popular in this segment, which are much cheaper than the brand ones. Another important segment are biscuits and cookies. These include 14% of the total market value. The next category, which is expected to fall in the sales value are sweet confectionery and chewing gums. Considering the remaining categories, soluble jellybeans and soluble gums offer promising growth prospects (Grauier, 2014).

Confectionery in Poland is benefiting from the overall demand for indulgence products. Consumers consider various sweets to be an affordable luxury, both for adults and children, and regularly reach for confectionery, even in tough economic times. In addition, the availability of a wide variety of products at all price levels makes confectionery accessible to consumers from all income groups.

Concidering nutrition facts sweets have a high-energy value resulting from a high content of sucrose and fats. At the same time, consumers like them because of their taste and properties that cause a positive emotional state after their consumption. They are a permanent element of Poles' diet (Grauier, 2014). Most of them, despite growing interest in being fit and live a healthy lifestyle, systematically consume these products.

Therefore, it is necessary to conduct research on the preferences and choices of consumers on the confectionery market. Identifation and understanding their expectations and behaviour towards innovations in this category will help to meet consumers' needs fully and reach market success in this sector.

1 TRENDS AND CHALLENGES ON THE CONFECTIONERY MARKET IN POLAND

The growth in the confectionery industry is attributed to economic factors and sociological trends. In Poland, the amount of food is more and more often supplemented with its quality. Polish consumers are starting to purchase more impulse and indulgence products due to the better performance of the Polish economy after the 2008-09 recession. In addition, confectionery sales are being driven by two key trends: the developing snacking trend and rising health awareness. Manufacturers have developed new product lines, with claims such as "sugar-free" or "gluten/lactose free", based on natural ingredients, free from artificial colourings or aromas in order to satisfy the need for indulgence mixed with health consciousness (Lusting at al. 2012, WHO 2015). They have also increased the range of dark chocolate lines, due to its perceived health benefits.

In Poland all social groups purchase confectionery. The consumption of sweets is also undoubtedly stimulated by promotional campaigns by the largest manufacturers. The purchasing habits of Polish consumers are becoming more westernized, and this is reflected in the increased demand for luxury goods in the country, including sweets.

As disposable incomes rise, demand for premium and super-premium sweet brands is expected to grow, while demand for private label products falls, athough these less expensive products will remain popular amongst less affluent consumers. The stronger the economy, the greater the demand for premium sweets as pralines, boxes of chocolates, and chocolate bars with unique ingredients. Poles are more willing to reach for sweets with unusual flavours that are offered in elegant packaging, which until recently were considered niche products. However, chewing gum, milk chocolate bars and boiled sweets are all being adversely affected by mounting consumer health concerns. Obesity and diabetes are major health issues that are increasingly affecting young and old alike. When it comes to "healthy" confectionery, consumers tend to look for products that benefit dental and cardiovascular health, as well as low-calorie products that help assuage guilt over indulgence.

What matters is product's personalization. People in Poland are expected to continue to live longer, while birth rates are expected to continue to decline. The median age of the population is projected to increase, from 37.8 in 2010 to 41.1 years in 2020. As in other European countries, the population in Poland is aging, which is having a major impact on consumption trends. Older people have their own expectations and needs and want confectionary industry to identify and meet them. The number of seniors increases. Currently, over 22% of the total population of Poland (8.5 million people) are consumers over 60 years old. In 2025, it will be over 10 million people and nearly 28% of the population, and in 2050 over 40% (13.7 million) (Statistics Poland, 2017).

The market is changing from a localised supply economy to a globalised demand economy, with many new trends, such as the economic downturn. The way consumers communicate and get information continues to change as the Internet, mobile phones and social networking continue to develop. Consumers now have a global outlook, rich access to information, and the ability to network at speed. They continue to change, becoming increasingly more sophisticated and knowledgeable, with evolving expectation and behaviour, such as increased product repertoire and different shopping behaviour through on-line ordering and delivery; increased impatience and an expectation that response will be rapid; and an expectation that they will have a say, which has been greatly facilitated by digital communication, whether it be voting on a reality television show, sending feedback to companies, starting their own web-based community or putting their own thoughts and ideas on-line. Today's consumers are willing and able to voice their opinions, good or bad, rapidly and on a global scale. This rapid evolution makes understanding and delivering to the consumer ever more challenging, yet companies must do so in order to survive, ideally on an ongoing, proactive basis to enable a faster response.

The impact on the development of the Polish (and European) confectionery market will certainly have the release of production quotas and sugar prices from October 2017. This will allow European companies to reduce the cost of sweets production by around USD 0.5 billion. Nevertheless, in the case of Polish producers, growth may be hampered by the difficult cooperation with trade networks, forcing lower and lower margins and the competition of sweets producers from Ukraine.

2 LITERATURE REVIEW

In the food and beverage industry, producers are aware that the successful innovation must result in a unique and superior product (Bradley, 2010; MacFie, 2007). What does it mean nowadays for the confectionery sector in Poland? It must, at a minimum, meet the needs and expectations of consumers, and ideally, it should exceed them and create some extra unique value (Kemp, 2013). To improve success and reduce risks, it is important to understand consumers and make them part of the innovation process in order to create offers they want to purchase, use and enjoy. In a survey in which food, beverage and consumer product companies were asked the cause of new products failure, the top two reasons given were 'consumer found no new or unique value proposition' (71%) and 'the product failed to meet consumer needs' (61%) (Grocery Manufacturers Association, 2009). Being aware of this fact consumers' behavior analysis becomes a necessity. The better, more focused on consumer needs market research the more probable the company is to reach the market success.

The most important customer needs should be met by confectionery products in the context of future trends in this sector (Weimann, 2012). Behavioural variables, such as habits (loyalty), shopping behaviour, product usage and usage rates are important for understanding product purchase and use. Knowing that we can influence trends on confectionery market (Kardes et al., 2010; Naughton et al., 2017).

Companies who invest more and use a greater range of consumer research techniques are more successful (van Kleef & van Trijp, 2007). A proactive approach is required to continually gather consumer information, indentify consumers' unmet needs and ways to satisfy them, and stay up to date with the changing market and consumer. This helps companies stay ahead of the competition by identifying breakthrough innovations and getting to market more quickly.

The factors conditioning the development of the confectionery market are: consumers' nutritional awareness, willingness to purchase new products and market behaviors implemented on a daily basis (Urala & Lähteenmäki, 2007; Kampov-Polevoy et al., 2006; Bäckström, Pirttilä-Bäckman & Tuorila, 2004). It is worth noting that the acceptance of new products on the food market is conditioned primarily by the pleasure of product consumption, the sense of uniqueness, the perception of low health risk and even the perception of health benefits from consuming such a product. (Sojkin et al., 2009, Thomson et al., 2010; Jeżewska-Zychowicz et al., 2009; Carrillo et al., 2011).

The aim of the undertaken research was to determine consumers' behavior on the confectionery market in Poland, their expectations for confectionery product as well as motivations (health, pleasure, eating habits, price) to buy sweets. It was established to what extent consumer preferences regarding sweets determine consumer interest in innovative sweets, products with special health properties, with limited calorific value, modified recipe, and unusual combination of flavors.

3 METHODOLOGY

Empirical research under this study was carried out in autumn 2017 among 1,255 consumers constituting a representative group of Polish citizens aged 18 and above (e-badania website was used). 1,167 respondents, which accounted for 93% of questioned people, declared to be consumers of sweets. It means they at least once in the last week bought and consumed confectionery products. Their sociodemographic characteristics are presented in table 1. 88 of respondents declared to avoid buying and consuming sweets. As a result of the research, the reasons of this behavior were determined. This creates the opportunity to determine what innovations new properties of sweets could contribute to the acquisition of new customers - people not interested in sweets present on the Polish market yet.

The study used a dedicated questionnaire with closed-ended questions about preferred types of sweets, motivation and factors determining their choice, expectations of sweets innovations or current and planned market behaviors on the confectionery market.

In the empirical material analysis the frequency analysis and cross tables were used to describe the structure of the population and particular variables, the test χ^2 and the one-way ANOVA analysis were used for data comparison. The probability $p = 0.05$ was assumed as the significance level. The statistical package SPSS for Windows was used.

Tab. 1 Characteristics of the analysed population of confectionery products' consumers, [%]

Confectionery products consumers N = 1176 Characteristics/variable	Total [%]	Gender [%]	
		Female	Male
Total	100	55	45
Age (NSS)			
18-24 years	27.2	25.1	30.1
25-34 years	18.8	18.8	19.0
35-50 years	21.9	22.4	21.3
51- 64 years	16.5	17.7	14.6
65 years and more	15.6	16.0	15.0
Education (SS)			
Basic/vocational	22.0	21.0	23.3
Secondary	45.8	45.8	45.7
Higher	32.2	33.2	31.0
Subjective family income evaluation (SS)			
Not satysfying – insufficient, allows to satisfy only basic needs of the family	24.1	23.7	24.6
Neutral - allows to meet the main needs of the family, but not all of them	54.6	55.1	53.9
Satysfying - We can afford everythiing and/or we can save some money without special sacrifaces	21.3	21.2	21.5

Explanatory notes: (NSS) – no statistically significant correlation between variable and gender at p < 0.05; (SS) – statistically significant correlation between variable and gender at p < 0.05.

4 RESULTS AND DISCUSSION

The analysis of the obtained research results showed that the vast majority of Poles - 93% consume sweets regurally (at least once a week). This means a slight increase in number of sweet lovers compared to the results from 2014 (then for 91% of Poles it was a permanent element of the diet, almost 40% of respondents declared they eat something sweet at least 5 times a week, and 11% reached for sweets even several times a day) (Grauier, 2014). Gender did not have a major impact on the respondents' answers - a similar percentage of women and men consume sweets. The most often sweets are chosen by young people up to 24 years old, almost 90% of them declare to eat confectionery products. In the group of the oldest respondents (over 65), the share of people who taste sweets was the smallest - 72%. The higher education level the more health concer consumers are in the context of sweets. They pay more attention to energy of the product and its ingredients. Subjective family income evaluation also influences behavior on the confectionery market. The more satisfied conusmers are in this field the more willing they are to taste innovations and buy luxury sweets.

Analysing responses of the consumers who do not eat sweets (7% of the questioned population) - 52% of them do not like sweets, 32% avoid them because of health reasons (diabetes, overweight), and 16% because of their lifestyle (diet, healthy eating). When asked what could encourage them to change their preferences in this regard, 58% made it clear that new interesting forms and flavors of confectionery, an increase of their pro-healthmness (47%), limitation of sugar content (40%), greater level of their naturalness and lack of artificial additives (32%) and smaller portions (25% indications).

Further analyses were carried out taking into account people who belong to regular consumers of confectionery products. 93% of them are satisfied with the offer of confectionery market, howver 85% of them are interested in innovations in this sector.

Poles like many types of sweets, chocolate products belong to their favorites - over 50% of consumers buy them systematically. Preferred types of sweets (in the study respondents could indicate up to 5 favorite types of sweets) are: milk chocolate 66% and chocolate bars 65% of indications. Then there are filled chocolate and packed cookies – both 62% of indications, dark chcoclate 60%, and chocolate candies 58%. The less preferred confectionery products on Polish markets are chewing gums 44%, jellies 38% and lollipops 22% of indications.

Gender of respondents does not have a major impact on Poles' shopping preferences. For some categories of sweets, the age of buyers is more important. For example, the older the person, the more often consumes dark chocolate. In the group over 65, it is bought by almost 90% of respondents, while among young people (up to 24 years old) only by 49%. In turn, bars find amateurs mainly among young people. Over three-quarters of respondents under 50 choose them, while only 33% of the oldest age group (over 65 years) buys these snacks. A similar trend as in the case of bars, although not as visible, is also noticeable in other categories of sweets, such as filled chocolate, lollipops or chewing gum.

Confectionery products consumption and choice is complex and influenced by many variables. The basis for each consumer's choice is motive he is guided by. From this point of view, it seems important to analyze the main determinants of the choice of confectionery products. In the study 12 factors affecting the choice of the sweets in Poland are listed. Results of the conducted research are presented on figure 1.

Fig. 1 Significance of determinants of confectionery products choice in Poland, %
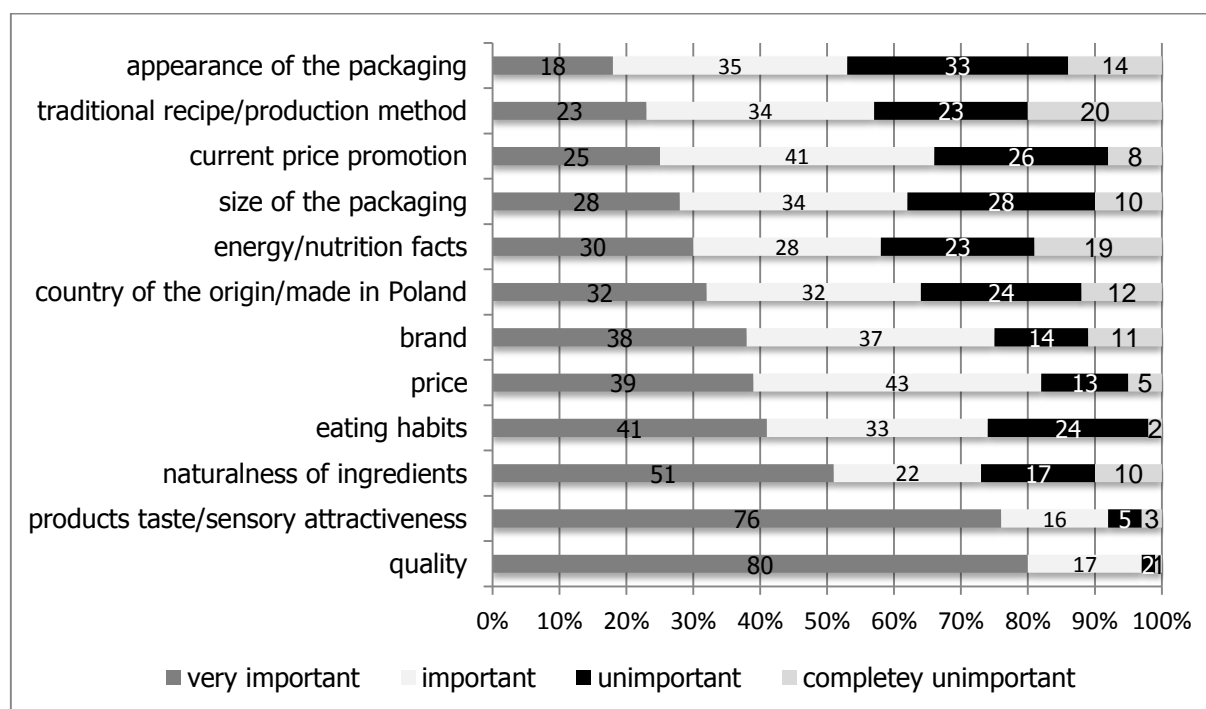
Source: results of the author research

The results of the survey show that the most important determinnat confectionery products choice is their quality. 80% of respondents consider it as very important, another 17% as important. Another factor is the taste of the product and sensory attractiveness associated with it. 76% of Poles consider it as very important and 16% as important. The third factor is the naturalness of the ingredients 51% of indications and eating habits of consumers 41%. It turns out that the price for the research group is in the fourth position, with 39% of

respondents considering it to be very important and 43% treat it as important. The weakest impact on the selection of sweets in the opinion of respondents has the "traditional method of sweets productiom" (23% treat it as unimportant and 20% as completey unimportant). As you can see, the respondents do not associate this factor with naturalness and health, and therefore with the hight quality of sweets.

To analysehe consumers' interest in sweets innovation the 5-point scale was used, where 1 is the lack of product innovation, and 5 is a noticeable change in the product. The average arithmetic of proposed improvements, which is an assessment of consumer interest in a given change, was taken into account. The results are presented in Table 2.

Tab. 2 Consumer expectations regarding innovations on the confectionery market in Poland

Type of innovation	Arithmetic average
Introduction of new flavours of existing products	3.95
Introduction of a new product line (bio, fit, light, functional, athleths/diabetes/vegan line, gluten/lactose free products	3.75
Enrichment of the product recipe. New healthier ingredients / higher content of cacao / neutraceutical / plant extracts / seeds)	3.38
Introduction of a completely new product/primary innovation	3.25
Decrease or increase the size of the product	2.75
Reduction or increase of energy value	2.55
Modification of the packaging structure (better ergonomics, the possibility of multiple opening and closing)	2.30
Changing the packaging material (eg environmental friendly)	2.05
Designing the whole experience, not just the product itself	1.80

Source: results of the author research

The Poles as the most desirable changes in the category of confectionery products treat introduction of new products (bio, fit, light, functional / athletics line, diabetes line, gluten / lactose free products) and enrichment of the product recipe. New healthier ingredients (superfruits i.e.), higher content of cacao, neutraceuticals, probiotics, fiber, vitamins and minerals were mentioned the most often.

Czuplikowska conducted similar research on chocolate products (Czuplikowska, 2014). She indicated that the new flavors of the existing products 3.80 in the 5-point scale, the reduction / increase of the product size (3.41) and the introduction of a completely new product (3.22) were the most desirable. As results from the presented data, the consumer reacts in small scope to product changes introduced by producers. In the case of product innovations rated below 2.5, there is a risk of not noticing the changes. One of the reasons may be the lack of benefits of the introduced changes in consumer's opinion or simply their invisibility, which may result in the rejection of the modified products by the market.

Some of the Polish consumers' opinions on confectionery products are presented in table 3.

Analysing the most promising trends for Polish confectionery industry pro-health is an absolute priority (89% of indications). Recipients analyze the list of ingredients of a given product and make a deliberate choice of confectionery products. It plays also an important role in the fight

against overweight. To meet the expectations of consumers sugar substitutes such as stevia, honey, xylitol are used in confectionery industry as well as wholemeal or gluten-free flour. There is also a growing interest in adding plant extracts from healing herbs or spices to sweets. In addition, producers offer smaller packages of chocolates, cookies and bars (a single portion should no exceed 250 kcal). The popularity of dark chocolate is growing, which has special pro-health properties. Another example of sweets, which in their composition include pro-health properties are jellybeans with vitamins, yogurt or juice. The health-promoting category of sweets more and more often includes breakfast bars, energy bars or protein bars without artificial colors and preservatives. A low glycemic index sweets for people suffering from diabetes appear and products "free from" for the ones with allergies or food intolerances.

Tab. 3 Selected opinions of Poles on confectionery products and their market behavior

Analysed area	Consumers' indications		
Do you currently buy the same amount of sweets as last year?	More	The same amount	Less
	11%	47%	42%
Analyzing the purchase of sweets within the next 2-3 years, do you intend to purchase them	More	The same amount	Less
	2%	53%	45%
When analyzing the purchase of light sweets, do you intend to buy them within the next 2-3 years?	More	The same amount	Less
	28%	52%	20%
Are you interested in trying out new unusual tastes of sweets?	Yes 59%	No 41%	

Source: results of the author research

More and more Polish consumers are interested in crossing – 65% of indications. Crossing is the art of combining different product features, often opposing flavors or textures in one innovative product. This trend was initiated a few years ago by combining caramel with salt, and then there were further mixes and innovations. An important argument that convinces producers to implement such new products is the growing need for consumers to taste unusual flavors (Miśniakiewicz, 2016). Consumers are more willing to accept the combination of products from different categories, such as milk chocolate with crackers, adding new ingredients, eg chocolate with a mint leaf, violets or roasted corn, developing unusual flavors, eg chocolate with chili or vegetable filling.

Prosumption indictaed by 58% of respondents is a consumer-driven innovation, which designs products to meet consumer needs. Co-creation offers a new way to innovate, in which prosumers work in mutually beneficial collaboration with companies to develop products, often through social networking. Prosumption actively involves the consumer in the production process of a particular good, which enables the producer to gain his satisfaction and loyalty. The main feature of prosumption is the guarantee of uniqueness and matching the product to the individual needs of a given group of consumers. When searching for goods, the customer often wants to express his autonomy and adapt the product to his own needs. Completing your own set of sweets, choosing graphics, or the ability to add dedications or photos to the packaging is one of the examples of active cooperation between the customer and the producer. Virtual ordering makes it easier for companies to execute such orders.

Other trends noticed by respondends were introduction of new seasonal or occasional sweets (44% of indications), clean label (37%) - increase in transparency of confectionery products

composition communication and delivering not just a product, but a product within the context of an emotional experience (23%).

CONCLUSION

Today's consumers live in an increasingly complex world that is changing from local to global, supply to demand, passive to interactive, and insular to connected. Their outlook is changing as they become more informed, sophisticated, discerning and impatient fuelled by the Internet and social networking. Consumers are empowered as never before and expect to be able to voice their opinion, whether to a company or their peers, and get what they want, the way they want it, quickly and at ever better value driven by the global economic downturn. There are an ever-increasing number of product choices that can be customised and purchased in a number of ways.

Increasing the chance of successful innovation in such an environment is difficult but can be achieved by identifying consumer needs and designing products that meet them. Companies that seek to understand the consumer in a proactive and ongoing manner, have a chance to respond more rapidly than competition. That is why researches like those presented above are necessary.

93% of the Poles declare to be confectionery products consumers. 85% of them, being satisfied with the market choice of sweets, are still interested in innovations in this sector as the quality of confectionery products and sensory attractiveness are the foremost important for Polish consumers. The addition of new flavours, introduction of new products lines (i.e. bio, fit, functional, vegan) and enrichment of the products recipe with new healthier ingredients as well as changes in package sizes are warmly welcomed to attract customers toward the products. Polish consumers desire primary innovation on the confectionery market, but on the other hand want traditional recepies and short list of well-known ingredients. Additionally, the ongoing trend for alternative, healthier fillings of confectionery products, such as plain yoghurt, granola, nuts or chia seeds is visible.

Consumers live in a complex and ever-changing world, which is influenced by a variety of environmental factors. Innovation, although not too many consumers want to notice it, is moving towards creating experiences rather than products and more effort will be put into developing methods to investigate and deliver emotional benefits. As a consequence, more reliance may be put on measuring overall satisfaction, rather than sweeets liking.

The main catalyst for the growth of sugar confectionery is its wide portfolio of products, the large number of innovations and the growing importance of healthier products, which often have some extra added features - witamin or antioxidant content and vasabi or salt on the other hand (crossing), thereby further attracting customers and raising sales of sugar confectionery are predicted. Prosumption opens new possibilities for this sector.

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Joining the Multi-regional Automotive System: the Specificity of the Creation of a Local Network of Suppliers in Russia

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Abstract: The paper aims at understanding how the integration of Russia to the automotive multi-regional globalized system took place between 2008 and 2017. The research is based on the interviews, at various moments of time, of several suppliers as well as various managers selecting and organizing, at OEM level, the relations with these suppliers. The analysis identified influencing factors that may hinder the integration process, classified between the macroeconomic level (the different market constraints, the business cultures) and the microeconomic level (cultural differences, the confrontation of different visions of the world and the relation to the others). These findings lead the way to deeper analyses aimed at understanding the local specificity of the integration, as well as the impact of this assimilation to the local business culture.

INTRODUCTION

In the last 30 years, the automotive sector was marked by a strong internationalization that has led to the creation of a multi-regional integrated system, often presented as one of the best example of the "global factory" (Buckley & Ghauri, 2004). If the transformation started in the 1980s with Spain and Portugal joining the European Union, it strongly accelerated later, when most Central European countries integrated the system and when emerging countries such as China and Brazil started to open themselves to the international automotive business. Russia was the latest BRICS country that Car manufacturers (OEMs) attempted to connect to the system during the period between 2008 and 2012.

In spite of a strong regional integration, the industry has retained several specific local features (Sturgeon, Memedovic, Biesenbroeck, & Gereffi, 2009), which can be different from one country to the other. Up to now, however, little work has been done to identify how the regional integration has taken place in emerging countries and which local features have become essential on the various markets. If some research has been launched on China (Lockström, Schadel, Harrison, Moser, & Malhotra, 2010), very little has been written yet on how partner suppliers emerged in Russia.

Our study intends to look at the development and integration of the Russian automotive market over a period of 10 years. To do this, we shall use an inductive qualitative method based on interviews of automotive companies, made up of two groups of actors, first several subcontractors producing automotive parts, and secondly car manufacturers using these parts to manufacture vehicles in Russia. More precisely, we want to identify the various factors that may have blocked or facilitated the integration of Russia into the globalized system and understand their persistence during the period studied. At times, we will follow the convention

initiated by Soulsby & Clark (2007, p. 1437) and use the relatively unprecise word "Westerner" for entities or individuals with a longer experience of advanced market economies.

After describing the methodology of our research and giving detailed information on the population that we have interviewed, we shall briefly record the specificity of the automotive globalized system, as well as of Russia, seen as a reindustrializing country. We shall then identify the various barriers or influencing factors mentioned by the interviewees, whenever their implementation was successful or not. We shall subsequently seek to differentiate between the factors that seem persistent on the ten years' span and those which were more linked to the economic backwardness of the country. Finally, we will describe the level of regional integration of the Russian automotive market as well as the specificity that persists despite a strong inclusion process.

1 METHODOLOGY

Our inductive qualitative approach is a case study (Yin, 2014) which uses one example of failure as the backbone of the research, following (Pettigrew, 1990) who advises to take advantage of extreme situations for which the process of interest is "transparently observable". This type of methodology is usually considered useful to understand the rationale underlying relationships or reactions (Eisenhardt, 1989).

Tab. 1 Interviewee population

Company and nationality	Activity	Informant (described by function)	Nationality	Interviews (number and year of interview)
Subcontractors / automotive suppliers				
CarSeat*(1) (German)	Automotive polyurethane producer	CEO	Belgian	1 (2013)
		Vice President Finance	British	1 (2013)
		Vice President Sales Marketing	Belgian	2 (2012, 2015)
		Development Manager	French	3 (2008, 2012, 2015)
		Controller	Belgian	1 (2013)
		Quality Director	Belgian	2 (2013, 2015)
		Process Manager	Australian	1 (2014)
		Technical Manager	Russian	1 (2013)
		CEO Russian Sub.	Russian	2 (2013, 2015)
		HR Manager	Russian	1 (2015)
Purfoam*(Russian)	Polyurethane producer (2)	CEO	Russian	1 (2013)
		Lawyer	Russian	1 (2013)
Foamaksent*(Russian)	Polyurethane producer (2)	Shareholder	Russian	1 (2015)
		Shareholder	Russian	1 (2017)
BASF Coatings (German)	Automotive produce of refinish paint	Sales Manager	Russian	1 (2010)
BASF Group (German)	Automotive supplier (partly)	CEO Russian Sub.	German	1 (2017)

Eternit Russia (Belgian)	Automotive supplier (partly)	CEO Russian Sub.	Belgian	1 (2010)
AD Plastic (Croatia)	Automotive supplier	Sales manager	Croatian	1 (2015)
Lear Corporation (USA)	Automotive seat supplier	CEO Russian Sub.	French	1 (2014)
Faurecia (French)	Automotive seat supplier	CEO Russian Sub.	French	1 (2015)
Foamline (Russian)	Automotive polyurethane supplier	Sales manager (automotive)	Russian	1 (2017)
Sotex (Russian)	Automotive polyurethane supplier	CEO (automotive activity)	Austrian	1 (2017)
Total		22 interviewees	Russian (9) Others (13)	27 interviews
Car manufacturer / OEM				
PSA (French)	Car manufacturer	Project Manager (HR)	French	1 (2010)
		CEO Russian Sub. (Citroën)	French	1 (2010)
		Site director (Kaluga)	French	1 (2017)
Renault Group (French)	Car manufacturer	Cooperation Manager	French	2 (2014, 2017)
		Purchaser chemistry	Russia	1 (2015)
		Purchaser engines	French	1 (2017)
		Purchasing assistant	Russian	1 (2017)
Avtovaz (Russian)	Car manufacturer (Renault majority share)	CEO French sub.	Russian	1 (2015)
		Lobbying	Russian	1 (2015)
		Technical Cooperation	Russian	1 (2015)
		Financial Cooperation	Russian	1 (2015)
		Lawyer	Russian	1 (2015)
Volkswagen Russia (German)		Purchasing Director	German	1 (2014)
		Purchasing chemicals	German	1 (2015)
Other				
Russia Data (German)	Consulting	Consultant	French/Russian	1 (2014)
Segula (French)		Assistant	French	1 (2017)
Total		16 interviewees	Russian (7) Others (9)	17 interviews
General total		38 interviewees	Russian (16) Others (22)	44 interviews

(1)   For the case of failure, names of companies involved have been changed

The aim of the study is mainly descriptive, and a major objective is to understand how the integration process worked over a period of 10 years (Eisenhardt, 1989 mentioned, as an example of detailed description, the work done by Trigger, 1981 on the relation between technology and culture). To complement the case of failure, we chose, on one side, suppliers to the Russian automotive industry, and on the other side, managers involved in the choice and the follow-up of such companies. Since Russia was mainly perceived by OEMs as an extension of the European integrated region, we considered that it was more logical to focus only on Western European companies. Even if it was difficult, we tried to have the highest possible representation of Russians as compared to Western Europeans, because we considered that it was important to integrate local witnesses (see population interviewed on Table 1).

We used a semi-structured questionnaire to identify the various factors that influenced the integration process, asking interviewees how the implementation in Russia was prepared and how it took place. We gradually tested the potential impact of any new factor that would have been revealed by the interviews. As is made possible with this type of methodology, we had some overlap between data collection and data analysis, as well as back-and-forth motions to complete information, induce reactions to unexpected messages and test the importance of the various factors identified. As an interviewer, we played on the personal interaction with the informant to make him mention the difficulty he / she had, or to react to information mentioned by others. Finally, we used an exploratory grid based on the internationalization literature to categorize and analyze the data collected with help of Nvivo software, to uncover the factors of influence mentioned as having the most impact on the integration process.

2 DESCRIBING THE CONTEXT

2.1 The automotive multi-regional system

The globalization of the automotive system has been described by many scholars (for example, Boyer & Freyssenet, 2000; Colovic & Mayrhofer, 2008). The major objective of regional integration strategies was to reduce costs by increasing volumes of parts produced, to take advantage of lower wages when possible, and to promote a strong standardization which leaves little space for adaptations (Berger, 2011). Placed in the centre of the system, OEMs monitor the levels of internationalization or externalization of the industry, as well as the extent of the "spatial integration or disintegration" that seems needed (PIPAME, 2010). They try to impose their approach to their suppliers and / or subcontractors, with whom they usually negotiate global contracts applicable World-wide (Sturgeon et al., 2009). In many cases, depending upon the types of parts produced, these companies need to settle close to the production plants to avoid disrupting the flow of just-in-time supply (Schmitt & Van Biesebroeck, 2013).

2.2 The Russian industrial environment

Twenty-five years ago, Russia lived through the shock of a brutal switch to a capitalist economy. When the barriers isolating the Soviet society disappeared, a massive translation of Western management literature provided local enterprises with knowledge essential to survive. Simultaneously, MNCs introduced a real competition and widespread the use of modern management practices (Björkman, Fey, & Jeong Park, 2007). Even though the country joined the WTO in 2011, Russian enterprises have still a low level of exposure to the international sphere for several reasons, among which we would mention the pre-eminence of oil and raw materials in trade, the membership to an economic union that it dominates (87% of trade

within the Eurasia Economic Union according to (Vinokurov, 2017), and the fact of being an enclave far from any of the trade triads (Dicken, 2015). Consequently, the Russian business fabric is very fragmented with different business practices (Krylov, 2013), as well as a very differentiated international experience. Using data provided by (Voszna & Kiss, 2014), we created a typology (Montenero, 2017,p. 78) that shows that only 43% of Russian companies are exposed to international competition in some way or another (State owned or mixed companies on strategic sectors 20%, Independent companies with activities abroad 18%, Western-Russian joint-ventures 1% and Foreign subsidiaries 4%).

3 FACTORS OF INFLUENCE

The influencing factors identified have been classified according to the levels of operation (Duverger, 1964), resulting into a separation between macropolitical determinants for global economic and political phenomena, and micropolitical explanations when it concerned relations of individuals with other individuals.

3.1 Macropolitical factors

A first series of macropolitical factors impacting the integration of Russia to the globalized automotive market are directly linked to the local specificity of the market, or "local markets", as mentioned in the literature on know-how transfer (Edwards, Colling, & Ferner, 2007).

- Almost all interviewees mentioned the administrative and legal uncertainty, which implies either excessive burden, or the difficulty to presage any decisions taken by the authority or the Government. A good example can be found with the law on local content, which was passed to encourage localization of automotive parts: not only did our interviewees have difficulty to know in what direction the Government was going, but its application came out as being very obscure. According to the level of experience of the country informants, reactions ranged between an "inability to decipher" to an "extreme impatience" (Montenero, 2017,p. 226). On every day's basis, the constraints of a market in "constant creation" (Safonova, 2013, p. 49) could translate into a waste of time and higher costs, or create rejection or fear. CarSeat CEO summarized the situation in this way: "We were desperately looking for benchmarks!". The legal and administrative uncertainty may also have prevented Western companies from copy-pasting what exists in the West: the obligation to use more guards, to recruit lawyers in HR department or the impossibility to combine administrative and commercial functions.

- In addition, managers and experts had some difficulty projecting how the Russian automotive market was organized and how it would develop. For example, many imagined that sales would increase by 240% in 15 years and that local brands would disappear (Vahtra & Zashev, 2008). However, sales have never reached again the level of year 2008; they have been very irregular, nothing comparable with the steady growth known in Central Europe. On top of this, as for the Russian brands which still exist today, many had forgotten the under-structure inherited from the Soviet period, in terms of locations, infrastructures and working habits, a situation which explains, for example, why the different sites are scattered across a circular zone of 3000 km diameter (against 800 km in Central Europe). Finally, we should not forget the difficulty of obtaining several raw materials or parts in similar conditions as in the West, because of scarce volume or high custom duties. Our analysis of reactions showed that the idea of scarcity or monopoly played a very important role in the way the industry organized itself or failed to organize efficiently.

- We find other constraints in the job market which often keeps traces of the Soviet system. For example, the buxgalter (бухгалтер) or chief accountant is still considered a key function in the official nomenclature because it holds the purse strings. Moreover, several functions are hardly available, creating the need for MNCs to train people and be able to keep them. To this we can add the absence of reference for some functions which are common in Western Europe such as Key Account Managers, as well as the high complexity of HR legal obligations, which may create misunderstandings between local HR managers and headquarters.

- Finally, the respondents also insisted on the constraints linked to the local financial market. If, in the first years of the period, many discovered that operating in Russia was expensive (Carseat' development manager said: "Russia is not a low cot country"), the currency devaluation has improved the situation but increased exchange risks. This, added to the high occurrence of crises and to the cost of local operations, tends to lead to a minimalist approach of travelling and exchanges with the headquarters that hinders the development cultural ownership. This last characteristic is even more significant because of the difficulty to find Western Europeans willing to expatriate to Russia.

A second series of macropolitical factors are directly linked to the differences between the automotive business culture and the Russian business practices.

- Different analyses have shown that automotive companies share a common culture characterized by values such as technical innovation (Beaume, Maniac, & Midler, 2008; Midler, 1998), quality and safety (Montenero, 2017), with the likelihood to think that it is superior to that of other industries. The way the globalized system is organized leads to give priority to standardized processes, transparency and traceability (Sturgeon et al., 2009). It should be noted that it follows a very specific scale of time which combines two opposite approaches: if it is essential to work with a long-time vision (often over 8 years) to ensure permanence throughout conception and models' lifespan, suppliers are also expected to be very flexible and go beyond everything that can be programmed. This later situation denotes also a very particular customer-supplier relationship (Mukherji & Francis, 2008) dominated by OEMs who impose their vision and strategy to suppliers, and require them to adopt a high level of transparency, in exchange for production volumes.

- The Russian industrial culture, inherited from the Soviet time, is very different. Due to a strong centralization, the interest of customers was long not considered, with consequently little concern for quality issues and a scarce culture of performance (Grachev, 2009, p. 5). All respondents recognized a dramatic improvement, but they insisted on a general lack of constancy (suppliers, productions, employees). Moreover, if some functions such as HR are strongly regulated, requiring keeping detailed records of the employee's background as well as of every action, this does not usually apply to technical and commercial activities. Furthermore, customer / suppliers' relations have often been based on power game as well as on a lack of transparencies (Braguinsky & Mityakov, 2015). But the major difference is to be seen in the way Russian companies organize themselves to face market and financial constraints, and reduce risks induced by corruption: they usually work with short-time customer orders that need to go throughout the complexity of common internal administrative rules (for example, a high number of signatures). The ensuing lack of flexibility tends to make cooperation with Western companies very strenuous.

3.2 Micropolitical factors

If they impact the efficiency of the interpersonal relations between headquarters and subsidiaries, these factors require careful consideration as they put high strain upon the stability of partnerships.

A first series of micropolitical factors are the consequence of cultural differences between Western Europeans and Russians, i.e. the values (Hofstede, 2003) driving different ways of organizing operations, behaving and dealing with difficulty.

- Particularly, when Western European tend to rely essentially to processes, Russians value much more networking (Salmi & Heikkilä, 2015), and informal relations (Ledeneva, 2006). If this attitude may explain a lack of continuity on the Russian side, because actions may be more linked to the relation than to the process, it often leads Western European to disregard informal practices (Elenkov, 1997; Ledeneva, 2006, p. 101).

- A strong cultural opposition is also to be found in the concept of time. To fight against the uncertainty of the Russian market, local entrepreneurs tend to concentrate on short-time, adopting a "limited time horizon" (Grachev, 2009, p. 6; Veiga, Yanousas, & Bucholtz, 1995, p. 22). When Western Europeans like to define detailed plans before any action, their Russian counterpart tend to adapt their reactions to the development of the context. As (Michailova, 2000, p. 102) wrote, "…they tend to adapt to the environment rather than transforming it". The importance of this adaptability may even lead Russians to evolve their understanding of norms, standards or contracts according to the contexts, an attitude that often disturbs or worries Western Europeans.

- Finally, the Russian historical context may explain a higher awareness of the power relation between colleagues or partners. This may translate into a difficulty to communicate openly if the distribution of forces is uncertain, or into a strong respect of each one's zone of responsibility, a behaviour that may prevent actual cooperation. On the other hand, when they feel that power is on their side, Russians do not hesitate to impose the ideas and control its application. In an alliance, they expect the same from the partner on his / her areas of competence. The respondents have mentioned this different approach of exchanges or of communication as a reason for misunderstanding, or even failure of collaboration.

A second series of micropolitical factors emerge from the confrontation of two different perceptions of the world as well as from contrasting attitudes to others.

- Firstly, Westerners, particularly in the context of the automotive sector, tend to favour technical expertise and impose their own models (Soulsby & Clark, 2011,p.308), with little consideration for local specificity. Moreover, it has been shown that in a post-socialist context, relations with Russian partners tended to be unbalanced (or "asymmetric") in favour of the Western part (Child, 2000; Clark & Geppert, 2006) with very often an underestimation of the value of the information possessed or provided by the Russian.

- The respondents also mentioned the possible impact of what they called the Russian strangeness. The Russian language, the Cyrillic characters and the complexity of the signals coming from the market may prevent certain managers from finding reference points. This may lead them to avoid immersing themselves too deep into the local context and shift local relations to their Russian employees or partners. Besides the fact that this behaviour forces them to rely only on intermediates, with the danger of biased interpretations, it pulls them away from direct contacts with major stake-

holders, in a country where relations with the prime contractor is considered very important.

- Finally, on the Russian side, the environment encourages micro-political behaviours to compensate for the weakness of institutions. The context of Russian business has often been described as an "institutional void" (Puffer, McCarthy, & Boisot, 2009) or "path dependence" (Schwartz & McCann, 2007). This situation leads to create situations of power seen as the only way ensuring that actions are moving forward in the direction wished.

CONCLUSION

In this paper, we have identified and listed the major drivers or obstacles of the integration process of Russia into the globalized automotive system. It is a first work towards a better understanding of the assimilation process in emerging markets. The second step would now be to analyse the extension of the multi-regional system over a period of ten years and see what has changed. The analysis should also lead us to differentiate between factors which happened at the early stage (consequence of the country's backwardness?) and those which persisted. This later group of items may be understood as the local specificity imposed to the system. Another interesting question to ask would be to check what the consequences of the Russian integration to the local business culture were. Has this integration created a new layer to a very fragmented business fabric? Is this integration benefiting only a group of people or does it extend to actual Russian companies, allowing them to catch up on Western technology and ways of working? Former observations have brought to light the emergence of a "generic subculture across organization" (Schein, 1986) gathering all Russian professionals who have chosen to work for and within foreign companies (Montenero, 2017, p. 336). Is this just the creation ex-nihilo of a group necessary to allow the Russian extension of the system to operate efficiently, or can these evolved managers help the Russian business culture to move forward? Moreover, it would be interesting to estimate what the Russian experience has brought to the globalized system. Lastly, this work should be associated to an analysis of what happened in other emerging markets identify the constants of the phenomenon.

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Theoretical Aspects of the Study of Social Investment

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Abstract: There are two real strategic tasks in Russian context: construction of a socially oriented market economy and transition from industrial to postindustrial, mostly innovative development path. Authors use methods of analysis, synthesis, and methods of comparison and generalization, and consider the content of international standards which serve as a guide for Russian and foreign companies in the planning and implementation of social investment programs: GRI, accountability AA 1000SES and AA 1000AS, ISO, UN Global Compact and others. Authors revealed that the need to develop a social investment business model of a company and formulated a list of basic qualitative and quantitative indicators of social investment in the company's main areas of operations. They are economic (honesty and transparency, quality of goods and services), ecological environmental protection, reduction of negative impact of company's activities and social (work with employees, local community and authorities).

INTRODUCTION

In the context of the need to make sure the harmonization of the interests of the public and private sectors of the economy, the analysis of management mechanisms and instruments of influence on the social environment of the most active party to economic relations – corporations – acquires special significance. The goal of any corporation as a commercial organization is to provide the highest possible market efficiency, which allows making high-quality products, paying dividends to shareholders, wages to workers and employees, etc.

In this system, to ensure their normal development, they are forced to do an institutionally uncharacteristic function in connection with an investment in social facilities. However, only the activation of business participation in social projects will be able to guarantee the enterprises of the corporate sector the realization of their main interests – making a profit.

Thus, the participation of corporations in the formation of a social environment is a vital condition for them, and failure to fulfill their social role can lead to various negative consequences. Therefore, studies of social investment management mechanisms in corporations that guarantee the effectiveness of investment projects acquire special relevance.

The aim of the work is to disclose theoretical aspects of the study of social investments. The paper considers and summarizes the most significant theoretical and methodological aspects of the interaction of the public sector of the economy with corporations regarding the implementation of corporate social investment projects as a mechanism to increase the level

of social security of the population, as well as management of investment activities in Russian corporations in the social environment.

1 LITERATURE REVIEW

European countries already from the 70s of the 20th century stood on the rails of the formation of a social state. A new political paradigm for reducing poverty and inequality was proclaimed (Midgley, 1999; Van Kersbergen & Hemerijck, 2012). Initially, the main source of social investment was the state, later in the early 90s of the 20th century, corporations and businesses joined the process.

Hemerijck in "The Quiet Paradigm Revolution of Social Investment" considers the emergence, dissemination, merit, and criticism of social investments as part of the social security policy. The paper highlights the growing interest in social investments by corporations in the last two decades and determines the role of social investments in overcoming economic and financial crises (Hemerijck, 2015).

Social investment, as a process and practice of corporate governance, is actively developing in foreign companies of economically developed countries. So, in the USA in 2016 the volume of social investments exceeded 8.72 trillion dollars, in the European Union 12.04 trillion dollars (Global Sustainable Investment Review, 2016). Russia also has past Soviet experience and modern prerequisites for the development of social investment, which in modern enterprises are realized under the condition of the coordinated interaction of the corporate sector, the state, and the local community. However, the size of social investment of corporations in Russia in 2012-2015 did not exceed 600 million dollars. (Blagov et al., 2015).

Fig. 1 Structure of the investment sphere
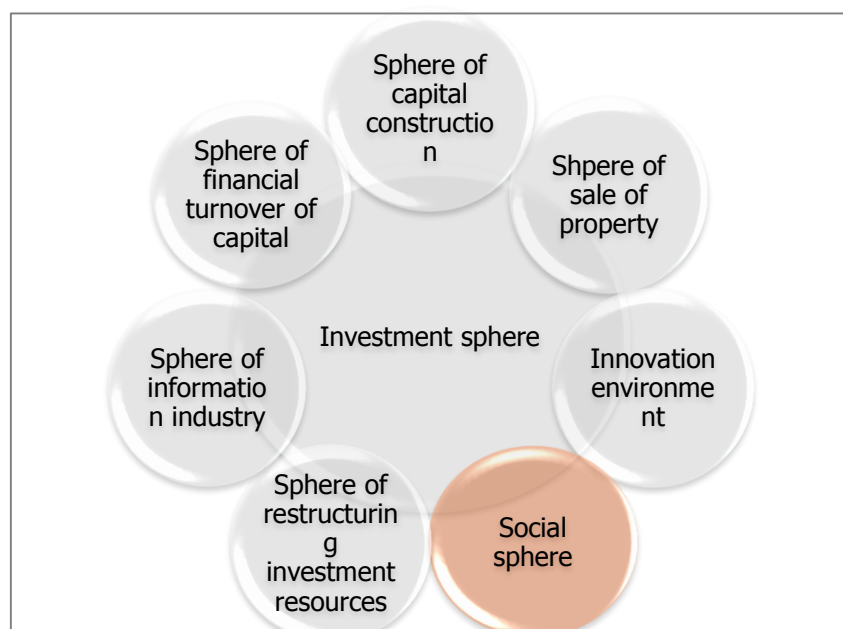
Source: Margolin & Semenov, 1999.

Turning to theory, the system within which a balance is made between social fairness and economic efficiency is the investment sphere, and its main parties are business, the state, and society (Figure 1).

Then, it is legitimate to define the social environment as an object of investment, and also as an element of the social sphere that characterizes it in its turn as an integral part of the investment sphere. Hence, the social investment being also a process of implementing investment activities within the social sphere is the concept of a lower level in relation to investment in general, and social investment – a concept that is subordinated to the notion of investment.

Social investments differ from the traditional financing of social obligations to citizens by the state. Social investments mean investing in "human capital" and "social capital" by investing in individuals or individual communities (Olk, 2007). An analysis of the European data for 1997-2007 shows that the format of social investment is more effective than the traditional format for the implementation of social obligations by the state (Van Vliet & Wang, 2015).

The size of social investment of the state, welfare and economic efficiency are closely interrelated. In theory, spending by the state on social needs is not a productive expenditure that reduces investment activity, which leads to a slowdown in economic growth. On the contrary, the reduction of government spending on social needs leads to the growth of economies. However, in practice, this model does not work in all economies. For example, the Nordic countries achieve a high level of economic efficiency in conditions of high social investment, Anglo-Saxon countries achieve the same goal through minimal government intervention, and the countries of continental Europe are experiencing financial difficulties in ensuring high social responsibility and economic efficiency (Bernard & Boucher, 2007).

Some issues of theory and practice of social investment were touched upon in the works of a number of Russian and foreign scholars. So, at the micro level, the concept of "social investment" in the world practice was formed relatively recently, about 40 years ago. Prior to this period, there were standards in various areas of corporate governance relating to employee relations, corporate ethics, approaches to environmental protection. At the same time, in the sphere of the social policy of companies, standards and rules were not worked out.

Currently, social investment for most Russian authors means investing in social facilities (Blagov et al., 2015; Morozov et al., 2016). In particular, social investment means long-term investments "with the aim of improving the quality of people's lives through the creation of new technologies and mechanisms for allocating funds among different groups of the population, taking into account their needs."

Nolan views social investments from a position of necessity for socio-economic development, their impact on economic growth and employment, as a concept or platform for corporate development (Nolan, 2013).

In this connection, quite a lot of research is devoted to the influence of social investments on the activities of the corporation and its corporate culture (Sparkes & Cowton, 2004; Javakhadze et al., 2016). Even some specialized companies emerge that help large corporations to effectively implement social investments.

For example, the organization Project Harmony helps Cisco, Microsoft, Intel, and others to implement targeted programs in Russia. Its program, joint with Intel, "Education for the Future" is aimed at supporting teachers in different regions of Russia and developing their professional competencies. Some companies support social investments in talented people and "knowledge industries" (for example, entrepreneurship training, events for start-ups, stimulating innovation in corporations, etc.), which leads to the active development of entrepreneurship and initiative (Bosma et al., 2004).).

In the world practice, companies traditionally use the following key indicators of the effectiveness of social investment (Sheiman & Smirnova, 2012):

- social effect and social efficiency, characterizing the degree of satisfaction of the population with the quality of life and determining the standard of living of people;
- social efficiency – an indicator that determines the improvement of people's living standards;
- socio-economic efficiency – an indicator that gives an idea of the economic efficiency of investment in the social sphere, taking into account the social effect achieved;
- economic efficiency – an indicator that reflects the economic efficiency of the project on the basis of the ratio of results to costs.

At the same time, the social effect can be determined either by economic or statistical, or by sociological indicators: a change in the ratio of household budgets from consumption to savings, an increase in the number of children in families, an increase in the educational level of the population, satisfaction with social or financial status. The main indicator for any company is the improvement of people's quality of life as a result of social investment activities.

Indicators of social efficiency characterize the quantitative aspect of the social goals achieved for which the social investment project was designed and implemented: the emergence of additional social services, the change in the consumer price index, housing provision, a reduction in unemployment, an increase in the birth rate and a decrease in mortality.

Indicators of socio-economic efficiency are determined along with the social effect through increasing the physical volume of the service, reducing the cost of the service, reducing the current costs of social organizations, increasing the number of visits to recreational activities, and lowering unemployment benefits. The range of indicators is quite wide and depends on the types of activities of companies.

The economic efficiency of social investment is based on minimizing the costs on their development and implementation: absolute (the difference between the amount of capital investment and the monetary evaluation of its results), relative (the ratio of monetary evaluation of results and total costs), temporary (the period of investment return).

The return on social investment can also be assessed using the methodology proposed by Lingane & Olsen, in which the author proposes ten standard recommendations (Lingane & Olsen, 2004).

Fig. 2 Implementation of international standards in the corporate management system
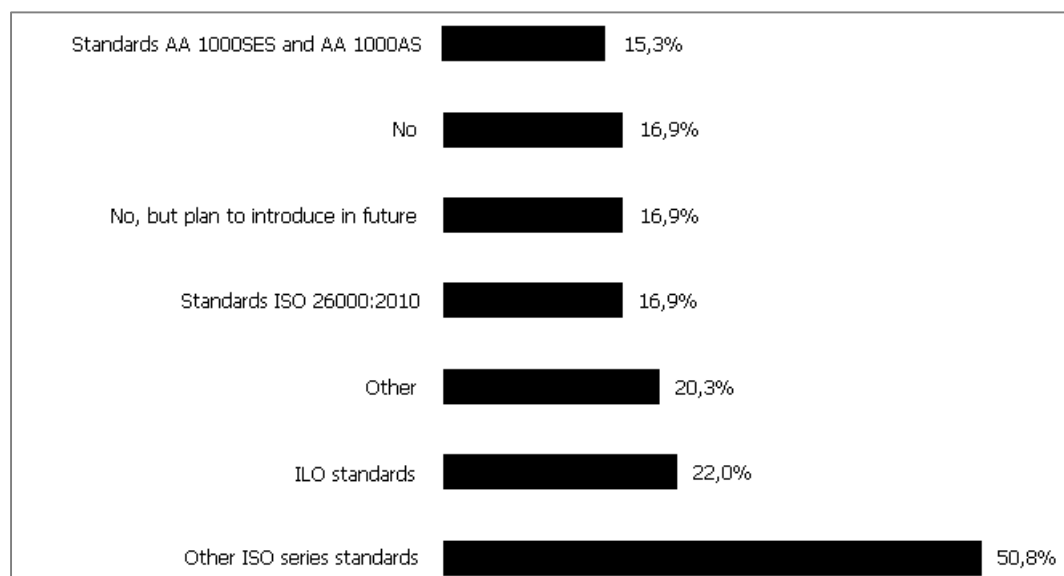
Source: Blagov, 2015, p. 15.

One of the most important conditions for effective social investment is the purposeful activity of the company's management, in particular, in connection with the decisions on the use of international and Russian standards for non-financial reporting, the implementation of which allows regulating the social activities of the company and increase the likelihood of a successful outcome; some are of particular interest for consideration.

Important international documents of the company's activities include the ISO Guide for Social Responsibility ISO 26000: 2010. Based on it, in Russia, within the framework of the Committee for Standardization No. 471 "Social Responsibility", the national standard GOST R ISO 26000-2012 "Guidelines for Social Responsibility" was introduced, which provides for the application of an international standard.

Standard ISO 26000: 2010 is a universal methodological tool for the organization. It promotes a systematic understanding of the principles of social responsibility and management of the company in accordance with them, interaction with stakeholders, and the definition of approaches to the implementation of social tasks.

Also, some companies use the standards AccountAbility AA 1000SES and AA 1000AS, however, the use of these standards is becoming less popular. The main standards used by the companies are shown in Figure 2.

There are various international and Russian indices and ratings highlighting companies that have the best practices of social investment and responsible behavior, and thereby confirm the relevant business reputation of the company. The most famous among them are the international indexes Dow Jones Sustainability Index (DJSI) and FTSE 4 Good (Morozova et al., 2016).

Russian companies are not represented in these indexes, due to increased attention of experts to the transparency of the companies, including in relation to suppliers and shareholders. In Russian companies, such level of transparency is not a frequent practice, due to the reluctance to disclose internal performance indicators.

In turn, the Russian Union of Industrialists and Entrepreneurs holds the contest "The Best Russian Enterprises: Dynamics, Efficiency, Responsibility" with nominations for social investment and non-financial reporting. The Association of Managers of Russia has been holding an international contest People Investor since 2008 to reward the best socially responsible companies. All this testifies to fruitful attempts to approximate the effectiveness of social investment to world procedures and evaluation standards.

2 METHODOLOGY

When analyzing the variability of social investment of companies, as well as the dependence of the Russian economy on modern conditions, the methods of analysis, synthesis, and comparison and generalization were used.

3 RESULTS AND DISCUSSION

In order to identify the categorical feature of social investment, the authors will now consider social investment as an investment activity of the corporate sector, through which corporations can achieve, in addition to their goals (income, useful effect), the goals of people/society – improving the welfare of the population, increasing its intellectual, cultural activity and the like. in other words, if only the corporation receives the effect of investing, then this is a "traditional" investment, but if the expected effect extends to both corporations and society (in some or other way), then this is "social investment" (Figure 3).

Fig. 3 Forms of investment
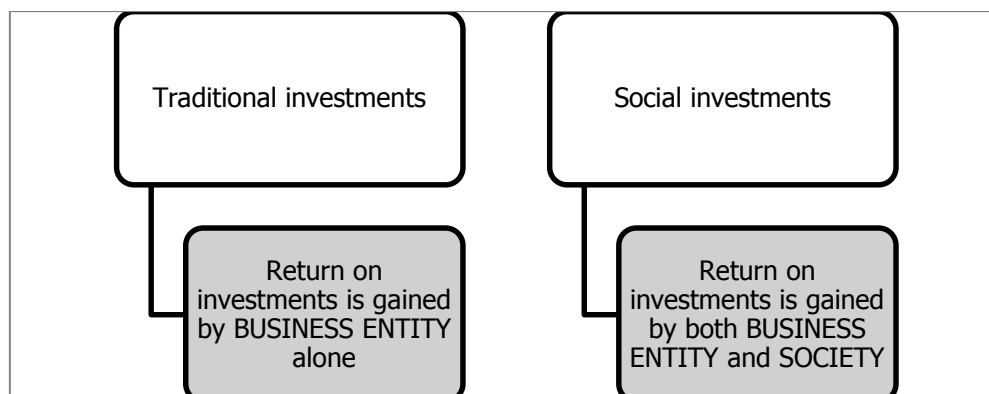
Source: compiled by the authors

Such a differentiation of investment into "social" and "traditional" is relatively arbitrary, since any investment indirectly spreads the resulting effect, including on the elements of society, which to some extent interact with this corporation.

The variety of objects and the complexity of the structure of social investment in corporations necessitated the definition of its specificity on the basis of certain classification criteria. For the classification of types of corporate social investment, there can be put such criteria as organizational forms, objects of investment, etc., which is determined by the goals and objectives of corporate governance. In general, corporate social investments can be classified according to the following characteristics (Table 1): subjects of social investment, as well as its object. Accordingly, social investment can be defined as a dynamic process of realizing relations between the parties of the social environment with respect to ensuring a balance of interests of the corporate sector with the interests of the society and the state (Figure 4).

Fig. 4 Social investment in corporations as a system
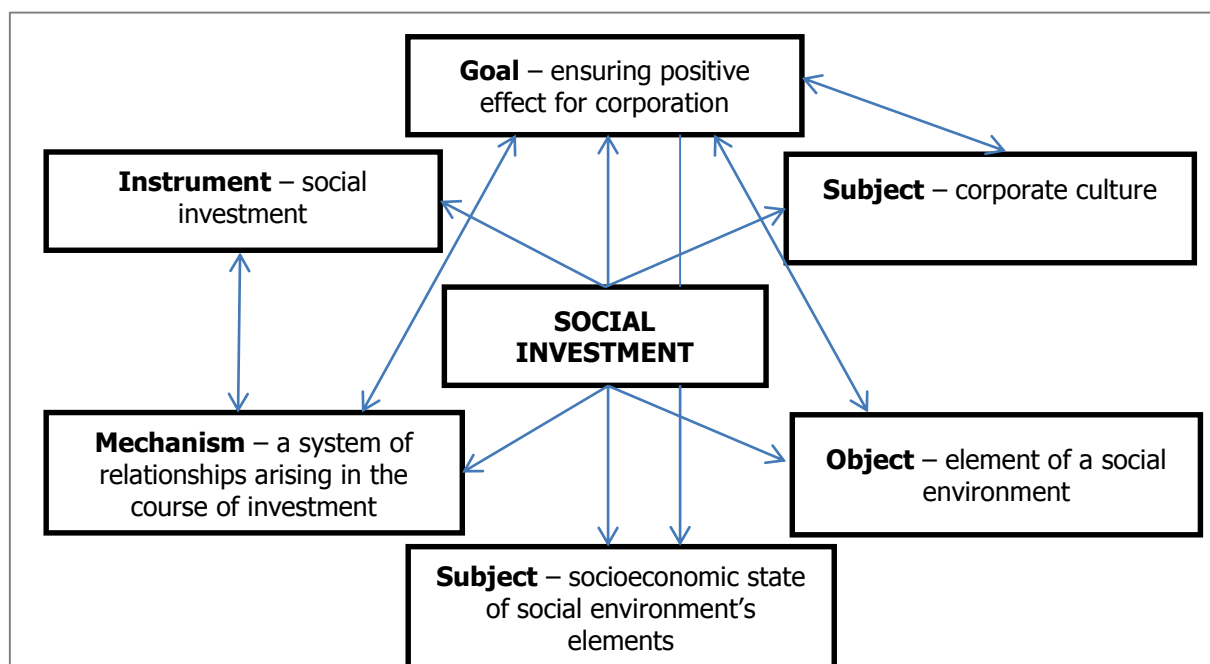
Source: compiled by the author.

Tab. 1 Classification of corporate social investments

Classification signs of social investments	Types of social investments
Investments goal	1. Ensuring the safety and stability of society 2. Maintaining the existing and stable level of production of goods (works, services) of the investee 3. Increasing the efficiency of production and provision of social goods and services 4. Increase in the volume of social goods and services per capita 5. Acquisition and implementation of new or brand new social technologies, products or services
Investments type	1. Direct social investments 2. Mediated social investments
Object of investments	1. Investments in social facilities 2. Industrial investments of a social orientation 3. Investments in the Noo- and Creato-sphere (sphere of creativity) 4. Investments in human capital
Level of influence of implementation of the investment project	1. Macro (national/international) 2. Meso (regional) 3. Micro (separate entities, households)
Forms and instruments of investments	1. Investments with direct positive effect on the corporation 2. Investments with a scattered positive effect on the corporation 3. Investments with indirect positive effect on the corporation 4. Investments with a mediated positive effect on the corporation
Expected impact on financial results	1. Investments ensuring growth in total corporate income 2. Investment ensuring downfall in total corporate income
By organizational forms	1. Investment projects – it is assumed, firstly, that there is a certain object of investment activity; secondly, the implementation of one form of investment. 2. Investment portfolio – includes various forms of investments by one investor

Source: compiled by the authors.

The system of interaction between the public and private sectors of the economy in different countries functions differently. Differences are generated by factors such as the historically established nature of the relationship between the business, the society, and the state, the traditions of resolving business conflicts, the prevailing types of economic behavior of the population, the level of political culture, the distribution of resources between different institutions. A certain correlation of these characteristics and the methods of interaction resulting from them in the society constitute the content of the notion of "business-state interaction model".

In the framework of this study, it is important to conduct an analysis of the state of the practice of social investment in companies with a view to systematizing the best foreign practices and the subsequent development of recommendations to Russian companies. It is advisable to begin the analysis with studying the processes and procedures of social investment of different countries. The institutional foundations of social investment in different countries have their own characteristics, therefore, a comparative characterization of the main aspects of social investment practices in the US, Europe, and Russia, presented in Table 2, is of interest.

Table 2 shows that in the European model presented in the context of this study, various aspects of the company's activities are regulated by law. At the same time, standards and laws are implemented at three levels: national, sectoral and corporate.

Tab. 2 Comparative characteristic of social investment practices in USA, Europe, and Russia

Aspects of social investments practices	USA	Europe	Russia
Economic	Compliance with advanced management principles, the impact of a competitive market, compliance with consumer protection rights	Legally established framework: working day, wages, labor safety, bonuses and after-hours work	Integration of international standards into the activities of large companies, medium, and small businesses do not see the benefits of social investments
Legal	A small number of legislatively fixed norms of social responsibility. Voluntary participation of companies	Clearly regulated business rules, including social obligations	Investments are realized in accordance with legislative norms
Social	Support of local community in the territory of company's operation	Investments are focused more on their employees and less on local communities, due to good state social support	Certain industries, for example, metallurgy, oil production historically support local communities
Attitude to charity	Historically, there has been a tendency to use significant funds for charity by foundations and individuals. The main spheres: art, education	Due to the high tax burden, financing is usually transferred to the state	Managers of companies traditionally allocate funds for charity, among small and medium-sized businesses, charity is not developed

Source: compiled by the authors.

In the American model, the activities of companies on social investment are carried out on their own initiative, the strategy of corporate social responsibility is also developed independently. However, the state encourages investments in socially significant projects through tax incentives.

The Russian model of corporate social responsibility is at the initial stage of development. This is primarily due to the low profitability of corporations, the traditional imposition of solutions to social problems on the state, the lack of motivation for social investments in small and medium-sized businesses.

CONCLUSION

Thus, under the "social investment of corporations" it is necessary to understand the dynamic process of realizing relations between parties of the social environment regarding the balance of interests of the corporate sector with the interests of the society and the state.

Russian corporate investors do not yet have sufficient motivation for reorienting part of their investments in socially significant facilities and programs. When creating a system for managing social investment in corporations, it is necessary to change the stereotype that has developed in relation to social projects, as they are obviously unprofitable. The implementation of social investment requires a certain positive effect, which differs from commercial profit. "Useful effect" can be expressed in the form of a positive financial result (profit), as well as in any other forms that provide a general increase in the efficiency of the corporation. Increasing the efficiency of social investment is achieved either by reducing the cost of implementing investment projects or by increasing the result obtained by the corporation from a social investment.

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Metropolitanization Process in the CEE

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Abstract: Cities of Central and Eastern Europe are becoming eminent parts of the world metropolitan network, but metropolitanization has also other dimensions. It can be shortly defined as focusing economic activity in some sparse fragments of space - the cities, excluding other territories. To examine metropolitanization in the CEE, the results of international city network studies will be used, together with territorial demographic and GDP data. The findings show that whilst the importance of the CEE cities in the world metropolitan network is rising, focusing of activity in meaning of population and GDP also appears in most cases. Nevertheless, in terms of GDP per capita the gap between the cities and their countries is not expanding in most of the cases.

Keywords: metropolitanization, Central and Eastern European cities, metropolitan development, GaWC

JEL Classification codes: R12

INTRODUCTION

Studies of contemporary globalization often underline the international trade relations, constant factors of production flows and growing financialization. Globalization, however, has also its spatial dimension, and metropolitanization is often recalled in this context. As urbanization was a part of industrial revolution, metropolitanization accompanies the ongoing process of changes in the world economy starting from the end of 20th century. Besides other regions, the countries of Central and Easter Europe (CEE) also undergo this process. The aim of this paper is to discuss the economic aspects of metropolitanization in the region. First, the changing importance of the major cities of the region will be shown. This will be based on the results of series of studies performed by the Globalization and World Cities (GaWC) research network. Then, the relations of population and economic performance in terms of absolute GDP of the cites in question to the rest of their countries will be examined. This should allow to address the question of focusing economic activity in the metropolises. The GDP per capita levels will also be compared, which in turn should let to discuss the question of an economic gap between the metropolises and their countries.

1 LITERATURE REVIEW

Metropolitanization can be shortly defined as concentration of population and activities in and around large cities (Fuguitt et al., 1988, p. 115). The fact that both people and activities concentrate not only in the very core of the city, but also around it, makes the metropolitan areas much bigger in terms of population and economy. It is the very source of great potential of those areas and it was made possible because of the improvements in transport and physical infrastructure. Growing of such large metropolitan areas allows them in turn to become the

"new building blocks" of economies (Short, 2012, p. 6) and important players on the global market.

When discussing metropolises many authors emphasize, that the world economic, financial, scientific, political, media and cultural potential tends to focus there. Higher management functions, innovation centres and advanced business services also find their preferred environment in the metropolitan areas (Gorzelak & Smętkowski, 2005, p. 16). This concentration of the forces that virtually drive globalization in the metropolitan areas is the reason why metropolitanization is sometimes simply referred to as an urban counterpart of globalization (L'Hostis, 2009) or a territorial form of globalization. This approach towards metropolitanization underlines also the fact, that metropolitan areas are places connected with each other by global exchange of flows of people, money, goods and information (Huybrechts, 2002, p. 237). Observation of this exchange led to a conclusion, that the big cities form a kind of global network in which they are the nodes. This approach is basic for the research on global metropolitan network performed by the GaWC network.

The emerging importance of metropolises, their mutual connections and the role they play in globalization brings forth no doubts. Yet the consequences of metropolitanization, and especially uneven development of metropolitan and non-metropolitan areas, are a subject of discussion. They are often pointed out as unwanted implications of ongoing global processes, with which the state and local authorities need to deal with. As the CEE countries also became the parts of global economy, studying the metropolitan development in this region seems to be necessary.

2 METHODOLOGY

In order to research on metropolises it is needed to determine at first which cities belong to this group. Although it may seem intuitive in case of some cities, especially the biggest ones, some kind of criteria allowing to classify a city (with its metropolitan area) as a metropolis are necessary. Generally, there is an agreement on defining a metropolis by addressing the functions that this city must have. The city should offer a broad set of services, it needs a well developed infrastructure and communication with the world. Besides serving its country or region with highly specialized services, it needs to develop transborder relations, allowing for exchange of domestic and foreign trends and innovations to be created (Enyedi, 1994).

Together with similar ones, the above way of defining of a metropolis may be categorized as functional. It leaves aside the number of inhabitants, as there is no objective size of a city that would make it metropolitan. It focuses on the set of services, that a city performs and that distinguish this city from others. It can be successfully applied to research on particular cities and to carry out many types of qualitative analyses. And preparing a list of cities meeting the criteria could be possible, although it would demand making some arbitrary choices on the side of the researcher. In particular, it would be hard to objectively judge and rank the cities or to observe the changes of such a ranking.

Those difficulties led to attempts to somehow quantify the studies of metropolises. The first popular approach to this problem was to use the number of people using the city airport, the air traffic in other words. The main argument that was used to support this way of proceeding was that no metropolis can exist without an airport and it is an objective number, because it does not depend on any specifics of a city that do not appear in other metropolitan areas. Furthermore, the air traffic is to some extent connected with the functions used in the very definition of metropolis. A part of it is generated by the companies offering highly specialized services and multinational companies in general, it is a sign of openness and shows the volume of international relations, it is also a part of physical flow of people to and from the city.

The air traffic method may be, however, prone to bias coming from infrastructural systems of different countries, strategies of airlines and other disruptions. Some airports act as hubs for people changing planes but also coming from other cities with another means of transportation. In some places the purely touristic flow of people is more important than the business traffic. Therefore acknowledging the merits of this approach was accompanied by pointing out its limitations and looking for another methods of studying metropolises and their connections. The next method was developed by P.J. Taylor and other authors that established GaWC network. The results of works of this network will be also used here and because of that this method needs to be explained in some detail.

For GaWC the object of studying is the world metropolitan network. In this network each city is a node and particular nodes may have different position in terms of importance, so it is possible to show a hierarchy of cities. The positions in the network are intended to reflect also the flows of people, information, capital etc., although it is done only indirectly by assuming that the higher the position of a city, the bigger the flows the city generates. The data on which the calculation is made is based on business service sector, so it is connected with the higher order services that characterise metropolises. Therefore it is possible to say that this method is in accordance with the functional approach to the question of metropolitan status of a city.

Technically, the indirect approach comes from the fact that the cities and their economies are complex entities, and measuring several different kinds of flows between them is impossible. So, some objects that can be used to represent each city need to be chosen. In order to reflect the contemporary highly globalized "economy of flows", the transnational business service companies are the ones taken into consideration. Those companies belong to the following industries: advertising, finance, law and business consulting. Each of them creates its own network of offices in the biggest cities of the world and between those offices flows are generated. Those flows between different offices of each company are also the flows between the cities where the offices are located, so if to aggregate them, it can reflect the total flows between the cities in question. From the point of view of a particular city, all the service companies that have offices in this city form a business service potential of the city.

The level to which each company engages in a particular city is usually different. Service companies employ more people and have bigger offices in the cities that are more attractive for them. This simple fact is used to show the hierarchy of the metropolitan network under investigation. Data on the importance of every city for each company is collected first, and then aggregation is made to show the overall position of each city. This way a ranking of metropolitan areas can be created for the world, a continent, etc. What is important for validity of this approach is the period of time that the cyclical research has been done and also the number of the companies and cities under investigation. The first edition of the survey was made using data for the year 2000 and it was based on 100 companies operating in 315 world cities. Then the research was conducted every four years and in 2008 the number of companies grew up to 175 whilst the number of the cities increased to 525 (Taylor, 2010). The last published edition was based on the data for 2016 and prepared for 175 companies from 707 cities (GaWC 2016).

The above description of the research procedure can benefit from some formalizing, which can be done as follow (Taylor, 2004, p. 63):

1 The data on the presence of each company in every city is collected. For a company j, and the city i, a validity (v) of each city is calculated and it is denoted as v_{ij}. The validity v is based on the number of employees, the functions that the office performs in the structure of the company or even the number of offices in the city i.

2 The relation between cities a and b for j-company can be measured as:

$$r_{ab,j} = v_{aj} \times v_{bj} \qquad\qquad (1).$$

3 The relation of the cities a and b for all the companies equals:

$$r_{ab} = \sum_j r_{ab,j} \qquad\qquad (2).$$

4 The relation of each city (a) with all the other cities can be calculated as:

$$N_a = \sum_i r_{ai}; \qquad a \neq i \qquad\qquad (3).$$

This relation shows the status of the city a in the network, and a term "interlock connectivity" was coined to name it. The higher the relation, the higher the status of the city, as it shows the force of relations of all the companies from the city with all other cities.

5 To compare connectivity of different cities, it is convenient to relate the connectivity of a city (Na) to the connectivity of the city with the highest connectivity in the network, Nh:

$$P_a = \frac{N_a}{N_h} \qquad\qquad (4).$$

Pa is called "relative connectivity" of the city a. It ranges from 0 to 1, which is easy to interpret. First of all, it is convenient to create different kinds of rankings based on this value and usually the results of GaWC studies are published this way. This manner of presenting will be also used here, together with the categories depending on the P_a value used to show the hierarchy of cities. Those categories and their interpretation according to the authors of this method are presented in the Table 1.

Table 1   Categories of cities according to GaWC

City category	Interpretation
Alpha	The most important global metropolises. It includes the Alpha ++,New York and London in practice, the most important cities of the world metropolitan network and other Alpha subcategories, which refer to cities highly connected and other important world cities that integrate regions and countries with the network.
Beta	Important cities integrating their countries and region with the world metropolitan network.
Gamma	Other cities that integrate their smaller regions and countries with the world metropolitan network.

Source: GaWC 2018

For the Alpha ++ cities the Pa is about 1.0, and for the further subcategories it drops rapidly. Alpha + means above 0,66, Alpha - above 0,46 (Taylor, 2011, p. 24). Beta and gamma are lower, although the exact border value is not published and it must be enough to rely on the descriptive approach from the table only. Nevertheless, the above hierarchy is useful and all the cities belonging to the Alpha, Beta or Gamma category can be perceived as metropolises,

as they meet the criteria enlisted before. Therefore all the cities from CEE that are classified to those categories will be treated here as metropolises and will be the subjects of further inquiry.

At first, the share of CEE cities in all the three categories will be shown, which will allow to describe the dynamics of the importance of those metropolises. It will illustrate the process of including the CEE cities into the world metropolitan network. It will be an initial look at the process of metropolitanization in the region.

After highlighting the metropolitan development from the global network perspective, the question of metropolitanization in terms of focusing economic activity will be discussed. As some authors perceive metropolitanization from a pure demographic point of view (Glenn et al. 1988), it will be taken into consideration by showing the changing shares of the metropolitan to the non-metropolitan population of each country. To discuss the focusing of economic activity, the territorial GDP will be used, for the period similar to the GaWC reports. The exact period is 2006 to 2015, as this data was provided by the Eurostat. For this period it was possible to use the NUTS 3 level data, which in most cases allows for delimitation of the metropolitan area from its broader region.

Basically, the economic gap can be presented as a relation of GDP per capita of one unit to the other, and for the purpose of this article, those indicators for the metropolises where confronted with the averages of their countries. For this level of territorial statistics, the Eurostat provides only absolute GDP data and separately the number of inhabitants for each territory. Therefore the per capita value had to be calculated.

When discussing any particular region, its borders should be unambiguously defined. In this article a geographical and also historical context is used. The CEE countries, and so - the cities - are those on the European continent that used to belong to the soviet zone before 1989. This way neither Austria nor Greece are included and also Germany was treated as a whole as not a CEE country. Turkey with Istanbul also did not meet the criteria.

3 RESULTS AND DISCUSSION

3.1 CEE cities in the world metropolitan network
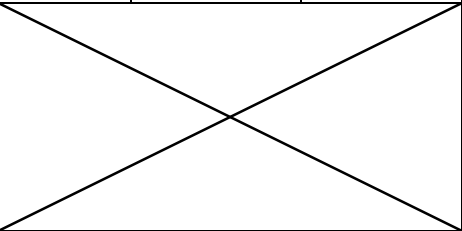
The results of the analyses of the GaWC rankings are presented in the Table 2. For each category of metropolises - Alpha, Beta and Gamma, the number of the cities from the CEE region is given. There is also the total number of cities from all over the world that were ranked in each category and then the share (ratio) of the CEE in the latter is shown in the last column. There is as well a sum for all the three categories, for which the ratio was also calculated. Each set is given for all the periods under consideration, from 2000 to 2016.

The Alpha, Beta and Gamma categories taken together show the changes in general position of CEE cities in the GaWC world metropolitan network. The shares of this region spread in general from about 6% to 10%, and they almost double if to look at 2004-2012 period, which was characterized by a strong growth of this position. In the first and also the last of the periods in question, the position of CEE cities dropped, but this drop was not significant. It can be stated, that in general the CEE cities were becoming more metropolitan, as their position in the network was rising in a dynamic way.

Looking at each category separately shows, that until 2012 the share of the CEE Alpha cities was growing dynamically, whilst the Beta and Gamma dropped in 2004, but were generally growing from that year until 2016. The biggest drop can be observed for the Alpha cities in 2016, which shows that the region lost 2/3 of its share in this most important category. This

is a sign of loosing strong position and gaining some share in the other two categories does not balance it. However, the source data says that it was due to just one city - Prague - dropping from Alpha to Beta category. The more important cause was that cities from other regions grew in importance, whilst the CEE cities lost some dynamics. Generally speaking, however disturbing the results for the 2016 may be, the data shows an ongoing process of metropolitanization in the CEE region understood in the terms of joining the global city network.

Table 2 CEE cities in the GaWC rankings

Category	No. of CEE cities	Total no. of cities	CEE/Total ratio	No of CEE cities	Total no. of cities	CEE/Total ratio
2000				**2012**		
Alpha	1	34	0,03	3	25	0,12
Beta	3	35	0,09	7	78	0,09
Gamma	4	53	0,08	6	59	0,10
Alpha+ Beta+ Gamma	8	122	0,07	16	162	0,10
2004				**2016**		
Alpha	2	35	0,06	2	49	0,04
Beta	2	29	0,07	9	81	0,11
Gamma	2	41	0,05	9	84	0,11
Alpha + Beta + Gamma	6	105	0,06	20	214	0,09
2008						
Alpha	4	41	0,10			
Beta	3	40	0,08			
Gamma	5	48	0,10			
Alpha + Beta + Gamma	12	129	0,09			

Source: own preparation based on GaWC 2000, GaWC 2004, GaWC 2008, GaWC 2012 & GaWC 2016

As it was explained, the GaWC method is a good way to indicate the metropolises in the CEE and to prepare a list of them, which will be useful in the later study. This list is shown in the Table 3, in which the division into the three metropolitan categories is also held. The list is based on the 2016 ranking, as the most up to date.

Table 3 The metropolises of CEE, ordered by relative connectivity

Category	Cities
Alpha	Moscow, Warsaw
Beta	Prague, Bucharest, Budapest, Kiev, Sofia, Bratislava, Belgrade, Zagreb, Tallinn
Gamma	Riga, Vilnius, Ljubljana, St Petersburg, Tbilisi, Minsk, Tirana, Skopje, Wroclaw

Source: Own preparation based on The world according to GaWC 2016

As a short comment on the hierarchy of cities shown in the Table 3 it is enough to say, that in general big countries make strong metropolises. Both the alpha cities are placed in the countries with the biggest (Russia) and the third biggest population (Poland). Those are also the only countries, for which two different cities were classified. On the other hand, the case of Ukraine (the CEE country with second biggest population) demonstrates that lack of political stability and unfavorable business environment reduces the chances also in this field. From historical point of view the case of Budapest is also interesting. In the 1990-ties the national conditions to become the most important regional metropolis seemed to be favorable for this city, as in case of Hungary the late socialist era was more market oriented than in other CEE countries (Enyedi 1994). In 2016, however, Budapest was classified only around the middle of the Beta category, as the economic conditions in other CEE have undergone a fundamental change.

3.2 The metropolitan - country relations

Having the list of metropolises from the Table 3, the finest way to study focusing of economic activity would be to analyze the data for all of them. But in order to use the data coming from one reliable source, and this way possible to compare, only the cities for which Eurostat provides the data were used. This way Moscow, Kiev, Belgrade, St Petersburg, Tbilisi, Minsk, Tirana and Skopje had to be left out, even though in case of Tirana and Skopje some data was available, but the time period was too short.

The available data on population and GDP of the cities and their countries is presented in the Table 4. For each pair the ratio of city / country is also given, which makes it easy to grasp the changes of this relation.

In case of population, in nine of the cities it grew in relation to the total population of their country and in the rest four cities this ratio remained stable, whilst no cases of decline occurred. And if to calculate the average grow of population for the cities, it would be 2,85% and minus 2,34% for the countries. So the demographic side of metropolitanization is visible in the CEE. The share of GDP of the metropolises in the total GDP of the country grew in eight cases, dropped in three cases and remained the same in two cases, if to look at the first and the last year. Focusing of the economic activity in the metropolitan areas seem to appear often, but not necessarily. The average GDP growth for the cities was 46,48% and 40,39% for the countries (for the 9 year, or six year period), which suggest some shift of the activity to the cities.

To examine if the focusing of economic activity is accompanied by growing gap of GDP per capita between the city and its country, the needed data is presented in the Table 5 and the ratio of this indicator is also calculated.
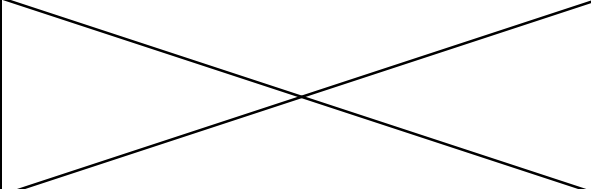
Only in six cases out of thirteen the most recent ratio of the city GDP per capita is higher than the first one. In the remaining seven cases the ratio shows the opposite. And the average GDP per capita growth was 42% for the cities and 51% for the countries. Therefore it can be stated, that in general the city - country GDP gap seams to decrease in the period under consideration.

Table 4 Population and GDP of CEE metropolises and their countries

Country/ city/ ratio	Population [thousand, %]				GDP at current market prices [million euro, %]			
	2006	2008	2012	2015	2006	2008	2012	2015
Bulgaria	7 601	7 493	7 306	7 198	27 211	37 200	41 947	45 286
Sofia	1 219	1 223	1 299	1 322	9 247	13 969	16 350	17 989
Sofia/ Bulgaria	16%	16%	18%	18%	34%	38%	39%	40%
Czech Republic	10 267	10 430	10 509	10 543	123 743	160 962	161 434	166 964
Praha	1 184	1 225	1 244	1 263	30 513	41 190	39 938	40 789
Praha/Czech Rep.	12%	12%	12%	12%	25%	26%	25%	24%
Estonia	1 351	1 338	1 325	1 313	13 522	16 517	17 935	20 252
Põhja-Eesti	545	551	568	575	8 198	9 761	11 018	12 822
Põhja-Eesti/Estonia	40%	41%	43%	44%	61%	59%	61%	63%
Croatia	4 313	4 313	4 268	4 213	40 198	48 130	43 934	43 847
Grad Zagreb	778	784	793	n.d.	12 851	15 371	14 667	n.d.
Zagreb/Croatia	18%	18%	19%	n.d.	32%	32%	33%	n.d.
FYRoM	2 040	2 047	2 061	2 070	5 472	6 772	7 585	9 061
Skopski	590	596	609	n.d.	2 577	3 000	3 247	n.d.
Skopski/ FYRoM	29%	29%	30%	n.d.	47%	44%	43%	n.d.
Latvia	2 219	2 178	2 034	1 977	17 264	24 355	22 058	24 368
Riga	705	692	647	n.d.	9 701	13 102	11 507	n.d.
Riga/Lativa	32%	32%	32%	n.d.	56%	54%	52%	n.d.
Lithuania	3 270	3 198	2 988	2 905	24 079	32 696	33 348	37 331
Vilniaus	830	826	806	n.d.	9 239	12 588	12 842	n.d.
Vilniaus / Lithuania	25%	26%	27%	n.d.	38%	39%	39%	n.d.
Hungary	10 071	10 038	9 920	9 839	91 399	107 637	99 086	109 674
Budapest	1 697	1 707	1 732	1 758	33 754	40 542	37 790	40 106
Budapest/ Hungary	17%	17%	17%	18%	37%	38%	38%	37%
Poland	38 132	38 116	38 534	38 455	274 603	366 182	389 369	429 794
Warszawa	1 700	1 708	1 711	n.d.	34 754	45 864	50 419	n.d.
Warszawa/ Poland	4%	4%	4%	n.d.	13%	13%	13%	n.d.
Wroclaw	635	633	631	n.d.	6 451	9 056	9 958	n.d.
Wroclaw/ Poland	2%	2%	2%	n.d.	2%	2%	3%	n.d.
Romania	21 194	20 538	20 060	19 820	98 419	142 396	133 511	159 964
Bucuresti - Ilfov	2 179	2 147	2 281	2 287	22 946	37 846	35 487	44 154
Bucaresti/ Romania	10%	10%	11%	12%	23%	27%	27%	n.d.
Slovakia	5 391	5 406	5 406	5 422	45 530	66 003	72 704	78 686
Bratislavský kraj	605	614	609	629	11 934	17 342	19 870	22 238
Brat. /Slovakia	11%	11%	11%	12%	26%	26%	27%	28%
Slovenia	2 008	2 022	2 057	2 063	31 561	37 951	36 003	38 570
Osrednjeslovenska	487	502	523	535	11 335	13 658	13 284	14 145
Osr./Slovenia	24%	25%	25%	26%	36%	36%	37%	37%

n.d. - no data available, Source: Eurostat, own calculation

Table 5 GDP per capita of the metropolises and their countries

Country/ city/ ratio	GDP per capita [thousands euro]				Country/ city/ ratio	GDP per capita [thousands euro]			
	2006	2008	2012	2015		2006	2008	2012	2015
Bulgaria	3,58	4,96	5,74	6,29	**Hungary**	9,08	10,72	9,99	11,15
Sofia	7,59	11,42	12,59	13,61	**Budapest**	19,89	23,75	21,82	22,81
Sofia/ Bulgaria	2,12	2,30	2,19	2,16	**Bud./Hung.**	2,19	2,21	2,18	2,05
Czech Rep.	12,05	15,43	15,36	15,84	**Poland**	7,20	9,61	10,10	11,18
Praha	25,77	33,62	32,10	32,30	**Warszawa**	20,44	26,85	29,47	n.d.
Praha/Cz. R.	2,14	2,18	2,09	2,04	**Wars./Poland**	2,84	2,80	2,92	n.d.
Estonia	10,01	12,34	13,54	15,42	**Wroclaw**	10,16	14,31	15,78	n.d.
Põhja-Eesti	15,04	17,72	19,40	22,30	**Wroclaw/Pol.**	1,41	1,49	1,56	n.d.
Põhja-Eesti/ Estonia	1,50	1,44	1,43	1,45	**Romania**	4,64	6,93	6,66	8,07
Croatia	9,32	11,16	10,29	10,41	**Bucuresti**	10,53	17,63	15,56	19,31
Grad Zagreb	16,52	19,61	18,50	n.d.	**Buc./Rom.**	2,27	2,54	2,34	2,39
Zagreb/ Croat.	1,77	1,76	1,80	n.d.	**Slovakia**	8,45	12,21	13,45	14,51
FYRoM	2,68	3,31	3,68	4,38	**Bratislavský**	19,73	28,24	32,63	35,35
Skopski	4,37	5,03	5,33	n.d.	**Brat. /Slov.**	2,34	2,31	2,43	2,44
Skop./ FYRoM	1,63	1,52	1,45	n.d.	**Slovenia**	15,72	18,77	17,50	18,70
Latvia	7,78	11,18	10,84	12,33	**Osrednjeslov.**	23,28	27,21	25,40	26,44
Riga	13,76	18,93	17,79	n.d.	**Osr./Slovenia**	1,48	1,45	1,45	1,41
Riga/Lativa	1,77	1,69	1,64	n.d.					
Lithuania	7,36	10,22	11,16	12,85					
Vilniaus	11,13	15,24	15,93	n.d.					
Vilniaus/ Lith.	1,51	1,49	1,43	n.d.					

Source: own calculation based on the Eurostat data

CONCLUSION

Starting from the beginning of the 21st century, the importance of CEE cities for the world metropolitan network is rising, which may be interpreted as a sign of successful transition of the regional economies. A process of metropolitanization understood as focusing economic activity in those cities is also noticeable. If to take into consideration the share of metropolitan inhabitants in the total population of their countries and the share of the city GDP in the country GDP, in most of the cases those indicators confirm this picture. However, in case of an economic gap between the cities and their countries no such conclusions can be drown. GDP per capita ratios between the cities and their countries changed both directions, but in average the ratio seems to decrease. In general, the results show that even though metropolitanization is a feature of the CEE economy, perceiving it as the main source of divergence would be oversimplification.

ACKNOWLEDGEMENT

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Restrictions on Trade in Professional Services in Central and Eastern Europe

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Abstract: Business, including professional services are among the most flourishing services sectors and are regarded as essential drivers of economic growth. The goal of this study is to examine the regulatory regimes governing professional services in Central and Eastern European countries. The paper quantifies restrictions through an OECD services trade restrictiveness index, which shows the height of the barriers applying to supply of four professional services subsectors. The study found that CEE economies tend to impose relatively highly restrictive policies, effectively hampering trade in professional services. The results are driven primarily by the sectoral characteristics which are found in the prevalence of qualification and licensing requirements (determining issues relating to entry and practice of a given professions), but they can also be attributed to general measures affecting all sectors of the economy, including quotas and labour market tests on different categories of service providers. Thus, the CEE's governments and private professional associations are called upon to fulfil their decisive regulatory role and serve the objective of improving access to the professions such as accounting, law, architecture and engineering.

Keywords: business services, Central and Eastern Europe, professional services, restrictiveness index, trade restrictions

JEL Classification codes: F13, F14, L84

INTRODUCTION

Business services have played a particularly important role in all modern economies and are regarded nowadays as essential drivers of economic growth. They are typically provided by one business/firm to other enterprises (but also to public administration) in support of their activities (EC, 2014), whereby they often become part of complex production processes. Nonetheless, several business services such as legal, architecture or engineering services are also supplied to households; these however represent a minor part of professional business. As such, an efficient and successful business services sector can contribute to the overall competitiveness of the economy.

Many of the activities covered by this sector of the economy (legal, accounting and auditing, market research, advertising, computer services, R&D etc.) have fully exploited the outsourcing phenomenon, which may explain their recent fast growth (Delimatsis, 2012). Advances in information and communication technologies and their application to everyday business have also made it possible to serve clients from remote locations and perform services for clients in other countries. Thus, growth in business services is the result of the increasing levels of globalized business, and the increasing willingness of companies located in developed countries, mainly in Europe and the United States, to rely on outside contractors and outsource non-core business functions to specialized service enterprises established in Asia and Central and Eastern Europe (CEE), instead of producing them in-house. Among other factors

contributing to the expansion of export opportunities are national deregulation and privatization of industries, integration of regional economies, structural changes is CEE economies and liberalization of trade in services through bilateral and multilateral agreements (Aharoni, 2014).

The business services sector has undergone solid expansion in the CEE region over the last ten years (ABSL, 2015). It has been driven initially by the low costs of the workforce and ease of setting up service companies, given the abundance of talent and skills of the workforce, as well as the EU legal and regulatory environment. Over time the cost benefits have been gradually overtaken by additional advantages predominantly centered around quality of the workforce, plentiful multi-language skills, proven track record in delivering more advanced services, as well as rapidly improving soft managerial skills. Today the sector continues to expand very fast and strengthens its attractiveness for locating advanced business services.

According to the sectoral classification list (W/120) of the General Agreement on Trade in Services (GATS), professional services do not form an independent services sector, but are classified as a subsector of the business services. Professional services are considered to include a diverse range of knowledge-intensive professions such as accounting and auditing, law, architecture, engineering, urban planning and landscape architecture, medical and dental, veterinary and services provided by midwives, nurses as well as physiotherapists.

Professional services have traditionally been confronted with heavy regulations (Molinuevo & Sáez, 2014). These can be specific to the respective services or can apply to all sectors in the economy. Regulations can explicitly discriminate against foreign providers or, although non-discriminatory, can still affect trade by favouring the local incumbent. Regulatory measures, ranging from burdensome (qualitative and quantitative) entry requirements to sometimes prohibitive post-entry regulations, are a result of both direct governmental regulation and rules by the respective professional associations (such as a national bar for legal services or an accounting association). It should also be noted that a prominent feature of regulatory measures affecting trade in professional services – which should be taken into account while examining the regulatory regimes governing these services – is their hierarchical nature and their linkages (Grosso et al., 2014a).

Many of these regulatory measures are justified to address market failures such as those related to information asymmetries, externalities, imperfect competition, and equity concerns (Gamberale & Mattoo, 2002). Qualitative regulatory measures may be necessary to guarantee the quality and optimal provision of these services. But many educational and professional qualification requirements, such as restrictions on access to the profession, and multiple certification requirements, may be disproportionate. Such regulatory instruments may lead in practice to the creation of barriers that can seriously distort the level playing field by preventing potential newcomers from entering the market.

1 LITERATURE REVIEW

Statistics on services trade and regulation are generally limited and not sufficiently detailed, especially in developing countries, sometimes making a comprehensive assessment of the economic importance of the sector impracticable. Limited statistics are also available for this study on the characteristic of the professional services in various economies. Statistics on these services are often combined with those of other business services or other sectors. Where they are reported, the statistics are likely to underestimate the true economic importance of these professions. Little work has also been undertaken to quantify restrictions on professional services. Nevertheless, information on regulatory measures affecting trade and investment in professional services can be gathered from a few previous studies.

The index methodology to quantify services trade barriers was pioneered by the Australian Productivity Commission in the late 1990s and applied to a range of services sectors. As part of Commission's research, Nguyen-Hong (2000) released the paper focused on identifying and quantifying the restrictions affecting domestic and international trade in legal, accountancy, architectural and engineering services in more than 29 economies in Europe, Asia, and North and South America. The research was part of one of the most comprehensive studies of services sector regulation across industries and countries.

A similar approach was used by the World Bank to compile the Services Trade Restrictions Database (Borchert and al., 2012) containing information on an unprecedented range of countries and sectors: 103 countries; 5 services sectors (financial services, telecommunications, retail distribution, transportation, and professional services); and 18 subsectors, including accounting and auditing, and legal services. The database classifies services regulations based on their mode of supply and includes information from country surveys conducted between 2008 and 2011.

The OECD Product Market Regulation (PMR) indicators are a comprehensive and internationally-comparable set of indicators that measure the degree to which policies promote or inhibit competition in areas of the product market where competition is viable. The professional services indicators cover entry and conduct regulation in the legal, accounting, engineering, and architectural professions. They are now estimated for the years 1996, 2003, around 2008 and 2013 for 34 OECD countries and for another set of non-OECD countries for 2013.

These sources of information may not be sufficiently comprehensive in the coverage of regulatory regimes being currently in force in CEE economies. To overcome this problem, in this study, information on restrictions has been collected from the OECD Services Trade Restrictiveness Index (STRI) database of de jure regulations in force, updated annually (currently covering the period of 2014-2017). Launched in 2014, the OECD STRI presents up-to-date detailed information on market access, national treatment, relevant domestic regulation and administrative procedures in 22 sectors (including four professional services subsectors: accounting, architecture, engineering and legal) across 44 countries, accounting for over 80% of global services trade. The database records policy measures applied on a most-favoured nation (MFN) basis and does not consider preferential treatment entailed in regional trade agreements. For instance, the database for European Union (EU) members (hence also for CEE countries) records laws and regulations applying to suppliers from outside the European Economic Area (EEA).

2 METHODOLOGY

The objective of this paper is to identify and recognize the nature and importance of domestic regulatory failures and explicit trade and investment restrictions in the professional services market in selected Central and Eastern European countries, as it may improve transparency and pursue efforts to create a more open trading regime. To avoid overlap with other studies this paper focuses on laws and regulations in professions most likely to be engaged in international business, namely accounting, legal, architecture, and engineering services, in four CEE economies: Czech Republic, Hungary, Poland, and Slovak Republic.

The paper catalogues barriers to professional services trade through applying the OECD STRI, which transforms the qualitative information on numerous restrictions into a summary numerical value, to facilitate cross-country and cross-sector comparisons of trade barriers. The STRI is presented in aggregate form as well as broken down into several classifications, including the GATS modes of supply. The STRI indices take values between zero and one; one representing a totally closed and zero a fully open sector. Economies with a higher overall

score have more restrictive trading regimes than economies with a lower score. An index approach is a useful way to assess the degree of restrictiveness of various economies when price or quantity measures are not available, as is the case for most services.

The paper identifies measures affecting trade in professional services by examining the regulations classified according to the five policy areas: restrictions on foreign entry and the movement of people, barriers to competition, regulatory transparency and other discriminatory measures that impact the ease of doing business.

Although not providing any methodological novelty to the empirical literature, the value added of this paper concerns first the comparison of regulatory regimes among countries based on a detailed up-to-date database. The study also focuses attention on particular services subsector i.e. professional services and particular region – Central and Eastern Europe. Finally, by presenting examples of practices and attitudes in CEE countries that create potential problems for foreign service suppliers, the study provides the assessment of extent to which foreign-based companies and foreign individuals are able to take advantage of increased opportunities to perform professional services either on a cross-border basis (mode 1) or through commercial presence (mode 3) and the temporary presence of natural persons in CEE market (mode 4).

3 RESULTS AND DISCUSSION

3.1 Comparison among professions

All the economies examined impose at least some types of restrictions on the four professions. The STRI values range from 0.25 to 1, highlighting significant variation in openness to trade in professional services among the countries and professions covered in the analysis (fig. 1).

Across the professions, the restrictiveness indices indicate that legal services are more highly restricted than accounting, as well as architecture and engineering services. In legal services, all economies (less Czech Rep.) have STRI scores much above the average of 0.39, reflecting the prevalent restrictions affecting this subsector. In contrast, the accounting services subsector is the most open of the four professions; all economies score less than the average of 0.33. Although the degree of restrictiveness between architecture and engineering services is almost the same, there is a marked split between countries; in Czech Rep. and Hungary regulations on these services providers are applied less frequently, than in Poland and Slovak Rep.

The most liberal market for accounting, legal, architecture and engineering services is Czech Rep. who maintains few restrictive measures affecting trade in professional services. The most restricted markets for legal services are in Poland and Hungary while Slovak Rep. imposes the highest number of barriers in architecture and engineering services.

The contribution of the five categories of measures which form the basis for the creation of the STRI is similar in accounting and legal services. Restrictions on foreign market entry, followed by restrictions on the movement of people contribute the most to the results. While in architecture and engineering services, the results are driven primarily by restrictions on the movement of people. This reflects the characteristics of these services, particularly the fact that they are skilled labour intensive. The other categories of restrictions have a smaller impact on the STRIs for professional services in CEE economies.

A breakdown of the STRI according to modes of service supply indicates the majority of restrictions found for professional services relate to the commercial presence (mode 3) and temporary movement of natural persons (mode 4). The importance of barriers affecting trade

through modes 3 and 4 is unsurprising, as these are the preferred modes of supply in all four subsectors.

Fig. 1   STRI for professional services in CEE countries, 2017
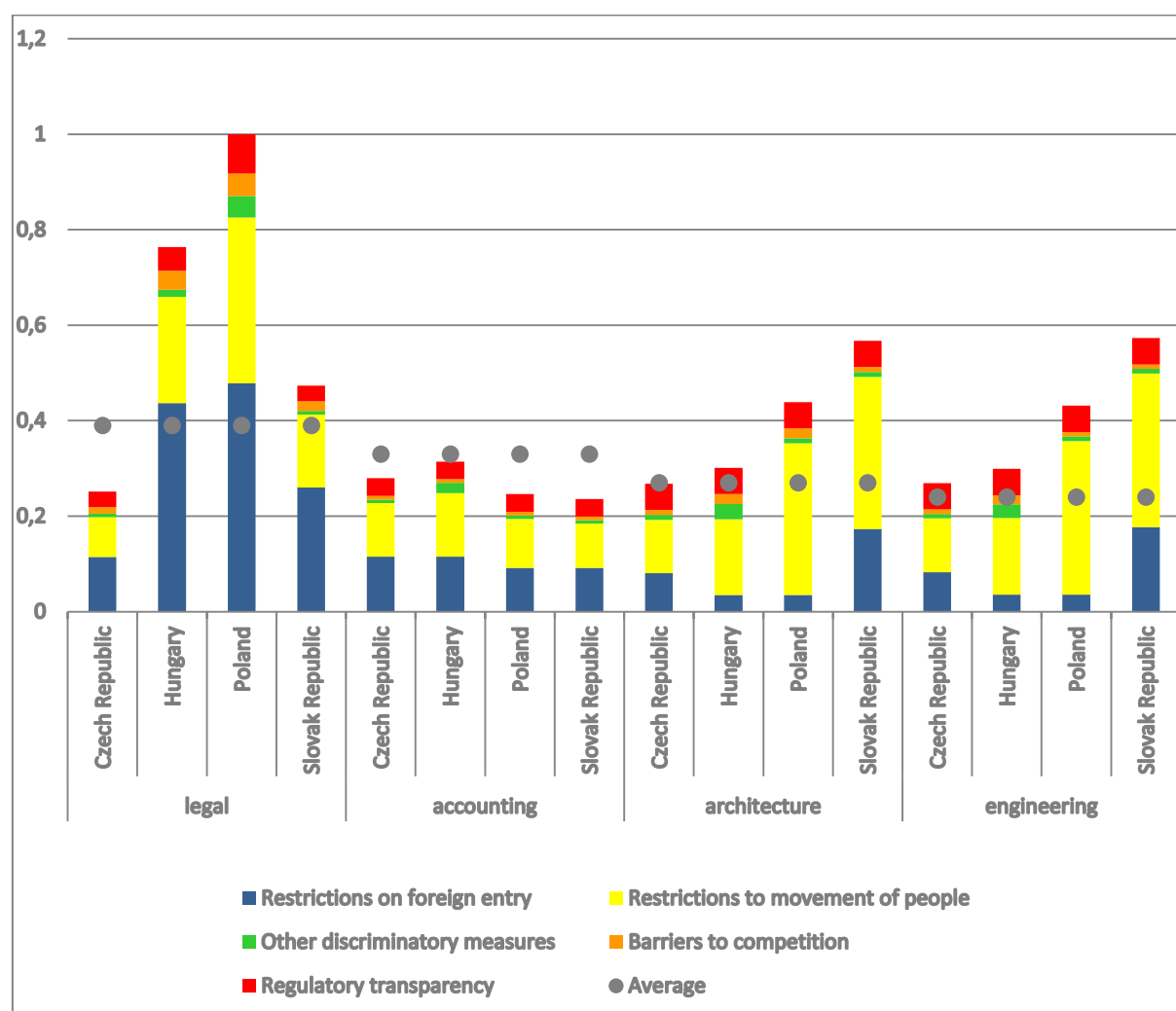
Note: the average is calculated for all 44 countries included in the database.

Source: OECD, 2017a

3.2 Horizontal policy measures

Professional services are affected by a wide range of regulations. Some measures represent outright discrimination, while others, although non-discriminatory, can still affect the ability of foreign providers to compete in a national market. In addition to sector-specific restrictions, several measures which are horizontal in nature (i.e. they are applicable to all services sectors) are also relevant for these services.

The Czech Rep. is the most liberal market in the CEE region (OECD, 2017b). The Czech Republic applies labour market tests – which assess the likely impact of foreign providers on the local labour force – for workers seeking to provide services in the country on a temporary basis as contractual services suppliers but not as intra-corporate transferees or independent services suppliers. The duration of stay is limited to 24 months for intra-corporate transferees and contractual services suppliers, and 6 months for independent services suppliers on their

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first entry permit. Finally, the number of official procedures and the number of days required to register a company are significantly above best practice.

Hungary has a lower score on the STRI than the average only in case of accounting services (OECD, 2017c). This can be explained in large part by general regulations that apply to all sectors in the economy. The number of work permits issued to non-EU nationals seeking to provide services on a temporary basis is subject to quotas and labour market testing. In 2017, 59,000 third country nationals (non-EU) could be granted work permits (up 10,000 compared to 2016).

A general regulation that contributes to the relatively high Poland's STRI in professional services subsectors (OECD, 2017d) is labour market tests for natural persons seeking to provide services on a temporary basis. Accordingly, the condition for the acquisition of a work/residence permit by contractual services suppliers is that the vacancy could not be filled by an EEA employee. This principle applies to both highly qualified as well as other employees. In order to gain an employment/residency permit, the independent services supplier has to prove that the new enterprise will positively contribute to the Polish economy, particularly in terms of innovativeness, investment growth and job creation. Moreover, acquisition of land or real estate by foreigners is subject to authorisation. Procedures to obtain business visas and administrative practices in business start-ups further have a detrimental impact on the operations of professional services' firms.

The Slovak Republic has a slightly higher score on the STRI than the average in a majority of professions (OECD, 2017e). The country requires that the manager of a company is resident in the EEA. Slovak Rep. applies labour market tests for workers seeking to provide services on a temporary basis as contractual services suppliers. The Labour Office assesses the application for work permit based on the situation on the job market, availability of Slovak nationals, qualifications etc. Labour market tests are not applied to intra-corporate transferees or independent services suppliers, i.e. they are provided a work permit under any circumstances, but for these two categories the duration of stay in the country is limited to 24 months on their first entry permit. Finally, time and number of procedures required for establishing a company are too excessive to place Slovak Rep. among the best performing countries.

In all economies examined, rights of access to public procurement are limited to regional trade agreement partners and members of the WTO's Government Procurement Agreement. A minimum amount of capital must be deposited in a bank or with a notary in order to register a business. The other measure that influences the degree of restrictiveness concerns cross-border data flows. The standards for the cross-border transfer of personal data are set at the EU level. Transfers to non-EEA economies can only take place when these ensure an adequate level of protection that is substantially similar to that required in the EU or when private data processors, both senders and receivers, establish various safeguards approved by the data protection authorities.

3.3 Legal services

According to WTO W/120 legal services cover advisory and representation services in domestic and international law (OECD, 2017f). International law includes advisory services in home country law, third country law, international law, as well as a right to appear in international commercial arbitration. Domestic law extends to advising and representing clients before a court or judicial body in the law of the host country.

The STRI supports the view that legal services are subject to a relatively restrictive, and wide range of sector-specific regulatory measures. Restrictiveness for legal services ranges from 0.25 for Czech Rep. to 1 for Poland. The requirements for obtaining a license to practice and

the activities reserved for licensed professionals largely define market access for foreign suppliers in the CEE region. The more restrictive countries – Poland and Hungary – have in place the prominent impediment to trade in legal services such as foreign equity limits on the basis of qualification and licensing. Some countries further impede foreign investment by limiting the types of legal entity allowed. This overall level, while higher than in other subsectors, is lessened somewhat by the possibility of service provision in other than host-country law, since the practice of foreign law tends to be more open than the practice of domestic law.

In Poland – the most restricted market for legal services – lawyers providing legal services in both domestic and international law have to be registered on one of the lists of legal professions managed by the Polish Bar Association. Moreover, the shares of law firms must be owned by locally licensed lawyers. Although foreign qualifications are recognized on a reciprocal basis, foreign lawyers outside the scope of reciprocal treatment are required to completely requalify to practice in Poland. In other words, qualifications from countries which are not on the list cannot be recognised, so the study and experience has to be re-done. Finally, no limited or temporary licensing system is in place. These restrictions prevent market entry and competition by lawyers from countries outside the EEA. Thus, Poland has the most restrictive regime possible in legal services; foreign competition in the legal services sector is completely closed (apart from any preferential trade).

In Hungary, legal services are the sector with the highest STRI score. Only locally licensed lawyers may own, manage or sit on the board of law firms. To obtain a license to practice, nationality of an EU or EEA member state is required. Foreign lawyers are limited to providing legal advice on foreign and international law through associations with a local attorney or law firm, and cannot establish a law firm.

In the Slovak Rep. legal services are among the three sectors with the highest STRI score. Practicing both domestic law and international law requires a license. All the shares in law firms must be owned by locally licensed lawyers and the entire board of law firms must also be locally licensed lawyers. Foreign lawyers may not have their qualifications recognised if obtained outside the EU and a temporary license is not available.

The Czech Rep. displays the lowest STRI score in legal services relative to other CEE economies. Foreigners and foreign legal entities have the right to acquire exclusive equity share. They are provided with same rights and obligations as Czech nationals and Czech legal entities. However, this right can be withdrawn on reciprocity grounds where Czech nationals are not granted the same rights abroad. All shareholders as well as boards of directors have to be licensed professionals.

3.4 Accounting services

Accounting services within the meaning of the GATS cover accounting, auditing and book-keeping services (OECD, 2017g). These services are less restrictively regulated than other professional services in CEE countries, notably legal services. The results indicate that STRI scores tend to be only marginally higher for Czech Rep., but significantly lower in case of all other economies examined. The STRI values for accounting services range from 0.24 to 0.31, connoting a low variation of trade restrictiveness among the countries covered in the analysis.

Foreign equity limits are not used in both accounting and auditing services. Yet, all CEE countries restrict the audit firms' ownership to qualified professionals. I.e. only minority ownership is allowed for non-licensed individuals or firms. Ownership restrictions are coupled with requirements that the majority of the board and the managers of auditing firms must be licensed professionals. Concerning accounting, no special provisions apply.

Foreign provision of auditing services is largely regulated by licensing and qualifications requirements. It is notable that across the region, accounting tends to be more open than auditing. Having said this, all but one CEE country (besides Hungary) do not require a license to practice accounting services, while auditing is a regulated profession in the whole region. In auditing, a procedure of recognition of qualifications, training and experience gained abroad is based on the principle of reciprocity. Foreign auditors, however, are still required to take a local examination (an aptitude test).

3.5 Architecture and engineering services

The architecture sector covers architectural services and related technical consultancy (OECD, 2017h), while the definition of engineering services includes several related activities, such as engineering and integrated engineering services, and engineering related scientific and technical consulting services (OECD, 2017i). In this case, an important feature is the regulatory interconnectedness and complementarity between engineering and architecture services. Often, they are combined into projects offered by one company, and are sometimes subsumed in the building and construction sector (Grosso et al., 2014b). As a result, it can be difficult to disassociate them and measure them separately.

Restrictions on architecture and engineering services tend to be not as extensive as in the case of other professional services. Despite the generally moderate levels of restrictiveness, there is considerable variation among countries in the scope and intensity of regulations governing these subsectors. The lowest value of the STRI for both architecture and engineering is 0.27 in Czech Rep., while the highest value amounts to 0.57 in Slovak Rep. Across the region, Poland and Slovak Rep. have the most restrictive regimes, while more liberal are Czech Rep. and Hungary.

The supply of architecture and engineering services relies heavily on the movement of natural persons to supply their services abroad on a temporary basis. Apart from labour market tests, limitations on duration of stay for temporary services suppliers and other horizontal restrictions noted above, architects and engineers in CEE countries are also subject to a host of qualitative preconditions for practice based on their qualifications. All countries in the sample have licensing requirements to practice architecture and engineering in the country but only in two cases (Poland and Slovak Rep.) it is associated with a nationality requirement. Other requirements vary, and often include procedures to recognise foreign university degrees, combined with minimum one year of local practice and professional competence examinations (applied in Poland and Czech Rep.). Additional requirements for compulsory membership in a professional association, allowing for more effective supervision of professional conduct, may also be applied. For example, the provision of civil engineering and architecture services in Poland is conditioned by a membership in the Association of Polish Architects. Finally, excessive visa processing time poses significant hurdles given the reliance on the movement of persons to supply architectural and engineering services abroad.

In Slovak Rep., engineering and architecture services have the highest scores relative to the average STRI across all countries. In architecture and engineering services, the two subsectors regulated by the same law, the Slovak Rep. imposes residency and nationality requirements as preconditions for obtaining a license to practice; authorised architects and engineers are required to have a citizenship of an EU/EEA/Switzerland. The majority of shares in architecture and engineering firms must be owned by licensed professionals and at least half of the board members must also be licensed professionals. A temporary license is not available.

In Poland, right after legal services, architecture and engineering are the two subsectors with the highest STRI scores. Architects and engineers are regulated professions in Poland. Polish or EEA nationality is required to obtain a license to practice both professions. There is no

temporary licensing scheme in place. Recognition of foreign qualifications to obtain a license is limited to EEA member countries. Foreign suppliers can, however, enter the market by investing in architecture and engineering services firms and by hiring licensed persons.

In the case of architecture and engineering services in Hungary, non-EU nationals must have a domicile or permanent residency in Hungary in order to obtain a license to practice. At the same time, Hungary does not maintain a limited licensing system authorising foreigners to practice on a temporary or project-specific basis.

In Czech Rep., architecture and engineering services, are among the subsectors with the relatively highest STRI scores, although the overall level of restrictiveness in this economy is rather low. In addition to the horizontal restrictions, foreign architects and engineers have to pass a local exam and no temporary licensing system is in place. Prior or permanent residency is also required to obtain a license to practice.

In the case of engineering and architecture services, CEE countries do not impose equity restrictions to not locally-licensed professionals. In contrast, residency or other requirements on the board of directors and management of engineering and architecture firms largely apply. Economic needs test may further restrict the number of foreign professionals or firms.

CONCLUSION

As business expands beyond national borders, professional service suppliers equally increase their spectrum of activity. This trend has increased due to the gradual opening to foreign firms and individuals as well as the development of complex projects that domestic companies and their employees could not execute on their own. On the other hand, technological developments led to the possibility to divide a given project into various components and outsource parts of it. However, supply of professional services at a transnational level can be hampered by various impediments notably of regulatory nature.

This paper has presented the STRIs for the professional services in selected CEE countries. Trade in these services has undergone significant growth in recent years and is an increasingly important feature of this region's economic landscape. All CEE countries currently operate a mixture of restrictive measures affecting trade and activity in legal, accountancy, architectural and engineering services. The type of restrictions and the way they operate in practice vary across economies, indicating that even within highly integrated area such as the EU, services maintain their characteristic of being very vulnerable to regulations impeding their supply (Delimatsis, 2012). Relatively high level of restrictiveness in professional services and the regulatory diversity at a national level create significant challenges for service suppliers, especially from non-EEA countries, seeking market access opportunities in CEE region. As the borders between different professions are blurring and digitisation has made professional services more easily tradable over digital networks, it may be time to re-think the relevant, century-old professional regulatory regimes and undertake reforms that would strike a better balance between protecting consumers and enabling a more open and competitive market for professional services (OECD, 2017j).

Hence, in order to facilitate access and enhance convergence and ultimately increase international mobility of professionals, policy action is called for in two main areas. The first is relaxing the explicit trade barriers applied to the movement of natural persons and commercial presence of professional services. Examples of possible reforms include the following:

- narrowing the scope of tasks reserved to licensed professionals;
- easing the regulatory regime on ownership and equity related to nationality as well as based on qualification and licensing;

- lifted residency requirements for board members of a domestic corporation;

- developing transparent criteria and procedures for applying any quantitative restrictions on the movement of professionals, such as quotas and economic needs tests on different categories of service providers;

- lengthening the permitted duration of stay for natural persons providing services temporarily as intra-corporate transferees, contractual services suppliers or independent services suppliers;

- facilitating the procedures for the recognition of professional qualifications acquired abroad (extending the procedures to professionals outside the EU/EEA);

- introducing flexible arrangements such as temporary licensing of professionals for specific tasks or shorter time periods;

- facilitating business travelling through the implementation of effective and inexpensive visa processing facilities such as electronic visas.

The CEE market for professional services is fragmented by restrictive policies, such as nationality requirements and regulatory heterogeneity, relating to licensing, qualification, and educational requirements. Hence, the second area requiring policy action is the coordination of further trade liberalization with regulatory reform and cooperation at the regional level. Such liberalization may not always be technically feasible or politically acceptable, however, especially when impediments arise from differences in regulatory requirements (Molinuevo & Sáez, 2014). Nevertheless CEE countries should consolidate efforts in order to promote the adoption of business-friendly rules going beyond national frontiers to the benefit of professionals, as deeper regional integration would enhance competition among services providers, enable those providers to exploit economies of scale, produce a wider variety of services and attract investment. European single market for services can be a particularly useful tool in this regard. That is why CEE countries should support any actions undertaken within EU encouraging open and competitive markets in professional services, as they have much to gain given the very important role those services play as key inputs for other sectors and the high value added they generate.

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International Public Procurement Market from the EU Business Perspective

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Abstract: International public procurement market is a very important business segment that attracts interest of EU companies. This market respects rules of the WTO Government Procurement Agreement (GPA); the accessibility of government procurement is, however, limited by the concrete schedule of commitments of the target country and by modes of publishing procurement, including the level of announcement – central, sub-central, local. Goal of the paper is to identify obstacles for EU business lying in extent of commitments and public procurement notices accessibility. The research is based on review and comparison of accessible information related to the published procurement in six main trade EU partners - members of GPA (USA, Japan, Norway, South Korea, Canada, Switzerland). International commitments of these countries as well as preferential trade relations with the EU are taken into consideration.

INTRODUCTION

Public procurement worldwide is an important market as governments are the biggest procurers of goods and services. This market represents about one fifth of the world GDP, even if the statistical data are not systematically collected (World Bank, 2017). The public procurement segment's attractiveness is underlined by the security of payment and large extent of supplies. Therefore, the demand for liberalization of international public procurement market access, for its higher transparency and comparable information is increasing. Despite it, global information about the public procurement market is still scarce.

Moreover, the ability of private companies to do business with foreign governments is limited by various national legislation. Governments settle the procurement regulation with respect to their national interests. Quite frequently, the cost minimizing goal that naturally should be a basis for bidding requirements for purchases by public entities is not the main aim pursued by a government, as other objectives are favoured. Governments often use public procurement procedures to incentivize, support and favour local companies, technologies, small and medium sized enterprises; the competition is sometimes reduced to a limited number of subjects that meet specific criteria or even a specific company is approached directly by the procuring entity. Lack of transparency in procedures, including publication of tenders, also makes the access to public procurement for foreign companies more difficult.

International attempts to liberalize public procurement markets and to ensure publication and accessibility of information on governmental procurement have been accomplished within the multilateral trading system under the World Trade Organization that covers also the

Governmental Procurement Agreement (GPA). The GPA has nevertheless its limits in the achieved level of liberalization and negotiations within a group of countries on further commitments and strengthening of rules are quite long. Consequently, developed economies, including the European Union, have chosen their preferential trade agreements as a way to deepen the third market openness. Even if both the plurilateral GPA and the EU preferential trade agreements consist also of the procedures for publishing procurement information and for making them accessible to private sector, it seems that the EU business does not use and benefit from the procurement opportunities at a large extent. The authors of the article are working on various hypotheses to recognize reasons of this situation. This text is devoted to exploring the hypothesis that despite the publication ways of the WTO and the EU, there are still obstacles for EU business lying in extent of commitments public procurement notices accessibility, and the goal of the text is to identify these obstacles.

1 LITERATURE REVIEW

Since national governments worldwide reduced the use of tariff barriers to trade as a result of international trade agreements, many governments have raised non-tariff barriers in their place. According to Kono and Rickard (2013), one increasingly prominent non-tariff barrier is discrimination in public procurement. Chen and Whalley (2011) claim that these discriminatory public procurement practices retarded the growth of world trade, and that is why the GPA has been signed. Using a gravity model on trade among GPA contracting parties, Chen and Whalley assume that the GPA has a positive impact on bilateral trade in goods and services. Despite these results, cross-border procurement remains limited at the international level, even in a single market such as the European Union which is ruled by a common set of directives (OECD, 2013). However, according to the analysis of the National Board of Trade (2011), the EU market as a whole is still relatively open in comparison with markets of its trading partners and the reciprocity between the EU and its trading partners is limited. On the other hand, Messerlin (2013) claims that the EU public procurement market is definitely not more open than those of its main trading partners, and the threat associated with the reciprocity is credible only for small countries.

In spite of its importance, cross-border public procurement is one of the areas in which the international policy agenda is facing substantial challenges due to lack of data availability and analysis. As a consequence, economic assessment of the explanatory factors of cross-border procurement is scarce (Kutlina-Dimitrova & Lakatos, 2014). However, the European Commission (2011) conducted a survey on different possible obstacles when bidding cross-border. According to the businesses surveyed, the most relevant obstacles are lack of experience with doing business abroad, language barriers, strong competition from domestic bidders, legal requirements leading to market entry barriers in the awarding country, and also perception of businesses that contracting authorities prefer domestic bidder. The public procurement regulatory system in 180 countries has been assessed by the World Bank (2017) with very similar results.

2 METHODOLOGY

Goal of this paper is, as mentioned above, identifying obstacles for potential EU bidders when participating or aiming to participate in cross-border public procurement of six chosen countries. These six countries have to meet two requirements – they have to be members of the WTO Government Procurement Agreement to ensure the same starting point for the further research, and they have to be among the most important EU trade partners, so that the paper provides the best possible contribution for EU enterprises. Methods used in the third

part of this paper are analysis, and comparative analysis of secondary data. We separately analyze relevant international agreements – namely the GPA, and various Regional Trade Agreements (RTAs) between the European Union and the chosen states. Based on this analysis, we want to find possible obstacles that the EU bidders handle with or that the potential EU bidders face when aiming to participate in international public procurement. The next step of our analysis consists in comparing relevant articles, appendixes and annexes of the GPA and RTAs to answer the question, whether RTAs can reduce these obstacles, and if yes, how. We focus on obstacles arising from commitments of the chosen countries, and from accessibility of public procurement notices. The analysis also includes comparison of different points of access of international public procurement notices for EU businesses.

3 RESULTS AND DISCUSSION

3.1 International public procurement markets rules

Governments – members of the multilateral trading system attempted to negotiate trading rules for public procurement already before the World Trade Organization has been established. Governmental Procurement Code has been signed in late 70ties as a result of the Tokyo Round trade negotiations, and in 1995, it became a part of the WTO system as the Governmental Procurement Agreement. While the first agreement had been related only to procurement in goods and to central governmental entities, the 1995 one covered also procurement in services and sub-central governmental bodies. The agreement remained, however, plurilateral and not all WTO members were ready to sign it. Plurilateral nature is the most important feature of the GPA. It means that the principles of the multilateral trading system, as non-discrimination lying in most favor nation clause and national treatment, applies only to the GPA signatories. Limited number of members concentrates on 19 economies, mostly developed ones. Besides the GPA members, all EU states respect the rules and EU commitments from the GPA as well, as the EU is a GPA member. Thus, all the EU possible suppliers enjoy rights and can benefit from business opportunities that the GPA members open.

Further negotiations of the GPA agreement followed under its built-in agenda and the revised GPA came into force in 2014. All GPA members except Switzerland have already ratified the revised GPA. The agreement emphasizes reciprocity in concessions of market access, good governance, anticorruption principles and increased transparency. The concession coverage is significantly extended and achieves 1,7 trillion USD annually (WTO, 2017). Very important change was the implementation of use of electronic procurement tools and procedures that enables access to information on public procurement.

The GPA parties provide their market access commitments of goods, services and construction services in their market access schedules that are relevant to central, sub-central and other governmental entities. The commitments listed in schedules are limited to threshold values that are higher than specified by the respective member. Individual procurements are thus subject to the GPA rules and disciplines only if it fails within the commitments covering the procuring entity, the specified good or services and are above the indicated threshold level.

The GPA is aimed at achieving open, competitive and transparent procurements market and should guarantee the non-discrimination principle. Therefore, the GPA states clearly the procurement procedures and requirements that have a direct impact on national procurement regulation. Requirements are set for notices, conditions for participation, qualification of suppliers, technical specifications and tender documentation, time periods for tendering and delivery, the use of negotiation and limited tendering, electronic auctions, treatment of

tenders, and awarding of contracts (GPA, 2014). In order to improve transparency of procurement market access information, the WTO has established an e-GPA portal that is a single point of access to the procurement commitments and information under the Revised GPA.

3.2 Commitments of the chosen countries from the GPA and RTAs

The following chapter reviews commitments of the six chosen countries arising from the GPA, and from the RTAs (if such an agreement exists) between every single country and the European Union (Table 1). The coverage schedule of each Revised GPA party contains seven annexes (Table 2) that define the party's commitments with respect to the GPA aspects mentioned above. With regard to Switzerland, we have to factor annexes of GPA 1994 in Table 2 as Switzerland is not yet a member of the Revised GPA.

Tab. 1 Overview of commitments sources related to the chosen countries (in alphabetical order)

Country	WTO (GPA)	RTA with the EU
Canada	Revised GPA	Comprehensive Economic and Trade Agreement (CETA)
Japan	Revised GPA	Economic Partnership Agreement, not yet in force
Norway	Revised GPA	Agreement on the European Economic Area (EEA)
South Korea	Revised GPA	EU-South Korea Free Trade Agreement
Switzerland	GPA	Bilateral Agreements I
USA	Revised GPA	-

Source: European Commission, World Trade Organization

Tab. 2 Coverage schedules under the Revised GPA and GPA 1994

Revised GPA	GPA 1994
Annex 1: central government entities	Annex 1: central government entities
Annex 2: sub-central government entities	Annex 2: sub-central government entities
Annex 3: other entities	Annex 3: other entities
Annex 4: goods	General rule that all goods are covered unless specifically exempted.
Annex 5: services	Annex 4: services
Annex 6: construction services	Annex 5: construction services
Annex 7: general notes	Included as "General Notes" under the GPA 1994.

Source: World Trade Organization

Focusing on Regional Trade Agreements, Anderson et al. (2011) define three possible ways, how RTAs affect public procurement in general. RTAs either include detailed provisions regarding government procurement (these provisions are often analogous to the GPA) or RTAs include coverage commitments (in which case there is a strong correlation between this and the first option) or RTAs lack detailed chapters on public procurement, however, envisage the liberalization of procurement markets as objective. As the heading of this chapter indicates, we will mainly focus on whether the listed RTAs include coverage commitments.

As the negotiations between the USA and the EU for the Transatlantic Trade and Investment Partnership stalled with President Donald Trump, the US commitments are based only on the GPA. The US commitments cover federal institutions as central government entities, and selected institutions of 37 states as sub-central entities. Despite the USA being a GPA member, their public procurement system is rather fragmented and includes many exceptions. For instance, there are requirements in certain legislations that only US produced material can be used in certain projects. The most notable of these restrictions is the Buy American Act 1933 (Dawar, 2017). According to our preliminary analysis, the application of Buy American Act on subjects from the GPA members is not clear. It needs, together with other discriminatory regulations, further extended research which goes beyond the scope of this paper and will be accomplished in following stage of the research.

Commitments of Japan are also based on the GPA as EU-Japan Economic Partnership Agreement has not entered into force yet. However, Japan established various voluntary measures, especially in terms of thresholds, entities, sectors covered, and procedural obligations in early 1990s. Due to the fact that the Revised GPA has caught up with these voluntary measures, their remaining value added is now essentially of procedural nature (Dawar, 2017). It follows that the de jure barriers on the Japanese public procurement market are very low. Nonetheless, there are de facto barriers to be found, among which the language is considered to be the most significant one, as there is limited access to official information in international languages.

The two newest RTAs – the Comprehensive and Economic Trade Agreement between the EU and Canada (provisionally in force since September 2017) and the Free Trade Agreement between the EU and the Republic of Korea (provisionally in force since July 2011, formally ratified in December 2015) both apply conditions and principles analogous to the Government Procurement Agreement mentioned in Chapter 3.1. Nonetheless, both agreements also extend the commitments of Canada and South Korea beyond the GPA.

The Canadian commitments now cover the procurement of federal entities, provincial and territorial ministries and most agencies of government, crown corporations, regional, local and municipal governments and entities, which, according to the European Commission, represents the most comprehensive opening of public procurement market Canada has ever made (European Commission, 2016). There are only two exceptions in this Canadian approach – exclusion of certain types of energy utilities contracts in the Provinces of Ontario and Québec, and public transport. The public transport contracts are generally unlimited to EU bidders, however, there are specific limitations again in the Provinces of Ontario and Québec including high local content requirements.

Similarly, the EU-South Korea Free Trade Agreement also offers new opportunities to EU (and vice-versa to Korean) bidders. These additional areas, not covered in the GPA, are EU public works concessions and Korean so-called build-operate-transfer (BOT) contracts such as key infrastructure projects from all central and subcentral entities committed by Korea under the GPA. It also covers BOT procurement contracts of all the public procuring entities of Seoul Metropolitan City, Incheon Metropolitan City, Gyonggi-do Province and Busan Metropolitan City (European Commission, 2011).

Specific is the case of the two remaining countries – Norway and Switzerland because they have access to the European Single Market. As a part of the commitment arising from the EEA Agreement, Norway has implemented three EU directives (2014/23/EU, 2014/24/EU, 2014/25/EU) which ensure that EU bidders are under the same conditions as in any other EU member state (e.g. a French company is bidding under the same conditions in Germany as well as in Norway). The trade relations of the EU and Switzerland are governed through a series of bilateral agreements covering also public procurement. Public procurement is a part of the Bilateral Agreements I, namely of the Agreement between the European Community and Swiss Confederation on certain aspects of government procurement from 1999 (in force since 2002). Main principles of this agreements are analogous to the GPA 1994, however, like other mentioned RTAs, this agreement goes further and covers also tenders of regions and municipalities and tenders of public and private companies in specific sectors (e.g. rail transport, gas, heating supply) (Directorate for European Affairs DEA, 2017).

3.3 Accessibility of public procurement notices

When assessing the accessibility of public procurement notices in the chosen countries, we focus on accessibility through electronic means. Online access and integration of e-procurement methods are confirmed by the Revised GPA as an important aspect of the modernization of the GPA (Anderson & Müller, 2017). All parties to the GPA are required to notify the paper or electronic media where they publish information on applicable laws and regulations or their changes, procurement and contract award notices, and websites for statistics.

The addresses for public procurement notices that are the subject of this chapter are listed in Appendix III of the Revised GPA. The GPA requires, for each covered procurement, a procuring entity to publish a notice of intended procurement in the appropriate paper or electronic medium. Nonetheless, there is a different approach for central entities, and subcentral, and other entities. For central entities, the notices shall be accessible by electronic means free of charge through a single point of access. For sub-central, and other entities, the notices shall be (where accessible by electronic means) provided, at least, through links in a gateway electronic site that is accessible free of charge. However, also sub-central and other entities are encouraged to publish their notices by electronic means free of charge through a single point of access.

For proper benchmarking, we first focus on whether and how the above stated requirements fulfilled by the European Union. Beside specialized press or registers of a few EU countries, there is a single point of access for all procurement notices from all EU members – Official Journal of the European Union, more precisely the Supplement to the Official Journal of the EU. The online version of this supplement is called Tenders Electronic Daily. Public procurement notices on TED are published every day from Tuesday to Saturday. The summary of each published notice has to be available in all 24 official languages of the European Union. However, detailed requirements and documentation are in the language of the contracting authority, which can be perceived as a de facto barrier for any foreign bidders – both outside, and inside the European Union.

In the following analysis, we will respect the order of countries given in Chapter 3.2:

Access to US opportunities is for foreign bidders ensured by the GPA regulation stated above. Notices published by US central entities (mainly federal government agencies - FGA) are to be found on the webpage Federal Business Opportunities (FedBizOpps), which complies with a requirement for a single point of access and has similar features like Tenders Electronic Daily. In general, FGA are under an obligation to publish notices of proposed procurement in FedBizOpps for contracts in excess of USD 25 000 at least 15 days before a request for bids.

When procurement falls within the scope of the GPA or a free trade agreement the USA have, a period of not less than 40 days must generally be granted. Sub-central entities – state governments are required to publish invitations to tender in their own state publications or each entity can utilize its internet homepage. In addition to notices of proposed procurement, some states use notices of planned procurement. Other entities listed in GPA Annex 3 of Appendix I can use FedBizOpps, their internet homepages or relevant state governments publications.

Despite the voluntary measures of Japan, and its "de jure" openness of public procurement market, there is a strong "de facto" barrier for foreign bidders – the language. Notices of all covered central and other entities are available through Kanpō webpage, which is the Official Gazette of Japan (comparable with the Official Journal of the EU). Notices are accessible free of charge for 30 days after the publication. However, the Online Official Gazette Service, and the Official Gazette Search Service are available only in Japanese. Notices of sub-central entities are accessible through Kenpō, Shibō or their equivalents. According to research undertaken by Dawar (2017), enterprises that are currently active and successful in Japanese government procurement have invested in hiring the expertise necessary to deal with administrative hurdles, access to market information and the development of a relevant network. This fragmentation should be, however, solved by the negotiated EU-Japan Economic Partnership Agreement.

Public procurement of Canada is for central entities accessible through single points Government Electronic Tendering System and MERX Canadian Public Tenders, for provinces and territories though their websites. However, as in Chapter 3.2, we have to take the CETA into consideration. The list of access points is in the CETA given in so-called Market Access Schedule of Canada (Annex 19-8), which includes the same webpages as Appendix III of the GPA, and adds webpages for entities that are covered only by the CETA. Nevertheless, this is not the only difference between the Government Procurement Agreement and the Comprehensive Economic and Trade Agreement. The CETA states that all the notices of intended procurement shall be directly accessible by electronic means free of charge through a single point of access. Use of electronic means in the CETA is no longer a possibility but an obligation. The single point of access applies (according to Article 19.6 of the CETA) to all covered entities, not only to those that are stated as central in the GPA. However, in compliance with Article 19.6 of the CETA, a party (Canada or the European Union) may apply a transitional period of up to 5 years from the date of entry into force of the CETA to entities covered by Annexes 19-2 and 19-3 (in other words, entities other than central entities) that are not ready to participate in a single point of access. Those entities shall, during such transitional period, provide their notices of intended procurement, if accessible by electronic means, through links in a gateway electronic site that is accessible free of charge and listed in Market Access Schedule. Canada, in the future, with respect to this regulation, shall apply a system similar to Tenders Electronic Daily.

Unlike the CETA, the free trade agreement of South Korea and the European Union is in its Chapter 9 less specific on public procurement and bases the regulation on provisions of the GPA 1994 and the Revised GPA. There is a single point of access for notices covered by the GPA – Korea Online e-Procurement System – Public Procurement Service available for general information and notices summary also in English. For this reason, the language de facto barrier is lower than in Japan. Information about specific tendering opportunities in Korea not covered by the GPA (e.g. BOT) will be according to the guideline on the EU-Korea Free Trade Agreement available on the websites of the procuring entities subject to the agreement and published in the main Korean daily press.

The user-friendliest approach of publishing notices is for EU bidders probably the one of Norway. According to the European Economic Area Agreement (more precisely Annex XVI of

this agreement), the Norwegian system is fully harmonized with the EU regulation. For this reason, Norway uses Tenders Electronic Daily for publishing its notices and opening its public procurement market not only to EU bidders but also to other GPA members. As already stated in the third paragraph of this chapter, there is only a de facto barrier for documentation and technical specification/requirements of tenders that can be in the Norwegian language.

Tab. 3 Online points of access of the chosen countries for EU bidders

Country	Central entities	Subcentral entities	Other entities stated in GPA	Other relevant entities (e.g. from RTAs)
Canada	Government Electronic Tendering System & MERX Canadian Public Tenders	Websites of the entities (requirement for a single point of access within 5 years)	Websites of the entities (requirement for a single point of access within 5 years)	Websites of the entities (requirement for a single point of access within 5 years)
Japan	Kanpō (in Japanese only)	Kenpō, Shibō or their equivalents (in Japanese only)	Kanpō (in Japanese only)	-
Norway	Tenders Electronic Daily	Tenders Electronic Daily	Tenders Electronic Daily	Tenders Electronic Daily
South Korea	Korea Online eProcurement System	Korea Online eProcurement System	Korea Online eProcurement System	Websites of the entities
Switzerland	Informationssystem über das öffentliche Beschaffungswesen in der Schweiz	Informationssystem über das öffentliche Beschaffungswesen in der Schweiz	Informationssystem über das öffentliche Beschaffungswesen in der Schweiz	Informationssystem über das öffentliche Beschaffungswesen in der Schweiz
USA	FedBizOpps	Websites of the entities	FedBizOpps or websites of the entities	-

Source: own processing – GPA, CETA, Agreement on the EEA, EU-South Korea Free Trade Agreement, Agreement between the European Community and Swiss Confederation on certain aspects of government procurement

As mentioned above, Switzerland is a member of the GPA 1994 and has not ratified the Revised GPA. Therefore, Switzerland is not necessarily encouraged to publish its notices online by the WTO. This obligation, nevertheless, arises for EU subjects from Bilateral Agreements I. Article 12 of the Agreement between the European Community and the Swiss Confederation on certain aspects of government procurement deals specifically with information technology. The parties shall cooperate with a view to ensuring that the type of procurement information, notably in tender notices and documentation, held on their respective databases is comparable in terms of quality and accessibility. The parties shall also take all the necessary measures to ensure that suppliers and service providers of the other party have access to relevant procurement information, such as tender notices, held on their respective databases. They shall afford suppliers and service providers of the other party access to their respective electronic procurement systems, such as electronic tendering system. Respecting this regulation, Switzerland applied a system both visually and functionally similar to Tenders

Electronic Daily shared by the federal government, cantons, and communes, which is called "Informationssystem über das öffentliche Beschaffungswesen in der Schweiz".

CONCLUSION

Despite the very fragmented data availability, estimations of the World Bank classify public procurement as the most important segment of world economy as it amounts to one fifth of the world GDP. This importance is reflected also in continued liberalization of the procurement markets through the plurilateral agreement of the World Trade Organization and through regional trade agreements. In spite of quite robust legislative framework for international public procurement, the quoted sources consider the real share of cross-border public procurement as under its effective capacity. Therefore, we assume that there are certain obstacles to international public procurement markets entry. Information on these obstacles is relatively scarce. For this reason, we have conducted a research on obstacles related to commitments of the chosen countries, and obstacles related to publishing public procurement notices, having in mind that those obstacles are only a part of those that exist, and that further research will be conducted on this issue.

Obstacles that the EU bidders have to face on international public procurement markets and are related to GPA member commitments could be classified, according to our analysis, into three main categories. Firstly, the range of covered goods, services, and construction services (that can be perceived as insufficient), secondly, the thresholds above which procurement activities are covered (that can be perceived as too high), and thirdly, the entities whose procurement is covered (and whose range can again be perceived as insufficient). However, the RTAs eliminate these obstacles in two cases: RTAs broaden the range of covered goods/services/construction services and extend the range of entities above those covered by the GPA. Special is the case of Norway, where the conditions are identical to those on the EU market.

Together with the obstacles consisting in commitments other obstacles arise from publishing procurement notices that are available on international public procurement markets. We have observed two main obstacles in this area – language and fragmentation of e-procurement portals (more precisely, absence of a single point of access for all "committed" entities, even above the central ones). The latter applies for the USA, Japan and Canada – in case of Canada, the single point of access should be established within 5 years; in case of Japan, the single point of access should be conditioned by the EU-Japan Free Trade Agreement. The former applies for Japan, partially for South Korea, and at even a lower level for Norway. For the stated reasons, we conclude that RTAs contribute to establishing single point of access, which makes the accessibility of public procurement notices easier. However, RTAs do not affect the language problem.

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CSR Awareness amongst Luxury Customers Development of the Theoretical Framework for Exploration of CSR Awareness, Impact on Purchase Intent and its Role on the Customer Journey of Luxury Customers

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Abstract: The topic of sustainability in the luxury industry is currently being discussed by different stakeholders on academic, industry and various activist's levels. The aim of this paper is to develop a theoretical framework as a foundation for a future study on how luxury industries approach CSR (as a broader term of sustainability) and how this effort is perceived by their customers, what are the drivers of CSR awareness amongst the segment of luxury shoppers and how does the CSR and sustainability dimension potentially influence shopping decisions. The theoretical framework is constructed after completing a literature review and proper definition of the problem. The main goal is to identify the network of relationships among the variables considered important for the study.

Key words: sustainability, sustainable development, luxury brands, customer journey, CSR, luxury brands purchase intention

JEL classification: M31, D64

INTRODUCTION

The conventional view tends to make us believe that luxury and sustainability are opposing concepts. There are a lot of controversies when it comes to understanding luxury's role in sustainability. On one side, the luxury companies are still silent when it comes to taking on corporate social responsibility and communicating it. They do certain activities and have an awareness of the importance of the CSR, but when it comes down to reality, the companies are waiting for the reaction from consumers and in fact, are just starting to realize that the change is on them. On the other side, the consumers who want responsibly compliant luxury products still strive for the lowest price.

Nevertheless, the industry is approaching a turning point. Up to now, the CSR efforts of luxury companies have not been significantly high, nor have the costs or impact on customers. Everyone would acknowledge the relevance of CSR and admit it to be a kind of 'hygiene' factor but if this interest has to be translated into sales figures, the trend is not visible.

Consumers have to reach the point when they are ready to pay for the sustainability efforts but it's the industry that has to pave that way. Having responsible luxury is about encouraging shared responsibility of producers and customers. Thus, it is on both sides, the consumers and the companies, to reach the mutual understanding.

We already see some shifts with new generations, namely Millennials and Gen Z who welcome and support social and environmental efforts by companies, but when they are deciding on

what to buy the percentage of those who care about CSR efforts significantly diminishes (from 89% to 65%) (Cone Communications, 2017).

The key objective of this study is to investigate to what extent luxury customers are aware of CSR and the significance of the role it plays in their customer journey. To achieve this, we introduce a conceptual framework that does not only set the foundations on exploring a luxury brand's positive associations with CSR, but can provide the significant inputs for companies on how this information can impact the purchase intent and buying behaviour of customers. The suggested model will analyse seven independent variables: functional, experiential, symbolic, social, sustainable, demographic and CSR perception, and how they drive purchase intention.

A lot of work has already been done in the Western countries to identify corresponding variables and their influence. However, not many studies have been conducted in Central Eastern European markets, namely the Slovak and Czech Republics. As our pole of respondents originate from these markets, we believe our work will be useful to better understand the customer behaviour, will contribute to the existing literature and move forward current business practices.

To justify the theoretical model, development the article is divided into three sections. The first part gives a profound review of the existing literature. In the second section, we define the problem and introduce the details of the theoretical conceptual framework. Conclusions and future steps are explained in the last section.

1 LITERATURE REVIEW

1.1 Sustainability and Sustainable Development

The term sustainability was framed and popularized in 1987 by the so called Brundtland Report (named after its main author, Gro Harlem Brundtland, the Norwegian prime minister and chair of the UN's World Commission of Environment and Development. In this report, sustainability was defined, as *"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs"* (United Nations, 1987). As result of this broad definition, the term sustainability is currently perceived to mean, "*issues related to the natural environment*" (Chandler, 2017, pg. 285)*.*

Sustainability, as defined above, is a base for definition of the sustainable development, being defined as "*a process of change in which the exploitation of resources, the direction of investments, the orientation of technological development; and institutional change are all in harmony and enhance both current and future potential to meet human needs and aspirations*" (United Nations, 1987).

According to Chandler, there are four main reasons why businesses should care about sustainability: climate change, resilience, natural capital, and stakeholders. Table 1 provides more explanation and connectivity between these four factors. Accommodation of effective sustainability programs as a key component of the long-term strategy is the most important tool how to address the issue by different businesses.

From the business quantification perspective, only large companies or corporations can provide the scale needed in terms of the changes in behaviour to tackle climate change: *"Unless the largest companies are fully invested in strategic CSR, we will only be scratching the surface of the progress that needs to be made"* (Chandler, 2017, pg. 301). The sales of luxury goods by the top 100 luxury goods companies in FY2015 totalled USD 212 Billion. This is an average of USD 2.1 Bill. per company. The threshold sales level for becoming to top 100 in 2015 was USD

180 Million (Deloitte, 2017). From the perspective of the size of the industry, luxury might evolve a strong corporate responsible segment with access to the resources needed.

Tab. 1 Key reasons for business involvement in sustainability

	Climate Change	Resilience	Natural Capital	Stakeholders
Why:	Consequences of climate change	Managing the risks	Act voluntarily before you are forced to change	Stakeholder's perceptual change
Objectives to be addressed:	Business to change the way they interact with the natural environment	Help vulnerable people, organizations and systems persist, even thrive, amid unforeseeable disruptions	Identify the ways to account for the natural capital that they consume during production	To accommodate stakeholders' needs in terms of their increasing demand for change
Tools/Means:	Getting the balance between current and future obligations correct	Search for ways to manage in an imbalanced world. Dependence of business success on accounting for a changing ecological context and adapting operations accordingly	Calculate the value of natural capital (the resources exploited for free) and Incorporate it to the planning	Accommodate effective sustainability programs as a key component of long-term strategy

Source: adaptation based on (Chandler, 2017, pg. 284-301)

1.2 Development of CSR

Corporate social responsibility is defined as "*A responsibility among firms to meet the needs of their stakeholders and a responsibility among stakeholders to hold firms to account for their actions*" (Chandler, 2017); or as "*a firm's commitment to maximize long-term economic, societal and environmental well-being through business practices, policies and resources* (Du, Bhattacharya, & Sen, 2011). One of the first academics working on CSR hierarchy was Carroll, whose pyramid of responsibilities covers discretionary, ethical, legal and economic. In his vision a socially responsible firm encompasses all four responsibilities within its culture, values and day-to-day business (Chandler, 2017). Du et al.'s definition is also appropriate for this article as it is mostly connected with business and consumers at the same time. It supports the idea that CSR is an umbrella for three dimensions – economic development, social equity and environmental dimension, as in Chandler's definition.

From the economic standpoint, the CSR adds value because it allows companies to reflect the needs and concerns of their various stakeholder groups. By doing so, the firm is more likely to create greater value and, as a result, retain the loyalty and customers of those stakeholders. Simply put, CSR is a way of matching corporate operations with stakeholder values and expectations that are constantly evolving (Chandler, 2017). Currently the economic argument for CSR is perceived as the last stage of CSR development where CSR brings true value to a company's business as the opposite to earlier understanding when philanthropy or discretionary arguments were creating the costs to the company, not the real added value to the business.

The consolidative model of CSR integration to companies was characterized by a three-phase CSR culture model (Maon, Lindgreen, & Swaen, 2010). Maon et al.'s phases of cultural resistance, cultural grasp and embedment are shortly summarized in Table 2.

Tab. 2 Maon's three phases of CSR cultural development

Phase	Key Features	Stakeholder type according to their moral orientation
CSR Cultural Reluctance	CSR perceived as a constraint, no CSR related goals, ignoring social responsiveness.	Limited morality: corporate egoists, short-term self-interest at the corporate level. Shareholders as the only stakeholders.
CSR Cultural Grasp	CSR as value protector of organizational goals. Focus on reputation, tangible results and adaptation of existing processes in the short-term.	Enlightened self-interest moral orientation. Concern for others is fairly self-regarding. Instrumentally useful stakeholders.
CSR Cultural Embedment	Integrative approach to CSR responsiveness. CSR commitments with large impact – from business opportunities to social change. CSR perceived as value creator for the organization, focus on innovations and long-term prospects.	Concern for others, normative stakeholders (competitors, media, activists' groups), derivative stakeholders. Pragmatism and pure intrinsic morality.

Source: adapted from (Maon, Lindgreen, & Swaen, 2010, pg. 30)

Within the cultural embedment phase, the organization develops a culturally integrated approach to CSR, through which it tries to maximize opportunities and create value through CSR commitments, creative processes and joint innovations with external stakeholders (Maon, Lindgreen, & Swaen, 2010).

Fig. 1 The Corporation's Rights, Responsibilities and Self-Interest
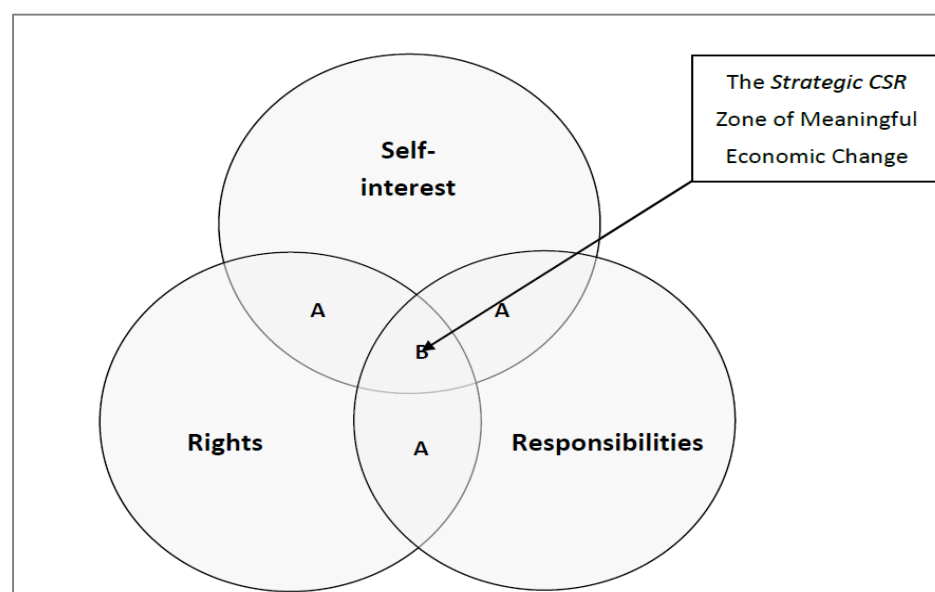
Source: adapted from (Chandler, 2017)

The moment when CSR becomes an essential part of a company's culture, organization and processes, it respects the self-interest and rights of the company, e.g. the zone of meaningful economic change (see Figure 1). To the extent that the responsibilities expected of it do not infringe upon its rights and align with its self-interest, the chance of introducing meaningful change and building a more sustainable economic model increases (Chandler, 2017).

1.3 Luxury

Despite many different attempts to define luxury, we found most relevant the one published in 2012 by Heine as: *"Luxury is anything that is desirable and more than necessary and ordinary" (*Heine, 2012, pg. 40). The definition resulted of combining the original eight dimensions ("*elitism, distinction and status, rarity, reputation, creativity, power of the brand, hedonism and refinement")*, defined earlier by Kapferer (1998), Dubois et al (2001) and Vigneron & Johnson (1999) (De Barnier, Falcy, & Valette-Florence, 2012).

The core values of luxury brands are defined by the authors individually. The most quoted values are scarcity or limited accessibility, heritage, aesthetics and sophistication, high desirability, excellent quality, high price, extraordinariness and high degree of non-functional associations (Heine, 2012), (Dubois & Paternault, 1995). This indicates the paradox in luxury brands, defined earlier as: "*managers want a certain level of diffusion for their brand to achieve success in the marketplace; yet, if their brand is over-diffused, it loses its luxury character*" (Dubois & Paternault, 1995).

1.4 CSR in Luxury Industry

Luxury brands sell products that are rare, and are thus resource-dependent, which increases their need for sustainability (Öymen Kale & Öztürk , 2016). Kapferer and Michaut-Denizeaut expressed the sustainability in luxury industry as "*sustainability silence"* because just a few luxury companies take proactive sustainable development stances. This sector is clearly aware of the issues but remains discreet, which some critics interpret as uninvolved (Kapferer & Michaut-Denizeaut, 2014). Their results highlighted the finding that the luxury buyers' interest in sustainability when purchasing luxury goods is still relatively minimal while they were clear about the fact that avoiding the negative effects of non-compliance may offer a compelling avenue for further efforts by the luxury sector" (Kapferer & Michaut-Denizeaut, 2014).

Despite the "silence", systematic review of sustainable behavior of luxury companies indicated that these companies are showing some progress (for example, IWC has committed to becoming carbon-neutral) but they still approach CSR with a combination of disorganised philanthropy, glamorous sponsorship projects and the management of reputational risks (Bendell & Kleanthous, 2007). The luxury segment's understanding of CSR is far away from the engagement of the more developed industries (food or automotive industries as an example) and it is obvious that unless they become more engaged in this agenda, they will miss out the opportunities in creating the additional value through CSR that would connect them with their customers.

The content analyses of the CSR messages amongst luxury industry companies was done by Wong & Dhanesh. They analysed each dimension of CSR message content amongst the most valued luxury brands by a qualitative frame analyses creating detailed frame matrices of each dimension. The outcome of this study was that luxury brands predominantly framed their CSR efforts "*as going beyond what is required driven by purely good-hearted, altruistic motives"* (Wong & Dhanesh, 2017, pg. 434). Moreover, the frame emphasized that supported programs

were congruent with their core business values and the impact of CSR programs was conveyed in abstract terms evoking emotions over logic (Wong & Dhanesh, 2017).

The issues the luxury industry is facing in terms of the existing known public concerns were listed by Bendell & Kleanthous as: the role of precious stones in financing conflicts; the impacts of mining operations; worker rights in companies and their supply chains; responsible marketing; and the trade in wildlife-derived products (Bendell & Kleanthous, 2007). Kapferer was more specific in naming the potential issues in luxury as those referring to hidden parts of the supply chain, such as raw material sourcing (for example, checking the source of all animal skins, gold, gemstones), animal treatments (for example, the anti-foie gras lobby, exploitation of crocodile farms, killing baby seals for fur), human work conditions (for example, gold), manufacturing methods polluting the local environment (for example, mercury for tanning skins), or destruction of the environment (for example, endangered tree species used in the luxury furniture business, exploitation of rare water resources by luxury golf clubs and hotels situated in poor countries) (Kapferer & Michaut-Denizeaut, 2014).

There are cases when a company undertakes activities to address the public concerns mentioned above by managing reputational risks without deeper engagement in strategic sustainability and CSR. Gucci, as an example, has recently announced they would stop selling or producing items made with animal fur by 2018. They obliged themselves to auction off fur items from their inventory and donate all proceeds to animal rights organizations Humane Society (in the US) and LAV (in Italy). The company is additionally joining the International Fur Free Alliance (Trendwatching, 2017). The Italian house Gucci visibly joins Calvin Klein, Giorgio Armani, and Ralph Lauren in banning fur from their collections. Earlier this year, Yoox Net-a-Porter Group (Net-a-Porter, Mr Porter, The Outnet and Yoox) also declared that it would no longer sell fur products on its e-commerce sites (Positive Luxury, 2017). Though, there are discussions that environmental impact of real fur compared to artificial one is lower due to the fact that fake plastic fur is extremely harmful to the environment, isn't biodegradable and negatively impacts wildlife, thanks to the petroleum and plastics used to produce it (Positive Luxury, 2017).

There are indicators that the position of luxury companies in their engagement towards CSR is going to change. The change is going to be supported by two key drivers: (i) Millennial consumers who are reported to be twice as likely to support brands with strong management of environmental and social issues, and expect brands to not only manage their impact but communicate it (Positive Luxury, 2016); and (ii) Millennial investors who are twice as likely as the overall investor population to invest in companies targeting social or environmental goals (Morgan Stanley, 2017). Morgan Stanley reports that sustainable, responsible and impact investing rose 33% between 2014-2016 to USD 8.72 Trillion (Morgan Stanley, 2017).

Moreover, sooner or later, the companies will be forced by legislations to act and report about their sustainability efforts (e.g. Slavery Act, the UN's Sustainable Development Goals and COP 21) and therefore integrating sustainability into business models is moving from a "good thing to do" to a legal obligation, and have increased demand from stakeholders for transparency and action (Positive Luxury, 2016). In parallel to other industries like food, tobacco, or alcohol, it is always wiser to act voluntarily and discuss potential ways with the authorities than to wait for strict regulations and controls.

1.5 Characteristics of Luxury Consumers from the CSR Perspective

A Gen Z CSR study published by Cone Communication in the U.S. has emphasized the importance of CSR for young generations. It reports that 94% of Gen Z believes companies should help address social and environmental issues (vs. 87% Millennial, 86% General Population). 89% of them would rather buy from a company supporting social and

environmental issues over one that does not, but only 65% pay attention to company's CSR efforts when deciding what to buy. 81% believe they can have an impact on social or environmental issues by using social media. They prioritize the same aspects of CSR as other generations (be a good employer, make products that are good for my family, help people and the environment, donate to cause in my community and around the world and support important social issues (Cone Communications, 2017).

Young people are specifically interested in sustainability and CSR issues but there are industries they simply do not think about it. Sustainability is, for example, not typically associated with fashion by young consumers, even though they are very open to environmentalism. It is important to understand such contradictories to modify perceptions and attitudes (Joy, Sherry, Venkatesh, Wang, & Chan, 2012, pg. 278).

Basic drivers of customer value perception that influence consumer behavior in the luxury industry to help differentiate the brands in terms of forming the desire for luxury brands were empirically validated by Hennings et al. as: financial, functional, social and individual consumer perceptions. Amongst them, the perceived social values of the luxury brands had strongest effects in terms of its positive relation to the total construct of individual luxury value perception (Hennings et al, 2015).

Understanding of the antecedents of luxury brand purchase intention was deeply analyzed by Hung et al. Their finding supported strong influence of social context on purchase intention for the luxury brands. The social context was explored through the statements: (i) before purchasing a luxury branded products, it is important to know what brands will make good impression on others, (ii) my friends and I tend to buy the same luxury brands, (ii) before purchasing a luxury branded products, it is important to know what kinds of people buy certains brands, (iv) I tend to pay attention to what other luxury brands others are buying), (v) I like to know what luxury branded products make good impressions on others and (vi) I actively avoid using luxury branded products that are not in style).

The role of perception formed by functional, experiential and symbolic values was weaker. The experiential (luxury brand X is precious, rare, unique, attracting, stunning) and functional (is handmade, best quality, sophisticated, superior) aspects of luxury brands were positively correlated with purchase intention. Symbolic values had weak negative relationship with purchase (luxury item is conspicuous, expensive, for wealthy). They concluded that the increased exposure of international luxury brands in media and the concomitant increase in international awareness and travel would support the luxury growth (Hung et al, 2011).

The impact of luxury brand positive associations with CSR has not been explored thus far. It remains a questionmark, as luxury consumers make luxury purchases on an infrequency basis, if the CSR impact is far more limited compared to the goods bought on day-to-day basis. Kapferer believes that buying a luxury product once in a while is an exceptional experience when brands help people forget the difficulties of their lives and in the world, and thus questions about manufacturing and supply chains are remote from buyers' decision criteria (on the contrary to day-to-day purchases, for which consumers show sustainability consciousness) (Kapferer & Bastien, 2012).

2 THEORETICAL CONCEPTUAL FRAMEWORK

2.1 Methodology & Problem Definition

We aim to understand the role of CSR and the sustainability dimension in the luxury consumer decision journey. How does the awareness of a luxury brand's positive approach to CSR affect

purchase intention? What is the role of positive attitudes towards CSR and sustainability? What are the implications for companies?

We will build the conceptual framework based on the existing literature and past research. The framework will serve as a base for hypothesis development and qualitative, resp. quantitative testing, which is out of scope of this paper and will therefore follow.

2.2 Development of the Theoretical Conceptual Framework

Our research will focus on the top internationally known brands as it is important that the respondents are familiar with them before exploring the drivers of their purchase intention. To do so, we have combined different sources. The starting point were brands produced by top companies sorted by sales (Deloitte, 2017), Table 3:

Tab. 3 Top 10 luxury goods companies by sales

2015 ranking	Company name	Brands	Country of origin	2015 sales (US$m)
1	LVMH Moët Hennessy-Louis Vuitton SE	Louis Vuitton, Fendi, Bulgari, Loro Piana, Emilio Pucci, Acqua di Parma, Donna Karan, Loewe, Marc Jacobs, TAG Heuer, Bene t Cosmetics	France	22,431
2	Compagnie Financière Richemont SA	Cartier, Van Cleef & Arpels, Montblanc, Jaeger-LeCoultre, Vacheron Constantin, IWC, Piaget, Chloé, O cine Panerai	Switzerland	12,232
3	The Estée Lauder Companies Inc.	Estée Lauder, M.A.C., Aramis, Clinique, Aveda, Jo Malone; Licensed fragrance brands	U.S.	11,262
4	Luxottica Group SpA	Ray-Ban, Oakley, Vogue Eyewear, Persol, Oliver Peoples; Licensed eyewear brands	Italy	9,815
5	Kering SA	Gucci, Bottega Veneta, Saint Laurent, Balenciaga, Brioni, Sergio Rossi, Pomellato, Girard-Perregaux, Ulysse Nardin	France	8,737
6	The Swatch Group Ltd.	Omega, Longines, Breguet, Harry Winston, Rado, Blancpain; Licensed watch brands	Switzerland	8,508
7	L'Oréal Luxe	Lancôme, Biotherm, Helena Rubinstein, Urban Decay, Kiehl's; Licensed brands	France	8,031
8	Ralph Lauren Corporation	Ralph Lauren, Polo Ralph Lauren, Purple Label, Double RL, Club Monaco	U.S.	7,405
9*	PVH Corp.	Calvin Klein, Tommy Hilfinger	U.S.	6,292
10**	Rolex SA	Rolex, Tudor	Switzerland	5,724

Sources: Adapted from (Deloitte, 2017, pg. 15). *, ** No. 9 of the original ranking (Chow Tai Fook Jewellery Group Limited 周大福珠宝集团有限公司）was skipped due to low awareness of its product amongst potential respondents.

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We compared the brands listed in Table 3 with the brands bought by the European consumers according the study of Dubois. According to him, out of the three-available brand-related measures (awareness, dream, purchase), purchase is the most discriminating factor. While 97% of European consumers knew at least one of the 30 brands and 89% "dream" of at least one, only 68% have bought at least one of them (Dubois & Laurent, 1993). The list of brands included: Armani, Laura Ashley, Bang&Olufsen, Bulgari, Cartier, Pierre Cardin, Chanel, Chivas Regal, Christofle, Daum, Dior, Dunhill, Guerlain, Gucci, Hermes, Lacoste, Lancome, Lanvin, Estée Lauder, Ralph Lauren, Remi Martin, Montblanc, Omega, Revlon, Rolex, Yves Saint Laurent, Shiseido, LV and Waterman.

Consequently, we updated the list of brands by top luxury brands according to Interbrand's ranking sorted by sales: LV, Hermés, Gucci, Cartier, Tiffany&Co, Prada, Burberry, Dior, Moet&Chandon (Interbrands, 2017).

The final list of brands developed as a frame of reference in terms of 'brand bought in the past year' was done as combination of the above sources with the emphasis to ensure relevancy for both male and female gender groups in European context and to include wide choices for handbags (females) and watches (males). Handbags are "the engine that drives luxury brands today", as cited in (Han, Nunes, & Dreze, 2010). We presume that watches in the male group play the same role as handbags in the female group. Therefore, our list of brands purchased in the past year as a sample builder is listed as: LV, Hermés, Gucci, Cartier, Tiffany&Co, Prada, Burberry, Dior, Chanel, Dior, Fendi, TAG Heuer, Montblanc, Vacheron Constantin, IWC, Ulysse Nardin, Omega, Longines, Breguet, Harry Winston, Rado, Blancpain and Rolex.

Luxury brands purchase intention is the dependent variable in our proposed conceptual framework model (Figure 2). Independent variables are based on those evaluated by (Hung et al., 2011) as important purchase intention drivers enriched by the attitudes towards CSR as a separate category (Davies, Lee, & Ahonkhai, 2012), (Kapferer & Michaut-Denizeaut, 2014). The proposed antecedents of luxury fashion goods purchase intention are listed in Table 4 as independent variables to our model. Vanity measurement items were not included due to their low ranking by (Hung et al, 2011).

As explained earlier, the generations of Millenials and Gen Z are perceived as more sensitive towards CSR and sustainability (Joy, Sherry, Venkatesh, Wang, & Chan, 2012), (Cone Communications, 2017). Together with age, income is included in sociodemographics variables. Kapferer's hypothesis that luxury consumers with lower income are more likely to perceive a higher contradiction between luxury and sustainability was not supported. Higher declared incomes lead to greater perceptions of a contradictions (Kapferer & Michaut-Denizeaut, 2014). Therefore income and age are part of the sociodemographic dimension in our variable set summarized in Table 4.

The variables regarding perception of CSR and its awareness were constructed based on application of past research findings (Kapferer & Bastien, 2012), (Davies, Lee, & Ahonkhai, 2012) and pilot interviews with the sample representatives. Davies et al. indicated that the ethical impacts of luxury brands have less intensity for consumers during decision-making, this is explained by qualitative data where luxury segment was perceived as not capable of making much difference compared to commodities with higher purchase frequency. The dimension of general attitudes towards CSR and sustainability issues is based on Kapferer's consumers' sensitivity to sustainability measure which was based on an existing scale developed by survey organization BVA for the French National Energy Saving Agency (Kapferer & Michaut-Denizeaut, 2014).

The sustainable dimension construct reflects Carroll's pyramid, which depicted the economic category as the base (as the foundation for the others), and then built upward through legal, ethical and philantropic categories (Carroll, 1999), Carroll (1991) and his formulation of the aim of the CSR company as "*to make a profit, obey the law, be ethical, and be a good corporate*

citizen" (Carroll, 1991, pg. 43). Our sustainable dimension is additionally based on the findings of Alvarado-Herrera et al.'s who developed and validated a measurement scale for consumer's perceptions of corporate social responsibility and proved that consumer perception of CSR is a multidimensional construct, rather than the one-dimensional factor. They confirmed that CSR is a complex construct even in terms of consumer perceptions and its complexity is reflected in the discrimination of economic, social and environmental dimension. (Alvarado-Herrera, Bigne, & Aldas-Manzano, 2017).

Tab. 4 Independent variables and measurement items

Independent Variables	Measurement Items	
Socio-demographic	Gender/age/income	
	I strongly disagree (1)/strongly agree (5)	
Functional value dimension	Luxury brand X's	- product is handmade (crafted) - has the best quality - is sophisticated - is superior
Experiential value dimension	Luxury brand X's	- product is precious - product is rare - product is unique - product is attracting - product is stunning
Symbolic value dimension	Luxury brand X's	- product is conspicuous - product is expensive - product is for the wealthy
Social influence	- Before purchasing a luxury branded product, it is important to know what brands will make good impression on others. - My friends and I tend to buy the same luxury brands. - Before purchasing a luxury branded product, it is important to know what kinds of people buy certain brands. - I tend to pay attention to what other luxury brands others are buying. - I like to know what luxury branded products make good impressions on others. - I actively avoid using luxury branded products that are not in style.	
Sustainable dimension	When I buy luxury brand X:	I am aware of its social responsible activities.
	In my opinion regarding society, brand X is really:	Trying to sponsor educational programmes Trying to be highly committed to well-defined ethical principles Trying to sponsor cultural programmes Trying to make financial donations to social causes Trying to help to improve quality of life in the hotel community
	In my opinion regarding the environment, brand X is really	Trying to sponsor pro-environmental programmes Trying to allocate resources to offer services compatible with the environment Trying to carry out programmes to reduce pollution Trying to protect the environment Trying to recycle its waste materials properly Trying to use only the necessary natural resources
	In my opinion regarding the economy, brand X is really	Trying to maximise profits in order to guarantee its continuity Trying to build solid relations with its customers to assure its long-term economic success Trying to continuously improve the quality of the services that they offer Trying to have a competitive pricing policy Trying to always improve its financial performance Trying to do its best to be more productive

Independent Variables	Measurement Items
	- Purchase from the socially responsible company makes me feel like better person at the same time as fulfilling its principal function
General attitudes towards CSR and sustainability issues	- One should limit car usage in city centres. - I am concerned about environment degradation. - I am ready to boycott a company that does not comply with social and environmental regulations. - It is through technical progress that we will find solutions to prevent environmental degradation. - It is by significantly modifying our lifestyles that can prevent the degradation of the environment. - I prefer healthy products, without risk to my health. - I often talk about pollution and the environment with my family, children, and friends. - During elections, issues regarding the environment are instrumental in my choice of candidate/parties. - I am in favour of awarding a penalty for products negatively impacting the environment. - I am interested in sustainable development.

Source: Authors

2.3 Theoretical Conceptual Framework Model

Fig. 2 Conceptual Framework Model
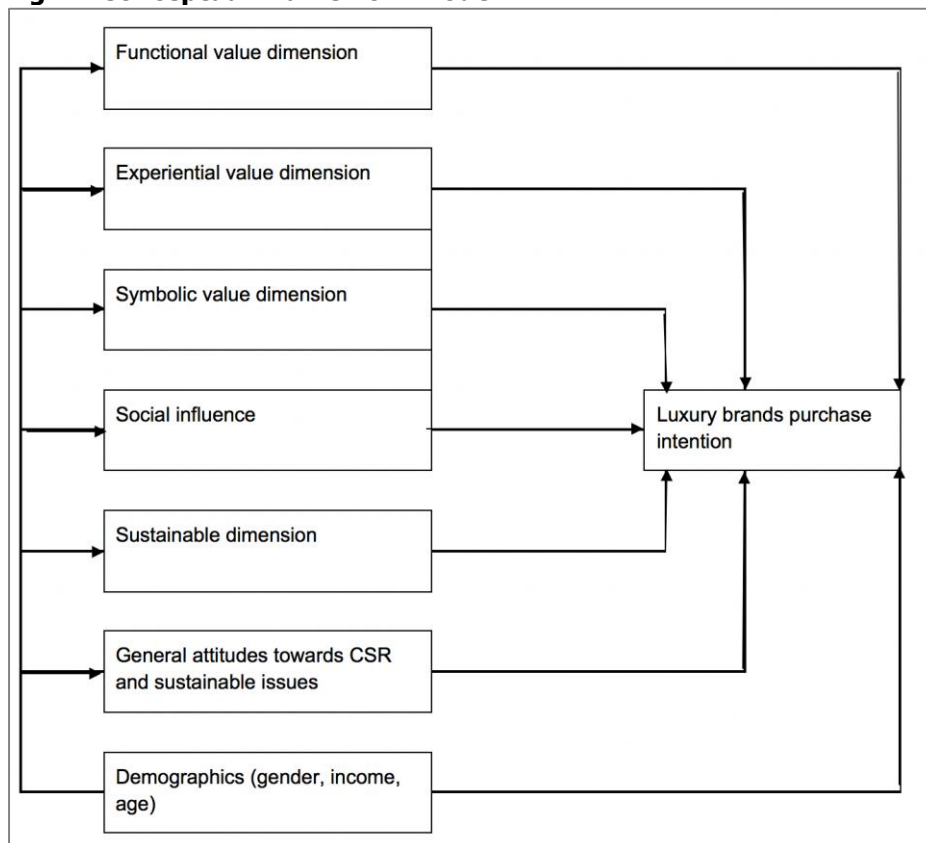
Source: Authors

The framework suggested in Figure 2 aims to explore (i) general knowledge of corporate social responsibility and its connection to the luxury segment as suggested by Amatulli's research on

insights from luxury industry (Amatulli, De Angelis, & D Anolfo, 2017, pg. 444), (ii) functional, experiential and symbolic value dimension of the purchased or gifted luxury brand (Hung, Chen, Peng, Tiwsakul, & Chou, 2011), (iii) sustainable dimension and general attitudes towards CSR and sustainability issues (Alvarado-Herrera, Bigne, & Aldas-Manzano, 2015).

Correlation between basic demographics and independent variables will be measured, as well as their impact on the dependent variable (luxury brand purchase intention) as demonstrated by the model (Figure 2).

3 CONCLUSIONS & NEXT STEPS IN RESEARCH

Faced with savvier consumers, luxury brands need to respond to the shift from show off, wasteful, conspicuous consumption into an intelligent and meaningful one. Companies who ignore social responsibility are at risk of being ignored by consumers who consider this matter in their decision-making process.

For this reason, in the article we develop the theoretical conceptual model based on seven dimensions: social, functional, experiential, symbolic, sustainable, demographic and attitudes towards CSR with the aim to analyse the level of consumers real awareness of the sustainability issue and extent to which it can impact their purchase decision.

For businesses to succeed in sustainability efforts is to combine business objectives with making contribution to society. The model thus, draws upon previous results reported in the literature as; general knowledge of corporate social responsibility and its connection to the luxury segment functional, experiential and symbolic value dimension of the purchased or gifted luxury brand, and sustainable dimension and general attitudes towards CSR and sustainability issues.

However, what hasn't been measured so far is the awareness of CSR among luxury industry consumers and its role in the customer journey. To achieve this goal, the initial stage of the research will use a qualitative approach. This means that we will study luxury consumers in their natural settings, attempting to find answers to our research questions in terms of the meanings and people's feelings about them.

We expect the importance of CSR in luxury industry to grow with the Gen Z and Millennial consumers getting mature enough to be able to afford purchasing in this segment. Therefore, our objective is to conduct the research as designed in this paper in both qualitative and quantitative phases and draw attention of the luxury producers to sustainability issues while there is time to adapt to the needs of these generations. With the current move of luxury brands to the on-line environment (recent acquisition of Yoox Net-a-Porter by Richemont, producer of Cartier, Piaget or Baume&Mercier, as an example), CSR may contribute to differentiation of luxury brands in the future.

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How New Technologies in Manufacturing Affect Rivalry, Industry Structure and Marketing Strategy

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Abstract: Intelligent, connected devices and implementation into systems are changing the core company functions as are product development, IT, manufacturing, logistics, marketing, sales, and after-sale service. They are being redefined, and the intensity of coordination among them is increasing. Entirely new functions are emerging, including those to manage the quantities of data now available. All of this has major implications for the classic organizational structure of manufacturers and quick running changes in business relationships. Business is forming platform as the ability to generate a network effect. Paper presents the results of database analysis within the automotive industry with the impact on reshaping roles in the value creation process.

INTRODUCTION

Nowadays experts talk about the third wave of IT-driven competition change. Twice before over the past 50 years, information technology radically reshaped competition and strategy in business. We now stand at the brink of a third transformation. Before the advent of modern information technology, products were mechanical and activities in the value chain were performed using manual, paper processes and verbal communication. The first wave of IT, during the 1960s and 1970s, automated individual activities in the value chain, from order processing and bill paying to computer-aided design and manufacturing resource planning. The productivity of activities dramatically increased, in part because huge amounts of new data could be captured and analyzed in each activity. This led to the standardization of processes across companies and opened question how to capture IT operational benefits while maintaining distinctive strategies in business.

The rise of the internet, with its inexpensive and ubiquitous connectivity, unleashed the second wave of IT-driven transformation, in the 1980s and 1990s – see Michael Porter's article "Strategy and the Internet," published by Harvard Business Review in March 2001. This enabled coordination and integration across individual activities; with outside suppliers, channels, and customers; and across geography. It allowed firms, for example, to closely integrate globally distributed supply chains.

The first two waves gave rise to huge productivity gains and growth across the economy. While the value chain was transformed, however, products themselves were largely unaffected. Now, *in the third wave, IT is becoming an integral part of the product itself*. Embedded sensors, processors, software, and connectivity in products (in effect, computers are being put inside products), coupled with a product cloud in which product data is stored and analyzed. Some applications are driving dramatic improvements in product functionality

and performance. Massive amounts of new product-usage data enable many of those improvements also.

Another leap in productivity in the economy will be unleashed by these new and better products. Producing them will reshape the value chain yet again, by changing product design, marketing, manufacturing, and after-sale service and by creating the need for new activities such as product data analytics and security. This will drive yet another wave of value-chain-based productivity improvement. *The third wave of IT-driven transformation thus has the potential to be the biggest yet, triggering even more innovation, productivity gains, and economic growth than the previous two* (Wallace & Xia, 2015)

Some have suggested that the internet of things changes everything, but that is a dangerous oversimplification. As with the internet itself, smart, connected products reflect a whole new set of technological possibilities that have emerged. But the rules of competition and competitive advantage remain the same. Navigating the world of smart, connected products requires that companies understand these rules better than ever.

1 LITERATURE REVIEW

Smart, connected products have three core elements: physical components, "smart components", and connectivity components. Smart components amplify the capabilities and value of the physical components, while connectivity amplifies the capabilities and value of the smart components and enables some of them to exist outside the physical product itself. The result is a virtuous cycle of value improvement. Physical components comprise the product's mechanical and electrical parts. In a car, for example, these include the engine block, tires, and batteries. Smart components comprise the sensors, microprocessors, data storage, controls, software, and, typically, an embedded operating system and enhanced user interface. In a car, for example, smart components include the engine control unit, antilock braking system, rain-sensing windshields with automated wipers, and touch screen displays. In many products, software replaces some hardware components or enables a single physical device to perform at a variety of levels (Porter & Heppelmann, 2014).

Connectivity components comprise the ports, antennae, and protocols enabling wired or wireless connections with the product. Connectivity takes three forms, which can be present together:

One-to-one: An individual product connects to the user, the manufacturer, or another product through a port or other interface, for example, when a car is connected to a diagnostic machine.

One-to-many: A central system is continuously or intermittently connected to many products simultaneously.

Many-to-many: Multiple products connect to many other types of products and often also to external data sources. Sophisticated applications are used in agricultural. A set of types of farm equipment are connected to one another, and to geolocation data, to coordinate and optimize the farm system. For example, automated tillers inject nitrogen fertilizer at precise depths and intervals, and seeders follow, placing corn seeds directly in the fertilized soil.

We see that connectivity serves a dual purpose. First, it allows information to be exchanged between the product and its operating environment, its maker, its users, and other products and systems. Second, connectivity enables some functions of the product to exist outside the physical device, in what is known as the product cloud.

It is important not only to know the technical and technological capabilities of smart products but to engage them in the value chain delivering process. So, what can smart, connected

products do? Intelligence and connectivity enable an entirely new set of product functions and capabilities, which can be grouped into four areas: *monitoring, control, optimization, and autonomy*. A product can potentially incorporate all four. Each capability is valuable in its own right and also sets the stage for the next level. For example, monitoring capabilities are the foundation for product control, optimization, and autonomy. A company must choose the set of capabilities that deliver its customer value and define its competitive positioning.

Fig. 1 Capabilities of smart, connected products
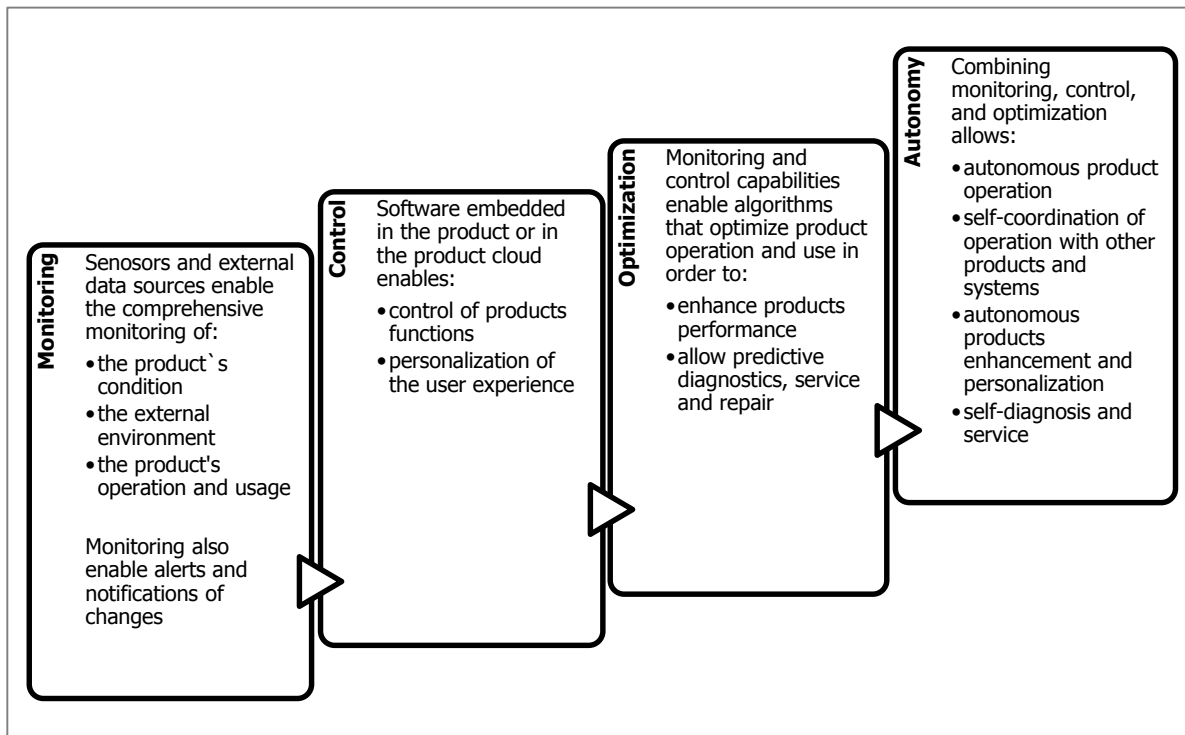
Source: adapted according Porter & Heppelmann, 2014

Note that experts often get hung up on definitions of "platform" these days. A platform can be a business platform (a multisided market), a software platform (a cloud-based subscription service), or an engagement platform, (a user-generated community). A very inspirational approach to platform was presented by the authors Buncheck and Libert (2017). Their approach is based on the known Einstein formula.

What defines a platform is the ability to generate a network effect. Einstein's famous formula of E=MC2 can be adapted for our purposes. Think of E as Enterprise Value. M is Mass, in this case all the things, people, and assets of your ecosystem. C2 is the exponential effect of Connectivity and Co-creation. In a traditional business, there is little connectivity or co-creation, so the enterprise value is equal to the "mass" of the company – its human resources, financial assets, intellectual property, and physical goods. By adding connections and co-creation, we multiply the ability of these assets to create value.

To put this new way of thinking into practice, they have found it helpful to think about networking different types of capital. In our $E=MC^2$ equation, you start with your M and then add the C to generate more E.

Every organization has five types of capital: human, financial, intellectual, physical, and relational. Let's see what happens when we connect them rather than manage them – that is, focus on the links rather than the nodes.

Human capital. We normally think of people as something to be managed. Organizations create value by managing people (and other inputs) to generate products and services (outputs). But consider the organization itself as a platform, connecting people who have ideas, skills, and work with the people who need them. Where traditional companies try to increase productivity by focusing on M, these companies work on increasing connectivity (C).

Intellectual capital. For most company intellectual property is something that sits on their balance sheet. Patents, trademarks, brands, data, and software (IP) are proprietary assets creating differentiation. But what if the value is not in the intellectual capital itself but in the connectivity of that IP? The way to create value (E) is by creating not scarcity and exclusivity (M) but connectivity and utility (C).

Physical capital. We normally think of the value of an asset as originating in what someone will pay for it and how they will use it. But in a digital world, physical goods become sentient and social. They are able generate value in how they work together.

Financial capital. We think that money is money. Even funding sources can be networked, as in the case of some crowdfunding models. Money itself is becoming more intelligent and connected.

Relational capital. To achieve loyalty, most companies focus on managing their customer relationships. But a networking mindset goes beyond the relationships company has with customers and looks for opportunities to connect them with each other.

The value of company customers is more than what they do for you (E=M) – it is what they do for each other ($E = MC^2$).

We will now focus on the concept of the platform within the automotive industry. The reason for this is the fact that the author of the article led the doctoral work in the field of automotive. Today, beyond any discussion, we see the great potential of smart products in the automotive industry.

This is the industry that has changed very dynamically in recent years. Balance between OEMs and suppliers in automotive completely changed (OEM is the standard abbreviation for the original equipment manufacturer). In the past all innovation was driven by OEMs. If we consider this whole, innovation-related challenges are reshaping traditional auto industry structures and relationships – in particular, by threatening the existing distribution of profits and the boundaries between OEM`s and Tier One or Tier Two suppliers, as well as between automotive and technological companies. Some suppliers will fold, as their business goes away completely, and others will struggle because changes in technology content will bring OEMs or non-automotive suppliers into their markets as new competitors. Decisions about investments and industry alliances that are being made now will determine the dominant positions of tomorrow.

According Parking et al. (2017) combined capital spending, R&D an M&A of top 10 OEM was at level 195bn USD in 2016 and the global automotive suppliers and engineering firms invested more than 65bn USD in R&D – investments in this area are growing at twice the speed of the final producers.

The transfer of research and development activities from OEMs towards suppliers in the supply chain, as well as implementing processes such as APQP, development and prototyping, CAD design systems, raises the question of internal personnel capacity. This whole chain of activities requires highly professional staff and the creation of sufficient human capacity within the internal organization (Watson et al., 2013).

Right qualitative and quantitative personal constitution of R&D department is now probably the most obvious criterion for distinguishing between active suppliers and those who they want to become. Own R&D is a prerequisite for true professionalism of the company and makes it

difficult to copy its competitive advantage. At the same time, it is something that the customer expects. Supplier must be the one who has all the theoretical and practical knowledge of his manufactured components. With the decrease in manufacturing depth by OEMs, this type of knowledge cannot be expected by them as customers. This is just showing the increasing interdependence of actors in network economy. Product development is usually still often completely the responsibility of the customer. Nevertheless, supplier should demonstrate its ability in this area at least in the analysis of product manufacturability so designed by customers, as well as in his later optimization. As far as supplier convinces its customer in these stages of its competence, it is likely this yields the space in the future by the development of new product. But it remains a fundamental prerequisite to build its own internal organization (department) of research and development. Such strategy definition allows formulate the following hypothesis H: Active suppliers have higher average number of developers than passive suppliers.

2 METHODOLOGY

The aim of our paper is to contribute significantly to the empirical investigations related to the correlation between number of product developers and success of suppliers in automotive. The paper also aims to theorize and empirically assess the importance of information about number of developers in supply chain marketing.

The main hypothesis H: Active suppliers have higher average number of developers than passive suppliers.

The key method is to analyze the database. For this purpose, we used data from supplier database of one of the largest global automotive suppliers. It is leading global automotive supplier with 328 manufacturing operations and 99 product development, engineering and sales centers in 28 countries, with over 163 000 employees focused on delivering superior value to our customers through innovative processes and World Class Manufacturing. Due to the requirements of the database provider to remain anonymous, the identification data of provider and the individual suppliers are not published.

This database contains information about 15 216 suppliers of all levels. For the purposes of this work and to define hypothesis, we chosen the following information on suppliers from the database: *Number of product development employees.* This information exists for 1 656 suppliers. The information in this database was valid at the beginning of the year 2014.

3.1 Geographical structure of suppliers

For the needs of a globalized generalizations and conclusions of this work has be done a detailed analysis of the supplier database geographic. From the 15 216 suppliers an indication of the country of origin exists by 15 210. By 6 suppliers the country of origin could not be identified. As we talk about the supplier's country of origin, in this work we have in mind the physical location of a supply unit with its own DUNS global classification identification number. Thus, we do not work with the country of residence of the main headquarters of the company or the country of residence of the owners of the company. Through detailed analysis, we found that in the database are represented suppliers from 64 countries of all continents.

Despite representation of suppliers from all continents, we can see a clear preponderance of suppliers from Western Europe and North America. With the distance the largest number of suppliers has its physical location in Germany. Their share represents 34.63% of the total number of suppliers. In second place is the USA (12.18%), followed by Austria (10.84%). Other countries share does not exceed 5%. Extremely high proportion of German suppliers

has many causes. The first is the high proportion of production plants of database provider in Germany. This currently represents 13.33% of its manufacturing plants, but this proportion was clearly higher in the past. The second and probably the most serious cause is the customer structure of the database provider. This is dominated by premium German car manufacturers. A third is the fact that the German supply industry today is absolutely the most developed in the automotive industry globally. USA supplier´s representation has similar causes as is the case in Germany. Surprise is the relatively low representation of automobile superpower Japan. Here, we must realize logistical context and location of the country itself. If we would analyze a database of suppliers according to ownership structure, the share of Japanese companies would substantially increase. These are in this database mainly represented by their foreign factories. Given the comparable (high) wage costs, there is a perceptible difference between Japan and Germany. There are two reasons. The first is logistically better position of Germany with respect to major world markets (this situation could change radically in the future). The second is the ability of German companies to succeed through brand and quality in world markets despite the relatively high price.

Clear sign of globalization tendencies is the fact that while the database provider operates directly manufacturing in 28 countries around the world, its direct suppliers are based in 64 countries and their number is constantly increasing.

3.2 Quantitative research

In terms of the theory of statistical examination, it was used multiple simple observation (Baumgartner, 2006). As a statistical unit is the provider´s individual supplier, registered in its database, where it includes Number of product development employees (factual statistical file definition - common statistical parameter) information. Spatial demarcation is global. In all this work the statistical files and sub-files are, from a statistical point of view large files. It was defined variable statistical feature for the hypothesis (variable). According to the statistical nature of the parameter it was selected quantitative factual parameter.

To test the hypothesis, it is used the procedure for defining the null hypothesis H0, where assumption is that the variable is for both files the same. Then gave his alternative hypothesis Ha, which will be identical with our hypothesis H. It was determined the value of the significance level α 5%. Then calculate the value of significance level P, which is compared with the value of α:

$$P < \alpha \quad - reject\ H_0\ and\ accept\ H_a$$

$$P \geq \alpha \quad - identified\ differences\ only\ random$$

To test the significance of the difference between the two averages for independent selections, it was used parametric unpaired t - test:

1. step: Hypothesis definition

$$H_0: \quad x_1 = x_2$$

$$H_a: \quad x_1 \neq x_2$$

2. step: Analysis plan formulation

$$\alpha = 5\%$$

3. step: Collected data analysis

Determine the degree of freedom:

$$DF = (n_1 - 1) + (n_2 - 1) = n_1 + n_2 - 2 \qquad (1)$$

DF – degree of freedom

n1, n2 – sub-file quantity

4. step: The test of the significance of the difference between the two averages for independent selections.

Parametric unpaired t - test   (2)

$$t = \frac{|\bar{x}_1 - \bar{x}_2|}{\sqrt{\dfrac{s_1^2}{n_1 - 1} + \dfrac{s_2^2}{n_2 - 1}}}$$

x1, x2 – sub-file average

s1, s2 – sub-file variance

Function Excel T.TEST one-sided distribution

5. step: Result interpretation

Comparison of the T-test value with the value $a = 0.05$, adopt or reject the hypothesis H_0.

3 RESULTS AND DISCUSSION – CORRELATION BETWEEN SUCCESS OF SUPPLIERS AND NUMBER OF PRODUCT DEVELOPERS

Confirmation or refute the hypothesis was tested by comparing two sub-files of the entire supplier database. The first sub-file consists of active suppliers of database provider. These are the companies that responded positively to the question: Do you have a trade with a database provider? As this is the supplier database, it is necessary to understand the term trading in the sense of being a supplier – it means there is actual flow of products. There are 7 122 such firms in the database. Second sub-file represents companies that responded to this question in the negative. There are 5 607 such firms in the database. This division allows us to define the basic postulate of this work. Affirmative answer to the question: Do you deal with a database provider? - as the result of the correct application of industrial marketing practices in terms of network economy. As an argument we state that for register to the database it is required: 1. Invitation to the provider´s database registration (buyer's expression of interest); 2. The provision of the required data by supplier (seller´s expression of interest).

This means that both parties have an interest to do common business and implementation of trade is the result of this effort. Conversely, if it not comes to realization of trade, co-operation is not successful.

Parametric unpaired t - test:

step: Hypothesis definition

H_0: Active suppliers have the same average number of developers than passive suppliers.

H_a: Active suppliers have higher average number of developers than passive supplier.

step: Analysis plan formulation

$$a = 5\%$$

step: Collected data analysis results

Tab. 1 Number of suppliers and average number of developers

Number of suppliers		Average number of developers
Active	872	74.6892
Passive	784	40.7347
Total	1 656	

Source: database analysis

1 step: The test of the significance of the difference between the two averages for independent selections

Tab. 2 Results of parametric unpaired t-test

Parametric unpaired t-test results:		
$x_1 =$ 74.6892	$x_2 =$ 40.7347	
$s_1 =$ 274117.70	$s_2 =$ 81865.62	

Source: database analysis

Function Excel T.TEST   T-test P = 0,048747 one-sided distribution

2 step: Results interpretation

As the value detected by the T-test (0.048747) is less than 0.05, result is statistically significant. It means, in these files, there was among the active suppliers significantly higher average number of developers than among passive. We accept the hypothesis Ha. The results of hypothesis H show that the active supplier employee more developers than passive ones.

Within hypothesis H we also confirmed a statistically significant difference of almost 34 developers with an average of 75 developers by active suppliers and 41 by passive. In connection with requirements in automotive supply chain, it was hereby confirmed the relevance of this marketing information.

Adoption of hypothesis H is confirming author´s statement about significance of number of developers for supplier´s success. It is the first time that this fact was confirmed on such big sample of companies with 1 656 individual companies. We can say with significance, that successful suppliers in automotive industry have in average more developers than unsuccessful. We can assume relevance of this conclusion also for other networked industries.

If we combine knowledge from previous research in this area we see processes of reshaping the value chain, by changing product design, marketing, manufacturing, and after-sale service and by creating the need for new activities such as product data analytics and security.

The powerful new data available to companies, together with new configurations and capabilities of smart, connected products, are restructuring the traditional functions of business – sometimes radically. This transformation started with product development but is playing out across the value chain. As it spreads, functional boundaries are shifting, and new functions are being created.

We introduced a new approach to product development. Intensive integration of Tier One and Tier Two suppliers into product development process.

Manufacturing and smart factories – the new capabilities of smart, connected machines are reshaping the operations of manufacturing plants themselves, where machines increasingly can be linked together in systems. In new initiatives like Industry 4.0 (in Europe) and Smart Manufacturing (in the United States), networked machines fully automate and optimize production.

Logistics continues the intensive use of new technologies and smart, connected products take tracking to an entirely new level.

Marketing and sales. The ability to remain connected to the product and track how it is being used shifts the focus of a company's customer relationship from selling (often a predominantly onetime transaction) to maximizing the customer's value from the product over time. This opens important new requirements and opportunities for marketing and sales - new ways to segment and customize; the new customer relationships; new business models.

After-sale service. For manufacturers of long-lived products, such as industrial equipment, after-sale service can represent significant revenues and profits.

Security. Until recently, IT departments in manufacturing companies have been largely responsible for safeguarding firms' data centers, business systems, computers, and networks. With the advent of smart, connected devices, the game changes dramatically. Job of ensuring IT security now cuts across all functions. Every smart, connected device may be a point of network access, a target of hackers, or a launch pad for cyberattacks.

Human Resources. A manufacturer of smart, connected products is a cross between a software company and a traditional product company. This mix demands new skills across the value chain, as well as new working styles and cultural norms. The skills needed to design, sell, and service smart, connected products are in high demand but short supply.

CONCLUSION

Hypothesis H is according to above mentioned findings confirmed. It shows the big difference between active (successful) and passive (unsuccessful) suppliers. This is a clear confirmation of the general trend that applies to all networked manufacturing sectors. The deepening interdependence between members of the network and research and development activities move to lower levels exert pressure by suppliers to create their own development capacities. In connection with the total number of employees is the average proportion of product developers by active suppliers 3.03%, while by passive suppliers only 2.1%. In absolute terms, this represents the difference 34 developers in favor of active suppliers. From the above it can be argued that the factor of own number of developers must become one of the basic building blocks of any marketing strategy in industrial sectors. Certainly, should be part of every marketing activity focused on the customer. Every company presentation performed to potential customers should contain very detailed information on the structure and capabilities of its own development department, including references.

In the context of ideas and theoretical basis of this work it is necessary to draw attention to its limits. These are mainly the fact that in this work defined hypothesis was verified in only one set of suppliers, which is tied to one customer – database provider. As the theme for further research it would be useful to test our hypothesis on supplier databases of other customers.

The general summary of our research is as follows – the higher number of product developers by automotive suppliers leads to improved success rate by doing business with customers in

automotive supply chain. The results show that the successful suppliers employee more developers than unsuccessful ones.

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The Possibilities of Gas and Oil Export to the Visegrad Group Countries in the Context of CETA

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Abstract: The Comprehensive Economic and Trade Agreement (CETA) is a free-trade agreement which is aimed at eliminating 98% of tariffs in the trade between Canada and the European Union Member States. The CETA agreement and the included clause on the Bilateral Dialogue on Raw Materials may create an opportunity to diversify the direction of obtaining petroleum oil and natural gas for Visegrad Group Countries, thus decreasing import dependence on Russian raw for these countries. The aim of this article is to attempt to answer the following research questions: - what is the origin and essence of the CETA agreement? - according to CETA, on what principles is the import of energy carriers (oil and natural gas) from Canada carried out by the EU? - will the realisation of the CETA agreement create considerable diversification possibilities for importing oil and natural gas for Visegrad Group countries? The author noticed that the import of tar sands oil and gas from Canada to the Visegrad Group countries may become an alternative or addition to the import of these raw materials from Russia, thus positively influencing diversification possibilities and the energy security of the Visegrad Group. The Author emphasised that in the planned export of Canadian oil and gas, key importance will be assigned to infrastructural issues, such as building new pipelines and LNG ports in Canada and in Visegrad Group Countries.

Keywords: CETA agreement, Visegrad Group countries, EU energy security, oil, gas, international trade,

INTRODUCTION

The Comprehensive Economic and Trade Agreement (CETA) is a free-trade agreement between the European Union and Canada, which was signed on 30 October 2016 and its provisional application began on 21 September 2017. Ultimately, CETA is aimed at eliminating 98% of tariffs in the trade between Canada and the European Union Member States. Negotiators emphasize the fact that the power industry and the trade in energy-producing raw materials connected with it are a crucially important area in this agreement for both parties: the European Union as well as Canada. In 2016, the European Union was the world's largest importer of primary energy which was estimated to be worth USD 336 trillion. And it is import which provides more than a half (53.5%) of the energy consumed in the EU. At the same time, this import is of low geographical diversification and it comes from a limited number of suppliers. Only from Russia alone comes 30% of each energy carrier: oil, gas or coal, brought into the European Union. In comparison, in 2016 Canada was only the 20th biggest supplier of energy-producing raw materials for the EU states market, which amounted to a mere 0,5% of the total oil supply and 0,5% of the whole gas import; and the rate of duties ranged from 8% to 2,2%. The countries of the Visegrad Group happen to be in a particularly unfavourable situation as they, due to their common historical heritage, have poorly-developed pipeline infrastructure in directions other than East – West, which results in their energy security being

hostage to obsolete transport infrastructure targeted mostly at the import of energy-producing raw materials from Russia (Ulbrych, 2017). All of these circumstances influence the fact that CETA seems to provide an opportunity for the diversification of energy-producing raw materials supply for the Visegrad Group countries and the entire EU, as well as for improving their energy security. On the other hand, the European Union is an immensely large market and a reliable trading partner for Canadian exporters of oil and gas, and this is connected with certain benefits.

1 LITERATURE REVIEW

The Comprehensive Economic and Trade Agreement (CETA) – an agreement on free trade between the European Union and Canada which, in its assumption, was to create the Transatlantic Free Trade Area together with TTIP (an agreement between the EU and the USA). This issue is widely debated among economists, politicians and other social groups (Mayer, 2015 and Rensmann, 2017).

As far as there are significant doubts concerning the future of the TTIP trade agreement under the presidency of Donald Trump who does not support the agreement, a provisional application of the CETA agreement began on 21 September 2017. The agreement aims to eventually eliminate 98% of the tariffs between Canada and EU countries (Morin, Novotná, Ponjaert, Telò, 2016). As it is emphasized by S. Griller, W. Obwexer, E. Vranes (2017), reaching an agreement was quite complicated despite the fact that the EU and Canada have had a long history of economic cooperation. Negotiations on the CETA agreement started in May 2009 and finished on 1 August 2014. They were classified. The European Commission officially published the document on 26 September 2014 and it was translated into all European Union languages. The agreement was officially signed by EU representatives – Jean-Claude Juncker and Donald Tusk – and the Prime Minister of Canada, Justin Trudeau, on 30 October 2016 and then published in the Official Journal of the European Union (The Council of the European Union, 2017). As has been mentioned above, a provisional application of the agreement began on 21 September 2017.When analyzing the CETA agreement, we should not omit the present trade situation between the EU and Canada. In 2016, the value of trade in goods between the EU and Canada was €64.3 billion and it increases every year, especially in comparison to the period from 2006-2010.

On the whole, the EU is Canada's second-biggest trading partner after the United States, accounting for 9.6 % of its trade in goods with the world in 2016 (European Commission, 2017). Canada, on the other hand, is the EU's 12th trading partner, accounting for 2% of the total import of goods into the European Union. The three main categories of goods which Canada and the European Union exported to each other in 2016 were:

- machines (23.6 % of EU exports to Canada and 13.7 % of EU imports from Canada)
- vehicles (18.7 % of EU exports to Canada and 11.4 %)
- oil, chemicals and pharmaceuticals (16.7 % of EU exports to Canada and 7.5 % of EU imports from Canada).

According to the CETA agreement, the application of tariff preferences for imported goods is conditioned by, among others, direct imports from the country of export to the target country and possession of proof of their preferential origin. CETA provides that a declaration of origin, prepared by the exporter, will be such proof. In the case of EU exporters, any exporter can prepare such a declaration, but only for shipments whose value will not exceed €6,000. When the value of a shipment exceeds this amount, only exporters registered in the REX system will be allowed to prepare the declaration.

2 METHODOLOGY

The aim of this article is to attempt to answer the following research questions:

- what is the origin and essence of the CETA agreement?

- according to CETA, on what principles is the import of energy carriers (oil and natural gas) from Canada carried out by the EU?

- will the realisation of the CETA agreement create considerable diversification possibilities for importing oil and natural gas for Visegrad Group countries?

Due to the research topic and the scope of the research objectives, the author has applied various methods. In the research process, a critical and multifaceted analysis of the CETA agreement's content and, particularly, the provisions concerning raw materials, has been carried out. Numerous international reports, Eurostat data, and studies concerning the energy situation of the European Union and the Visegrad Group countries have also proven helpful in the realisation of the research objectives. In many situations, the Author has used the comparative method and the method based on case studies.

2.1 CETA provisions concerning raw materials

The CETA agreement consists of 30 chapters (Art. 1.1 – 30.11) with appendices which regulate the following matters (Council of the European Union, 2017): Chapter 1 – general definitions and initial provisions, Chapter 2 – national treatment and market access for goods, Chapter 3 – trade remedies, Chapter 4 – technical barriers to trade, Chapter 5 – sanitary and phytosanitary measures, Chapter 6 – customs and trade facilitation, Chapter 7 – subsidies, Chapter 8 – investment, Chapter 9 – cross-border trade in services, Chapter 10 – temporary entry and stay of natural persons for business purposes, Chapter 11 – mutual recognition of professional qualifications, Chapter 12 – domestic regulation, Chapter 13 – financial services, Chapter 14 – international maritime transport services, Chapter 15 – telecommunications, Chapter 16 – electronic commerce, Chapter 17 – competition policy, Chapter 18 – state enterprises, monopolies, and enterprises granted special rights or privileges, Chapter 19 – government procurement, Chapter 20 – intellectual property, Chapter 21 – regulatory cooperation, Chapter 22 – trade and sustainable development, Chapter 23 – trade and labour, Chapter 24 – trade and environment, Chapter 25 – bilateral dialogues and cooperation, Chapter 26 – administrative and institutional provisions, Chapter 27 – transparency, Chapter 28 – exceptions, Chapter 29 – dispute settlement, Chapter 30 – final provisions.

In the context of raw materials, mostly petroleum oil and natural gas, Chapter 25 is extremely important, and particularly Article 25.4 entitled Bilateral Dialogue on Raw Materials, which says that:

(1) Recognising the importance of an open, non-discriminatory and transparent trading environment based on rules and science, the Parties endeavour to establish and maintain effective cooperation on raw materials. For the purposes of this cooperation, raw materials include minerals, metals and agricultural products with an industrial use.

(2) The Bilateral Dialogue on Raw Materials covers any relevant issue of mutual interest, including:

a to provide a forum of discussion on cooperation in the field of raw materials between the Parties, to contribute to market access for raw material goods and relevant services and investments and to avoid non-tariff barriers to trade for raw materials;

    b   to enhance mutual understanding in the field of raw materials with a view to exchanging information on best-practices and the Parties' regulatory policies vis-à-vis raw materials;

    c   to encourage activities that support corporate social responsibility in accordance with internationally-recognised standards such as OECD Guidelines for Multinational Enterprises and the OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas; and

    d   to facilitate, as appropriate, consultation on the Parties' positions in multilateral or plurilateral fora where issues related to raw materials may be raised and discussed.

This dialogue may be an opportunity for the Visegrad Group countries to diversify their directions of obtaining key raw materials such as oil and gas. It could positively influence an increase in the energy security and independence from the import of Russian raw materials.

2.2 Import of petroleum oil and natural gas by the Visegrad Group countries

The decreasing production of primary energy in the European Union with the use of coal, lignite, petroleum oil, natural gas and, recently, nuclear energy, has led to a situation in which meeting the EU demand increasingly depends on importing raw materials such as petroleum oil or natural gas.

Fig. 1 Extra-EU imports of petroleum oil, shares (%) of main trading partners, 2016
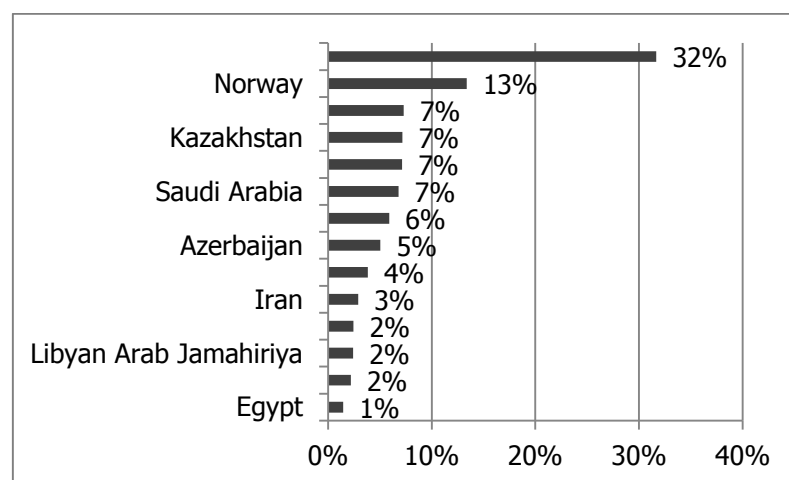
Source: Author's own dataset based on: Directorate-General for Energy (European Commission), EU Energy in Figures, Statistical Pocket Book 2017, Luxembourg: Publication Office of the European Union, 2017.

In 2016, Russia was the main supplier of both petroleum oil and natural gas to the EU-28 (see Figures 1 and 2).

Russia's share in total imports of these raw materials into the EU exceeded 30%, and in the case of oil it reached 32% and in case of gas it reached 40%. Unfortunately, Canada's share in gas and oil imports into the EU amounts to only 0.5%.

This situation is disadvantageous for the entire EU and it poses a threat to the energy security of the Community, as was the case during the Russian-Ukrainian gas crises in 2006 and 2009. The Visegrad Group countries happen to be in a particularly disadvantageous situation, as

evidenced by the domestic production of primary energy in Poland, Hungary, Slovakia and the Czech Republic in 2015. Within the group of these 4 countries, two sub-groups with certain similarities can be distinguished: Poland and the Czech Republic, who still make great use of coal in the energy industry (respectively 80.2% and 58%); and Slovakia and Hungary, who base their energy industry mostly on nuclear raw materials which give as much as 63% of all primary energy in Slovakia and 40.3% in Hungary (see Table 1).

Fig. 2 Extra-EU imports of natural gas, shares (%) of main trading partners, 2016
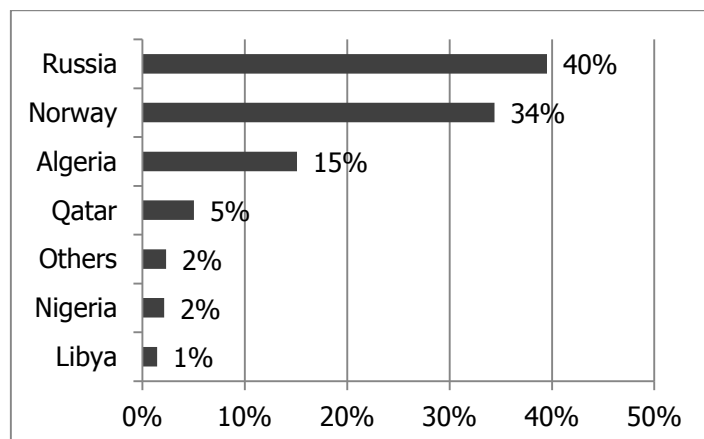
Source: Author's own dataset based on: Directorate-General for Energy (European Commission), *EU Energy in Figures*, Statistical Pocket Book 2017, Luxembourg: Publication Office of the European Union, 2017.

Table 1 Production of primary energy in the Visegrad Group countries in 2015 (%)

Country	Coal	Oil	Natural gas	Nuclear	Renewables
Czech Republic	59	0,5	0,7	26	12,6
Hungary	15,8	5,7	14,5	40,3	20,4
Poland	80,2	1,4	5,6	0	12
Slovakia	9,2	0,1	1,3	64,1	22,8

Source: Author's own dataset based on 'Benefits of the Energy Union - country factsheets' https://ec.europa.eu/priorities/publications/benefits-energy-union-country-factsheets_en (accessed on 03.01.2018).

Similarities in the field of using energy carriers in the case of renewable sources of energy look analogical. Hungary and Slovakia have now a considerable share of renewable energy sources in their energy mixes (20.4% and 22.8%). On the other hand, in Poland and the Czech Republic the use of renewable sources of energy is relatively low (12% and 12.65%). As can be seen in Table 1, these countries produce virtually no gas (only Hungary produces ca. 14% of the total primary energy production) or petroleum oil, which forces these countries to rely on the import of the raw materials necessary for the normal functioning of the economy of a given country. In their primary energy consumption, the Visegrad Group countries use the following amounts of gas: Poland – 14%, the Czech Republic – 15%, Slovakia – 24%, and Hungary – 30% (see Figure 3).

At the same time, practically all this gas comes from imports, where in the case of Poland 10% comes from imports, in the case of the Czech Republic all the gas comes from imports, in the case of Hungary – 21%, and in the case of Slovakia – 22%.

A similar situation occurs in the case of petroleum oil. The countries of the Visegrad Group use much more than 20% of it in the entire raw materials consumption: in the case of Slovakia it is 20%, Poland – 25%, the Czech Republic – 21%, and in the case of Hungary it is 28%. This oil comes mostly from imports: in Poland – 24%, Slovakia -19 %, in the Czech Republic all of the oil comes from imports, in Hungary – 28% (Directorate-General for Energy, 2017).

What the Visegrad Group countries have in common is the fact that they are all highly dependent on one supplier for the supply of both petroleum oil and natural gas. Due to the close geographical location and historical conditions, this supplier is Russia.

Fig. 3   Consumption of raw materials in the Visegrad Group countries in 2015
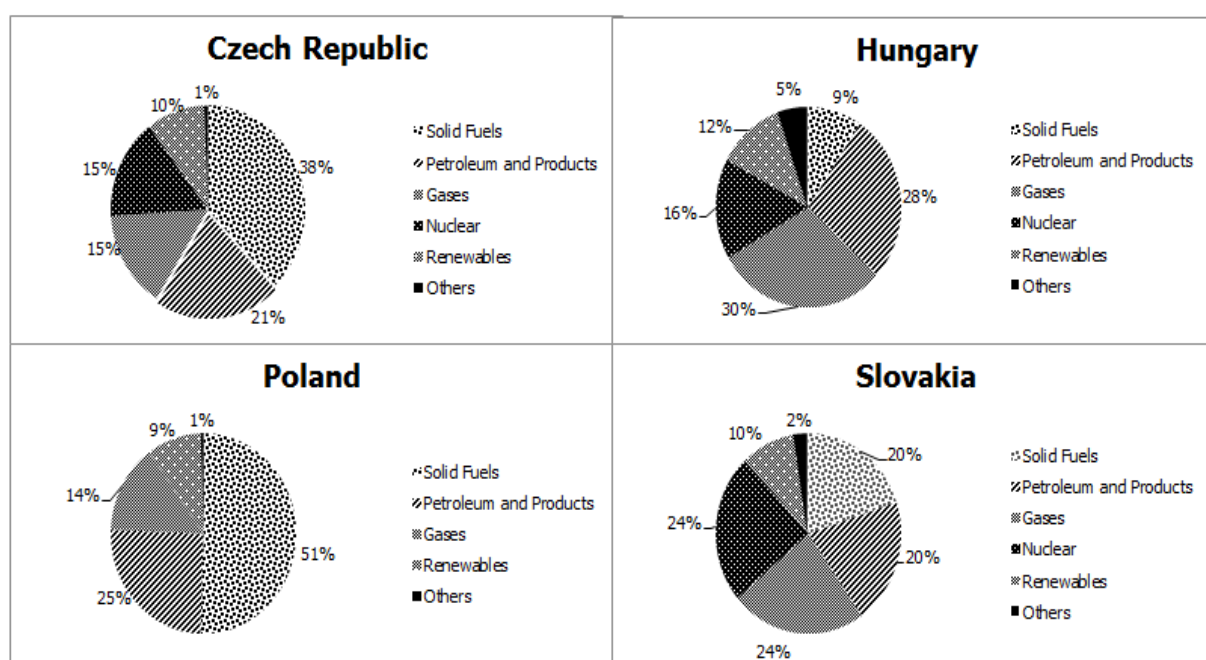
Source: Author's own dataset based on: Directorate-General for Energy (European Commission), EU Energy in Figures, Statistical Pocket Book 2017, Luxembourg: Publication Office of the European Union, 2017.

Analysing raw material consumption in these countries (see Figure 3), we can see that in each country oil and gas play a very important role in the structure of the consumption. The share of oil and gas in domestic consumption in 2015 was 30% and 20% respectively, and practically all of it was imported, mostly from Russia (see Table 2).

The table below presents import dependence of individual Visegrad Group countries and other EU countries regarding importing Russian oil and natural gas.

Quoting Eurostat, the data has been presented in percentage bands due to its partial confidentiality. The table shows that Poland, Hungary, Slovakia and the Czech Republic are 75% dependent on the import of gas and oil. The only exception here is the Czech Republic, which imports more than 50% of its oil from Russia. The form of presenting the above statistical data might be somewhat surprising: are all the European Union countries, including the Visegrad Group countries, too afraid to provide the official data of their dependence on the import of Russian raw materials? Is it the fear of public criticism or just quiet securing their

own interests? The dependence is significant. Based on older statistical data, which was normally presented in academic studies and international reports, in 2015 this dependence data was fully revealed. The share of Russian gas in the total amount of the imported material in the case of the Czech Republic amounted to 99%, in Hungary – 89%, in Poland – 55%, and in Slovakia – 95% (Pach-Gurgul, 2017 and European Commission, 2017a).

Table 2 EU countries' dependence on the import of Russian oil and natural gas in 2016

	Share (%) of Russia in national extra-EU28 imports	
	Petroleum Oils	**Natural Gas**
Belgium	25-50	0-25
Bulgaria	75-100	75-100
Czech Republic	50-75	75-100
Denmark	0-25	0-25
Germany	25-50	50-75
Estonia	75-100	75-100
Ireland	0-25	0-25
Greece	0-25	50-75
Spain	0-25	0-25
France	0-25	0-25
Croatia	0-25	0-25
Italy	0-25	25-50
Cyprus	0-25	0-25
Latvia	0-25	75-100
Lithuania	75-100	25-50
Luxembourg	0-25	0-25
Hungary	75-100	75-100
Malta	0-25	0-25
Netherlands	25-50	25-50
Austria	0-25	75-100
Poland	75-100	75-100
Portugal	0-25	0-25
Romania	25-50	75-100
Slovenia	0-25	75-100
Slovakia	75-100	75-100
Finland	75-100	75-100
Sweden	25-50	0-25
United Kingdom	0-25	0-25

Source: Author's own dataset based on Eurostat, 2017, EU imports of energy products - recent developments, http://ec.europa.eu/eurostat/statistics explained/index.php/

The CETA agreement and the included clause on the Bilateral Dialogue on Raw Materials may create an opportunity to diversify the direction of obtaining petroleum oil and natural gas, thus decreasing import dependence on Russian raw materials.

3 RESULTS AND DISCUSSION

3.1 Contemporary conditions for petroleum oil and natural gas trade between Canada and the European Union and its main challenges.

The CETA agreement aims to facilitate the trade in oil and gas between Canada and EU countries through elimination of tariffs. Before the agreement entered into force, petroleum products and gas were subject to tariffs from 7% on liquefied butane to 8% on liquefied propane (see Table 3). After CETA took effect, zero-tariff quotas became applicable (see Table 3), making the possibility of exporting these raw materials even more tempting.

Table 3 Tariff rates on petroleum and gas products before the introduction of CETA and after its entry.

	Pre-CETA tariff	Under CETA
Non-crude petroleum products	up to 4.7%	0%
Light oils and preparations	4.7%	0%
Liquefied propane	up to 8%	0%
Petroleum oils and preparations containing biodiesel	up to 3.7%	0%
Liquefied butane	0.7%	0%
Paraffin wax	up to 2.2%	0%
Other mineral waxes, not elsewhere specified or indicated	up to 2.2%	0%
Petroleum jelly	up to 2.2%	0%

Source: Author's own dataset based on http://www.international.gc.ca/gac-amc/campaign-campagne/ceta-aecg/oil_gas-petrolier_gazier.aspx?lang=eng

According to the most recent data (BP Statistical Review of World Energy, 2017), Canada was the world's second (after the USA) biggest oil exporter in 2016, and an important exporter of gas, mainly to the American market. On the other hand, as has already been mentioned, the European Union (and especially the Visegrad Group countries) is highly dependent on the import of Russian raw materials, mostly oil and gas. It seems that this mutual situation perfectly fits within the CETA agreement and bodes well for more flourishing trade in oil and gas between Canada and the European Union.

Year by year, Canada increases oil extraction and export, mostly from tar sands in the state of Alberta. Tar sands (oil-bearing sands) are a mixture of petroleum oil, bitumen, sand or mud. Oil extracted from bituminous sands is characterised by a high consumption of water and energy during its processing into liquid and preparation for transport. In order to extract this type of oil, viscous mud is abstracted from sand, sulphur is removed and the mud is processed into light oil, which usually requires adding gas. A by-product of this process is carbon dioxide going into the atmosphere. As much as two tonnes of bituminous sands are needed for the production of one barrel of oil.

The Canadian production of oil from tar sands has increased in recent years, although the price of oil has been rather low since mid-2014, at a level of ca. 40 dollars for a barrel. However, low world oil prices did not discourage Canadian oil exporters. The fuel industry

experts indeed foresaw hard times for tar sands for which the production costs are relatively high. Yet, this segment production turned out to be surprisingly resistant to low prices; not only did it not decrease, but it is still growing. The reason for this is that the already functioning projects lowered their costs with a simultaneous increase of production efficiency. Moreover, a vast majority of projects which were being implemented during the market crisis were not abandoned and they started production. In the years 2017-2018, the total production from new projects from the area of Canadian tar sands is assessed at almost 500 thousand barrels a day.

The massive Canadian production of oil created a possibility of importing oil from Canada to the European Union, and especially to the Visegrad Group countries. During the CETA negotiations, precisely in 2014, there appeared a considerable problem concerning oil trade in particular. The CETA negotiations were disturbed by the simultaneous adoption of the Fuel Quality Directive by the European Union. In this context, considerable controversies in the European Union were raised by the high carbon intensity of Canadian oil extracted from tar sands, which is four times higher than oil obtained from conventional sources.

The European Union pressed for the provisions that oil extracted from so-called tar sands be charged with higher carbon intensity, which stems from a more energy-consuming technology of its extraction and processing. This issue was the point of contention during the talks (Royal Bank of Canada, 2016). Canada protested against such provisions as it perceived itself as an exporter of that oil to the European Union, which would be hindered by the introduction of the proposed provisions. Additionally, some EU countries, including Estonia whose energy sector relies on tar sands exploitation, were against introducing such a provision. The issue was so sensitive that the introduction of the provisions could have influenced the ongoing negotiations on the trade agreement. Eventually, according to the provisions of the new EU Fuel Quality Directive, fuel producers will be required to declare the overall carbon intensity of their products in the entire chain of value, i.e. from the very moment of raw material extraction from deposits. The European Commission proposals to abolish the provisions which were disadvantageous for Canada coincided with the arrival of the first tanker with West Canadian heavy oil to the Italian port of Sarroch in Sardinia, which raises questions about the concurrence of these two events.

It is worth emphasising in this context that Canada has been preparing to export oil to the European Union for some time. The Energy East Project has been planned for this purpose. It is a project which will enable the transportation of oil from the deposits in the west of the country to Quebec and the Eastern Coast provinces and from there, more frequent ship deliveries to those European refineries which are prepared for processing this type of oil. It is estimated that Energy East will provide 1.1 million barrels a day for the refineries and export terminals in Quebec.

Canada is the third biggest producer of natural gas in the world (BP, 2017). The U.S. Energy Information Administration estimates Canadian deposits of shale gas to be 16 billion m3. The prices of natural gas have recently dropped considerably on international stocks, and in Canada they are dependent on supply and demand in the whole of North America. However, it seems that the USA will remain Canada's largest regional consignee of gas, yet the development of the entire sector will depend on an increase in this raw material extraction. Production costs and the efficiency of shale gas drilling will considerably influence the process. This is due to the fact that Canadians have no well-developed industry which would use this gas. It seems that within the next few years they will have no choice but to export gas, as finding clients in the USA, who have shale gas surpluses, is rather unlikely. Therefore, they need to look for markets in Europe. The shale revolution in North America brought about a number of essential changes on the liquid natural gas (LNG) market. Shale gas extraction became the main priority, but work on the planned regasification terminals was terminated.

It can be said that in 2014, most of the proposed regasification projects in Canada were suspended because of the fears concerning gas surpluses on the market and growing domestic gas extraction from unconventional sources. Therefore, in 2014 in Canada, only one regasification terminal was working – Canaport LNG – located in Saint John, in the province of New Brunswick on the eastern coast.

Table 4 Gas regasification terminals in Canada – functioning and future projects (as of 2016)

Name of the project	Launch date	Volume (in million tonnes per year)	Location
Kitimat LNG	2017	10	British Columbia
Douglas Channel LNG	2016	1.8	
LNG Canada	2017	24	British Columbia
Prince Rupert LNG	2019	21	British Columbia
Pacific NorthWest LNG	2018	18	British Columbia
West Coast Canada LNG	2023	30	British Columbia
Woodfibre LNG	–	2	British Columbia
Goldboro LNG	2019	10	Nova Scotia

Source: Author's own dataset based on Government of Canada, 2017, Canadian LNG Projects, http://www.nrcan.gc.ca/energy/natural-gas/5683.

As CETA agreement negotiations progressed, Canadian producers began to realise that Canada would be able to benefit from the possibility of exporting natural gas to the EU. For that reason, further projects enabling the export of LNG to the EU have been planned (see Table 4).

CONCLUSION

The CETA agreement will undoubtedly enhance trade cooperation between Canada and the European Union. This also concerns mineral raw materials, such as petroleum oil and natural gas. Chapter 25 of the Agreement, and particularly Article 25.4, called the Bilateral Dialogue on Raw Materials, which says that the Parties endeavour to establish and maintain effective cooperation on raw materials, is especially important in this context.

A complete elimination of tariffs on oil and gas provided for by CETA will probably be an additional positive impulse encouraging trading exchange in this area.

For the Visegrad Group countries this means a seismic change in international raw materials markets. These countries' situation is quite complicated as they import practically all gas and oil from one direction - Russia. This creates heavy and dangerous dependence, and thus susceptibility to disturbances during crises such as, e.g. between Russia and Belarus or Russia and Ukraine as happened in 2005, 2007 and 2008, when those countries were deprived of a considerable amount of raw materials deliveries due to ongoing conflicts.

In this context, we should ask a very important question: will the zero-tariff quotas be sufficient to intensify oil and natural gas trade between Canada and the Visegrad Group countries which remain highly dependent on the import of Russian raw materials? The zero rate of tariffs will obviously be a great incentive for enhancing commercial cooperation in this area. It seems

that the import of tar sands oil and gas from Canada to the Visegrad Group countries may, in the near future, become an alternative or addition to the import of these raw materials from Russia, thus positively influencing diversification possibilities and the energy security of the Visegrad Group.

However, it should be emphasised that in the planned export of Canadian oil and gas, key importance will be assigned to infrastructural issues, such as building new pipelines, including the Energy East Project, and LNG ports in Canada, as well as adapting refineries for the needs of processing heavy Canadian oil and increasing the number of LNG ports in the Visegrad Group countries.

AKNOWLEDGEMENT

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Adaptation of Key Factors of Retail Management in Central and Eastern European Fast-moving Consumer Goods Retail Companies

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Abstract: In the context of the creation of the single European market, the European consumer displaying some similar ways of buying behaviour on the one side and some considerably different characteristics on the other side has emerged. Retail companies should therefore pay close attention to making the right decisions about the application of various factors leading to the creation of the customer value. The paper addresses the identification of key factors of retail management in the most successful fast-moving consumer goods (FMCG) retail companies and the analysis of their adaptation rates in Central and Eastern European countries. The research conducted allows to define adapted and standardised factors affecting the success of the retailers in the foreign markets. Implementation of the results of the research can thus help retail companies improve their economic and competitive situation in individual markets as well as increase the effectiveness of their strategic activities.

INTRODUCTION

Commerce in general, as well as a retail company, can be considered relevant object for research of ever-changing processes related to their temporal and spatial variability. Retail companies are gaining more and more authority over many processes not only through the possibility of deciding on final prices, but also because of their interconnection and joining bigger and bigger companies. Bulk purchases, rationalisation of processes, introduction of new information and communication systems are the manifestations of successful business companies and their modern management.

The retail market in Central Eastern Europe is characterised by the dominant position of international retail companies (Dries et al., 2007). These companies create a strong competitive pressure on local retailers because they can keep prices very low as the amount of their revenue is high and the character of consumers enables it (Križan et al., 2016). However, local retailers may be inspired by the approaches of the most successful international retail companies in order to maintain their market position and to successfully compete against them.

The issue of internationalisation and globalisation of retail is highly discussed, but it is still lacking in its direct application to the fast-moving consumer goods industry in a particular country or region. To be able to identify opportunities and to stay ahead of the competition on challenging markets, the FMCG retailers need not only a long-term and ever-improving offer of high quality products (Richnák et al., 2016) and a comprehensive picture of market trends, but they also need to know the developments in consumer demand and buying behaviour. Modern retail in terms of internationalisation and globalisation includes a wide

range of activities not only in domestic but also in foreign markets. To ensure these activities, it is essential to develop effective marketing and management of retail companies. For these reasons, it is significant to deal with the issue.

1 LITERATURE REVIEW

The management system of retail companies in the process of globalisation represents the management and coordination of activities that guides and ensures the improvement of the quality and efficiency of customer oriented processes and activities in order to meet their needs and requirements in individual markets. The definition of the content of the retail management is approached by various authors in two basic dimensions, in a broader and narrower sense. Cimler et al. (2007) perceive the concept in a broader sense and focus on the organisation and management of retail companies, human resources, movement of goods management, various information and communication technologies, the location of individual retail units, or the increasingly discussed business ethics and consumer protection. Similarly, Čihovská et al. (2012) distinguish mainly the main sequencing (planning, organisation, personnel, management and control) and continuous management functions (communication, activity analysis and decision making), along with the corporate culture or social responsibility. Horváthová (2013) includes among the continuous or parallel management functions also the implementation.

In order to increase the efficiency of their activities also in foreign markets, retail companies must pay close attention to the individual business operations taking place in the operating units, and to the factors that affect them. This activity can be labelled as the retail management as well, involving individual processes related to retail level of management that help customers obtain the required retail goods. At the same time, retail management can also be defined as a process of enhancing the efforts of retailers to achieve greater sales and greater customer satisfaction through a better understanding of their customer needs. Companies must focus on creating value for customers and meet their individual needs in order to maintain their long-term loyalty and resulting long-term and sustainable profits (Zendulka, 2015). Given that most of the work operations are related to operating units, i.e. operational management, retail management is therefore an important activity of every business company. On the other hand, in the narrower sense, the concept of retail management can also be approached in terms of retail mix and related processes. According to Krafft and Mantrala (2010), business factors, service factors, assortment, price, supply chain and technology are among the key factors leading to value creation by retail chains.

The ever-growing pressure to increase efficiency and increasingly complex customer demands is currently faced also by FMCG. FMCG refers to low-cost products that are quickly sold, replaced, or consumed within one year, usually within days, weeks or months. The need to ensure the day-to-day availability of this assortment requires the involvement of all stakeholders, including retailers, manufacturers, suppliers, logistics providers and other large and small companies. In the individual markets, FMCG retail companies have to focus on the correct implementation of the retail mix, which is a combination of various elements of a retail company that can influence consumer behaviour. It is basically a marketing mix tailored to the conditions and activities of retail companies. According to Lazer and Kelley (1961), a mix of three basic sub-mixes, namely a mix of goods and services (including their prices), a mix of communication and a distribution mix (including store placement and inventory management), was built in the past. Hasty and Reardon (1997) include the basic tools of the marketing mix, namely product, price, distribution and communication, among the main elements of the retail mix and attribute to the latter also their individual variables such as services, goods costs, business expenses, profits, situation analysis, merchandising, and so on. In a simplified way, it can be said that the retail management analyses and identifies suitable countries and specific

locations for company expansion, decides about assortment, pricing, distribution, and communication strategy, sales process management and other processes applied on a particular territory. Based on the above, it is possible to define the management of retail companies in conditions of globalisation as the process of managing individual standardised or adapted elements of the retail mix in order to achieve the stated goals by implementing selected and developed strategies on represented domestic and foreign markets.

The question of applying the global standardisation or the international adaptation by the FMCG companies is the result of current ever-changing situation, consumer uncertainty and the uncertain economic conditions. In general, adaptation and standardisation are defined as the basic approach of using effective international marketing program for each foreign market served by the company. The processes of standardisation and adaptation in marketing strategies are discussed by Kotler and Keller (2013) who clarify the possibilities and the range typology of these approaches in different elements of marketing mix and they add the examples of processes applied in practice. The process of adaptation of different elements of marketing mix, including various strategies and management programs, is the result of need for respecting the differences and need for adaptation to the local market. Sands (1979) defines the notion of adaptation as the use of different marketing strategies that do not have any elements in common. Czinkota and Ronkainen (2013) discuss the difference between various markets, as well as the similarity of certain factors, and the international marketing strategies and management programs. Such adaptation can be too costly and ineffective if a company operates in many foreign markets. Amongst the authors preferring the use of both approaches of standardisation and adaptation are Kim and Mauborgne (1987) who consider the simultaneous application of both approaches necessary for ensuring the competitiveness. According to Machková et al. (2002), the recent trend consists in maximal effort of using the standardised processes that are adapted to the local conditions. The integration of the approaches of operation in foreign markets mentioned above was discussed by Vrontis (2003). Given that the adaptation of the key factors of successful multinational companies cannot be considered in isolation from its contradictory approach, Nanda and Dickson (2007) also discuss this issue, focusing on three factors: the homogeneity of customer responses to the marketing mix, the transfer of competitive advantages, and similarity in the degree of economic freedom. According to them, even in countries with similar cultures there are differences in customer needs and requirements. According to their study, standardisation will be successful if the homogeneity of customer responses and the degree of economic freedom are high and the competitive advantages are easily transferable to the markets of other countries as well. Otherwise, the adaptation approach needs to be used. In applying the adaptation approach to the marketing mix and management systems, managers must consider, in particular, the cultural and market differences, the different levels and speeds of economic development, the differences in customer needs, the different availability of information and communication technologies, the country's legislation, and so on (Belch & Belch, 2012).

In order to understand the extent of the factors considered when deciding on the standardisation, or adaptation rate, it is necessary to identify the different sets of factors that affect retail management and the international retail strategy in each market. According to Berman and Evans (2013), these factors include:

- institutional factors (ownership form, product / service category, existing distribution channels, level of competition, level of technology, government measures, suitability of standardised approach);

- consumer factors (retail preference, population trends, prevailing language, level of incomes and their distribution, literacy / education, cultural values and lifestyle patterns);

- business location factors (availability of required areas and locations, terms of purchase, level of transport equipment, opening hours);

- operational factors (staff availability, appropriate management style, expected rate of minor thefts);

- assortment factors (range and depth of assortment, assortment quality, level of innovation, availability of suppliers, inventory management);

- price factors (level, use of fixed / adjusted prices, purchase terms);

- image and communication factors (shop atmosphere, shop layout, advertising, personal sales).

The issue of standardisation and adaptation of multinational companies is also dealt with by Vrontis et al. (2009) who, on the basis of quantitative research, have identified strategic factors that are the subject of management decision-making. In the study, they also focus on the various causes that influence companies in their decision-making. Research was focused on multinational companies based in the UK and operating across multiple sectors. In the following diagram are presented the results of this study illustrating the individual influenced and influencing elements that lead to both discussed approaches.

Fig. 1 Influenced and influencing elements leading to standardisation and adaptation

Source: Vrontis et al., 2009, p. 483.

A balanced combination of standardisation and adaptation in accordance with cultural, social and economic conditions, and consumer preferences enables retail companies to maintain a portfolio of satisfied and loyal customers. Such action brings to retail companies an improvement in their economic and competitive situation in individual markets as well as an increase in the effectiveness of the strategic activities being pursued. Even though more and more authors are addressing this issue, in today's competitive and globalising environment, it would be appropriate to extend the topic to a particular FMCG segment in Central and Eastern Europe. All of these, as well as many other theoretical approaches and assertions, can be used as the basis for the successful operation of individual companies on foreign markets.

2 METHODOLOGY

The aim of the paper is to identify the key factors of retail management in the most successful FMCG retail companies and to analyse their adaptation rates in Central and Eastern European countries (CEECs). For this purpose, a quantitative survey was carried out on the sample of 38 FMCG retail companies, originating from the countries of the single European market environment, which are the most successful in terms of sales in CEECs. According to OECD (2001), amongst the CEECs are Albania, Bulgaria, Croatia, the Czech Republic, Hungary, Poland, Romania, the Slovak Republic, Slovenia, and the three Baltic States: Estonia, Latvia and Lithuania. As Albania is not a part of the single European market, we did not survey the companies operating in the Albanian retail market in order to achieve the homogeneity of the target group and to eliminate possible distortions in the results, resulting from the possible different market conditions prevailing there. In line with the research objectives of the survey, the respondents were the stakeholders of the individual companies, according to their organisational structure, dealing with the studied factors (i.e. marketing managers, marketing directors, CEOs).

The survey was carried out using a questionnaire, containing closed-ended questions with a prevailing use of the seven-level Likert scale with a possibility of neutral answer. Within the descriptive statistics, the data gathered were analysed using the average values of the responses, the values under 4 representing the standardisation and values above 4 representing the adaptation of respective factor groups. Amongst other mathematical and statistical methods, the test of independence with the use of the Spearman's correlation coefficient in order to determine the interrelationships between the variables, and the non-parametric analysis of variance with the use of the Kruskal-Wallis test in order to detect the statistical significance of the difference between selected groups of variables were used. In order to evaluate the studied key factors of the retail management of FMCG companies and to examine their relationships, the individual factors were grouped into specific factor groups, according to Krafft and Mantrala (2010). The internal consistency of these factor groups was then verified using the Cronbach alpha coefficient which exceeded the value of 0.7 in all cases, that is, all factor groups created are internally consistent (Gliem & Gliem, 2003). The Table 2 shows the values of Cronbach alpha for all the factor groups studied.

Tab. 2 Internal consistency of factor groups

Factor group	Number of items	Cronbach alpha
Factors of store	5	0,789
Factors of services	6	0,770
Factors of assortment	9	0,877
Factors of price	6	0,833
Factors of supply chain	5	0,837
Factors of marketing communication	8	0,803
Factors of technology and sales personnel	6	0,900

Source: Own processing.

The degree of adaptation is significantly affected by the type of management (centralised or decentralised), applied by individual retail companies. Therefore the following hypothesis has been formulated and subsequently been subject to verification: *Adaptation of most factor groups in FMCG retail companies in CEECs is dependent on their management method.*

Applying these methods of analysis has enabled us to identify the key factors of adaptation and standardisation in FMCG retail companies in CEECs, which can be considered as indicators of success in individual markets.

3 RESULTS AND DISCUSSION

For the efficient and successful operation of FMCG retail companies in the conditions of CEECs, it is necessary to combine the standardisation and adaptation approach. Defining the main adapted factors may be the starting point for companies considering the internationalisation of business, but also for companies not reaching the desired results in the foreign markets. Many of the factors studied in the survey are currently considered as factors that allow for a certain form of value for the customer, and therefore it is important to apply them in the right way. Based on the analysis of the results of the survey carried out, it is possible to point out the differences in the adaptation of the various factor groups as a whole, as well as the adaptation of the individual specific factors. The results of the survey show that factors of store are significantly standardised factors (the average value 2.15), with all of the individual factors considered, such as colours, music, design, etc. (1.68), image including name, branding, etc. (1.97), layout of the store (2.09), store equipment (2.15), store format, for example hypermarket, supermarket, etc. (2.88), being standardised within the given factor group. Within the factors of services (the overall average value 3.59), FMCG retailers in CEECs slightly adapt additional services (4.39), and standardise all other factors of services as outlined in Graph 1.

Graph 1 Factors related to the offered services
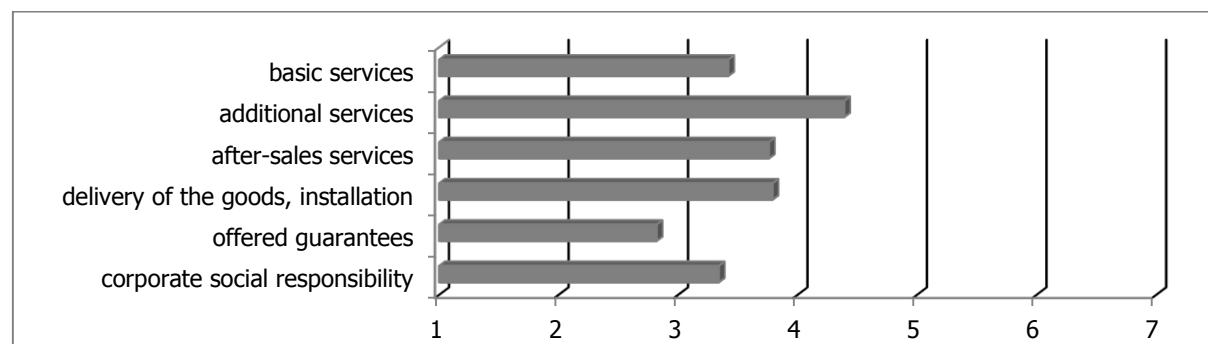
Source: Own processing.

Other highly standardised factors in FMCG retailers in CEECs are the factors of assortment (the average value 2.70), with the most standardised factors of used raw materials and ingredients (1.50), branding private labels (1.92), quality / composition of private labels (2.24), procurement processes of the assortment (2.58), category management (2.82), packaging of private labels, including sizes, special packaging, etc. (2.89), and assortment of private labels (3.32). In the case of the width of the standard assortment excluding private labels (3.50) and the quality / composition standard assortment excluding private labels (3.58), the values obtained tend to the central value of the Likert scale (4), which in this case means that these factors are not standardised in their entirety. In view of the significant differences in the

economic situation of the CEE countries, according to the findings of the survey as outlined in Graph 2, the factors of price are fully adapted (the average value 5.26).

Graph 2 Factors related to the price
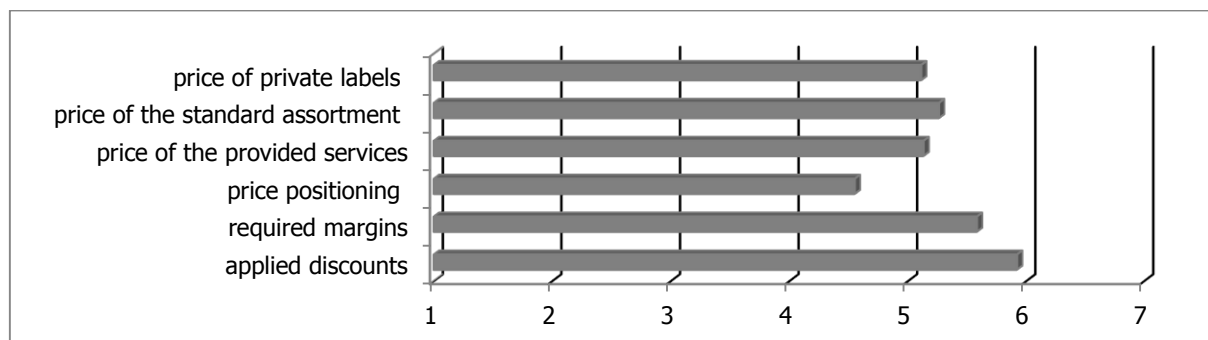
Source: Own processing.

The factors of distribution are also standardised in FMCG retailers in CEECs (the average value 3.45). However, the results of the survey show the average values of the individual factors above 3, which means that these factors are not fully standardised, but they are slightly adapted, especially when establishing relationships with suppliers (3.61), certain distribution channels, for example e-commerce, brick and mortar, etc. (3.59), inventory management (3.42), requirements on the localisation of stores (3.24) and logistics (3.24). On the other hand, communication factors are almost entirely adapted (the average value 4.61), except for the communication of retail brand and merchandising, as shown in Graph 3.

Graph 3 Factors related to the marketing communication
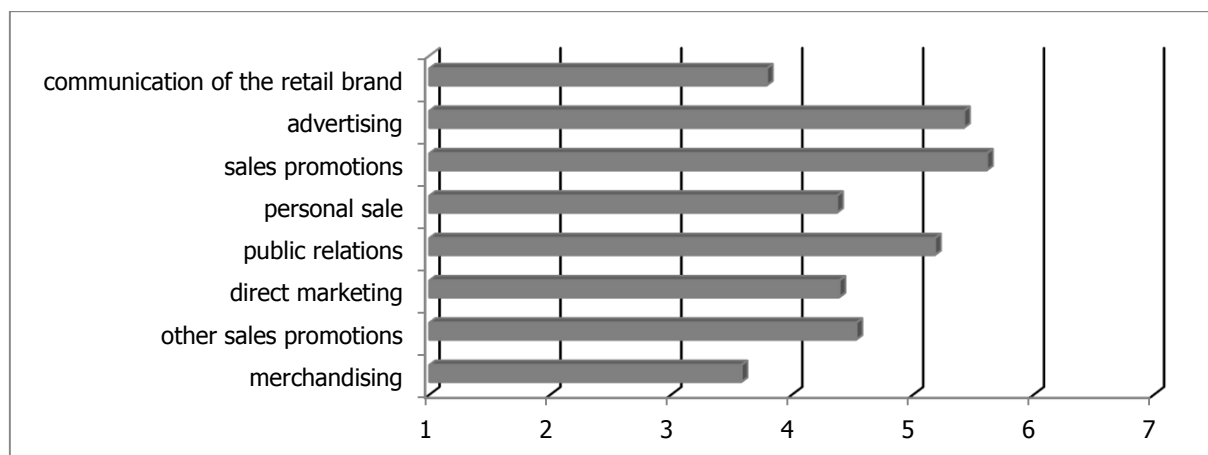
Source: Own processing.

Within the factor group of technology and sales personnel, all factors are standardised (the overall average value 2.55), to the largest extent being standardised the factors of technical equipment of stores (2.35), information and communication technologies (2.45), required skills of store managers (2.47), required skills of sales staff (2.53), training and education of sales staff (2.68) and evidence / administration (3.03).

The degree of adaptation and standardisation in FMCG retail companies is also influenced by the type of management (centralised or decentralised) in each country of operation. If the FMCG retail company exerts predominantly centralised management, it does not mean that it does not adapt any factors of management systems or marketing strategies in individual countries of operations. This is also evidenced by the results of the survey, which show, as shown in Graph 4, that FMCG retail companies with centralised management in CEECs adapt the factors of price to a certain extent (4.39), while FMCG retail companies with decentralised management adapt them to a larger extent (5.66), and they adapt the factors of supply chain (5.10), marketing communication (4.09) and services (4.06) as well.

Graph 4   Degree of standardisation and adaptation of factor groups according to the type of management
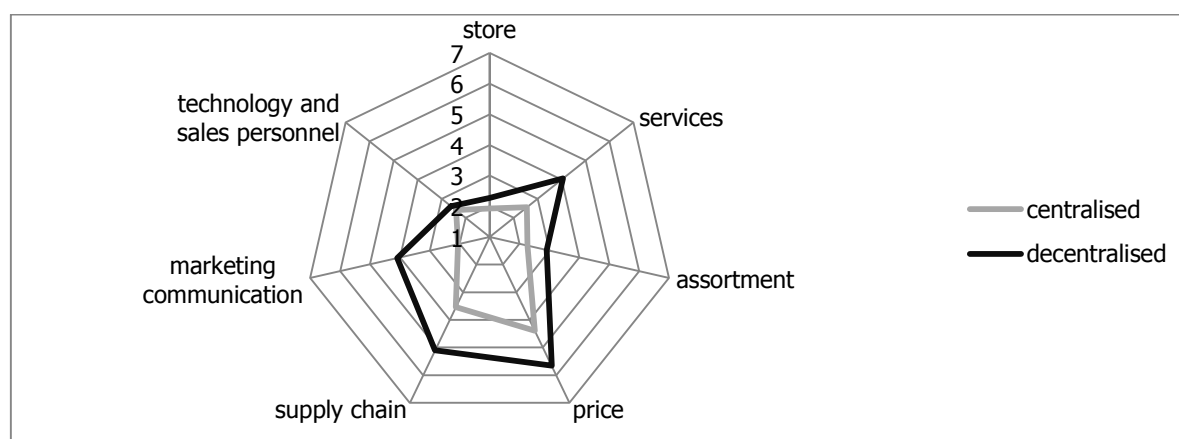
Source: Own processing.

Based on the existing difference between the type of management and the adaptation of certain factor groups of retail management, it is necessary to test the relationship between the variables using the bivariate analysis. The power of statistical dependence between variables can be measured through a correlation coefficient. Its values are in the range from -1 to 1, with values close to 0 meaning that there is no relationship between the variables and the values approaching 1 represent a strong relationship. The use of the Spearman's correlation coefficient has shown interdependence between the type of management and the adaptation of the factors of services, price, supply chain and marketing communication. On the contrary, there is no interdependence between the adaptation of the factors of store, assortment, technology and sales personnel, and the type of management applied. In the next step, it was necessary to test whether the dependencies found were statistically significant (relationship between the variables examined does exist) or only random (relationship between the variables examined does not exist). As shown in Table 2, it was found by using the Kruskal-Wallis test that there is a statistically significant relationship between the types of management (centralised and decentralised) and the adaptation of factors of services, price, supply chain and marketing communication. If the p-value is lower than the chosen significance level (5% = 0.05), the zero hypothesis can be rejected, which means that the difference between at least one pair of medians calculated from the sample is too large to be only a consequence of random selection.

Based on the analysis above, it can be stated that the adaptation of most of the factor groups of the surveyed entities (factors of services, price, supply chain and marketing communication) depends on the type of management applied in the individual CEE countries surveyed. The

hypothesis *Adaptation of most factor groups in FMCG retail companies in CEECs is dependent on their management method is thus accepted*.

Tab. 2   Testing the relationship between the type of management and selected factor groups

H0	Variable 1	Variable 2	P-value
1.	Type of management	Factors of services	0,002
2.		Factors of price	0,002
3.		Factors of supply chain	0,000
4.		Factors of marketing communication	0,001

Source: Own processing.

By adapting individual factors of retail management, companies respond on the one hand to the preferences and needs of consumers, the economic and cultural environment or other important factors, but on the other hand they try to increase their profit or market share. For this reason, the survey also focused on the impact of adaptation of individual marketing strategies on sales achieved by FMCG retail companies in conditions of CEECs. The calculated average values of responses show that adapting the product strategy has a positive effect on their retail sales (5.47), while the offer of regional products also has a positive effect on their sales, but to a lesser extent (4.39). Adapting the pricing strategy of FMCG retailers increases their retail sales to a relatively large extent (5.79) in the CEE countries. Conversely, according to the average response value (3.79), adapting the distribution strategy does not cause in most cases a revenue growth. Most respondents indicate that the increase in retail sales in FMCG companies is positively influenced by adaptation of the communication strategy (6.24). Despite the claims regarding the positive impact of the adaptation of marketing strategies to the growth of the FMCG retail companies' sales, it should be noted that all of these strategies include individual retail management factors studied, some of which can be basically adapted and other standardised.

CONCLUSION

Under conditions of new global trends, such as increasing importance of local consumer products, multichannel retailing, etc., the importance of adaptation is likely to increase. Effective adaptation of retail management factors to the conditions of various countries has a positive impact not only on the achievements of retail companies but also on the satisfaction of customers. FMCG retailers must therefore make comprehensive decision-making on the degree of application of the studied approaches in order to successfully operate on foreign markets. Given the similar historical evolution of the CEE countries, it can be said that these countries are still characterised by certain similar characteristics and consumer behaviour. For this reason, FMCG retailers are likely to standardise most of key retail management factors. According to the results of the survey, there is a stronger adaptation in the given countries in particular for price and communication factors, as well as in assortment factors. This can be justified by the fact that consumers in different countries respond to price changes in a different way, and that pricing applied by FMCG retailers in these markets must be based on cultural differences, customer preferences, the purchasing power of the population, and the associated costs of purchasing goods. Within the communication strategy, CEE countries may have different legislative constraints, diverse systems and ways of campaigning, customers

can respond differently to individual communications. The geographic conditions of these countries or local tastes and customs are also slightly different, so it is not appropriate to offer certain types of products in certain countries, they must be adapted to the relevant conditions. Customers in some countries are becoming more and more ethnocentric and tilted with products from their own country. On the basis of the above, it can be said that the adaptation of retail management factors, which is in line with customer requirements and preferences, as well as with the overall strategy and goals of the retail company, represents a significant competitive advantage of current global retail.

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Firm Failure Prediction: Prediction Accuracy Improvements Based on Firm Size Groupings

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Abstract: Firm failure has been an interesting research topic for a long period and many researches try to explain this phenomenon, often trying to improve failure prediction accuracy. In order to explore the issue of firm failure, researchers use different statistical methods and samples. Findings generally indicated that financial ratios are useful for failure prediction. Many early papers dealt with the samples of large listed firms, but later papers put focus on SMEs. Comparison of studies for large firms and SMEs reveal that models are not identical regarding financial ratios and prediction accuracy. Therefore, in order to explore the issue of possible differences in failure profile of different sized firms we developed separated models, not only for the two groups of firms commonly investigated (large or SMEs) but for four different size firm groups. Empirical research was conducted for failed firms from Croatia, while the data was obtained from Amadeus database. Failure models were evaluated with the usage of logistic regression and findings confirmed that failure prediction accuracy for size based subsamples was higher than for all firms sample.

INTRODUCTION

Firm failure has been in focus of practitioners and academics for more than 50 years and many studies tried to explain this phenomenon. The issue of firm failure is important for stakeholders since all of them have certain financial interest in firm and therefore they should try to evaluate the possibility of firm failure. The information about firm failure risk might be crucial one when making investing or crediting decision. Firm failure definition can take several forms and authors often describe firm failure as bankruptcy, insolvency or financial distress. The level of sophistication of firm failure analysis is different among different stakeholder groups, but banks and other institutional investors often use the most sophisticated failure prediction models since they have adequate human and financial resources to develop such models. Modern banking regulation and large losses caused by recent economic crisis are causing additional pressures for improvements in firm failure modeling.

Early academic studies (from 1930's) did not use very sophisticated mathematical/statistical methods, but since Beaver's (1967) and Altman's (1968) seminal papers research methodology has been constantly improving. Recent research used the most sophisticated mathematical/statistical techniques like logistic regression, hazard models, fuzzy logic, neural networks, etc. Empirical evidence from academic studies in generally confirmed that accounting information and financial ratios are useful for firm failure prediction. Most research on firm failure were and still are focused on classical financial ratios (profitability, solvency, liquidity, activity, etc.), in case of which evaluated models result with high level of prediction accuracy. Here we must point out that the prediction accuracy of failure model was inversely related with the age of financial data. Namely, the best accuracy of failure prediction was

obtained with usage of data one year before the failure, while prediction accuracy is much lower when data is two/three years before the failure.

An important recent development in failure modeling is utilization of non-financial i.e. qualitative variables. Namely, in order to better evaluate client failure risk, commercial banks have started to use qualitative variables (alongside with financial variables). Such variables often include management quality, firm age, technology, etc. Academic evidence on use of qualitative variables in firm failure modeling is still scarce, but available studies in generally confirm that inclusion of qualitative variables increases failure prediction accuracy.

Besides qualitative variables, commercial banks often use separated credit lending procedures/models for large firms and for SMEs. Such a behavior of banks might indicate that evaluation of failure risks for large firms might be different in comparison with SMEs. Academic research on this aspect of firm failure is still very limited. In order to deeply explore the issue of firm failure, with respect to different firm's size, we have decided to develop several size related models. The first evaluated model included data of all sampled Croatian failed/healthy manufacturing firms available in Bureau van Dijk database Amadeus. Besides the model that encompasses all firms, we have evaluated additional failure models based on data from different sized firm groups. Empirical findings indicated the highest failure prediction accuracy when total sample was divided into four subsamples based on the asset size.

1 LITERATURE REVIEW

Firm failure literature has been developing for more than 50 years and many academic papers are still trying to put additional light on this phenomenon. Early papers of Beaver (1967) and Altman (1968) triggered failure modelling, which is very interesting issue for both, practitioners and academics. Business practice and profit maximization goals requires that creditors, investors, business partners and other stakeholders manage the risk of firm failure in order to avoid financial loses. In order to minimalize risk of losses stakeholders must evaluate possibility of financial problems/firm failure in order to undertake appropriate business decisions. Therefore, as a result of academic research failure model can have very practical applications, especially in banks and other institutional investors.

Firm failure definition can take different forms, thus, for example, some studies define it as bankruptcy (Altman, 1968; Ohlson, 1980; Zmijewski, 1984, Pervan et al. 2011), others define it more broadly as financial distress (Beaver, 1967; Vuran, 2009), while some author focus on illiquidity/blocked account (Pindado & Rodrigues, 2004; Šarlija et al. 2009; Pervan & Kuvek 2013). Although there is a large number of failure studies, developed failure models are often based on different failure definitions and consequently models are not directly comparable.

Analysis of statistical methodology used in previous research revealed that majority of early papers followed Altman (1968) and were using multiple discriminant analysis-MDA. However, MDA has some very strict requirements (normality of independent variables, equal variance-covariance matrices across groups, prior groups' probability) which often are not satisfied in empirical data. After Ohlson's (1980) paper, many studies switched from MDA to logit/logistic regression since this statistical method has fewer requirements and it is more robust in comparison with MDA. However, since different studies still use different statistical methods, and consequently report heterogeneous findings, it is not possible to find consensus on "the best" statistical method choice (Balcaen & Ooeghe, 2006).

Certain shift from statistical modeling of firm failure can be found in papers that are developing risk index scores, which are very frequently used in commercial banks practice. Tamari (1966) was the first academic author who designed index based on six financial ratios and with total score of 100 points. Empirical assessment of developed risk index model has confirmed that

only 3% of firms with index value higher than 76 points went into bankruptcy. Contrary to that, 52% of firms with index value lower than 21 points went into bankruptcy. Very similar approach of firm failure modeling can be found in paper of Moses & Liao (1987), who developed risk index model with three financial ratios (leverage, liquidity and turnover). Empirical testing of the risk index model revealed prediction accuracy of 85% in the segment of failed firms. Pervan (2015) compared prediction accuracy of risk index model with logistic regression and neural networks. He concluded that risk index model performed pretty good in the segment of healthy firms, since it had classification accuracy of 86.4%. However, risk index model had shown its weakness in the segment of failed firms where it was outperformed by more sophisticated techniques. Namely, for failed firms' risk index model classification accuracy amounted only 63.5%, which was much lower in comparison with logistic regression model (78.9%) and artificial neural network (84.4%).

Majority of failure studies put focus on accounting information and financial ratios and its' ability to predict firm failure. According to the accounting framework of IFRS and other standard setters, accounting information (among other) should be useful for investing and crediting decisions. Empirical findings in generally confirmed that accounting information and financial ratios can be effectively used for failure prediction. However, it is important to point that Altman (1968) found that older financial data resulted with lower prediction accuracy. An important new element in recent failure studies is inclusion of non-financial, qualitative variables in modelling. Grunert et al. (2005) used data from German commercial banks and used six financial ratios and two non-financial variables in calculation of credit score. Authors developed three separated failure models. The first one was based only on financial ratios and had predicting accuracy of 88.75%. The second model used only non-financial variables and resulted with predicting accuracy of 89.00%. Finally, the third "combined model" included financial and non-financial variables had the highest accuracy in predicting of default (91.69%).

Similar findings on application of non-financial variables can be found in Altman et al. (2010). Set of non-financial variables that authors used in modelling included: legal actions by creditors, filling history, comprehensive audit report and some firm specific characteristics. Empirical findings revealed that "combined" model had up to 13.0% better predicting accuracy in comparison with the "classical" financial variables model. Research for Croatian firms (Pervan & Kuvek, 2013) also revealed that inclusion of non-financial variables improved accuracy of failure prediction. Empirical findings from previously described studies confirmed that practical usage of qualitative variables in commercial banks can be explained by additional informational value of such variables in the context of firm failure prediction.

Many early and recent studies from different countries put their focus on listed firms. For example, Beaver (1967), Altman (1968) and Ohlson (1980) conducted analysis on a sample of large U.S. listed firms, Taffler (1982) explored UK listed firms, Vuran (2009) analyzed Turkish listed firms, Ong et al. (2011) performed analysis on a sample of Malaysian listed firms, Sinarti (2015) examined Indonesian listed firms, etc. During the time, some researchers shifted their focus from large firms to SME. The first paper which dealt with SMEs sample was that of Edminister (1972). He followed Altman's methodology and used MDA in order to discover differences in financial profile of loss making and non-loss making SMEs. Empirical analysis has resulted with MDA model with seven financial ratios and classification accuracy of 93%.

Altman & Sabato (2007) used panel data of U.S. SMEs in 1994-2002 period. With application of logistic regression, they estimated failure model with five financial variables, and compared it with Altman's Z". It is important to mention that Altman's Z" was designed as a general usage model i.e. for all sized firms. Comparison of developed SME model and Z" model showed that SME model significantly outperformed Z" model (by 30%). Kubičkova (2015) compared prediction accuracy of four earlier developed failure models (Ohlson's, Altman's Z', Taffler's

model and IN05 model). Empirical comparisons of mentioned models was conducted on the sample of 1,996 manufacturing SMEs from the Czech Republic, while results show that Ohslon's and Taffler's models classified more than 88% of sampled SMEs as healthy. However, Z' and IN05 models resulted with approximately 43% of SMEs categorized as healthy. Z' classified 41% of firms in "grey zone" and 16% in "bankruptcy" zone. IN05 was even more conservative since it has classified 27% in "grey zone" and 30% in "bankruptcy" zone. Her findings indicated that application of different failure models on the same SMEs dataset resulted with significantly different firm status classifications.

Cultrera & Bredart (2016) in recent study conducted analysis for 3,576 bankrupted Belgian SMEs and developed model with five financial ratios and prediction accuracy of 82.97% in the segment of failed SMEs. Šlefendorfas (2016) used MDA on the sample of bankrupted SMEs from Lithuania in 2007-2013 period. The final model incorporated nine financial ratios and had total prediction accuracy of 89%. Besides mentioned studies, exists a number of studies for SMEs in different countries like Slovenia (Mramor & Valentincic, 2003), Portugal (Pindado & Rodrigues, 2004), Russia (Lugovskaya, 2009), etc.

Review of firm failure literature has shown that many papers deal with the issue of firm failure; however recently, researchers put a special focus on SMEs failure modeling. SME sector in many countries represents important part of economy system and significantly contributes to employment and GDP. Anecdotal evidence from Croatian commercial banks also confirms the fact that banks use separate credit scoring models for SMEs. Building on such anecdotal evidence and previously described academic research, we have decided to develop and test prediction accuracy of size related firm failure models. Based on both, anecdotal evidence from banks and empirical findings from other academic studies we expect that size related failure models should have higher prediction accuracy in comparison with generic all firms model.

2 METHODOLOGY

In order to conduct the empirical research, firstly we had to define dataset with two groups of firms, failed firms and "healthy" firms. Aiming to assure highly coherent dataset we have decided to conduct analysis only for manufacturing Croatian firms. This kind of dataset should assure that all used financial ratios are equally important for all observations and that there is no any kind of industry bias. Related to this issue, Bhargava et al. (1998) pointed out that failure prediction model for retail firms in SAD & Canada was significantly different in comparison with manufacturing firms.

Data for failed Croatian manufacturing firms required for the research was retrieved from Amadeus database (August, 2017), while definition of failed firms included three firm statuses available in the database: bankruptcy, insolvency and rescue plan. Based on such defined query we have found data for 217 failed Croatian manufacturing firms. Furthermore, we have retrieved a sample of healthy firms, which in our research included data for 743 manufacturing firms. Our dataset were limited to only financial ratios, since qualitative variables were not available in Amadeus database. On the basis of standard approach in failure modeling we have decided to use financial indicators from the following five groups: liquidity, activity, financial structure, profitability and cash flow.

Empirical modeling was done with the usage of logistic regression, supported by of IBM® SPSS® 22 Statistics software. We have decided to use logistic regression since it is more robust statistical method in comparison with multiple discriminant analysis. Namely, logistic regression does not have requirement for data normality (Hair, et. al, 2010), which if often violated in financial ratios. Although logistic regression is robust statistical method it was necessary to check for potential problem of multicollinearity among independent variables –

financial ratios. Often, many financial ratios are calculated by using the same denominator (assets, sales, liabilities, etc.) and there is real possibility of severe multicollinearity problem.

The problem of multicollinearity in the estimated model causes inefficiently estimated parameters and high errors, which in turn results with many insignificant variables and high explanatory power of the estimated model. In order to control for potential multicollinearity problem we have used two approaches. First, we have calculated matrix of Pearson Correlation coefficients. Literature often suggests that correlation higher than 0.8 indicates existence of multicollinearity problem. Therefore, in the first variable filtering if two variables had correlation of 0.8 or higher one variable was omitted from the further analysis. After the first variable filtering an additional test for multicollinearity was conducted by estimation of Variance Inflation Factors (VIFs) in auxiliary regression models. Estimated auxiliary regression models have shown that all VIFs were lower than 5.0 indicating that the estimated models were free of multicollinearity. After described filtering in two stages the final set of independent variables that entered into firm failure modeling comprised set of six financial ratios as presented in table 1.

Tab. 1 Means of financial ratios – healthy vs. failed firms

Independent variable		Mean	Standard deviation	Standard error
ROE	0 – Healthy firms	12.27637	19.122506	0.701537
	1 – Failed firms	-3.27892	50.299897	3.207004
ROA	0 – Healthy firms	8.46262	14.003385	0.513734
	1 – Failed firms	1.08030	11.485372	0.732281
EBIT Margin	0 – Healthy firms	7.52929	12.631131	0.463391
	1 – Failed firms	-1.22391	26.514716	1.690517
Assets Turnover	0 – Healthy firms	2.08992	1.503030	0.055141
	1 – Failed firms	3.75806	10.840314	0.691153
Current Ratio	0 – Healthy firms	4.34956	5.599581	0.205429
	1 – Failed firms	2.05647	5.785739	0.368885
Solvency	0 – Healthy firms	66.23869	17.222783	0.631843
	1 – Failed firms	34.81499	23.908649	1.524360

Source: Author's calculations

Mean value for independent variables presented in table 1 were in line with theoretical expectations that failed firms have lower profitability (ROA & ROE), lower cash flow (EBIT Margin), lower activity (Assets Turnover), lower liquidity (Current Ratio) and lower solvency. Although differences among selected financial ratios were observable trough the calculated financial ratios means, still remained the question whether calculated differences were statistically significant. In order to check for this, we have conducted t-test (table 2).

Univariate analysis i.e. t-test (see table 2) indicated that selected six financial ratios have statistically significant mean differences (at 1% level) between failed and healthy firms. Therefore, conducted t-test confirmed the fact that healthy firms have better values of financial ratios in comparison with failed firms. Since all six financial ratios had statistically significant

differences between failed and healthy firms we have used these ratios as independent variables in estimating the failure models.

Tab. 2 T-test for means differences of financial ratios

Independent variable	Sig.	T-value	Mean difference	Standard error difference	Difference interval	
					Upper	Lower
ROE	0.0001	7.037	15.555290	2.210367	11.217731	19.892849
ROA	0.0010	7.477	7.382324	0.987346	5.444785	9.319862
EBIT Margin	0.0001	6.935	8.753199	1.262247	6.276203	11.230194
Assets Turnover	0.0001	-4.082	-1.668144	0.408687	-2.470140	-0.866149
Current Ratio	0.0001	5.521	2.293088	0.415341	1.478035	3.108142
Solvency	0.0001	22.364	31.423697	1.405125	28.666321	34.181074

Source: Author's calculations

3 RESULTS AND DISCUSSION

As discussed earlier the main objective of this paper was exploration of firm size effect (and firm groupings) on failure prediction accuracy. In order to analyze the effect of firm size we have decided to develop and compare failure model for all firms and separated firm size related models. The first estimated failure model was based on data for all firms (failed and healthy) regardless of the firm size. Parameters were estimated by usage of logistic regression and enter method, which forced all selected variables from the table 2 into the failure model. Model summary from the table 3 revealed that four out of six variables were statistically significant in explaining the firm failure, while ROE and ROA were not significant. Negative values of parameters with EBIT Margin, Assets Turnover and Solvency indicated that increase of these financial ratios reduces the odds ratio of firm failure. Contrary to that, positive parameter with Current Ratio indicated that increase of this variable increases the odds ratio of failure.

Tab. 3 Parameters – all firms model

Variable	Parameter	Standard error	Wald	df	Sig.	Exp(B)
ROE	0.005	0.007	0.510	1	0.4750	1.005
ROA	-0.042	0.022	3.685	1	0.0550	0.958
EBIT Margin	-0.020	0.009	4.504	1	0.0340	0.981
Assets Turnover	-0.034	0.017	4.043	1	0.0440	0.966
Current Ratio	0.078	0.020	15.767	1	0.0001	1.081
Solvency	-0.123	0.009	173.119	1	0.0001	0.885
Constant	4.616	0.423	118.831	1	0.0001	101.040

Source: Author's calculations

The first failure model resulted with Cox & Snell R^2 of 0.432 indicating that 43.2% of variation of dependent variable (failure) was explained with the usage of selected financial ratios. Nagelkerke R^2 amounted 65.8%, which can be characterized as moderately strong relationship between selected financial ratios and firm failure. Hosmer & Lemeshev test was insignificant indicating high quality of estimated failure model. Estimated model had classification accuracy of 90.8% for all firms, while classification accuracy was 96.2% for healthy firms and only 72.4% for failed firms.

Tab. 4 Classification accuracy – all firms model

			Classification			
			0 – Healthy firms	1 – Failed firms	Hit rate	Nagelkerke R^2
All firms model	**Status**	**0 – Healthy firms**	715	28	96.2%	0.658
		1 – Failed firms	60	157	72.4%	
	All firms				90.8%	

Source: Author's calculations

Tab. 5 Classification accuracy – size related models

			Classification			
			0 – Healthy firms	**1 – Failed firms**	**Hit rate**	**Nagelkerke R^2**
Group 1 – assets < 250.000 €	**Status**	**0 – Healthy firms**	259	6	97.7%	0.711
		1 – Failed firms	16	61	79.2%	
	All firms				93.6%	
Group 2 – 250.000 € < assets < 4.500.000 €	**Status**	**0 – Healthy firms**	306	14	95.6%	0.690
		1 – Failed firms	24	76	76.0%	
	All firms				91.0%	
Group 3 – 4.500.000 € < assets < 10.000.000 €	**Status**	**0 – Healthy firms**	79	1	98.8%	0.861
		1 – Failed firms	2	19	90.5%	
	All firms				97.0%	
Group 4 – assets > 10.000.000 €	**Status**	**0 – Healthy firms**	76	2	97.4%	0.898
		1 – Failed firms	2	17	89.5%	
	All firms				95.9%	

Source: Author's calculations

Besides the initial failure model, which incorporated data for all firms, we have estimated additional failure models by dividing initial sample into subsamples according to the firm assets size. The first division (on two subsamples) was done by the cut-off value of 4.5 mil. € of firm's assets, but estimated models have not resulted with significant increase of prediction accuracy. After we have tried with various ways of firms grouping, we have found out that the division of total sample into four subsamples (with respect to firms' assets) has resulted with significant increase in classification accuracy. Classification results from the table 5 provided evidence of significant increase of prediction accuracy especially in the segment of failed firms. For example, prediction accuracy for Group 1 was higher for 6.8 percentage points in comparison with all firms model. Similar increase was observable for other groups (Group 2 - increase for 3.6 p.p.; Group 3 - increase for 18.1 p.p. and Group 4 - increase for 17.1 p.p.). In addition, Nagelkerke R^2 statistics was higher for size related models that for all firms model.

CONCLUSION

Recent experience during the global financial/economic crisis has shown that firms, regardless the industry sector or size, can have severe financial problems and consequently can end up in insolvency or bankruptcy procedures. Many stakeholders have their financial interests in the firm and therefore they should actively manage the risk of firm failure. Modern global financial accounting frameworks (like IFRS) are designed to provide financial information, which should be useful for evaluation of firms' financial position and performance, measured by both accruals and cash flows. Therefore, accounting information and calculated financial ratios should be useful set of information for firm failure prediction.

Academic research generally confirmed that financial ratios are useful source of information for failure prediction, however business practice of banks showed separated lending procedures for large firms and SMEs. In order to deeply explore the issue of failure modeling regarding the firm size, in this paper we have developed size related firm failure models. Empirical research was conducted on the sample of manufacturing Croatian firms with usage of logistic regression. After variable selection procedure it was revealed that four variables – financial ratios were statistically significant in explaining the firm failure. Parameters with three variables (EBIT Margin, Assets Turnover and Solvency) were estimated as negative, indicating that increase of these financial ratios reduces the odds ratio of firm failure. Current Ratio had positive parameter value indicating that increase of this variable increases the odds ratio of failure.

After the initial model for total sample we have performed division of total sample of firms into four subsamples and developed four separated models. Such division and additional modeling resulted with significant increase in additional models classification accuracy. Findings confirmed that separated size related failure models are more accurate than failure model based on total sample. Namely, firm failure model for total sample had prediction accuracy of 90.8% for all firms and only 72.4% for the segment of failed firms. When the total sample of firms was divided into four subsamples according to the firm assets size, total prediction accuracy was improved in the range from 0.2 percentage points up to 6.2 percentage points. However, in size related models, the segment of failed firms' prediction accuracy was improved even higher, from 3.6 percentage points up to 18.1 percentage points.

Such empirical findings confirmed some general earlier findings of Altman & Sabato (2007) that failure modeling should be different for SMEs in comparison with large firms. This paper adds to the literature by showing that further division of firms sample is useful, since four assets size groups/models resulted with higher classification accuracy in comparison with only two groups. Since this research was limited to the sample of manufacturing firms findings are relevant for that industry, and results should be interpreted with caution regarding the other

industries. Further improvements in firm failure modeling might be achieved by conducting additional analysis for other industries, and by inclusion of qualitative variables in the size related failure models.

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State Aid for Employment and Its Impact on the Economic Growth of the EU Member States – the Case of Central and Eastern Europe

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Abstract: This paper discusses guidelines for implementation of art. 107-109 of the Treaty on the Functioning of the European Union, from the point of view of State aid for employment. Statistical data for quantitative analysis are gathered on the basis of reports published by the European Commission on State aid granted by Member States. This has to lead to verification of two research theses. According to the first thesis, the Central and Eastern Europe countries approved and granted State aid for employment by far smaller amounts than the EU-15 Member States. Whereas the second thesis highlights that the amount of State aid provided by EU Member States should be positively correlated with the size of the economic growth of these countries. This analysis is carried out based on the linear regression model. The response variable (dependent variable Y) is the size of GDP in real terms, and explanatory variable (independent variable X) is the expenditure on State aid for employment.

INTRODUCTION

The primary goal of the economic and social policy of the European Union and its Member States is to promote employment and social cohesion. The European Union has recognized the support of a high-employment economy as one of the priorities of the 'Europe 2020' Strategy and set the ambitious goal of reaching by 2020 a level of 75% of employment for people belonging to the age group of 20-64 years (European Commission, 2010a). As part of the flagship initiative "An agenda for new skills and employment" (European Commission, 2010b), the main priorities were identified to address this challenge; they included a better-functioning labour markets, a better qualified workforce that should be able to contribute to technological evolution and adapt to it through new work organization systems, better jobs and better working conditions, and more effective policies to stimulate job creation and demand for labour.

Due to the imperfect functioning of labour markets in certain cases, State aid may be an appropriate instrument for creating new jobs and preserving existing ones. Legal regulation of the issue of State aid is an element of the competition mechanism protection, which was recognized in the Treaty on the Functioning of the European Union (TFEU, 2012) as one of the basic tools for the implementation of the tasks assigned to it. The purpose of this article is to analyze the conditions of admissibility of State aid for employment from the perspective of its impact on the economic growth of EU Member States. The analysis of State aid should lead to the verification of two research theses. According to the first thesis, the Central and Eastern Europe countries approved and granted State aid for employment by far smaller

amounts than the EU-15 Member States. Whereas the second thesis highlights that the amount of State aid provided by EU Member States should be positively correlated with the size of the economic growth of these countries.

1 LITERATURE REVIEW

State aid for employment may be considered compatible with the internal market on the basis of art. 107 par. 3 point c) TFEU, whereas it should be remembered that this provision allows State aid for the development of economic activities and economic development of regions, and not the aid for the development of individual enterprises, which is regulated by art. 107 par. 3 point b) TFEU (Podsiadło, 2016a, Podsiadło, 2016b). Therefore, in this case, the aid provided to a given enterprise to create a new one or to preserve an existing workplace must aim to develop a specific sector or region (Court of First Instance, 2004). Consequently, pursuant to art. 107 par. 3 point c) TFEU State aid is allowed in view of the general situation in a particular sector or region and not from the perspective of the position of enterprises operating in that sector or region (Court, 1982). Aid which, in principle, improves the competitiveness of its recipients operating in a sector characterized by intense competition and as a result serves to strengthen the position of beneficiaries in relation to competitors who do not benefit from aid, does not meet the conditions of art. 107 par. 3 point c) TFEU, since this aid is not generally used for the development of a given economic activity or region (Court, 2004).

Horizontal aid, which is aimed at solving problems occurring in various industries or regions, is more preferred by the European Commission (Botta, & Schwellnus, 2015, Micheau, 2015, Bacon, 2017). For this reason, the vast majority of horizontal aid measures may be granted on simplified rules, according to which certain groups of aid comply with the rules of the single European market and are exempted from the obligation to notify the planned aid to the Commission for approval (Sinnaeve, 2007, Hofmann, & Micheau, 2016). These rules are defined as group exemptions. In the analysed period 2000-2016, three EU regulations on block exemptions were in force within State aid.

In the BER regulation in force until 2008 on State aid for employment (European Commission, 2002) any aid not exceeding 15 million euro for a period of three years was exempted from notification requirement. In the cases where new jobs were created in areas or sectors that at the time the aid was granted were not eligible for regional aid, the aid intensity could not exceed 15% of costs for small enterprises and 7.5% for medium-sized enterprises. However, when employment was created in areas and sectors eligible for regional aid, the aid intensity could not exceed the corresponding ceiling for regional investment aid set out in the system approved by the European Commission for each Member State and applicable at the time the aid was granted. The Commission Regulation on employment aid also excluded from the notification requirement the aid intended to create appropriate incentives for enterprises to recruit certain categories of employees who have particular difficulties finding a job due to their being perceived by potential employers as less efficient (e.g. no previously acquired professional experience or permanent impairment). Systems providing aid in this area were exempted from the notification requirement under the condition that the amount of support granted did not exceed the size necessary to compensate for lower productivity of certain employees, additional costs of their employment or costs of creating and maintaining sheltered employment. This condition was intended to prevent enterprises using such aid from selling certain products or services below competitive prices on markets that are also supplied by other enterprises (Sinnaeve, 2001). However, with regard to aid granted for the maintenance of existing jobs, the Commission Regulation stipulates that it is the aid in essence very similar to operating aid. Therefore, the consent for this type of aid was to be granted only in exceptional circumstances and for a strictly limited time. Thus, the granting of aid in this

respect was, however, strictly conditional upon the consent of the European Commission and was not subject to exemption from the notification requirement.

A further exclusion of State aid for employment from the notification rules was included in the General Block Exemption Regulation (GBER) (European Commission, 2008). The GBER Regulation provides a framework that allows Member States to provide aid targeted at creating jobs, increasing competitiveness and improving the environment without having to contact the European Commission. The GBER Regulation allowed Member States to grant aid to facilitate workers with disabilities or disadvantaged workers for another reason to find employment on the open labour market without first having to report this aid to the Commission. These provisions set a block exemption for three types of employment aid.

The aid in the form of wage subsidies for the recruitment of employees in a particularly difficult situation was excluded. The intensity of this aid did not exceed 50% of the eligible costs, for which the costs of wages were recognized in the period not longer than 12 months from the day of employment, and exceptionally – not longer than 24 months from the day of recruitment. The gross grant equivalent in the case of aid for the recruitment of employees in a particularly disadvantaged situation did not exceed 5 million euro for one enterprise per year.

The aid in the form of wage subsidies for the employment of disabled workers was also subject to exclusion. At that time, the aid intensity did not exceed 75% of the eligible costs, for which the costs of remuneration for the entire period of employment of a disabled employee were considered, and the gross grant equivalent did not exceed 10 million euro for one enterprise per year. Both in the case of aid for the employment of disadvantaged workers and aid for the employment of disabled workers, the employee was entitled to continuous employment for a minimum period of employment in accordance with national rules or collective agreements governing the conclusion of employment contracts, except in the event of lawful dismissal for violation of employee duties.

The last category of employment aid distinguished in the GBER regulation was aid to compensate for additional costs related to employment of disabled workers. The intensity of this aid could not exceed 100% of eligible costs, which were expenses other than wage costs that the enterprise would have to incur in the case of employing non-disabled workers for the entire period of employment of a disabled employee. The gross grant equivalent in this case did not exceed 5 million euro for one enterprise per year.

As from 1 July 2014, a new regulation came into force – with a perspective until the end of 2020 - it excluded certain horizontal aid categories from the notification procedure to the Commission (European Commission, 2014). The regulation underlined that supporting the recruitment and employment of disadvantaged and disabled workers are extremely important goals of the economic and social policy of the Union and its Member States (Nicolaides, & Schoenmaekers, 2015). Therefore, public authorities may take measures to encourage enterprises to increase the employment levels of these categories of workers, especially young people. Taking into account that employment costs form part of the normal operating costs of each enterprise, the aid for the employment of disadvantaged or disabled workers should have a positive impact on the employment levels of the mentioned categories of employees and should not allow enterprises to reduce the costs that would have to be incurred in the absence of aid. Such aid should therefore be excluded from the notification requirement if it is likely to contribute to the entry or re-entry of these categories of employees into the labour market and to remain on it. Thus, three categories of employment aid introduced by the GBER regulation were maintained.

2 METHODOLOGY

From the perspective taken in this paper, adopted measure of economic growth is the size of gross domestic product in real terms (GDP), which is a synthetic measure of the economic situation of the State. As a test period the years 2000-2016 were adopted, i.e. the period of implementation of the two most important development strategies of the European Union - the Lisbon strategy and the "Europe 2020" strategy; taking the year 2016 as the closing period of observation was due to the available annual data on State aid, which is published by Eurostat (Eurostat, 2018a, Eurostat, 2018b). The thesis was accepted that the amount of State aid provided by EU Member States should be positively correlated with the size of the economic growth of these countries. The response variable (dependent variable Y) is the size of GDP in real terms, and the explanatory variable (independent variable X) is the expenditure on State aid for employment. The positive correlation of GDP with the size of State aid for employment would mean that with increasing State aid provided in this form there is positive economic growth of the Member States and their competitiveness increases.

Statistical analysis will be carried out based on two source tables.

The first table shows the calculations for the linear regression model concerning respectively the slope parameter (directional factor β). t Stat is a test of linear relationship occurrence between expenditure on State aid for employment and the size of the GDP. This statistical test allows to verify the authenticity of the so-called null hypothesis that the parameter of the regression function I type β is equal to zero, with the alternative hypothesis that it is not equal to zero (H_0: β = 0; H_A: β ≠ 0). The acceptance of the null hypothesis that the parameter β = 0 would mean that the increase in the value of expenditure on State aid by € 1 will not cause any changes in the size of the GDP which means the lack of any relationship between expenditure on State aid and the size of the GDP. In other words, the acceptance of the null hypothesis means the lack of the influence of the State aid for employment provided by the Member States of the European Union on the size of their GDP. From the perspective taken in this paper it will be essential to reject the null hypothesis in favor of the alternative hypothesis which states that between the studied phenomena - expenditure on State aid and the size of the GDP - there is a significant statistical relationship. From the tables of critical values of t-Student it is seen that $\pm t_{\frac{\alpha}{2}} = \pm 2.1315$ for α = 0.05 and n - 2 = 15 degrees of freedom. The null hypothesis can be rejected in favor of the alternative hypothesis only when $t_b < t_{\frac{\alpha}{2}}$ or $t_b > t_{\frac{\alpha}{2}}$, that is when $-t_b < -2.1315$ or $+t_b > +2.1315$.

The second table contains regression statistics. Among the regression statistics are: the correlation coefficient, determination coefficient, standard error and the parameters of F test, that is the value of F-test and the probability of making type I error, when the hypothesis is verified concerning the lack of impact of expenditure on State aid on the size of the GDP (irrelevance of State aid expenditure in the regression model). F-test, similarly as described above t-test, is used for testing the significance of linear regression coefficient β evaluation. The checking of this test is a statistic F having F-Snedecor distribution of k_1 and k_2 freedom degrees. When rejecting the null hypothesis F > F_α of no relation between expenditure on State aid and the size of the GDP and accepting the alternative hypothesis of the existence of a statistically significant relationship between the variables. From the table of critical values of the F-Snedecor for $k_1 = 1$ (1 independent variable) and k_2 = n − 2 = 15 degrees of freedom and α = 0.05 we read $F_{0,05} = 4.543$. Thus, the alternative hypothesis can be adopted only when F > 4.543.

3 RESULTS AND DISCUSSION

Member States granted aid earmarked for employment of about € 43.7 billion in 2000-2016: EU-15 - € 31.6 billion, EU-12 - only € 12.1 billion (Eurostat, 2018a). The largest amounts of employment aid have been granted by Denmark (€ 15.7 billion), Italy (€ 4.2 billion), France (€ 3.9 billion), Belgium (€ 1.7 billion) and United Kingdom (€ 1.4 billion). In the Central and Eastern Europe area the countries that provided the greatest employment aid are Poland, Hungary and Slovenia - respectively € 8.9 billion, € 2.1 billion and € 0.7 billion. Does State aid for employment provided by Member States to enterprises have an adverse effect on the condition of their economic growth, leading to a decrease or increase in the size of the GDP of these countries? Or does such aid not have any impact on the GDP? Answers to these questions will be provided by the regression analysis.

3.1 Economic growth

The most important statistical test in the simple regression analysis is a test of whether the regression coefficient equals zero. If in a specific case it could be concluded that the directional coefficient of the real regression line in the population equals zero, it will mean that between expenditure on State aid and the size of GDP, there is no linear relation, or expenditure on State aid and the size of GDP are not linearly dependent. Therefore, there should be a test of the linear relation occurrence between expenditure on State aid for employment in the Member States and the size of their GDP. Statistics on this test are shown in table 1.

On the basis of the calculations set out in table 1, it should be distinguished that the statistical basis for the recognition of the occurrence of a linear relation between expenditure on State aid and the size of GDP exist in the case of 10 Member States, i.e. Austria, Denmark, Finland, Germany, Ireland, Lithuania, Malta, Poland, Spain and Sweden. This relation does not occur at the level of the European Union (EU-28).

In the case of Denmark, Finland, Lithuania, Malta and Poland, the regression coefficient takes a positive value. Consequently, the increase in expenditure on State aid by € 1 is accompanied by an increase in GDP by average: € 73.39, € 1156.62, € 1372.11, € 361.39 and € 313.35. Margin of error is: € 12.56, € 240.25, € 146.06, € 164.24 and € 54.10. Bearing in mind however the confidence interval for the regression coefficient, it can be with a probability of 95% said that the increase of granted State aid for employment by € 1 will cause an increase of GDP of: Denmark from € 46.62 to € 100.16, Finland from € 644.54 to € 1668.93, Lithuania from € 1060.80 to € 1683.43, Malta from € 11.32 to € 711.46 and Poland from € 198.04 to € 428.66. It should also be noted that the probability of type I error (p-value), involving the rejection of a true null hypothesis that, in the case of these countries providing State aid for employment do not significantly affect the size of the GDP in real terms, is below the accepted level of significance, i.e. 0.05. The consequence is that the result of the study in relation to these countries, may be considered important, and thus the null hypothesis can be rejected in favour of the alternative hypothesis.

For the other five countries there is a negative relation between the variables analyzed. For Austria, Germany, Ireland, Spain and Sweden regression coefficients are negative, which means that expenditure on State aid for employment have a negative impact on GDP in these countries. The increase in expenditure on State aid by € 1 comes together with a fall in GDP in real terms - respectively – with an average of € 2954.82, € 7824.58, € 1262.78, € 3841.53 and € 863.08. Estimation errors are respectively € 621.76, € 1460.12, € 381.67, € 982.89 and € 335.56. Taking into account however the confidence interval for the regression coefficient it can be said with a probability of 95% that the increase of granted employment aid for undertakings with € 1 will cause fall in GDP by the value of the interval (€ 1629.57; € 4280.06)

for Austria, (€ 4712.41; € 10936.70) for Germany, (€ 449.27, € 2076.29) for Ireland, (€ 1746.56; € 5936.50) for Spain and (€ 147.85; € 1578.31) for Sweden.

Tab. 1 State aid for employment and GDP – the analysis of variance: the line "variable X"

EU Member State	Regression coefficient *b*	Standard error *Sb*	*t* Stat *tb*	*p-value*	Lower 95%	Upper 95%
Austria	**-2954.82**	**621.7562**	**-4.75237**	**0.000257**	**-4280.06**	**-1629.57**
Belgium	423.271	268.625	1.575695	0.135948	-149.29	995.8317
Bulgaria	-592.214	493.0122	-1.20122	0.248292	-1643.04	458.6161
Cyprus	3798.206	1986.473	1.912035	0.075165	-435.861	8032.273
Czech Republic	-1368.77	923.1706	-1.48268	0.158864	-3336.46	598.9262
Denmark	**73.39437**	**12.5597**	**5.84364**	**3.23E-05**	**46.624**	**100.1647**
Estonia	2270.069	1320.266	1.719403	0.106102	-544.011	5084.15
Finland	**1156.618**	**240.2471**	**4.814287**	**0.000227**	**644.5439**	**1668.693**
France	-92.5518	138.2244	-0.66958	0.513303	-387.17	202.0665
Germany	**-7824.58**	**1460.119**	**-5.35886**	**7.96E-05**	**-10936.7**	**-4712.41**
Greece	63.37428	531.6944	0.119193	0.906704	-1069.91	1196.654
Hungary	61.28919	29.05486	2.10943	0.052122	-0.63977	123.2182
Ireland	**-1262.78**	**381.6706**	**-3.30856**	**0.004774**	**-2076.29**	**-449.269**
Italy	-334.639	282.239	-1.18566	0.254201	-936.217	266.9393
Latvia	3571.902	1946.962	1.834603	0.086475	-577.95	7721.754
Lithuania	**1372.114**	**146.0563**	**9.394423**	**1.13E-07**	**1060.803**	**1683.426**
Malta	**361.3889**	**164.2388**	**2.200387**	**0.043863**	**11.32226**	**711.4556**
Netherlands	284.2834	1062.627	0.267529	0.792706	-1980.65	2549.22
Poland	**313.3508**	**54.10122**	**5.791936**	**3.55E-05**	**198.0368**	**428.6648**
Portugal	-202.938	136.1055	-1.49103	0.156681	-493.04	87.16409
Romania	-9458.33	5717.042	-1.65441	0.118813	-21643.9	2727.262
Slovakia	4032.017	5276.814	0.764101	0.456659	-7215.25	15279.28
Slovenia	53.8054	38.64735	1.392214	0.184155	-28.5695	136.1803
Spain	**-3841.53**	**982.8859**	**-3.90842**	**0.001397**	**-5936.5**	**-1746.56**
Sweden	**-863.077**	**335.5602**	**-2.57205**	**0.021248**	**-1578.31**	**-147.847**
United Kingdom	-446.297	324.9978	-1.37323	0.189861	-1139.01	246.4195
EU 28	1349.131	661.9256	2.038191	0.059565	-61.7301	2759.992

Source: The author's own calculations.

Occurrence of the linear relationship between expenditure on employment aid in the above-mentioned Member States and the size of their GDP is also confirmed by the F test parameters, i.e. the value of F-test and the probability of type I error when the hypothesis is verified on the lack of impact of expenditure on State aid to the size of GDP (irrelevance of State aid expenditure in the regression model). For all the indicated countries F-test values are higher than the applied critical value of 4.543, and the probability of type I error is less than 0.05. The calculations in this regard are presented in table 2.

Tab. 2 State aid for employment and GDP - regression statistics and F-test

EU Member State	Regression statistics			Test F	
	Correlation indicator	Determination coefficient	Standard error	F	Significance *F*
Austria	**0.775181**	**0.600905**	**29375.52**	**22.58502**	**0.000257**
Belgium	0.376848	0.142015	50863.44	2.482813	0.135948
Bulgaria	0.296232	0.087753	11336.25	1.442921	0.248292
Cyprus	0.442678	0.195964	2787.731	3.655879	0.075165
Czech Republic	0.357523	0.127823	35365.21	2.198336	0.158864
Denmark	**0.833547**	**0.6948**	**18154.63**	**34.14813**	**3.23E-05**
Estonia	0.405759	0.164641	4636.106	2.956346	0.106102
Finland	**0.779164**	**0.607097**	**16223.28**	**23.17736**	**0.000227**
France	0.170357	0.029021	241400.4	0.448333	0.513303
Germany	**0.810486**	**0.656887**	**191899.9**	**28.71743**	**7.96E-05**
Greece	0.030761	0.000946	30672.74	0.014207	0.906704
Hungary	0.478309	0.22878	16161.84	4.449695	0.052122
Ireland	**0.64953**	**0.421889**	**33379.55**	**10.94657**	**0.004774**
Italy	0.292726	0.085688	133887.4	1.405785	0.254201
Latvia	0.428092	0.183263	5560.033	3.365767	0.086475
Lithuania	**0.924515**	**0.854729**	**3475.652**	**88.25518**	**1.13E-07**
Malta	**0.49398**	**0.244017**	**1513.683**	**4.841704**	**0.043863**
Netherlands	0.068911	0.004749	80388.57	0.071572	0.792706
Poland	**0.831275**	**0.691018**	**51147.34**	**33.54652**	**3.55E-05**
Portugal	0.359278	0.129081	16561.12	2.223182	0.156681
Romania	0.392828	0.154313	42046.73	2.737069	0.118813
Slovakia	0.193559	0.037465	21513.08	0.58385	0.456659
Slovenia	0.338276	0.114431	5770.106	1.93826	0.184155
Spain	**0.71032**	**0.504554**	**112570.3**	**15.27575**	**0.001397**
Sweden	**0.553219**	**0.306051**	**56730.8**	**6.615432**	**0.021248**
United Kingdom	0.334182	0.111678	235402.7	1.885762	0.189861
EU 28	0.465707	0.216883	1470712	4.154223	0.059565

Source: The author's own calculations.

For the Lithuania the correlation indicator is very strong: 0.924515 and the determination coefficient is 0.854729. Therefore, variations in GDP in this country were explained in 85.47% with variations in expenditure on State aid for employment, while the remaining 14.53% result from the impact of other factors. If the coefficient of determination takes the values less than 0.5, the regression explains only less than 50% of the variation in GDP and predictions based on such a regression model may be unsuccessful because the regression model explains then very little. This means that the predictions can be created basing on the Lithuanian model, because the regression model is characterised by a good fit and is little burdened with the estimation error, which provides grounds for precise forecasting.

In the case of Denmark, Finland and Poland, one can speak of a strong correlation of employment aid granted to companies with the amount of their GDP in a positive sense: 0.833547, 0.779164 and 0.831275. These models have a satisfactory fit to the empirical data, as its calculated coefficient of determination is 0.6948, 0.607097 and 0.691018. Therefore,

variations in GDP in these countries were explained in 69.48%, 60.71% and 69.10% with variations in expenditure on State aid for employment, while the remaining 30.52%, 39.29% and 30.90% result from the impact of other factors.

In the case of Malta, the value of the correlation coefficient is 0.49398. This country is characterized by weak positive relationship occurring between the amount of provided State aid and the level of its GDP. Moreover, there can be no satisfactory adjustment of the regression line to the empirical data. The determination coefficient equals 0.244017.

Germany and Austria are characterized by occurring between the amount of provided employment aid to undertakings and the level of GDP, strong negative correlation - respectively 0.775181 and 0.810486. In the case of Germany, for which the determination coefficient has the highest value, the variability of GDP in the real terms was explained in 65.69% by variability of expenditure on State aid for employment. The remaining 34.31% is the effect of random and non-random factors (other non-aid variables, imprecise fit of a straight line to the empirical data etc.). For Ireland, Spain and Sweden the determination coefficient assumes lower values and amounts to 0.421889, 0.504554 and 0.306051. This means that there can be no satisfactory adjustment of the regression line to the empirical data.

3.2 Discussion

Fiscal policy - both of the EU-15 Countries and also of Central and Eastern Europe Countries - and its consequences, particularly implemented within its frames tax policy (specifying the implementation of public revenue) and State aid policy (depending on the instruments of implementation - affecting both the expenditure and the revenue side of public finance sector), are closely linked with the sphere of real economy. The issue here is primarily about the relation between size and changes in the Gross Domestic Product, and changes in public funds. Changes in GDP affect changes in the revenue of the state budget and revenue of other public funds, that is, the revenue of the entire sector. These correlations result from the fact that taxes and other public levies are part of GDP in revenue terms. Revenue generated in the process of creating GDP affect thus its consumption, but this correlation is non-linear, because part of the revenue is spent on monetary savings of the economic system entities, mainly household savings. The issue if these savings are going to be transformed into demand for goods, especially goods for investment purpose, is dependent on many factors, and in particular on the credit policy of banks or other entities of the financial system, whose function is the transformation of savings into capital provided to enterprises.

In the process of creation and distribution of GDP a significant function is performed by the State, which by taking in the form of taxes and other public levies some part of the revenue generated by households and enterprises, changes the structure of aggregate demand in the economy. The taxes imposed on enterprises limit their investment opportunities, but revenues from taxes and other levies are directed by the State to both households (social assistance, unemployment benefits, scholarships etc.) and to enterprises (State aid in the form of grants), forming the basis of demand for consumer goods and investment goods.

State expenditure policy, which includes the policy of State aid to enterprises, can thus give an impulse to GDP growth and increase the indicator GDP *per capita* (growth of competitiveness of the national economy) even if the State spends more money than the accumulated revenue in the budget. This situation means the appearance of budget deficits, which accumulation in the coming years leads to the formation of public finance sector debt (Amtenbrink, & de Haan, 2003). The source of financing deficits, and as a result public debt, are domestic monetary savings, relatively foreign. This process is accomplished by a loan taken out by the state in the form of debt securities, which buyers are banks, investment funds,

insurance companies, etc., that is, institutions that accumulate monetary savings of the economic system entities, mainly households. Fiscal policy therefore plays an important role in economic growth, especially in a situation where enterprises, commercial banks, for various reasons, e.g. increased risk of capital loss, are not willing to support real economic processes (investment processes) and economic growth (Tunali, & Fidrmuc, 2015). The savings accumulated in commercial banks and other financial institutions are thus borrowed by the state, which creates the demand for consumer goods and investment goods, consequently stimulating the processes of economic growth.

The above outlined description of the relation between the real sphere and the fiscal sphere is necessarily greatly simplified. It provides a subject of theoretical investigation and empirical analysis, econometric models, which aim to quantify these relations, combine them in cause and effect structure. It is significant and essential to ascertain these relations with the analysis of such policy aid - concerning regional goals, sectoral and broadly understood horizontal goals - conducted within the framework of fiscal policy by the given State or group of Member States of the EU. This analysis regards capturing the relation between changes in fiscal policy (State aid policy) and changes in production and other real terms, and then in fiscal amounts - public finance sector debt.

Presented in the article regression analysis of State aid with horizontal objective in the field of employment and GDP contributes to comparative studies among countries conducting fiscal policy in the conditions of the single monetary policy and the countries outside the euro area.

CONCLUSION

In relation to the proposed research theses in the paper it also should be concluded that:

1. The first thesis, according to which the Central and Eastern Europe countries approved and granted State aid for employment by far smaller amounts than the EU-15 Member States, were positively verified.

2. The second thesis, according to which, both in relation to the European Union and its individual Member States, the amount of expenditure on State aid for employment is positively correlated with the size of the economic growth of these countries, should be rejected. It was incorrect to assume that this correlation occurs for all Member States, because of the amount spent on State aid for employment to undertakings are very different at the level of individual Member States. Different is also the proportion of aid actually granted in the aid approved by the European Commission.

Summing up the considerations on the impact of State aid for employment, on the economic growth of EU Member States, it is worth adding that State aid in the form of wage subsidies is not the only policy instrument available to Member States to support the employment of disadvantaged and disabled employees. Member States can also take advantage of publicly available measures, such as reducing the taxation of labour costs and social costs, promoting investment in education and training, undertaking advisory activities, supporting and training unemployed people, and also introducing changes to labour law provisions (Richelle, Schön, & Traversa, 2016). In the case where a Member State has considered the above solutions and where it was established that it is preferable to use a selective instrument in the form of state aid for a specific enterprise, the measures are considered to be an appropriate fiscal policy instrument.

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Index Methods for Analysis of Commodity Groups of Foreign Trade

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Abstract: In this paper the problems of aggregation of goods in groups and methods of their solutions using the indices of foreign trade for the «price–quantity–value» parameters analysis are considered. The calculation formulas are oriented to computer realization. For approbation of methods the group of foodstuff and agricultural raw materials and the task of the analysis of their export from the Czech Republic to the Russian Federation are used. The information base of the analysis is the Russian statistics on the import of Czech goods to the Russian Federation. Based on the results of the calculations, an analysis of aggregate indices of foreign trade of goods of the selected group with an additional sub–group of the largest growth which have provided growth of sales is carried out. There was conducted the analysis of the position of Czech goods and goods of other non–CIS countries on the Russian market. It was revealed that unlike the non–CIS countries the Czech Republic was able to ensure the growth of sales of agricultural products on the basis of practically stable prices and the growth of natural supplies.

Key words: Index Numbers, Laspeyres index, Agriculture in International Trade, export – import of goods

JEL Classification codes: C43, F14, Q17

INTRODUCTION

Foreign trade indices are one of the tools for analyzing foreign trade of goods, which allows us to examine the dynamics of commodity flows, taking into account changes in average prices and physical volumes of export and import. As a rule, foreign trade indices are included in the standard data set of national statistical systems and are calculated using the well-known formulas of Laspeyres and Paasche (see, e.g., Allen, 1975; Koves, 1983). In general, at the macroeconomic level foreign trade indices describe the changes in prices and the number of deliveries of one universal commodity of the country and allow analyzing the conditions for the export and import of this commodity taking into account changes in its supply by price and quantity.

For the calculation of foreign trade indices, statistics forms a list of basic goods (the sample depth in it is not less than 95-99 percent), on the basis of which, using the known Laspeyres or Paasche formulas (see below (1) and (6)), the aggregate foreign trade index of the average prices and physical volume of exports and imports is calculated. All methods of calculating aggregated indices are well known and are described more than once in classic textbooks and statistical publications of international organizations (Allen, 1975; Koves, 1983; Aggregation, 2018).

It was noticed that with the help of statistically calculated aggregated foreign trade indices, additional tasks can be formulated, such as an analysis of the influence of individual goods and their groups on the positions of other goods of the country's foreign trade (for example, how much the prices and volumes of physical energy supplies affect the total import index of the country, including the index of other goods). Similar tasks, unlike aggregated methods, require the appropriate disaggregation of indices for their solution (Aggregation, 2018, Disaggregation, 2018), when based on the aggregated indices calculated by statistics, we begin to quantify the effect of the disaggregated indices of the selected goods and their groups on general indices of foreign trade.

It should be noted that disaggregation methods are based on equivalent transformations and expand the analytical capabilities of the index methods, without changing the original standards and prerequisites of the latter.

For the first time the general formulation of such a problem was considered by us (Pushkin, 2004), but a specific method for solving it was not described, although it was applied in practice (Pushkin, 2009; Yurik, 2005). In particular, for the foreign trade of Belarus in the publication (Yurik, 2005), using disaggregation methods it was proved that the group of goods produced by private businesses of Belarus without financial state support demonstrates better opportunities for adaptation to crisis phenomena (due to the optimal price reduction and volume changes and assortment of export supplies) than the group of goods produced by large state-owned enterprises with a full set of state benefits and financing.

In general, the solution of the tasks of selection commodity groups and goods is a natural extension of the classical marketing analysis and allows carrying out foreign trade research, for example, within the classification of commodity groups of the BCG matrix (BCG matrix, 2018). In this publication, a group of products of sustainable growth was identified and the dynamics of their prices and supplies was analyzed, as well as a group of other products with an assessment of the prospects for their sales in the Russian market.

The purpose of this research is to describe methods for calculating foreign trade indices for the allocation of goods and commodity groups. This implies: setting tasks for analyzing using indices, as well as describing algorithmic methods for their solutions; the calculation of indicators on the proposed algorithms on the example of specific statistical data; economic analysis of the results. The information basis for the analysis is the data of the customs statistics of the Russian Federation on the import of Czech goods to the Russian market, including foreign trade indices, calculated according to the Laspeyres formula (Allen, 1975). For the first time, the possibility of using Russian customs statistics for Czech foreign trade with the EEA countries and Russia was examined by S.Yurik (Yurik, 2017).

1 MATERIALS AND METHODS

Foreign trade indices are calculated by the statistics of countries using the well–known Laspeyres and Paasche formulas on the basis of data on exports and imports of goods. In Russia the Laspeyres formula is used to calculate foreign trade indices and the data source is the customs statistics (Customs statistics of the Russian Federation – database, 2018).

Denote q_0, q_1 – the quantity of goods in the reference and reporting years; p_0, p_1 – the price per unit of goods in the reference and reporting years, respectively. Foreign trade indices are aggregated and are usually calculated by the average price index I_p. The quantity index is then calculated by dividing the value index by the price index. Summation is made by the number of goods exported and imported by the country. The *Laspeyres price index* assumes the use of weights of the reference period and is calculated by the formula:

$$I^p_{lps} = \frac{\sum p_1 {}^* q_0}{\sum p_0 {}^* q_0} \ ,$$

(1)

$\sum p_1 {}^* q_0$ – the cost of products of the reference period at the prices of the reporting period;

$\sum p_0 {}^* q_0$ – the actual cost of products in the reference period.

The statistics of foreign trade of the Russian Federation represents foreign trade indices by the total results for the country, including for the CIS countries and the non–CIS countries, and also calculates foreign trade indices for the enlarged commodity sections of the HS.

2.1 Setting the task of identifying the most important (significant) goods and their groups in exports or imports using total foreign trade indices

To describe the calculation algorithm, we use the table–matrix form with the numbering of rows of the matrix from 0 to 3, the columns from A and then alphabetically. The cells of the matrix with known values are marked in blue, description of calculations on the text below.

Method A: the allocation of commodity from the total

Given: Foreign trade total indices and indices for the goods (Table 1). It is required to find: indices of the other goods.

We carry out additional obvious calculations of the values of the indices of the average prices p_1^0 and p_1^1 (columns E and F) for goods 1 according to the formula:

$$p_i^t = s_i^t / q_i^t \ ,$$

(2)

where $i = 1$ - ($i = 1, ..., n$ – the quantity of goods); p_i^t – the price of goods i in year t; s_i^t – the value of the commodity i in the year t.

Table 1   Initial data for calculations of variant A

		A	B	C	D	E	F	G	H	I
		t=0	t=1	t=0	t=1	t=0	t=1	Average price index (I^p_{Lps})	Volume index (I^p_{vlm})	Value index (I^p_{vl})
		Value, thousand $		Volume, unit		Price, $/unit				
0	TOTAL	S^0	S^1	-	-	-	-	$I^p_{Lps}{}^0$	$=(S^1/S^0)/I^p_{lps}$	$=S^1/S^0$
1	- goods 1	s_1^0	s_1^1	q_1^0	q_1^1	$p_i^t = s_i^t / q_i^t$		...	...	$= s_i^1 / s_i^0$
2	Other *	$=S^0 - s_1^0$	$=S^1 - s_1^1$							

Source: Authors

Also for further calculations, we fill in the two line items "Other" A2 and B2 of Table 1 – this is the cost of other goods in the reference and reporting years S^0_{oth} and S^1_{oth}:

$$S^0_{oth} = S^0 - s_1^0 \ ,$$

$$S^1_{oth} = S^1 - s_1^1$$

(3)

where S^0, S^1 – total value of goods in the reference and reporting years; s_1^0, s_1^1 – the value of goods 1 in the reference and reporting years.

We will also recall that the Average price index (in our case this is Laspeyres price index I^p_{Lps}) is calculated by the statistics according to the formula (1), Value index (I^p_{vl}) is the ratio of the set values S1 / S0 (they can also be calculated for all rows by column I of table 1). As a result, the Volume index I^p_{vlm} is calculated by the formula:

$$I^p_{vlm} = (S^1/S^0) / I^p_{lps} = I^p_{vl} / I^p_{lps} . \tag{4}$$

Having prepared the information, we proceed to the calculation formula Laspeyres price index $I^p_{Lps}*$ for the line "Other" (position L2 of Table 2). Note that Table 2 is an extension of Table 1 with hidden columns C–F and additional columns J–L.

Table 2   Calculations Laspeyres price index using method A

		A	B	G	H	I	J	K	L
		t=0	t=1	Average price index (I^p_{Lps})	Volume index (I^p_{vlm})	Value index (I^p_{vl})	Laspeyres price index		
		Value, thousand $					$p_0 * q_0$	$p_1 * q_0$	I^p_{Lps}
0	TOTAL	S^0	S^1	I^p_{Lps}	$=(S^1/S^0)/I^p_{lps}$	$=S^1/S^0$	$= S^0$	$=I^p * S^0$	$I^p_{Lps}{}^0 = G0$
1	- goods 1	$s_1{}^0$	$s_1{}^1$	...	...	$= s_i{}^1 / s_i{}^0$	$= s_1{}^0$	$= p_i{}^1 * q_i{}^0$	-
2	Other *	$=S^0 - s_1{}^0$	$=S^1 - s_1{}^1$	$I^p_{Lps}* = L2$	$=I2 / G2$	$=B2 / A2$	$=J0 - J1$	$= K0 - K1$	$= K2 / J2$

Source: Authors

Next we calculate the numerator and denominator (1) using the values of matrix-table 2, so that the formula for calculating Laspeyres price index IpLps* for the line "Other" will be as follows:

$$I^p_{Lps}{}^* = K2 /J2 = (K0 - K1) / (J0 - J1) , \tag{5}$$

where the elements of formula (5) are the values at the intersection of the indicated columns K, J and rows 0, 1 of the matrix–table 2. Thus, the unknown indices are calculated.

Method B: group N of goods and calculation of the Laspeyres index of the group.

Given: all the necessary indicators for a group N of goods (Table 3). It is required to find: a total index of average prices and natural supplies for this group.

In this case the Laspeyres index is calculated by the formula (1), taking into account the statistic values for each commodity (columns A–F) and the additional calculation of the total value of all goods of the reporting year t = 1 in the reference year prices t = 0 (cell K0 of table 3).

Table 3   Initial data and calculations Laspeyres price index using method B

		A	B	C	D	E	F	G	H	I	J	K	L
		t=0	t=1	t=0	t=1	t=0	t=1	Average price index	Volume index (I^p_{vlm})	Value index (I^p_{vl})	Laspeyres price index		
		Value, thousand $		Volume, unit		Price, $/unit					$p_0 * q_0$	$p_1 * q_0$	I^p_{Lps}
0	Total by goods	$S^0=\sum s_i{}^0$	$S^1=\sum s_i{}^1$	-	-	-	-	I^p_{Lps}	$=(S^1/S^0)/I^p_{lps}$	$=S^1/S^0$	S^0	$=\sum p_i{}^1{}^* q_i{}^0$	$=K0/J0$
1 2 .. N	- goods 1 - goods 2 .... - goods N	$s_i{}^t$, i=1,N, t=1.2		$q_i{}^t$, i=1,N, t=1,2		$p_i{}^t= s_i{}^t / q_i{}^t$, i=1,N, t=1.2						$=p_i{}^1*q_i{}^0$, i=1,N	

Source: Authors

We note that method B can be combined with method A. As a result, we are able to analyze the indices of a certain sample and other goods in a common set of export or import goods. Obviously, it is possible, if necessary, to increase the number of groups of goods, including significant for the analysis goods in them. The calculation algorithms will be similar to methods A and B.

Also it is necessary to make appropriate changes to the formulas in Tables 2–3 (columns J and K), if for the calculation of foreign trade indices the statistical bodies the Paasche formula is used:

$$I^p_{psch} = \frac{\sum p_1 {}^* q_1}{\sum p_0 {}^* q_1} \ ,$$

(6)

Using methods A and B listed above, the required index indicators of the tables were calculated to analyze the supply of Czech products to the Russian market.

2 RESULTS AND DISCUSSION

2.1 Approbation of methods and discussion of results

The initial statistical basis for calculations based on the proposed index methods for analyzing Czech exports to Russia was data from statistics on imports of Czech goods to the Russian market. Data source – Federal Customs Service of Russia (2018).

We note that in the Russian customs statistics, foreign trade indices are calculated using the Laspeyres formula. For approbation of the index methods, the information on trade in foodstuff and agricultural raw materials was chosen as the analysis group – these are goods from commodity groups HS 01–24. The main products of Czech imports of foodstuff and agricultural raw materials to the Russian market are presented in Table 4.

At the beginning of Table 4 the data of Czech imports to Russia for foodstuff and agricultural raw materials shown by Russian customs statistics are presented. The list of these products includes 32 items (4–digit HS code) from commodity groups (01–24), which are presented separately in 32 products in table 4, as well as the total result, including foreign trade indices calculated using the Laspeyres formula. As follows from Table 4 the list of 32 goods is more than 99% of the value of Czech imports which allows using their composite indices also in the analysis of groups 01–24.

Table 4   Russian import from Czech Republic: main goods

	HS code				2016			Indices 2016/2015			2016-2015, thous. $
				Quantity	Value, thous. $	Share	price	volume	value	
		Russian import from Czech Rep.									
		- HS (01-24) from Czechia			109 323	100%	-	-	1,087	
		- 32 main goods			108 393	99,3%	0,989	1,102	1,090	8 933
1	2309	Animal feed	t	13630	24 704	22,6%	1,137	1,274	1,448	7 648
2	0407	Birds'eggs	t	6627	21 556	19,7%	0,768	1,317	1,012	248
3	2203	Beer made from malt	l	17635211	16 301	14,9%	0,979	1,142	1,119	1 731
4	1207	Other oil seeds and oleaginous fruits	t	7376	12 011	11,0%	0,863	1,197	1,034	393
5	2208	Spirits, liqueurs and other spirituous, beverages	l	358817	3 672	3,4%	0,926	1,102	1,021	76
6	1302	Vegetable saps and extracts	t	249	3 530	3,2%	1,451	1,556	2,258	1 966
7	1704	Sugar confectionery (including white chocolate)	t	1392	3 375	3,1%	0,987	0,928	0,916	-310
8	1210	Hop cones	t	342	3 352	3,1%	0,974	1,239	1,207	574
9	1107	Malt, whether or not roasted	t	6230	3 343	3,1%	0,970	0,977	0,948	-182
10	2106	Other food products	l	300	2 792	2,6%	1,575	0,476	0,750	-931
11	2101	Extracts of coffee, tea or mate'	t	808	2 495	2,3%	1,018	1,140	1,160	344
12	1602	Other prepared or preserved meat	t	898	2 397	2,2%	0,994	0,681	0,676	-1 147
13	1905	Pastry, cakes, biscuits and other	t	401	1 826	1,7%	1,513	0,599	0,906	-190
14	1209	Seeds of a kind used for sowing	t	138	1 080	1,0%	1,134	1,221	1,385	300
15	0106	Live poultry	pcs.	2405	893	0,8%	1,716	1,696	2,910	586
16	1904	Prepared foods obtained	t	205	694	0,6%	1,050	0,554	0,582	-498
17	1901	Malt extract	t	221	640	0,6%	0,738	0,831	0,614	-403
18	2008	Fruit, nuts and other	t	187	510	0,5%	1,060	0,773	0,819	-113
19	2201	mineral water without sugar	l	818039	427	0,4%	1,022	0,843	0,861	-69
20	2202	Waters mineral, containing sugar	l	575304	401	0,4%	1,013	1,226	1,242	78
21	2206	Other fermented beverages	l	219650	328	0,3%	0,904	0,266	0,241	-1 034
22	0105	Flour	pcs.	421560	301	0,3%	1,102	1,233	1,360	80
23	2007	Jams, fruit jellies, marmalades	t	280	301	0,3%	0,807	0,720	0,581	-218
24	2209	Viengar and substitutes	l	798000	258	0,2%	0,970	1,462	1,418	76
25	1902	Pasta	t	271	225	0,2%	1,028	1,726	1,774	98
26	2005	Other vegetables prepared	t	141	214	0,2%	0,868	0,972	0,844	-40
27	1514	Rape	t	119	166	0,2%	1,047	0,930	0,974	-5
28	1001	Wheat	t	183	159	0,1%	1,740	0,600	1,044	7
29	2103	Sauces and preparations therefor	t	61	142	0,1%	1,059	0,726	0,769	-43
30	0208	Other meat and edible meat offal	t	40	135	0,1%	0,996	2,000	1,993	67
31	1520	Glycerol	t	240	115	0,1%	0,923	0,632	0,583	-82
32	1806	Chocolate and other food	t	11	52	0,0%	0,845	0,478	0,404	-77

Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2018.

2.2 Goods with growing value

As one example of the use of foreign trade indices, we will analyze data on goods with the largest growing value in 2016 (the last column of Table 4). In the group of selected products we include only those in which all three of the index is greater than one (in Table 4 there are eight such goods, they are marked with a fill).

We will include in the group with growing cost four products with the largest volume of value growth and the indices of all indices are more than one. In addition, we show the position of beer as a separate line, since the increase in its value has the third result in the list–32 goods, although the average price index of 0.997 is slightly less than one. Once again we note that our group includes only those Czech goods that have significantly expanded their presence in the Russian market due to a simultaneous increase in prices and natural supplies.

The calculated data of Table 5 show that the five allocated goods expand their presence in the Russian market, having high competitiveness, which allows them to simultaneously increase the price and increase natural volumes of supplies.

In general prices and natural supplies for selected five goods (30.2% of total imports of goods) increased by 15.6% and 29.4% respectively, which increased the cost of supplies by 1.5 times or by $ 10.9 million. As a result, there was a change in the structure of imports, where the

share of the five allocated goods–leaders increased from 22% in 2015 to 32.7% in 2016. In a somewhat different way, it was possible to increase the volume of beer sales – this became possible due to a small decrease in prices (by 2.1%) and growth in natural supplies (by 14.2%), with the result that the cost of beer sales for the year increased by $1.7 million.

Table 5   Russian import from Czech Republic food and agricultural products: goods with growing value

HS code			2016			2016-2015, thou $	Indices 2016/2015		
			Quantity	Value, thou $	Share		price	volume	value
	32 main goods			108 393	100%	8 933	0,989	1,102	1,090
	- 5 goods with growing value			32 701	30,2%	10 845	1,156	1,294	1,496
2309	Animal feed	t	13630	24 704	22,8%	7 648	1,137	1,274	1,448
1302	Vegetable saps and extracts	t	249	3 530	3,3%	1 966	1,451	1,556	2,258
2101	Extracts of coffee, tea or mate'	t	808	2 495	2,3%	344	1,018	1,140	1,160
1209	Seeds of a kind used for sowing	t	138	1 080	1,0%	300	1,134	1,221	1,385
0106	Live poultry	pcs.	2405	893	0,8%	586	1,716	1,696	2,910
2203	- Beer made from malt	l	17635211	16 301	15,0%	1 731	0,979	1,142	1,119
	- Other 26 goods			59 392	54,8%	-3 642	0,942	1,000	0,942

Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2018.

The remaining 26 goods from Table 4 were able to keep the volume of natural supplies (the index of quantity is 1) only because of a fall in prices (by 5.8%), which caused a decrease in the value of sales by $ 3.6 million.

Thus, the analysis of goods from the group of unconditional sales leaders allows us to indicate their contribution to the growth of exports of goods to the market and a change in the share in exports, as well as to determine the characteristics of the indices of other goods (in our case, there was a drop in sales, comparable to a decrease in average prices). Note that in order to continue the analysis, depending on the research objectives, the group of other goods can be divided into subgroups, using the same method, similar to that considered in this example, to calculate the composite indices of subgroups.

2.3 Analysis of the competitive position of the Czech Republic among non–CIS countries in the Russian agricultural and food market

Table 6 presents data on the volumes of Russian imports from non–CIS countries together with the corresponding indices of foreign trade, including indicators for the import of foodstuff and agricultural raw materials (groups 01–24) from non–CIS countries. Then the data of the Czech import of agricultural products to Russia – total, including the share of the Czech Republic in the volume of non–CIS countries agricultural products, is presented. The last line of the table contains data on imports of agricultural products from the rest of the non–CIS countries (excluding the Czech Republic), as well as the foreign trade indices calculated using method A on this line. We draw your attention to the fact that this problem is solved in the event that foreign trade indices of the country are specified for the selected group (in our case these are indices in groups 01–24 for the Czech Republic). We considered them to be the same as the indices of the main 32 goods in groups 01–24 (99% of the country's imports), which were calculated above using Method A in Table 4.

As can be seen from Table 6, in general, imports of agricultural products from non–CIS countries decreased by 8% or $ 1.8 million, while physical supplies decreased (by 5.3%) and average prices fell (by 2.9%). The rest of the non–CIS countries (without the Czech Republic),

as shown in Table 6, have the same index characteristics (a difference of tenths of a percent in the value and volume indices). At the same time, imports of goods from the Czech Republic, on the contrary, increased by 9%, or by almost $ 9 million, with an increase in physical volumes of supplies (by 10%) and almost unchanged average prices (they decreased by only 1.1%). In other words, the Czech Republic expanded the presence of its agricultural products on the Russian market, practically without reducing average prices for products.

Table 6   Russian import from non–CIS countries: trade indices

	2015		2016		2016-2015, thou $	Indices 2016/2015		
	value, thousand $	% of total	value, thousand $	% of total		price	volume	value
Russian import from non-CIS countries	161 692 700		162 724 500		1 031 800	0,978	1,026	1,003
- foodstuff and agricultural raw (01-24)								
- from non-CIS countries	22 213 700	13,7%	20 428 500	12,6%	-1 785 200	0,971	0,947	0,920
- from Czech Republic	100 532	0,1%	109 323	0,1%	8 791	-	-	1,087
- share (01-24) from non-CIS	*0,45%*		*0,54%*					
- main goods (32 pcs.)	99 637	0,1%	108 549	0,1%	8 912	0,989	1,101	1,089
(% of total import from Czech Rep.)	*99,1%*		*99,3%*					
Other 01-24 (non-CIS countries without the Czech Rep	22 114 063		20 319 951		-1 794 112	0,971	0,946	0,919

Source: own calculations on the basis of data of the Federal Customs Service of Russia, 2018.

Thus, the competitive position of the Czech Republic on agricultural trade in the Russian market in terms of the ratio of changes in the "product–price–cost" factors looks more preferable in 2015–2016 than the average for non–CIS countries (without the Czech Republic), because of the indices of the Czech Republic is significantly higher than the average level of non–CIS countries and has an increase in sales in the Russian market, unlike the rest of the non–CIS countries, where sales decreased by 8.1%.

It is clear that with the availability of information, the analysis can be continued, for example, with the allocation of countries of major competitors. In addition, it can be selected another or other product groups. The calculation algorithms for solving these new problems will in principle be the same as in the cases considered above.

CONCLUSION

Foreign trade indices are calculated using the well-known Laspeyres and Paasche formulas in aggregate form on the basis of a list of the basic export or import goods. From the point of view of foreign trade analysis, it seems interesting to solve the "reverse" problem - the disaggregation of indices, when the influence of the dynamics of changes in trade of significant goods or their groups on general trade changes, as well as on other commodities, is analyzed using statistically calculated foreign trade indices. With the help of disaggregation methods, tasks can be formulated and solved, for example, within the framework of BCG matrix classifications, as well as many others.

In the research the statements of two basic problems of aggregation foreign trade indices for large groups of goods taking into account their importance are considered and the methods of their solution with formulas of calculations in a table–matrix form are described. The first method of calculation allows us to calculate the total price index of group (or groups) of goods, the second method is intended for calculations of price indices of other goods out of the allocated group (or groups). It is noted that the combination of the methods considered makes it possible to select and analyze the state of the indicators of commodity groups taking into account changes in the "price–quantity–value" factors.

For approbation of methods, foodstuff and agricultural raw materials from commodity groups HS 01–24 were included into the study group. For the indicated commodity group of Czech goods it was necessary to analyze the state and conditions of sales in the Russian market. The customs statistics of Federal Customs Service of Russia was chosen as the source of data for the solution of the task.

On the basis of the Russian customs statistics, calculations of the aggregated price indices for import of all Czech foodstuff and agricultural raw materials to the Russian market were made, as well as calculations with allocation of additional group of the goods which have provided the greatest expansion of sales.

Thus, the calculations of the indices and the analysis of the presence of Czech goods and goods of other non–CIS countries on the Russian agricultural and food market showed the following: in 2015–2016 the rest of the non–CIS countries (without the Czech Republic) reduced their sales (by 8%) due to a simultaneous fall in prices (by 3%) and volumes of natural sales (by 5%). At the same time, unlike the rest of the non–CIS countries, the Czech Republic was able to ensure the growth of sales of foodstuff and agricultural raw materials (by 9%) on the basis of growth in natural supplies (by 10%) and practically stable average prices (a decrease of 1%).

Further, the analysis of the list of the main goods of Czech imports to the Russian market showed that the total growth in sales of Czech goods on the Russian agricultural and food market was provided by the group of goods of the greatest growth. These commodities have high competitive potential and increase sales volumes with simultaneous price (by 16%) and natural supplies (by 29%) increase. Although the rest of Czech goods preserved volumes of natural supplies, as a whole they reduced the sales value due to the fall in average prices (by 6%).

It is planed to conduct a research with the use of foreign trade indices on the trade of the Visegrad Group countries with the Russian Federation in the agricultural and food market. In particular, it is supposed to analyze the state and influence of sanctions against Russia Federation on trade of the countries, as well as assess the possibilities of restoring trade volumes by expanding sales of non-sanction goods.

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Traditional and Regional Meat Products – Preferences of Polish Consumers

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Abstract: A growing interest in traditional and regional food products as an alternative for conventional products can be observed on the Polish food market. The aim of this research is to present the consumers' awareness and attitudes towards the traditional and regional meat products available on the Polish market. The research was carried out in Lesser Poland on a group of 241 respondents, aged 19-65. The following factors were examined: types of most frequently consumed traditional and regional products, determinants that indicate consumers' choice of traditional and regional meat products, and their consuming frequency. According to our research, Poles are more and more aware of the food quality and safety. Recently, the popularity of traditional and regional meat products has increased - those products are being consumed a few times a month. However, according to the consumers, the prices of traditional and regional meat products are too high and the availability is not sufficient.

INTRODUCTION

In the last years, on the Polish food markets growing interest in novel food and innovative products can be observed. The popularity of fast food and convenience food is also increasing. These types of food are being bought mainly by young adults who do not have time to prepare conventional meals. On the other hand, consumer preferences and behaviours on the food market change, due to higher consciousness and better education in the field of nutrition. Consumers pay more and more attention to food safety and food ingredients i.e. the lowest contamination of such substances as fat, phosphates, preservatives or salt in the food products is being sought (Kuśmierczyk & Szepieniec-Puchalska, 2008; Babicz-Zielińska & Zabrocki, 2007; Kociszewski, 2007; Górska-Warsewicz, 2007).

Recently, due to the sociodemographic changes and an increase in societal wealth, "back to the nature" trend, not only on the food market, can be observed. On the one hand, consumers follow the global trends, on the other hand, they long for original products that are characterised by their exquisite taste, produced according to traditional recipes or connected with specific place or culture. Therefore, regional and traditional products become an alternative to massive production (Żakowska-Biemans, 2012; Kowalczuk, 2009; Jaworska & Przybylski, 2012).

The aim of this study is to present the consumers awareness and attitudes towards the traditional and regional food products available on the Polish market, with an emphasis on meat products.

1 LITERATURE REVIEW

Nowadays, consumers look for traditional flavours, what leads to buying high-quality products, produced with methods used for generations. According to AC Nielsen report, purchases of 80% of Polish consumers are no longer determined only by price of the product, but also by its quality. Likewise, according to ASM (Market Research and Analysis Center) report (2017) Polish consumers' purchase decisions are based on quality (73%) and price (65%) of the product, 80% of respondents attach importance to the place of origin. The most trusted brands are the ones that exist on the market for many years. Traditional and regional products are increasingly being associated with high quality due to the change in consumers' attitude – the importance of food composition, its origin and production method increases (Krzywiński & Tokarczyk, 2012; Pankowiak, 2013; Unknown, 2018). According to Nestorowicz et al. report (2016) consumers prefer to buy products 'made in Poland' and food produced with the use of traditional methods of production.

Traditional or regional products are formed over a long period of time through the influence of cultural and natural factors. According to EU regulation no 1151/2012 of the European Parliament and of the Council of 21 November 2012, foodstuffs can be registered in the EU as protected designation of origin (PDO), protected geographical indication (PGI), or traditional specialities guaranteed (TSG). They can be marked with a special logo to help consumers identify the products. The aim is to secure "a fair return for farmers and producers for the qualities and characteristics of a given product, or of its mode of production, and providing clear information on products with specific characteristics linked to geographical origin, thereby enabling consumers to make more informed purchasing choices". At the end of 2017, there were 1422 foodstuffs listed as PDO, PGI or TSG, among which 40 were from Poland (European Commission, 2018).

In Poland, traditional products are regulated by the Law of 17 December 2004 on registration and protection of names and designations of agricultural products and foodstuffs as well as traditional products (Dz.U. 2005 nr 10 poz. 68 with subsequent changes). Based on the above mentioned regulation, List of Traditional Products is formed. The purpose is to identify traditional products available on the domestic market, as well as prepare producers to register their products at the EU level and create opportunities to apply for veterinary or sanitary exemptions. A product can be listed as "traditional" if it is produced by traditional methods for at least 25 years, and its distinguishing features results from those production methods, and is an element of the cultural heritage of the region and its social identity (Newerli-Guz & Rybowska, 2015). At the end of 2017, there were 1761 products listed by the Polish Ministry of Agriculture and Rural Development as traditional products, among which 391 were meat products (MARD, 2018).

2 METHODOLOGY

To obtain empirical data, a survey in the form of a face-to-face and internet questionnaire was conducted. It consisted of 12 closed-end questions and 5 sociodemographic questions. The following factors were examined: types of the most frequently consumed traditional and regional products, determinants that indicated consumer choices of traditional and regional meat products and their consuming frequency.

The research was carried out in Lesser Poland on a group of 241 respondents, including 156 women and 85 men, aged 19-65 (Tab. 1). The overwhelming part of the population inhabited big cities (40.25%) and declared good financial situation (76.68%). A detailed characteristic of respondents is presented in Table 1.

Tab 1 Population characteristics

Feature	Category	[%]
Gender	Female	64.73
	Male	35.27
Age	19-24	38.59
	25-35	27.39
	36-50	18.67
	51-65	12.86
	> 65	2.49
Education	Primary school	1.24
	Secondary school/vocational	37.34
	University	61.41
Permanent residence	Country	29.05
	City up to 100 000 inhabitants	21.16
	City 100-500 000 inhabitants	9.54
	City more than 500 000 inhabitants	40.25

Source: own research

The obtained data was analysed with the use of STATISTICA 10.0 and R 3.2.2. As a part of statistical analysis, joint distribution of two qualitative variables was described with the use of contingency tables. The dependence between two qualitative variables was determined with the use of χ^2 test, with significance level (p-value) less than 0.05 required. The influence of such factors as: sex, age, permanent residence and education was analysed. In addition, the cluster analysis with selected socio-demographical factors influencing the preferences of traditional and regional food was performed.

3 RESULTS AND DISCUSSION

3.1 Consumers' awareness of the term *traditional food*

The vast majority of respondents (97.8%) consume regional and traditional food products. Their understanding of the term regional and traditional products is individual and intuitive. According to Sajdakowska & Żakowska-Biemans (2009) consumers subconsciously correctly connect traditional food with home-made meals, food handed down through generations, and food connected with specific culture or specific geographic region. The producers of meat products use many marketing tricks in order to increase their volume of sales – the aim is to convince the consumers to link their products with Old Polish traditions. Therefore, it is confusing for the average consumer to distinguish an originally regional or traditional product from a conventional product named e.g. "traditional grandmother's ham" (Sajdakowska & Żakowska-Biemans, 2009; Stadnik, 2009; Krzywiński & Tokarczyk, 2012; Kupracz, 2007; Żakowska-Biemans, 2012).

Based on a literature review, a definition of traditional food was created. The *traditional products* are foodstuffs produced according to recipes handed down from generation to generation, with a small share of modern processing methods. These products are characterized by outstanding sensory properties and are associated with the local, regional or national community (Gąsiorowski, 2005; Jeżewska-Zychowicz, 2009; Krajewski & Zabrocki 2008; Krzywiński & Tokarczyk 2012; Stadnik 2009; Sajdakowska & Żakowska-Biemans 2009; Zin & Duma 2008).

3.2 Frequency of consumption of traditional food products, with emphasis on meat products

According to empirical research, the most often consumed traditional and regional products are meat products, such as traditional cured meats (70.5%), processed fruit and vegetables (44%) and dairy products, such as traditional cheeses – like oscypek, bundz or bryndza (41%). The obtained results are similar to the results of other authors (Borowska, 2008; Żakowska-Biemans & Kuc 2009; Sajdakowska & Żakowska-Biemans, 2009; Grębowiec, 2010).

Own research has shown that the vast majority of respondents consume traditional and regional hams or sausages. Over 38% of the respondents purchase these products several times a month, and about 36% of respondents several times a week. Traditional and regional meat products are consumed statistically significantly more often by people over 36 years old. These meat products are usually consumed with the closest family and friends during holidays (60%) and other celebrations (51.65%). It is strongly related to the fact that Poles have celebrated holidays in a traditional manner (especially Christmas and Easter) for generations.

Respondents consume traditional meat products not only during family celebrations. Nearly 50% of respondents declare that they eat them every day. Around 28.5% of consumers try regional products during visits in the region of their origin, while 16.5% buy them at fairs or festivals. Women up to 35 years old purchase traditional and regional meat products intended for consumption during family celebrations. People 36 years or older tend to purchase these products for everyday consumption. Statistically significant differences were found for the above mentioned relationships. The frequency of consumption of traditional meat products is presented in the Figure 1.

Fig. 1 Frequency of consumption of traditional meat products
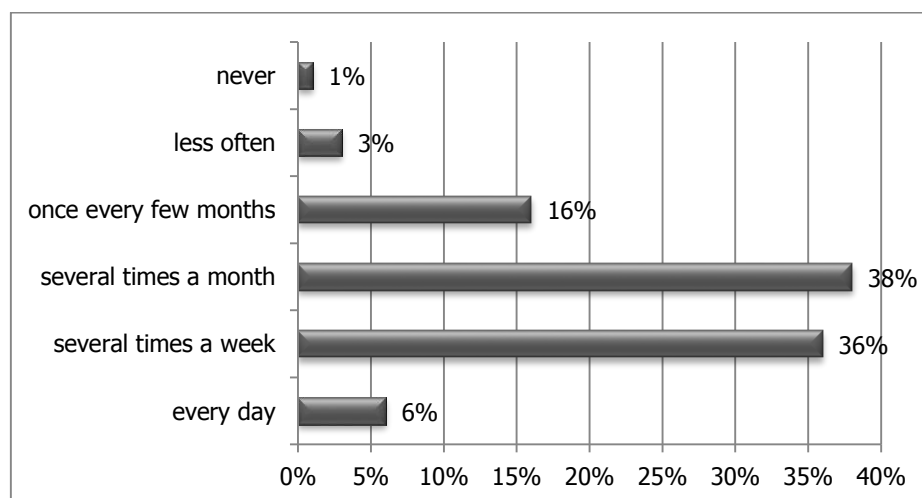
Source: own research

The research has shown that the most important source of information about traditional meat products is family and friends (71.37%). Respondents look for information in the place of purchase (37.34%) and on the internet (16.6%). Internet is the chosen source of information among young adults (19-35 years old) – the differences were statistically significant. The research of Chudy & Gierałtowska (2013) has also shown that young people (21-24 years old) learn about traditional and regional products from the internet. The least popular source of information is (same as in own research in 2012) the radio (2%). Among „other sources of information" respondents list school/university.

Respondents who declared they are purchasing traditional meat products stated that they are able to classify a given product as traditional or regional based on their acquired knowledge and experience (67.8%). Among the respondents, 45.5% believe that the products belonging to this group can be identified based on its packaging, or the enclosed information leaflet. Women attach more importance to this type of information medium (statistically significant differences were found, p = 0.007). Obtained results are similar to the results of Chudy & Gierałtowska (2013). According to them, 82% of respondents are able to distinguish traditional/regional products from the conventional one.

3.3 Determinants of purchase and consumption of traditional meat products

The factors influencing the purchase of food products are: sensory characteristics of the product, price, producer, advertising and nutritional and health properties of the products (Florek et al., 2013; Pankiewicz, 2013). Górska-Warsewicz (2006) study indicated that consumers of conventional hams pay the most attention to the price and availability of the product, while premium products customers value the quality and composition of the product, brand and the name of the producer, as well as nutritional and health value. According to AC Nielsen report (2016), the most important determinant of purchase is quality, according to Kozłowska at al. (2009) – quality, price and brand.

Based on our own research, it can be stated that among the qualitative characteristics of traditional meat products, the most important factors selected by respondents are taste and smell (72.3% of indications – very important) and freshness and durability (59.9% of indications – very important). The least important feature, determining the purchase of a given product, is its energy value. Figure 2 presents the means obtained from consumers indications related to the importance of individual quality features. A five-point scale was used, where 1 referred to "not important at all", while 5 referred to "very important".

Fig. 2 Declared importance of quality features of traditional meat products
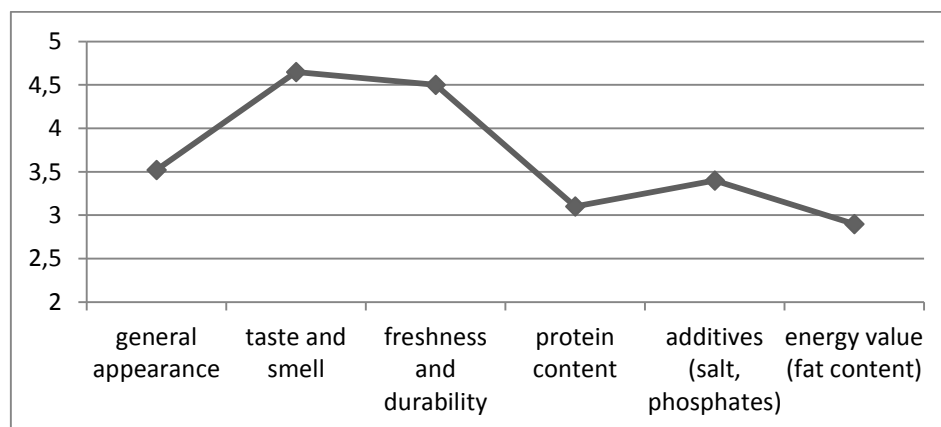
Source: own research

According to Żakowska-Biemans and Kuc (2009), consumers perceive traditional food in a positive way. The sensory attributes (taste and smell) such as high quality and, to a lesser extent, the nutritional benefits of this type of food play a greater part during the purchase. Based on observations by Kowalczuk (2011), it can be concluded that consumers are increasingly interested in traditional food and appreciate traditional flavours. However, nearly 23% of respondents believe that the prices of traditional cured meats are too high.

Respondents participating in own research were asked to choose four (out of nine) statements that determine the purchase and consumption of traditional and regional meat products, and then rank them from the most important (1) to the least important (4). Based on the results of the research, four statements influencing the purchase decisions were indicated.

The reasons for purchasing traditional/regional meat products (indicated by respondents) are as follows:

1) they are more natural, fresh, contain no preservatives or flavour enhancers (an average position 3.08),

2) they have higher flavour values than conventional products (average position 3.45),

3) consumers value traditional flavours (average position 3.48),

4) they are characterized by high quality (average position 3.5).

It was statistically observed that significantly more women with higher education living in the cities indicated the answer "have higher flavour values than conventional products". The answer "I value traditional flavours" was statistically significantly more often chosen by respondents over 36 years of age.

3.4 Prices and availability of traditional meat products

According to empirical research, 53% of respondents buy traditional meat products directly form the producers or in company shops, 25.2% choose butcher shops/small local shops, 24% buy at the bazaars or marketplaces and only 10.3% at the supermarkets. Likewise, according to Vanhonacker at al. (2010), European consumers prefer to buy traditional and regional products directly form the producers. On the other hand, according to Kowalczuk (2011), Polish consumers choose butcher shops/local shops to buy high-quality hams.

The prices of traditional meat product are too high for 50.21% of respondents, while 49.38% maintain that the prices are on the appropriate level. One person suggested that the prices are too low. The results are dependent on the income level of respondents – the ones with a very good financial situation (20% of all respondents) evaluated the prices as appropriate (64%) or too high, the ones with an average financial situation (74%) stated that the prices are too high (53.33%) or appropriate.

The research results show that the availability of traditional and regional meat products are sufficient (49%), good (35.4%) or very good (3.8%). Over 85% of urban residents and nearly 93% of rural residents assess the availability of traditional meat products as at least sufficient. Other respondents (12%) declare difficulties in purchasing such products.

The factors that, in the opinion of respondents, could cause the increase in demand for traditional meat products are: lower price (54.5% indications), greater availability (47.2% indications), easy way to distinguish traditional/regional products from conventional products (24% indications), quality confirmed by a certificate (21.1% of indications), wider range of products (18.7%) and advertising (1.63%). As "other" factors, among others, respondents mentioned: confirmed origin, easier identification of the place of origin, ensuring the use of traditional production methods, guaranteeing higher quality of traditional/regional products.

8.5% of the respondents assessed that there is no factor that would encourage them to purchase traditional/regional meat products more often.

The attributes negatively correlated with image of traditional food are: availability, prices, assortment and convenience of purchase (Lengard Almli et al., 2011). Nearly 40% of respondents stated that availability of traditional products is insufficient (Żakowska-Biemans & Kuc, 2009; Grębowiec, 2010).

3.5 Cluster analysis

For the purpose of cluster analysis, the following variables were selected:

- age – respondents >36 years old consume traditional/regional meat products more often than the rest of population,
- availability – respondents that evaluated the availability of traditional/regional products as "good" or "very good" consume traditional/regional meat products more often than the rest of population.

Cluster A was formed of people complying with two conditions, cluster B of people complying with one condition and cluster C of people complying with none of the conditions. Based on the assumptions, the respondents from cluster A should show the greatest interest in traditional/regional meat products, whereas respondents from cluster C the smallest.

Respondents from cluster A (54.76%) most frequently look for information about the traditional meat products in the place of purchase (p=0.035), respondents from cluster B indicated that answer least often. Similarly, respondents from cluster A indicated "at the food trade fairs" as place of information (16.67%), this answer was least often chosen by respondents from cluster B (p=0.044). Respondents from cluster C look for the information most often on the Internet.

Regarding determinants of consumption, respondents from cluster A eat traditional/regional food every day, without any special occasion (61.9%), and during food trade fairs (23.8%), whereas respondents from cluster C indicated both answers least often.

CONCLUSION

Conducted surveys have shown that meat products are the most commonly consumed traditional and regional products on the Polish food market. Respondents declare such consumption to be at least several times a month, especially during holidays and family celebrations. Consumer knowledge about traditional and regional food has improved in the recent years. The majority of respondents declare that they can determine the affiliation of a given product to this group. However, the respondents admit that the price of regional and traditional meat products is high, and the availability is insufficient. Based on two variables that influence frequency of traditional meat products consumption – age of respondents and availability of traditional products – three clusters could be formed.

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How Czech Consumers Perceive Quality of Food Products

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Abstract: The article presents basic findings of research on consumer behaviour on the market of foodstuffs assigned by quality labels in the Czech Republic. The sample of the research was 444 respondents interviewed in 2016 in front of retail stores. Goals of the article were to identify important factors which influences customers´ decision making process of purchase of food products and how is the order of factors influencing consumers´ decisions when they are buying foodstuffs and to discover how is the brand awareness of food quality brands by Czech customers. Based on the research, the most important factors for the customer are price, origin and a quality of the product. Quality label was at the 7th position.

Keywords: food quality labels, consumer behaviour, consumers´ opinion

JEL Classification codes: M31, Q18, P36

INTRODUCTION

After lifting food quality standards in 1993, quality of numerous products has decreased without attention on the side of the consumers. Gradually, information began appearing that it is necessary to monitor composition of products as they might not contain the ingredients they should. The problem was and remains that in the process of shopping consumers do not want to spend time reading unclear and often confusing information on composition of the products which is usually even missing at over-the-counter sale. Therefore, it is common that consumers purchase spurious products where name and packaging play the key role, not the actual composition or nutritional value.

Over time, price has become guidance for quality of food products. But nowadays even that is no guarantee for quality or content of the ingredients expected by the consumers. On the one hand, some product quality indicators are improving, on the other hand, use of substitutes in foodstuffs is growing. Quality labels the number of which is growing rapidly on the market are supposed to resolve the issue. These labels should guarantee quality of products in terms of composition, place, or method of production, and should help consumers choose fine quality, unadulterated food.

Due to fact that quality is gradually becoming a significant factor in the choice of food by more and more consumers, quality labels are gaining importance as well. They are substantial not only for consumers but also manufacturers who are able to attract attention or differentiate from the competition thanks to products which meet the parameters for obtaining such label of quality.

1 LITERATURE REVIEW

Quality labels, or the so-called utility signs, are graphic symbols that appear on a product, its packaging, or enclosed information materials. They inform about parameters of a product

(packaging), or its use (Velčovská, 2005). They are also concerned to maintain the diversity of the agricultural production in the Union. This generates a demand for agricultural products or foodstuffs with identifiable specific characteristics, those linked to their geographical origin." (European Parliament and Council of the European Union, 2012). Teuber (2011) highlights a growing consumer segment that is concerned about food safety and food quality issues and values the origin as a useful quality cue. Definition of quality can therefore differ depending upon the importance and relative contribution of each parameter to a producer or consumer-based approach to quality (Bremner, 2000). Any aspect can play a single, but important role in the whole collection of food quality parameters (O´Riordan and Delahunty, 2003). A useful tool for cheese manufacturers willing to manage a significant higher quality of their products could be a product certification through the quality labels. Quality labels can help to producers communicate their products with the value-adding characteristics, highlight the specific character of their products, and stimulate consumers´ interest in such products (Velčovská and Sadílek, 2014).

They are a tool to reassure consumers about the quality through certification. Specific labels only cover certain aspects of quality. It means that the market offers product or service quality labels.

According to Tulder (2006) there is great diversity within quality labels. Symbols are divided into several categories which may overlap with one another. Those are related to:

- Industry (sector) - e.g. HORECA Select,
- Working conditions - e.g. Fairtrade, Oké bananas,
- Production conditions - e.g. FSC certification, Rainforest Alliance,
- Recycling and organic products - e.g. Eco-O.K.,
- HR policies - e.g. Investor in People,
- Product - e.g. Klasa.

All utility signs are segmented in higher detail by Velčovská (2005) according to the following criteria: in terms of severity, content, extent, and geographic perspective.

There is no doubt that quality labels have undeniable importance for producers as well as consumers. To consumers they provide certain assurance as products marked by such labels must meet the established standards and requirements. They also contribute to simpler orientation on the market and help choose a quality product or service with minimal risk. Currently, one of the assumptions about todays´ consumer behaviour is the fact that people are increasingly buying products not because of their parameters but for the personal value they represent. Products are often evaluated according to their specific qualities (not the main benefit it should deliver), but the so called enhanced product (a set of intangible elements which bring the perceived advantage to the consumer, e.g. image, service, consulting, etc.). Quality labels are part of the enhanced product which influences consumer behaviour. (Turčínková, 2007; Klánová, 2013)

Contribution of brands for manufacturers is often far greater than benefits for consumers. Quality labels can serve as an effective marketing tool which leads to an increase in sales (after being marked with a brand logo) and raise in awareness among consumers. Brands are therefore considered an important tool for manufacturer´s sales support. The survey conducted by Focus Agency for an expert periodical Marketing Journal shows that 81% of companies see the main benefits of using quality labels in the expected increase in consumer confidence. Another benefit is the increase in revenues and a way to differentiate from competition. Also, 39% of companies perceive quality labels as a guarantee of production stability and high quality of its products. (Focus Agency, 2013; Horacek, 2014)

Czech food market is flooded by many quality labels which should function as a guide for consumers and at the same time guarantee quality and origin of products. Consumers may encounter labels used exclusively for food products (eg. Klasa or Regionální potravina), or labels given in other product categories (eg. CZECH MADE or Český výrobek). Theese quality labels are presented in Table 1.

Tab. 1 Quality labels used in the Czech Republic

	Name	Characteristics
	KLASA	Label awarded by the Ministry of Agriculture to food and agricultural products of finest quality.
	Český výrobek – guaranteed by Federation of the Food & Drink Industries of the Czech Republic	Products must be manufactured in the Czech Republic and must contain a certain share of Czech ingredients. The label is awarded by Federation of the Food & Drink Industries of the Czech Republic.
	Český výrobek (belongs to the Český výrobek fund)	Label for both food and non-food products whose production company is owned by Czech citizens and revenue is not transferred outside the country. Label is awarded by Český výrobek fund.
	Český výrobek (belongs to Český výrobek Ltd.)	Designation of safe products manufactured in the Czech Republic (where employees are Czech). The label is granted by Český výrobek Ltd.
	Czech made	The label which is part of the state program Česká kvalita reflects that the quality of designated goods and services has been objectively verified by a third party. This label is awarded by Sdružení pro Cenu České republiky za jakost.
	BIO – a product of eco agriculture	Nationwide trademark for organic food given awarded by organizations entrusted by the Ministry of Agriculture.
	BIO in EU	EU logo for organic packaged foods, which was introduced by the European Commission.
	Ekologicky šetrný výrobek (Eco-friendly product)	Goods and services that are proven environmentally and consumer health friendly, label is granted by the Ministry of the Environment.

	Name	Characteristics
	Regionální potravina (Reginal food)	Label awarded by the Ministry of Agriculture to finest-quality agricultural products that win in regional competitions.
	Asociace regionálních značek (Association of regional labels)	Association of various regional food labels. Regional origin, ecological sustainability, uniqueness.
	Vím, co jím (I know what I eat)	Designation of nutritionally balanced food granted by the non-profit organization Vím, co jím a piju.
	Zdravá potravina (Healthy food)	Labelled food must not contain controversial additives, artificial flavourings and E-additives, is awarded by Zdravá potravina.
	Certified e-friendly food (CEFF)	Food products without preservatives, artificial colourings and flavours, the label is awarded by an independent institution.
	Chráněné zeměpisné označení (Protected geographic trademark)	Designation of an exceptional agricultural product or foodstuff from a given region / location. At least one phase of production - production, processing, or preparation must take place in the designated area. Awarded by the European Commission.
	Chráněné označení původu (Protected origin trademark)	Designation of an exceptional agricultural product or foodstuff from a given region / location. All stages of production must take place in the designated area, it also applies to ingredients. Awarded by the European Commission.
	Zaručená tradiční specialita (Guaranteed traditional specialty)	Agricultural product or foodstuff produced or manufactured for at least 30 years specific nature of which is recognized by the EU. Awarded by the European Commission.
	Fair Trade	A certification system for products from the countries of the Third World where consumer buying this product helps disadvantaged producers (mainly from the Third World countries). Managed by Fairtrade Labelling Organisation International.

Source: Babička (2012), Eagri (2015)

2 METHODOLOGY

This paper aims to (1) identify the main factors in decision-making while purchasing food and their order stated by the respondents, (2) discover knowledge and recognition of quality labels that appear on the Czech food market, and (3) gain respondents´ opinions on food products marked by quality labels.

The presented study are preliminary results of research on quality labels. The research was done in the period from December 2015 to January 2016, 444 respondents were interviewed distribution whom roughly corresponds the distribution of the monitored categories of the population sample. The survey sample consisted of residents of the Czech Republic over 18 years of age addressed in front of grocery stores. The interviews were recorded for qualitative evaluation.

The research technique used were individual semi-structured interviews, the respondents answered a set of 13 questions with closed and open-ended answers and scales. Representative technique was used for the selection of respondents, namely simple random selection where respondents were interviewed in front of grocery stores. The questions were focused on the attitude of respondents towards purchasing food labelled by quality labels and their knowledge of quality labels placed on food sold in the Czech Republic. Further segmentation questionnaire contained questions on household size, total net income of the respondent´s household, the highest educational attainment of the respondent, and zip code for region identification. The aim of the survey was to get most of responses from women, because we expect they have higher influence on shopping behaviour of food and stronger decision-making power than men. The respondents were willing to answer questions, and no significant number of respondents who would be reluctant to participate in the questioning was registered. The obtained data were then processed and classification of the first and second degree was conducted, followed by correlation analysis and hypotheses testing.

3 RESULTS AND DISCUSSION

Responses were distributed evenly within the sample according to the number of members in the households, as well as in the category of total monthly net income of the households. In the category of gender, a higher proportion of women was reached, which is advantageous as in most family's women take decisions on food purchase. Unequal representation was achieved in the category of age where almost over 41% of respondents fall into the age group of 20-29 years. The territorial distribution of the respondents is that nearly 64% of respondents come from the Central Bohemian Region, the rest of the respondents from the regions of Olomouc and Plzen. Thus, it is possible to say that the inquirers managed to ensure representation of respondents living in large cities and near such cities who usually have different lifestyle and therefore distinct shopping behaviour from people living in rural areas.

n the ranking of the factors that most affect food purchase, an earlier assumption was confirmed that price is the main criterion. Each respondent was asked to state three factors that most influence their purchase of food and, in addition to price, respondents placed great emphasis on the origin of products (whether it is a Czech or foreign product and whether it is a regional product, or a product imported from a greater distance). Among other qualities, appearance of the product was considered important. Other factors that placed on the first to fifth position were quality, composition of the product, taste (which is the most subjective criterion), and recommendation. Quality label placed 7th in case of the first factor, 10th as the second factor, and 3rd in stating the third factor. This means that quality label is not one of the main selection criteria for the respondents.

Tab. 2 Sample characteristics

Number of household members	1	**8,3 %**	**Total monthly net income of households**	**up to 10 000 CZK**	**16,7 %**
	2	22,3 %		10 000 – 20 000 CZK	19,4 %
	3	22,2 %		20 000 – 30 000 CZK	27,8 %
	4	22,2 %		30 000 – 40 000 CZK	13,9 %
	5	25 %		40 000 – 60 000 CZK	11,1 %
				over 60 000 CZK	11,1 %
Education	Primary	11,1 %	**Age**	20 -29 years	41,7 %
	Secondary	16,7 %		30 – 39 years	19,5 %
	Secondary (higher)	44,4 %		40 – 49 years	19,4 %
	College	2,8 %		50 – 59 years	11,1 %
	University	25,0 %		60 years and more	8,3 %
Gender	Female	63,9 %	**Region**	Central Bohemian	63,8 %
	Male	36,1 %		Plzen	2,8 %
				Olomouc	33,4 %

Tab. 3 Order of factors with most influence on food purchase

	First factor	**Second factor**	**Third factor**
1	Price	Price	Price
2	Origin	Origin	Appearance
3	Quality	Composition	Quality label
4	Composition	Appearance	Composition
5	Taste	Other	Recommendation
6	Appearance	Recommendation	Quality
7	Quality label	Habit	Freshness
8	Habit	Freshness	Taste
9	Freshness	Taste	Shelf-life
10	Other	Quality label	Appearance

The tests made on rank correlation (Kendall's tau) did not confirm dependency between the order of the factors cited meaning that it is impossible to say unequivocally which factor respondents generally consider as the most important as there is no trend of a single factor appearing on the first place. Values of Kendall's tau varied from -0.433 to 0.06 and are statistically significant at a significance level of $\alpha = 0.05$.

Like in the previous question on factors influencing food purchases, respondents were asked to name three quality labels they know. This confirmed the earlier assumption that Klasa holds the leading position on the Czech food market as most respondents named it as the first option. Many respondents were not able to name a second label, however, Český produkt, Bio, and the response "Other" appeared among the answers. The respondents also named brands that do not belong among quality labels – e.g. private labels of retail chains. Therefore, it is possible to conclude that the concept of quality labels is unclear for many respondents

and, despite repeated campaigns to promote recognition and knowledge of quality labels, consumers are still unsure about what such labels represent in detail. More precisely, shoppers understand that a quality label represents higher quality standard compared to other unmarked goods, but they lack certain knowledge on what production standards, ingredients, or other norms a label stands for or should inform about. As the second option, respondents named Český produkt, Regionální potravina, and Zdravá potravina. It is also interesting that some reported Chráněné zeměpisné označení a Chráněné označení původu as the second and third answer since those labels are not often known among Czech consumers.

Tab. 4 Order of labels by awareness

	First factor	**Second factor**	**Third factor**
1	Klasa	Other	Regionální potravina
2	Český produkt	Český výrobek	Other
3	Other	Chráněné zeměpisné označení	Chráněné označení původu
4	Bio	Regionální potravina	Český produkt
5		Český produkt	
6		Zdravá potravina	

Even in this case the conducted rank correlation tests (Kendall's tau) did not confirm any dependency between awareness rankings of quality labels, which means that it is not possible to say unequivocally which labels are more significant than others, except for the Klasa label whose position is exceptional. Values of Kendall's tau vary from -0.501 to 0.229 and are statistically significant at a significance level of $\alpha = 0.05$, at the same time there is no visible trend.

Tab. 4 Respondents' opinion on labelled food products

	1	**2**	**3**	**4**	**5**	**T-test value**
Do food products marked with quality labels meet your expectations?	0	94.4	5.6	0	0	Sig = 0, T = 53.09
In your opinion, are labelled food products of better quality?	1.9	44.4	30.6	2.8	2.8	Sig = 0, T = 15.43
In your opinion, are quality labels trustworthy?	19.4	41.7	22.2	8.3	2.8	Sig = 0, T = 13.36
Are you willing to pay mofre for labelled than unlabeled products?	27.8	44.4	13.9	5.6	2.8	Sig = 0, T= 12.21

Source: Note: 1 – absolutely agree, 2 – rather agree, 3 – neither agree nor disagree, 4 – rather disagree, 5 – absolutely disagree

Another aim of this paper was to find out opinions of the respondents on food products marked with quality labels. It is noteworthy that 94.4% of respondents rather agree that labelled foodstuffs meet their expectations, but only 58.3% of respondents consider these products

better (13.9% absolutely agree and 44.4% rather agree) while 30.6% of respondents were neither concurring nor dissenting. Similarly, the respondents answered questions on whether the labelled products are trustworthy where 61.1% of respondents agree with such statement (19.4% absolutely agree and 41.7% rather agree), which may seem interesting for food producers who endeavour to obtain some of the quality labels. Willingness to pay extra money for the labelled food products was confirmed by 72.2% of the respondents which shows a positive trend that consumers are willing to pay more for products which are marked with quality labels and which are expected to have higher quality than unlabelled products. These findings may also be confirmed by one-sample t-test the value of which reached t = 0 at a significance level of α = 0.05. Such fact may look slightly paradox as from the test of stating three most influential factors and naming three quality labels it seems that most consumers do not have detailed knowledge on standards represented by each quality label.

CONCLUSION

In identifying three factors that most affect consumers while shopping food, an assumption was confirmed that the most important factor is price. However, the assumption cannot be unequivocally confirmed at this stage of the research. More accurate results will appear with a higher number of respondents and statistically significant correlation. In the opinion of consumers, the second most important factor after price is origin of the food, where in addition respondents care what country a product comes from and, in case it is a domestic product, from which region. The third most influential factor according to the gathered information is appearance of products. Visual characteristics therefore play an important role in food selection. It is also necessary to mention other factors which occurred on various positions from first to fifth, those are: quality, composition of the product, taste, and word of mouth or recommendation. Based on all the previously mentioned information it is possible to conclude that quality labels are not one of the key factors in food selection and thus do not have significant influence on consumer behaviour.

Respondents were also asked to name three labels of quality, most frequently they named Klasa as the first option. Based on the results of this study, Klasa seems to have the highest awareness on the Czech market. Other labels featured on the first place are Český výrobek and Bio. In addition, respondents also named brands which are not considered quality labels but private labels of retail chains. Several respondents were unable to name any brand of quality. These facts reveal that brand awareness of quality labels in the Czech Republic is generally not high. Such labelling thus has low significance and consumers do not have an entirely clear and accurate idea of what quality labels mean. They have a general idea that labelled products should have higher quality, but mostly do not have knowledge on what exactly each label represents in terms of production standards, norms, origin or ingredient requirements. One of the reasons for this could be that there are too many quality labels on the Czech food market, which can cause confusion in consumers´ perception of food quality labels and Czech consumers can confuse food quality labels with private labels or other brands. Another reason can be the influence of price on consumers´ decision making as for many shoppers in the Czech Republic, price is the most important criterion in the process of purchasing food.

The final part of the study examined consumers´ views on food products marked with quality labels. Nearly 95% of the respondents rather agree that labelled foodstuffs meet their expectations, while only 58% of consumers consider labelled products to have higher quality in comparison with conventional products. As for the question whether quality labels are trustworthy, 61% of those surveyed responded approvingly, while 19% absolutely agree and 42% rather agree with this statement. At the same time, 72% of the respondents are willing to pay more for the labelled food products than for those unlabelled, simply because they view

labelled foodstuffs as products with higher quality or some exceptional value, or in case of Bio label they can expect products to be healthier. In conclusion, approximately two thirds of consumers trust quality labels and almost three quarters are willing to pay extra money for such labelled products. However, as a matter of fact but somewhat paradoxically, the awareness of these labels and knowledge about their meaning is not high. Therefore, the question remains whether and what actual value labels of quality have on the food market in the Czech Republic.

In the future, the study could be repeated with a bigger sample of respondents and better structure of certain demographic categories. Information from the research can be applied in decision making about the effectiveness of campaigns for the support of food quality labels on the governmental level and for further planning in food quality.

ACKNOWLEDGEMENT

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Transformation of the Russian Reinsurance Market: Trends, Problems, Prospects

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Abstract: This article considers current issues of modern legal regulation and the financial component of the reinsurance market in Russia. The authors focus attention on the impact of international and domestic financial crises within the last decade, on the development of the Russian reinsurance market. Based on critical reviews of key indicators of Russian reinsurance market development for 2005-2016 and the beginning of 2017 revealed that its main opportunities and risks, identified drivers of development and factors that hinder its growth. Particular attention is paid to the author's work experience with the national state reinsurer, the Russian national reinsurance company. This allowed the authors to formulate a number of recommendations on improving the regulation of the reinsurance market in Russia and to propose directions for strengthening its financial component.

INTRODUCTION

At the present stage of development of the global financial market, characterized by the integration and globalization of national economies, the role and importance of reinsurance as one of the most important financial regulating instruments for the economic relations is growing. This is due to the fact that reinsurance is defined as a global business, based on diversification of risks by types and territories. The development of the reinsurance market is of particular importance for Russia, since under the uncertainty of functioning of the Russian economy, the generation of new types of risks by the geopolitical factors and by the innovative form of national economy development as well, it is the reinsurance that can become an effective mechanism for maintaining the economic equilibrium and financial security of the society. The mechanism of reinsurance sustainably guarantees the additional protection of economic interests of the participants of the insurance processes and acquires a strategic value in the context of the macroeconomic stability of the state economy.

The Russian reinsurance market is traditionally attractive, as it is filled with catastrophic losses, both on natural disasters and on large-scale industrial risks. However, despite the fact that significant attention is paid to the development of this sector both from the state and from professional reinsurers, the Russian reinsurance market remains one of the most volatile segments of the economy for quite a long period. This fact actualizes the need to create new and to develop the existing legal and financial regulating instruments for the Russian

reinsurance market, the practical implementation of which should be based on concerted actions between the bodies regulating the Russian reinsurance market and its professional participants.

The purpose of this study is to determine the prospects for the development of the reinsurance market in Russia in the context of globalization. In the service of this aim, the following problems are set and solved:

- the features of the functioning and development trends of the Russian reinsurance market are studied;

- the factors, determining its development, and the problems, hampering its growth, are identified;

- the directions of the reinsurance market development in Russia are determined within the framework of the development of the world reinsurance market.

1 LITERATURE REVIEW

The problems of reinsurance are the subject of study for a sufficiently large number of researchers.

Reinsurance is an integral element of the insurance market, providing the financial stability of insurance organizations. Reinsurance provides a financial stability and normal activity of any insurer, regardless of the size of its own capital and insurance reserves. Currently in Russia, the transformation of the reinsurance market caused by its instability is observed. In this connection, the world experience in the formation and regulation of the reinsurance market is analyzed (Burca, & Batrinca, 2014; Upreti, & Adams, 2015), including in transitional conditions (Falush, 1997).

The structure of the world reinsurance market is considered, the effectiveness of the activities of reinsurance organizations, and the effect of risk diversification on their profitability is analyzed by Biener et al. (2017) in their work. The regulation of the reinsurance markets at national and international levels is considered by Rossi, & Lowe (2002).

The main function of reinsurance is the secondary distribution of risk. As a result of reinsurance, the risks are split, the responsibility is distributed among a large number of insurance companies, both in the internal insurance market and in the external insurance market. In this context, Garven et al. (2014) consider the formation of long-term relationships between the insurers and the reinsurers as an important element in the effectiveness of the reinsurance market.

An insurance company requires reinsurance to cover its losses on large single risks, the losses on catastrophic events or risk losses in the event of a higher than average number of insured events. In this regard, the attention should be paid to the theoretical research in the field of the application of contracts for futures in reinsurance in case of catastrophes and other large insurance cases (Perrakis, & Boloorforoosh, 2018).

Due to reinsurance, the insurer is able to insure more risks than without reinsurance. The more contracts concluded by an insurance company, the more balanced its insurance portfolio is and the less fluctuations are contained in the insurance payment claims against it. However, in this situation, the insurance company needs to use an insurance model capable of controlling the risks both between the insurers and the reinsurers (Garven, & Louberge, 1996; Moller, 2004; Edoli, & Runggaldier, 2010) and between the insurers and the banks (Chen et al., 2014). In this context, the research performed by Cole et al. (2007), in which the reinsurance market is analyzed in terms of the eclectic paradigm, is of great interest.

The need for reinsurance protection is evident for all insurance companies without exception. Reinsurance is necessary to maintain their financial sustainability and to reduce the probability of bankruptcy of the insurance company (Iurchenko, & Marchenko, 2016; Lin et al., 2015; Mankaï, & Belgacem, 2016).

These studies prove the relevance of the study of the reinsurance market, especially today in the context of globalization and the instability of the world economy.

2 METHODOLOGY

The general scientific methods (dialectical logic and synthesis) and the methods of empirical research (observation, comparison, analysis) are used in this research. The analysis of the reinsurance market is based on the official data provided by the Bank of Russia (http://www.cbr.ru), the Federal State Statistics Service (http://www.gks.ru), the results of the secondary research conducted by the leading Russian rating agencies (Expert RA, National Rating agencies) and insurance associations (All-Russian Union of Insurers, Russian National Reinsurance Company). The data provided by the European (re)insurance federation (https://www.insuranceeurope.eu/), the International Group of Protection & Indemnity Clubs (https://www.igpandi.org/), Swiss Re (http: //www.swissre.com/) are used herein.

The data on the dynamics of the number of reinsurance companies and specialized reinsurers in Russia, reinsurance premiums and other indicators as of 2005-2016 and beginning of 2017 are analyzed herein.

The risks of Russian reinsurers in 2015-2017 are identified on the basis of analysis of the materials of the XXI Professional Conference on Reinsurance "Russian Reinsurance Market – Paradigm Shift", held on April 5-6, 2017.

The data on the SWOT analysis of the Russian National Reinsurance Company are obtained based on the analysis of the "Strategy for the Development of Insurance Activity in the Russian Federation until 2020" approved by the RF Government Decree No. 1293-r dated July 22, 2013 and the materials of the above-mentioned conference.

Moreover, the regulatory legal acts of Russia in the field of insurance are used herein, for example, the Federal Law "On the Organization of Insurance Business in the Russian Federation" dated November 27, 1992 No. 4015-1 (as amended on July 26, 2017).

3 RESULTS AND DISCUSSION

The scientific and technological progress, the innovative development and globalization of the world economy have caused the emergence of major risks (space, marine, industrial, etc.), the damage from the occurrence of which cannot be covered by the individual insurers independently due to their inability to compensate them within the same insurance portfolio. To maintain the financial stability of the insurance company and ensure the protection of its capital when dealing with such risks, the system of redistribution of large risks between the insurers themselves is used: the coinsurance and the reinsurance (Chen et al., 2014; Lin et al., 2015; Potrafke, 2015).

If we consider these insurance sectors in terms of financial significance in the redistribution of the risks, the reinsurance carries a more significant burden than co-insurance, as it is the financial mechanism, balancing the insurer's insurance portfolio and ensuring its financial stability. This, in turn, is the basis for increasing the volume and quality of insurance services and contributes to the improvement of the insurer's protection (Jaspersen, 2016; Mankaï, & Belgacem, 2016).

Despite the fact that the problems that arise in this industry and the prospects for its development are the subject of discussion between both legislative bodies and professional reinsurers, the Russian reinsurance market have no sustainable trend of development due to the insufficient coordination and coherence between the Russian regulatory authorities regulating the market and the re-insurers themselves (Kaygorodova, & Seferyan, 2017).

According to Fig. 1, over the past 12 years the number of insurance companies licensed for the reinsurance in Russia decreased by 72.85% (from 652 units in 2005 to 177 units in 2016).

Fig. 1 Dynamics of the number of reinsurance companies and specialized reinsurers in Russia in 2005-2016
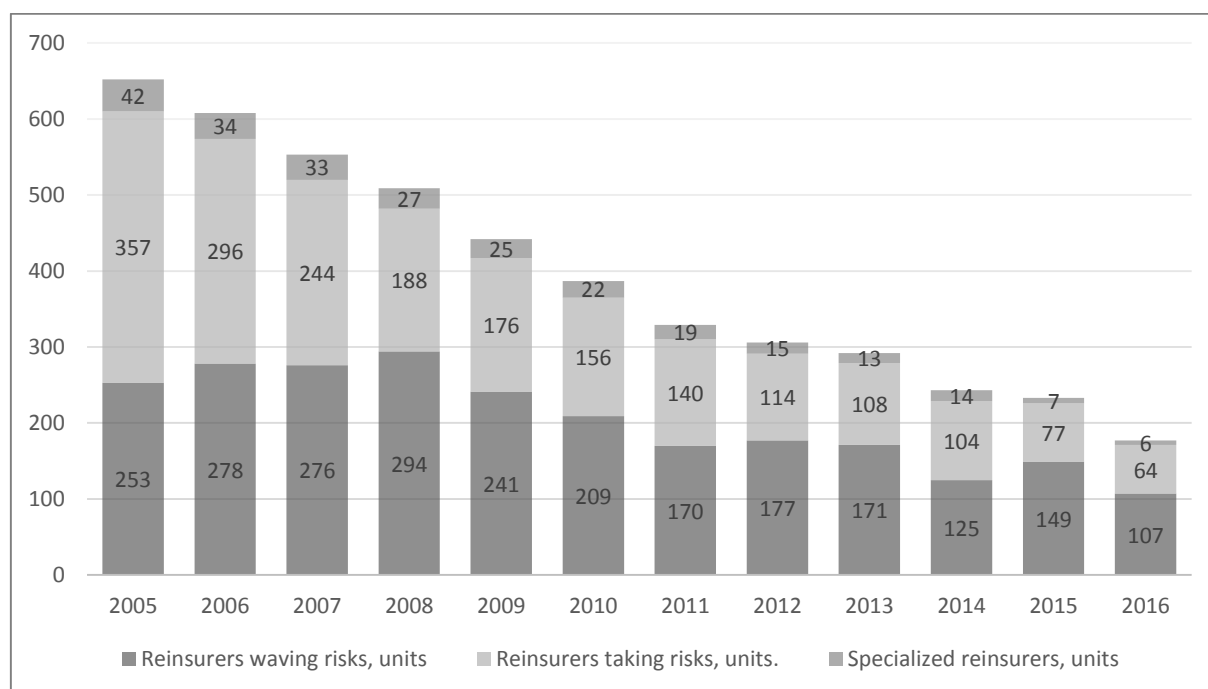
Source: Data provided by the Bank of Russia (www.cbr.ru) and Goskomstat of Russia (www.gks.ru)

Simultaneously, the rate of reduction of the reinsurers taking risks amounted to 82.07%, which led to a decrease in their share in the composition of all Russian reinsurers from 54.75% to 36.16%. At the same time, the number of specialized reinsurers in 2005-2016 decreased by 7 times – from 42 units to 6 units.

The reduction in the number of professional participants in the Russian reinsurance market in 2005-2016 is accompanied by a decrease in business volumes and the appearance of signs of stagnation (Figs. 2 and 3).

Thus, in 2005-2011, the Russian reinsurance market was marked by a significant reduction in incoming reinsurance premiums (by more than 65%), which was due to the clearing of reinsurance from the mass schemes, consolidation of the market, dumping, and the impact of the global financial crisis of 2008-2009. A significant increase in contributions (by 20.00%), noted in 2012, was associated with overcoming the consequences of the crisis of 2008-2009 due to the increase in the "schemes" and the development of some segments of the domestic market (compulsory insurance of hazardous production facilities, the insurance against accidents, CNC insurance, etc.). The slowdown in the growth rate of the Russian reinsurance market in 2013-2014 is a consequence of the slowdown in the growth of the domestic insurance market, a reduction in the share of "schemes" and the volume of so-called "pseudo

insurance". In 2014, the situation was exacerbated by the negative impact of geopolitical factors: the introduction of economic sanctions against Russia because of the situation in Ukraine has lowered the ratings of the largest Russian companies, which significantly reduced the flow of foreign reinsurance premiums, which are a potential driver of the Russian reinsurance market.

Fig. 2 Dynamics of premiums on incoming reinsurance in Russia in 2005-2016 and the first half of 2017
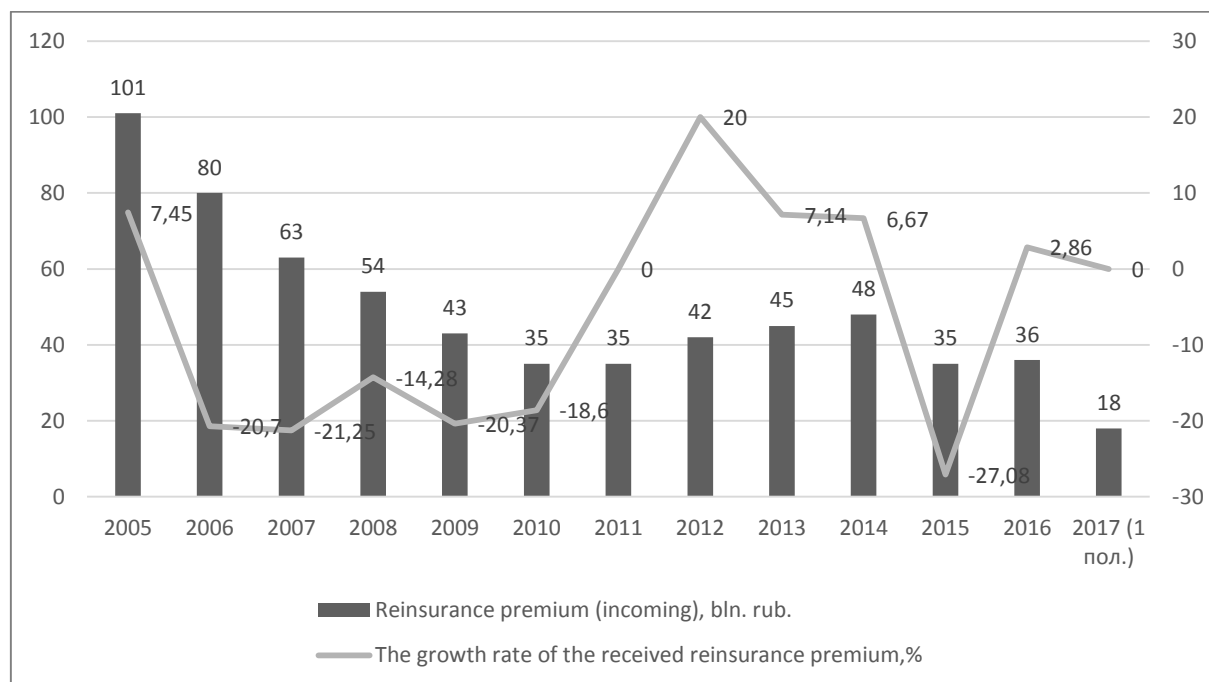
Source: Data provided by the Bank of Russia (www.cbr.ru) and the Russian National Reinsurance Company (www.rnrc.ru)

In 2015, there was a sharp decline in volumes due to the reduction in the internal reinsurance market as a result of the withdrawal of a significant number of players from the market because of the revocation of their licenses by the regulator, the consolidation of insurance companies and high competition for direct insurance in this segment of the insurance market. In 2016, the negative dynamics was overcome, and the total volume of premiums on incoming reinsurance in Russia grew by almost 3%, which is significantly less than in 2012-2014, when the market did not fall below 42 billion rubles. According to the forecasts of the experts of the Russian National Reinsurance Company (hereinafter – RNRC), in 2017 there will be no drastic changes in the incoming reinsurance market, and its volume will remain at the level of 2016.

Fig. 3 Dynamics of premiums on outgoing reinsurance in Russia for 2005-2016 and the first half of 2017
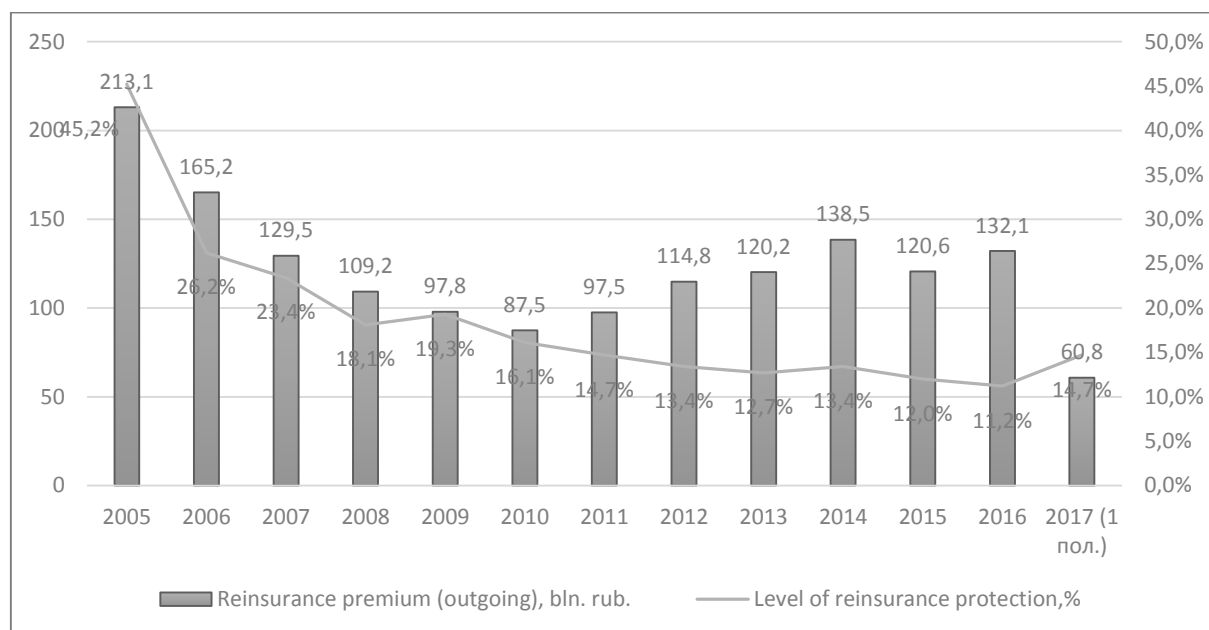
Source: Data provided by the Bank of Russia (www.cbr.ru) and the Russian National Reinsurance Company (www.rnrc.ru)

The dynamics of the outgoing reinsurance key indicators is similarly different. In 2005-2010, a steady decrease in premiums transferred to reinsurance was observed – more than 2 times: from 185.9 billion rubles to 87.5 billion rubles, which was caused by the same factors that affected the reduction of the premiums on incoming reinsurance in this period. 2011 was a turning point for the outgoing reinsurance market – until 2014 it was expanding, which resulted in the growth of insurance premiums transferred to reinsurance by more than 1.5 times – to 138.5 billion rubles in 2014. However, due to the influence of unfavorable political and economic factors in 2015, the outgoing reinsurance market fell to 120.6 billion rubles. The growth in the outgoing reinsurance in 2016 was mainly due to the "preparation" of a number of companies for the start of the operation of the RNRC. In general, it can be supposed that the Russian reinsurance market, on the one hand, is subject to the influence of the global trends, on the other hand, it has its own specifics. For example, the volumes of the Russian reinsurance market tend to decrease, in the same way as in the world due to the consolidation of companies and the increase in their own retention (Iurchenko, & Marchenko, 2016; Weiß, & Mühlnickel, 2014; Biener et al., 2017). However, the reason is not only in the mergers and acquisitions (Prokofjeva, 2016), but also in the withdrawal of companies from the market on their own initiative or on the initiative of the regulator. Besides, the following can be attributed to the number of purely Russian trends (Kaygorodova, & Seferyan, 2017):

- a more accurate approach to taking risks on one's own withholding due to the withdrawal of a number of insurers and the enlargement of the market;

- a decrease in the capacity of the Russian market, including through own retention of companies;

- the tariff reduction, and to a greater extent than the world average;

- the reduction of a number of optional risks as a result of the expansion and increase in the obligatory capacity of the insurers;

- the continuation of the tendency of reorientation of the assignors from Russian reinsurers to foreign ones and, as a result, the reduction in the number of specialized reinsurance companies due to the reduction of their base of existence;

- the increase in the number of obligatory programs and facilities;

- a more selective approach when taking classical risks into reinsurance;

- a growing interest in non-classical insurance products, softening of decision-making systems;

- the development of co-insurance for specific risks among Russian companies;

- African and MEHA countries began to consider risks from Russia, the CIS and the Middle East (Yanase, & Limpaphayom, 2017);

- the return of some cedant to proportional reinsurance, as a sign of market immaturity and low margin in direct insurance.

Over the past 3 years, 2015-2017, Russian reinsurers were forced to work in the conditions of influence on their activities of internal and external risks, most of which were not inherent in the domestic reinsurance market before (Fig. 3).

Fig. 3 Risks of Russian reinsurers in 2015-2017
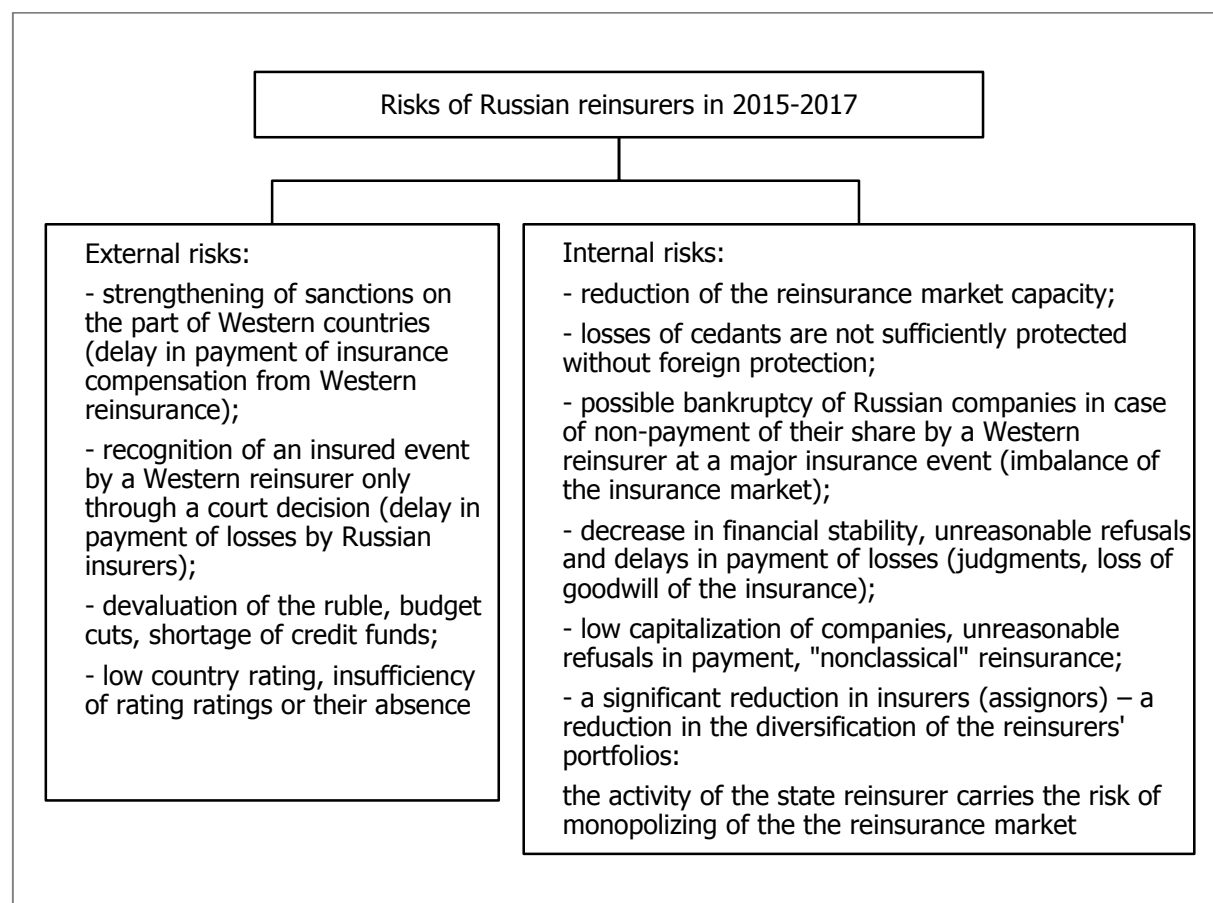
Source: developed by authors

At the same time, it should be noted that reinsurance is a business significantly depending on the international insurance market, because Russian insurers are forced to turn to foreign

reinsurance companies because of insufficient capitalization to maintain their financial stability. This resulted in an increase in the amount of the foreign reinsurance premium by more than 3 times in 2005-2016 – from 5.3 billion rubles to 16.5 billion rubles. (Fig. 4).

Fig. 4 Dynamics of premiums and their share on incoming foreign reinsurance 2005-2016 and the first half of 2017
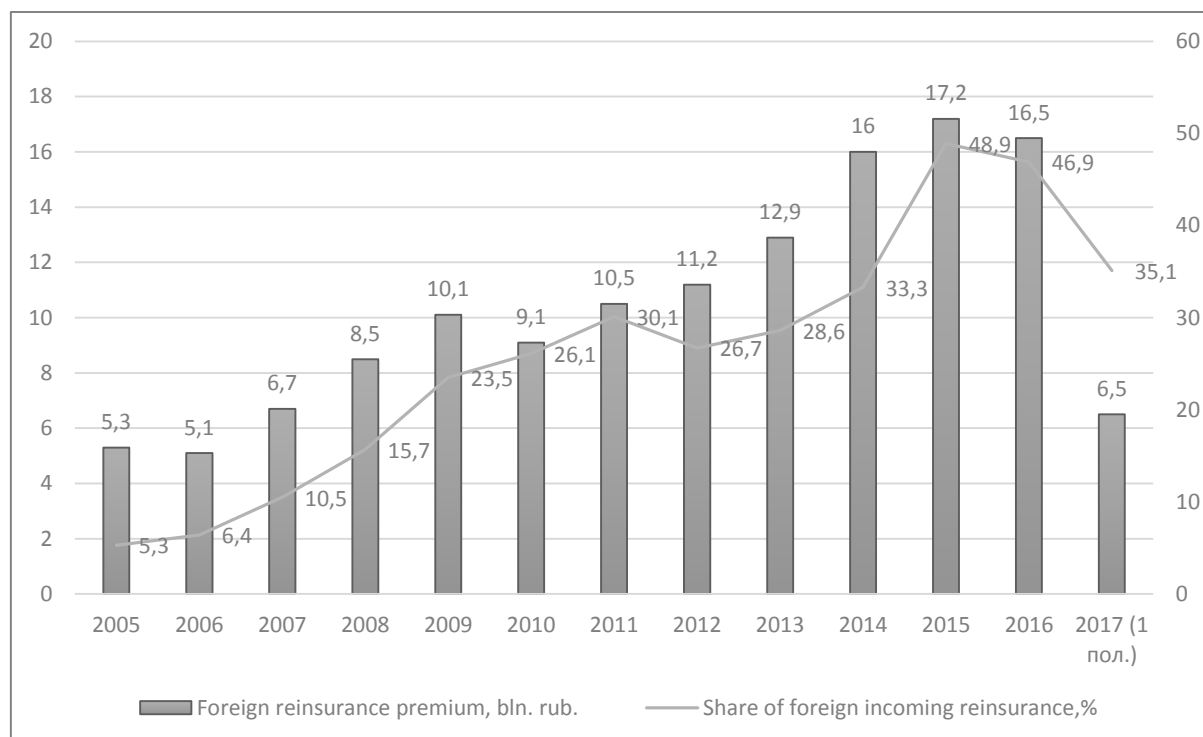
Source: Data provided by the Bank of Russia (www.cbr.ru) and the Russian National Reinsurance Company (www.rnrc.ru)

As a result, the share of incoming reinsurance from abroad in 2016 reached 46.9%, having increased by 9 times. This is due to the greater reliability of foreign reinsurers in comparison with the domestic ones, their vast experience in the field of reinsurance and the regulated international legal framework in this direction.

In our opinion, the flow of reinsurance premiums from abroad to Russia in 2017 should be significantly reduced because of the possibility of extending sanctions, which is determined by their modern structure:

1   The prohibition on reinsurance of the insurers under sanctions, including those, in the capital of which the majority of ownership belongs to the persons under sanctions, including the ultimate beneficiaries.

2   The prohibition on reinsurance of the individuals and companies included in the sanctions lists – the content of sanctions may be different.

3   The prohibition on reinsurance of certain risks (sectoral sanctions): deep-sea and offshore drilling, development of gas and oil fields in the Arctic; military products or dual-use products, with the exception of those related to space exploration and space launches, non-military final consumption, nuclear reactors, etc. to EU countries, and a number of other exceptions.

4   The prohibition on reinsurance of risks in the Crimea: in connection with new investments, exports and imports of goods, technologies and services.

5   The entry of the sanctions into force from the moment of their adoption – a reinsurance payment cannot be made even if the reinsurance contract was concluded before the imposition of sanctions.

6   The prohibition on the implementation of remittances through the banks under sanctions, or the accounts of the individuals in such banks.

7   Under Russian law, the prohibition of the performance of a reinsurance contract in connection with sanctions cannot be considered as a force majeure.

All this requires changing the strategic plans in the Russian reinsurance market for both the mega-regulator of the financial market in Russia and for professional participants in this market, since the largest players in the world reinsurance market are located in Europe and the USA (Albrecher et al., 2017; World Insurance in 2015, 2016), which in the current political conditions restricts Russia in certain areas. As a result, Russian reinsurers' community was forced to reorient the risks of policyholders who became the subject to sanctions from the European market against the CIS countries and Asia.

A certain interest in this direction is represented by the Chinese reinsurance market, the participants of which are being involved in the reinsurance of the risks of the Russian market for major infrastructure and energy projects. However, it should be understood that in order for Chinese reinsurers to actively enter the Russian market with their reinsurance services, especially for large construction projects, it is necessary to involve them as contractors or co-investors. At the same time, one should not expect the Chinese reinsurance market to replace sufficiently the similar European markets in the near future. But this situation will make it possible to activate the positions of Russian reinsurers, who have a sufficient budget and a clear understanding of their position in the international market.

The current realities of the Russian reinsurance market increase the need to discuss the legal and financial issues of its modernization. For this purpose, the Committee of the All-Russian Union of Reinsurance Insurers annually holds conferences on reinsurance, in which the leading players of national and foreign reinsurance markets take part.

XXI Conference on reinsurance "Russian Reinsurance Market – Paradigm Shift" of the current year was held on April 5-6, 2017. The analysis of the materials of the conference makes it possible to identify the two most important areas, discussed by its participants:

1   the remaining tension in relations with Western reinsurers due to the sanctions;

2   summarizing the first results of the inclusion of the state guarantee elements in the reinsurance activities by creating a Russian national reinsurance company.

In this context, it should be noted that with respect to incoming foreign reinsurance, it became possible to consider only the indirect impact of the sanctions, because it manifests itself unnoticed, since it does not affect directly the insurance relations, but is absconded by other factors, which have no direct relation to the sanctions: the macroeconomic factors (a recession in the economy, curtailing the investment programs), and specific factors, inherent only in insurance (instability in motor insurance, dumping and uprating of the commission in almost all sectors, except CNC, the aggressive to insurers jurisprudence, the excessively high costs of business running (BRC), low quality assets, etc.).

It should be noted that the estimates of the indirect impact of sanctions on the insurance market are always rudimentary, speculative-prognostic and probabilistic (Kaygorodova, & Seferyan, 2017). For example, Western sanctions have already led to a decrease in the country

rating of Russia and reliability ratings of the individual insurers and reinsurers, and this will inevitably affect the volumes of incoming reinsurance and the cost of outgoing one.

The accumulated problems in the Russian reinsurance market, the need to ensure its further growth, the limited possibilities for the reinsurance of the risks of certain industries and companies under sanctions in the European and American markets resulted in the state intervention in this market by creating a state reinsurance company following the example of France, Brazil, Argentina, India, etc., including our closest neighbor – Belarus, where the Belarusian National Reinsurance Organization (BNPO) was established. The model of its creation with subsequent initiation, joining of the interstate reinsurance companies of the countries of the EAEC, the SCO and the BRICS, as well as the withdrawal of the state from its composition, was formed back in 2015 at the XIX Conference on Reinsurance "Reinsurance in the New Economic Landscape: Opportunities and Risks" (Fig. 5).

Fig. 5 A phased model for the establishment of the Russian National Reinsurance Company
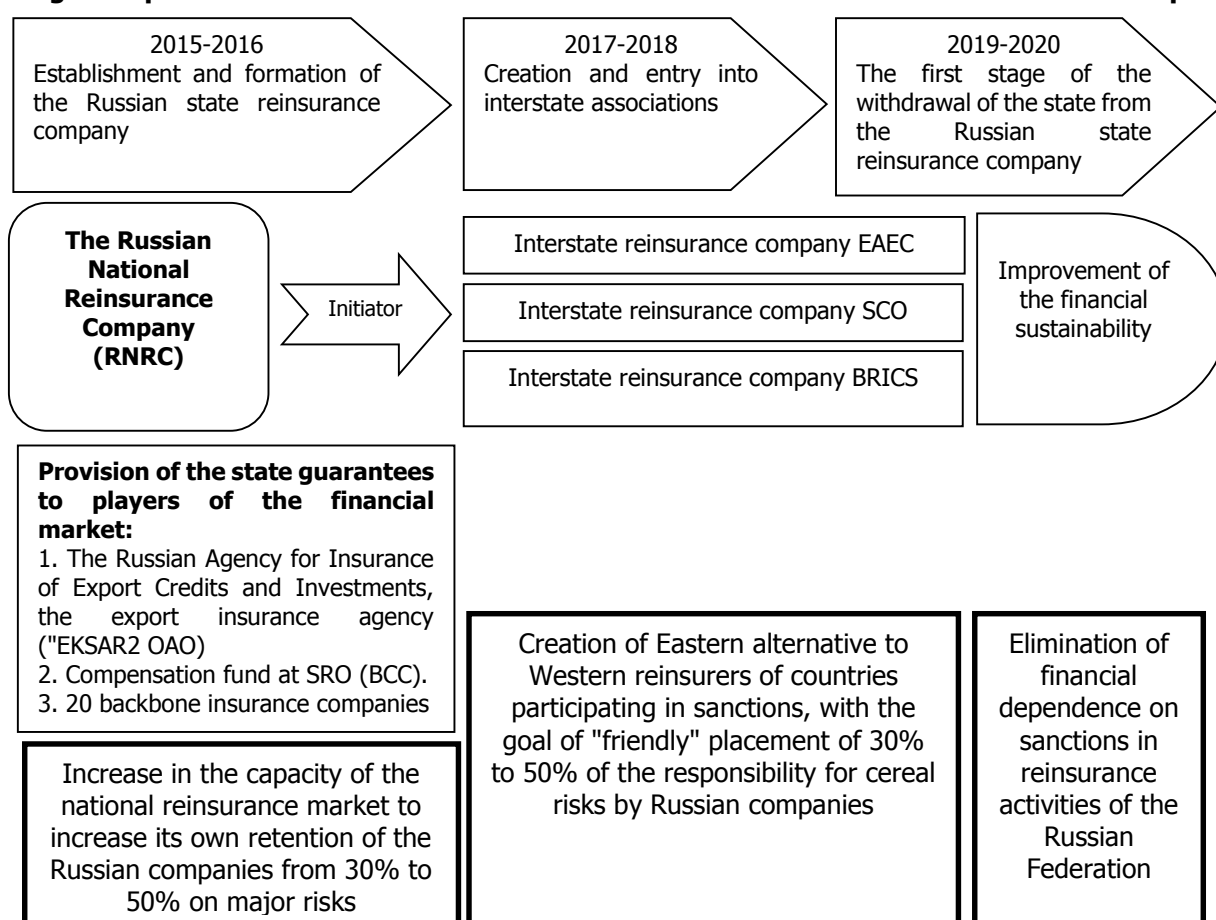
Source: developed by authors

The joint stock company Russian National Reinsurance Company was established pursuant to the Federal Law No. 363-FZ of July 3, 2016 on amending the Law on the Organization of Insurance Business in the Russian Federation by a decision of the Board of Directors of its sole founder, the Central Bank of Russia, which owns 100% of the shares of the company.

The strategic goal of the RNRC is to achieve the leading positions in the reinsurance market among Russian insurance companies by covering at least 15% of the Russian outgoing reinsurance market on basic types, forming at least 20% of the asset portfolio by the

international business, the best practice of asset management among the insurance companies, the system, the winning of the positions of the national center of insurance competencies, the readiness for entering the IPO.

Since January 1, 2017, the insurance companies are required to transfer 10% of the risks transferred to reinsurance to RNRC, and they will also be able to reinsure other risks with the consent of the RNRC. The emergence of a state reinsurer in the Russian insurance market is primarily intended to solve the issue of reinsurance of the sanction risks, to expand the opportunities for the reinsurance of the risks in the domestic market and to reduce the share of premium to be transferred abroad.

In our opinion, the work of the RNRC will have a positive impact on the Russian reinsurance market. Thus, according to the results of the first half of 2017, the share of the RNRC in the domestic incoming reinsurance market is 25.4%. Without taking into account the RNRC premiums, instead of growth by 6.5%, the incoming reinsurance market would show a 20% drop due to the withdrawal from the market of a number of companies – Unity Re, Transsib Re, Zhaso, Transneft, Selekta (the company returned to the market in Q2 2017), as well as a decrease in the activity of a number of Russian players, such as Rosgosstrakh, Kapital Strakhovanie, SCOR, etc.

However, a 10% mandatory assignment means that the state reinsurer will initially operate under the quasi-market conditions, and in case of significant expansion and tightening of the sanctions against Russia, the development of the domestic reinsurance market may go according to the scenario of increasingly eliminating competition and creation of a state monopoly by increasing the size of the obligatory cession. In these circumstances, it is necessary to take a decision on the gradual reduction of the share of mandatory cession in the RNRC, which will reduce the likelihood of the monopoly risk and will promote the development of free competition in the Russian reinsurance market.

Thus, solving the problems that have arisen in the Russian reinsurance market, the participants of this system, in our opinion, should concentrate their attention on the following areas:

1   Formation of additional reinsurance capacity for Russian cedants by creating the internal additional financial mechanisms with the state support.

2   Formation of additional reinsurance capacity outside Russia by creating the additional financial mechanisms of EAEC, SCO and BRICS.

3   Reinforcement of the arrangement of the reinsurance protection in the countries not participating in sanctions against Russia.

4   Reduction of the contractual relations with the insurance companies of the countries participating in sanctions against the Russian Federation.

CONCLUSION

The modern reinsurance market in Russia is developing under the influence of global trends (market consolidation, high consolidation of insurance groups, the influx of alternative capital, etc.), taking into account the Russian specifics (the withdrawal of companies from the market on the regulator's initiative, the availability of sanctions, the creation of a national reinsurer, etc.). Definitely, the presence of a number of financial and legal problems hinders the sustainable development of not only the domestic reinsurance market in Russia, but also the outgoing reinsurance. But, at the same time, these problems can become a "locomotive" in speeding up the revitalization and restructuring of this segment of the Russian insurance market.

The results of the study made it possible to draw the following conclusions:

1   the Russian reinsurance market operates under harsh business conditions, which caused a decrease in its capacity and the number of specialized reinsurance companies due to a reduction in the base of their existence;

2   the establishment of the RNRC will lead to structural shifts in the reinsurance market of Russia, an increase in the capacity for sanctions risks and will contribute to the improvement of the quality of risk portfolios of the insurers;

3   the further development of the reinsurance market is connected with the development of new products (for example, reinsurance of cyber-risks or environmental risks), involving the participants who do not support the anti-Russian sanctions (BRICS countries, Asia, the Middle East), creating a single reinsurance space within the framework of the EAEC and SCO.

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The Aging Workforce as the Challenge for Sustainable Development

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Abstract: The paper is a discussion concerning the essence and importance of the use of available labour resources in the European Union, with focus on aging workforce. Demographic aging poses a number of challenges which are even more important considering the fact, that older people are both beneficiaries of, and contributors to, sustainable development. Their activity rate is decreasing with age, while the share of people aged 50 and over in the population is growing. Therefore, increasing employment opportunities among older workers is essential to ensure that the labour market adapts to meet the needs of the aging population. The main research questions are: "what is the scale and dynamics of activity of elderly people in the EU?", "how big are disparities across the UE?", "are demographic changes a threat or an opportunity to sustainable development?" The analysis covers the period between 2004 and 2016; the main source of data used in the paper is Labour Force Survey, downloaded from Eurostat database. Considering the aforementioned conditions, the goal of the paper is to present spatial diversity of activity of people aged 50 and over in the EU-28 between 2004 and 2016.

Keywords: activity rate, sustainable development, European Union, older workers

JEL Classification codes: J21, J70, O52

INTRODUCTION

The issue of demographic changes has been included in the discussions concerning sustainable development for many years. Elderly people form a group that is particularly susceptible to poverty and exclusion which is caused by their early professional deactivation among others. Maintaining activity of elderly people, especially in the sphere of their professional life, is one of the factors limiting the risk related to that. Considering the fact that professional activity rate is declining with age, while the share of people aged 50 and over is growing, it is important to implement actions aiming at increasing their employability on labour market. Given the fact that demographic ageing actually comprises (in various degrees and at different pace) almost all the EU countries, the issue of elderly population, both with reference to their needs and rights, is becoming one of the major subject areas in discussions on sustainable development. The opportunity to use available human capital resources not only in the form of their education, skills and professional qualifications but also health, positive attitude to life-long learning, as well as social and cultural capital of this age group has measurable economic benefits and is a determinant becoming more important for effective production than classical means. Therefore, the objective of the paper is to present spatial diversity in the level of economic activity of the people aged over 50 in the EU member states between 2004 and 2016, and challenges related to ageing of available labour resources to sustainable development.

1 LITERATURE REVIEW

Being aware of demographic changes observed in European population, actions aiming at supporting activity and extension of professional activity period observed in European population of mature workers are implemented more and more often (D'Addio et al., 2010, Balcerowicz-Szkutnik et al., 2015). It must be stated that there is no consensus regarding the limit of "mature" age or "elderly" worker. In the documents of the European Union the concept is prevailing that people being close to retirement age should be perceived as elderly, i.e. in Europe the group aged 55-64 (European Commission, 2007) and in OECD studies workers aged over 50; in Polish studies various age groups are adopted, for example 45 and older, 50 and older, 60 and older and 65 and older (Kotowska, Grabowska, 2007, Stypińska, 2015). On the basis of the literature review, analysis of results of conducted research, and while considering comparative character of the analyses, the paper adopts the age limit for elderly people on labour market to be 50-64. However, it must be remembered that the adopted limit has a contractual and unstable character, because old age limits are not only determined by belonging to a specific age group. This is because being older than 50 does not cause immediate and automatic change in the way work is performed. Nonetheless, the people are often perceived as less efficient and useful in the organisation which proves their professional discrimination.

In operating national and European Union documents, special attention is paid to equality of all the people before the law, and the necessity to guarantee protection against discrimination because of any reasons, including age (Directive, 2000). Therefore, discussed issues include the possibility to be free to choose employment, provision of working conditions favouring health preservation, labour safety and worker's dignity, security of the right to fair pay or the use of social security benefits for provision of work among others.

The issue of increasing participation of elderly people in the labour market is addressed in many strategic documents of the European Union, including European Employment Strategy, Lisbon Strategy, or "Europe 2020" strategy (2010, Warzecha & Wójcik, 2017), as well as in directives, declarations and resolutions. For example, in the so-called Bonn Declaration (2005) adopted by the European Union, they emphasise the importance of active preparation of economy for demographic changes. This shall provide the opportunity for improvement in the quality of life, economic growth and competitiveness of Europe. Commenced cooperation within European network of regions that promotes the model of *silver economy* focuses on supporting increase in professional activity of elderly people, using their intellectual potential and experience, life-long learning, enhancement of inter-generational solidarity, and primarily growth of awareness of the opportunities resulting from population ageing and the ways to satisfy their needs.

Many international initiatives are implemented in this area by various scientific entities, research institutes and organisations. Special emphasis should be put on the projects implemented by Eurofound (European Foundation for the Improvement of Living and Working), Cedefop (European Centre for the Development of Vocational Training), and EU-OSHA (European Agency for Safety and Health at Work) among others. International SHARE (Survey of Health, Ageing and Retirement in Europe) project that focuses on people aged over 50 is one of the examples of implemented initiatives. Its goal is to create a database linking information from many essential areas of life of this growing group of European population, including health condition, financial and family situation, activity on labour market and retirement decisions (www.share-project.org).

EU member states that are most successful in the sphere of support for professional activity of elderly people include Germany, France, Denmark, Sweden, Finland and Holland among others. Attention should be paid here to holistic approach they apply to the process of labour

resources ageing and its consequences both in the individual dimension as well as on the level of enterprises and the entire population. Its major assumptions are presented in fig. 1.

Fig. 1 The framework of integrated policy of active ageing of labour resources
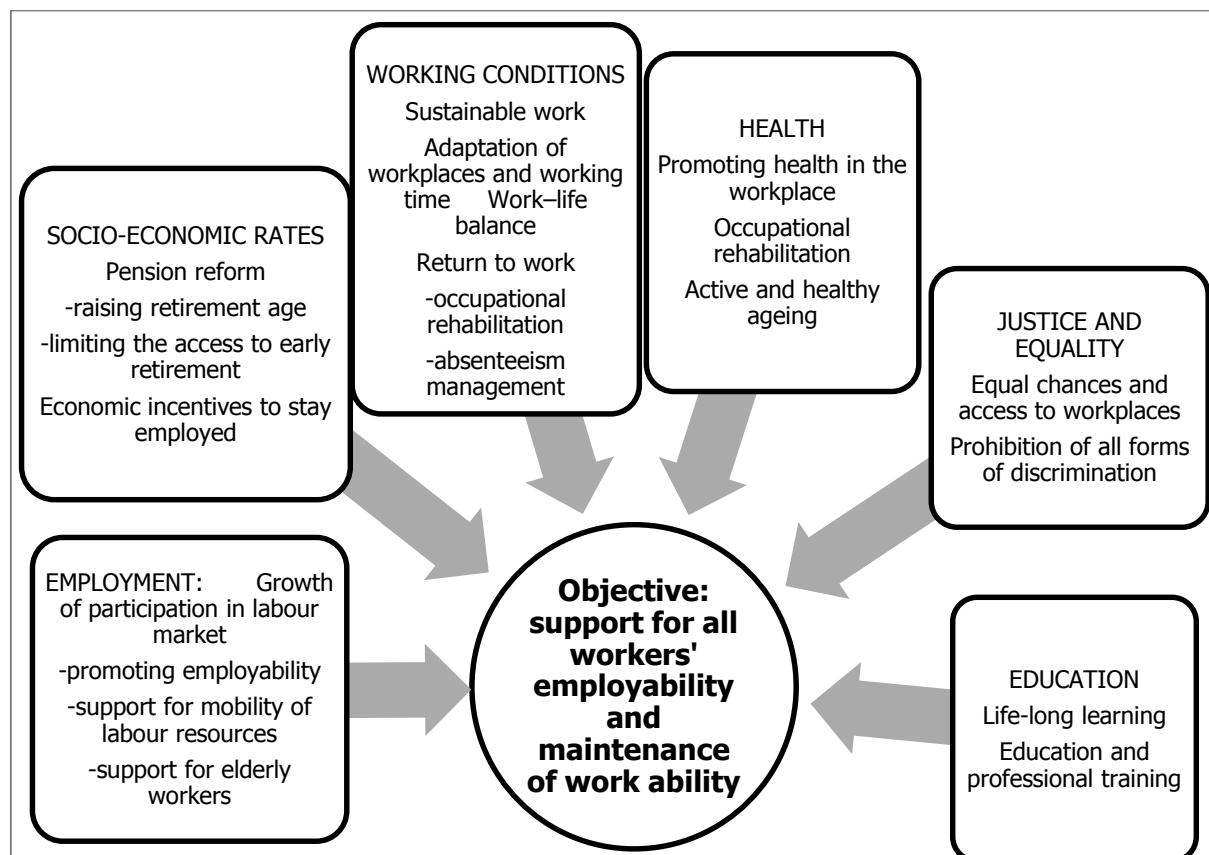
Source: own case study based on: (EU-OSHA, 2017, pp. 12).

2 METHODOLOGY AND DATA

Raising this subject area is associated with an attempt to answer the following questions: "What is the scale and dynamics of economic activity of elderly people in the EU?", "How big is the difference between individual EU member states?", "Is ageing of labour resources an opportunity or a threat to sustainable development?" Considering this, the situation of people aged over 50 on the labour market in EU member states is analysed in further part of the paper. The analysis of the situation on labour market needs application of various economic measures and rates. In economic literature focused on general assessment of the situation of labour market, measures describing trends in the sphere of labour supply and demand are most often applied. These rates are somehow interdependent, however, because of the subject area undertaken in the paper, the main focus is put on the scale and dynamics of professional activity of elderly people.

A quantitative, descriptive approach is adopted under the study. For the purpose of analysis, data and information collected during course of the study is obtained from secondary sources. All data is collected from Eurostat and include the years 2004-2016. The starting point for conducted analysis are changes in the population size and structure (e.g. age median) and demographic forecast by 2060. Referring the activity rates to people aged over 50 allows for diagnosis and assessment of their situation on labour market. It is especially important because this age group constitutes one of the populations discriminated on labour market, and

a simplified way of perceiving this social group brings a lot of negative consequences (Topgul, 2016).

3 RESULTS AND DISCUSSION

Progressing process of ageing of the Polish population at low professional, as well as social activity of elderly people is confirmed among others by the "Active Ageing Index 2014" ranking (Zaidi & Stanton, 2015), in which Poland had the last, 27th place among EU states. This index allows for the analysis of the situation of elderly people, and is developed on the basis of data concerning four dimensions of their life: employment, social participation, self-reliance (independence), healthy, secure life and creation of conditions conducive to active ageing. Although in the sphere of employment Poland is located on slightly higher position (24th), it is not satisfying in any way. This low rank of Poland forces focussing the interests of social and economic politicians on the issues associated with activation of elderly people. It represents not only their participation in social life, but also in professional life the essence of which is presented in further part of the paper. At the same time, it must be stated that people aged 50 and over do not form a uniform group, they are diversified with respect to sex, education, professional experience, occupied position or practised profession. However, in many cases their early withdrawal from the labour market is a common feature. This situation is determined by many factors including health problems, disability, too low or outdated qualifications, stereotypes among employers concerning efficiency of middle-aged people, as well as psychical barriers, including lack of confidence in their abilities (Skórska, 2018, Grzega 2015).

3.1 European population ageing – situation and perspectives

Similarly to references to other complicated socio-economic structures, factors determining the size and structure of labour supply operate in connected way and form complex matrices. The purpose of their presentation is to show their abundance, diversified nature and often complex way of affecting the supply side of the labour market. Assuming that the number of people at the age of working capability, it must be stated that changes in the population situation and structure (by age, sex, education, place of residence) occur as the result of natural movement, i.e. births and deaths, and as a result of population relocation. Progressing process of ageing of the European population is proved by regularly growing age median among others. Its increasingly higher value must be indicated regardless of differences between individual EU-28 states. While in 2004 the median for EU-28 was 39.2 years and in 2016 it was 42.6, it is estimated that in 2060 it will have reached 46.8 years. The countries of the highest age median include Germany (45.8 years), Italy (45.5 years) and Portugal (44 years). Still relatively good demographic situation in Poland, similarly to Finland, Ireland, Luxembourg and Cyprus is proved by the age median that was not higher than 40 years in these countries. However, it must be emphasised that by 2060 the median will have been higher than 50 years in Poland, similarly to Greece, Italy, Cyprus and Portugal. It is undeniable that as a result of demographic processes, labour force resources in Europe will be decreasing in the following decades, which is presented in fig. 2. According to European Commission projection, by 2060 only in Poland the labour resources will have decreased in comparison to 2010 by 6.2 million, even though the projection includes calculation of growth in professional activity from the level of 65.8% in 2010 to the level of 67.2% in 2060 (in this projection the maximum rate of activity will have been reached around 2025 and will have been around 69%). At the same time, it has been assumed that mean effective age of leaving the labour market will have grown for men from 61.8 years in 2010 to 64 years in 2060, whereas for

women from 58.6 years to the level of 60.7 years (European Commission, 2012). In many European countries these changes will be experienced even more severely.

Fig. 2 The ratio of population aged 65 years and more in Eu-28 between 2015 and 2060 (%)
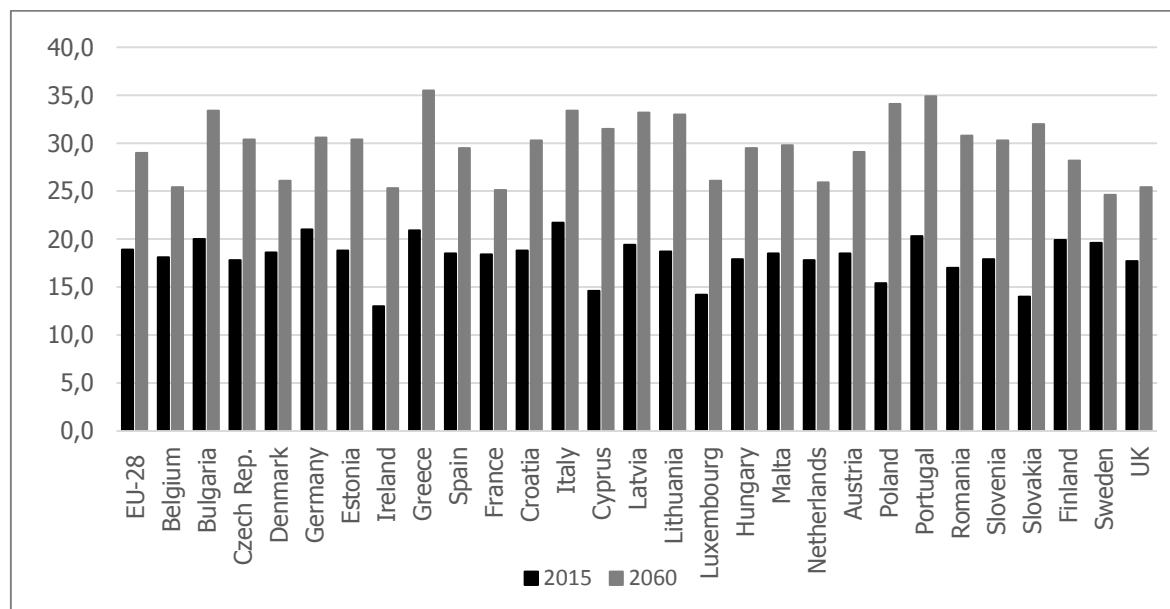
Source: own case study on the basis of data from Eurostat
http://ec.europa.eu/eurostat/data/database (accessed 12.12.2017)

Therefore, it should be assumed that in the coming decades, European labour market will increasingly be more the "employee market", and national economies will recruit the labour force from abroad more and more willingly. Apart from population processes the labour supply is also significantly affected by educational aspirations, family model, subjective assessment of benefits and other incentives encouraging professional activity, or inviting to limit it or abandon. Labour supply is also considerably influenced by cultural and social determinants, including stereotypes functioning in the society concerning for example the role of women and elderly or disabled people. Approaching the population ageing through the prism of its economic consequences refers to the question of proportion between the "producers" (workers) and "consumers". Börsch-Supan (2006) estimates that it is not possible to achieve such growth in productivity of the people currently active on labour market that could compensate for the lack of workers. This, in turn, can lead to weakening of economic growth of European countries. Increase in elderly people activity on labour market seems to be the only way that could alleviate the negative results of population ageing.

3.2 Professional activity of people aged 50+

The analysis of the rate of professional activity allows for stating that between 2004 and 2016 its value was regularly growing, both with respect to the total labour resources, and people aged 50+. While in 2004 this rate was in the EU-28 69.2%, in 2016 it was higher by nearly 4 percentage points. In the analysed period the rate of professional activity among people aged over 50 was considerably lower (55.5% in 2004). However, the dynamics was definitely higher (growth by 12.3 percentage points in 2016), which is presented in table 1. Poland belongs to the group of countries of relatively low level of activity of elderly people, however it does not

result from high unemployment rate, but the high rate of professionally passive people among them. It is important that the rate of professional activity is growing faster in the countries in which it was initially low (for example Poland, Italy, Austria), whereas in the countries of high activity in 2004 (e.g. Denmark, Finland), the dynamics of changes is remarkably lower.

Table 1 The rate of professional activity of the population aged 50-64 in EU-28 in 2004-2016 – in %

	2004	2006	2008	2010	2012	2014	2016	Changes in p.p.
EU-28	55.5	57.8	59.3	60.7	63.0	65.4	67.8	12.3
Belgium	45.3	48.4	50.3	53.8	54.9	57.9	59.9	14.6
Bulgaria	50.9	54.7	59.2	59.5	60.8	64.9	66.2	15.3
Czech Republic	61.2	62.5	63.0	62.5	64.4	68.1	71.4	10.2
Denmark	72.6	71.2	69.4	70.5	71.9	73.7	76.8	4.2
German	60.1	66.1	68.7	71.5	73.5	75.9	77.6	17.5
Estonia	64.4	70.2	72.8	72.4	72.7	74.1	77.3	12.9
Ireland	58.8	61.9	63.3	62.7	62.6	65.0	67.0	8.2
Greece	51.6	53.5	54.2	55.4	53.1	52.7	56.3	4.7
Spain	53.3	55.7	58.4	60.9	63.5	65.1	67.6	14.3
France	56.6	56.2	55.6	57.2	60.6	63.0	64.9	8.3
Croatia	45.9	48.9	50.6	52.0	52.0	52.5	52.2	6.3
Italy	44.2	46.4	48.6	50.3	54.3	58.6	62.0	17.8
Cyprus	64.6	64.0	65.6	66.7	65.7	65.4	66.7	2.1
Latvia	61.3	67.3	71.7	67.7	70.9	70.8	73.2	11.9
Lithuania	64.9	63.2	65.0	67.5	70.1	72.1	76.5	11.6
Luxembourg	47.1	49.9	51.9	55.0	57.3	59.4	57.3	10.2
Hungary	46.8	47.9	46.7	49.2	52.1	55.8	62.4	15.6
Malta	42.0	40.6	40.5	42.8	45.1	49.2	53.5	11.5
Netherlands	58.4	61.0	65.0	65.7	69.1	71.9	74.2	15.8
Austria	43.7	50.4	54.7	57.8	59.1	61.9	64.9	21.2
Poland	43.8	46.2	48.3	50.8	53.5	55.6	57.3	13.5
Portugal	61.7	63.0	63.6	64.2	63.6	64.7	67.2	5.5
Romania	49.9	53.6	54.1	51.9	52.6	53.6	53.3	3.4
Slovenia	49.0	51.1	51.6	53.0	51.3	54.1	56.2	7.2
Slovakia	53.9	56.8	59.5	60.2	61.9	62.4	65.2	11.3
Finland	66.6	68.3	69.0	68.9	70.3	71.7	73.8	7.2
Sweden	77.4	77.7	77.8	79.2	81.3	82.0	83.7	6.3
United Kingdom	66.0	66.9	67.7	68.1	69.5	71.5	73.1	7.1

Source: Ibidem.

The analysis of previously presented data confirms explicit disparities between the EU states. The span in the values of professional activity rate in the analysed age group reaches 31.5 percentage points. In 2016, in Croatia this rate reached 52.2% whereas in Sweden 83.7% which is presented in fig. 3. It must be emphasised here that the differences in the level of professional activity of people of post-working age are significantly smaller (slightly over 17

percentage points). Depending on the value of professional activity rate of people aged over 50, EU can be divided into 4 groups:

- countries of the smallest professional activity rate in 2016 (below 55%) – Croatia, Malta, Romania,

- countries of medium-low level of employment (56-65%) – Belgium, Greece, France, Italy, Luxembourg, Hungary, Austria, Poland, Slovenia, Slovakia,

- countries of medium level of employment (66-75%) – Bulgaria, Czech Republic, Ireland, Spain, Cyprus, Latvia, Portugal, Holland, Slovakia, Great Britain, Finland,

- countries of high employment rate (over 75%) – Denmark, Germany, Estonia, Lithuania, Sweden.

Fig. 3 Professional activity rate of people aged 50-64 in EU-28 states in 2004 and 2016, (in %)
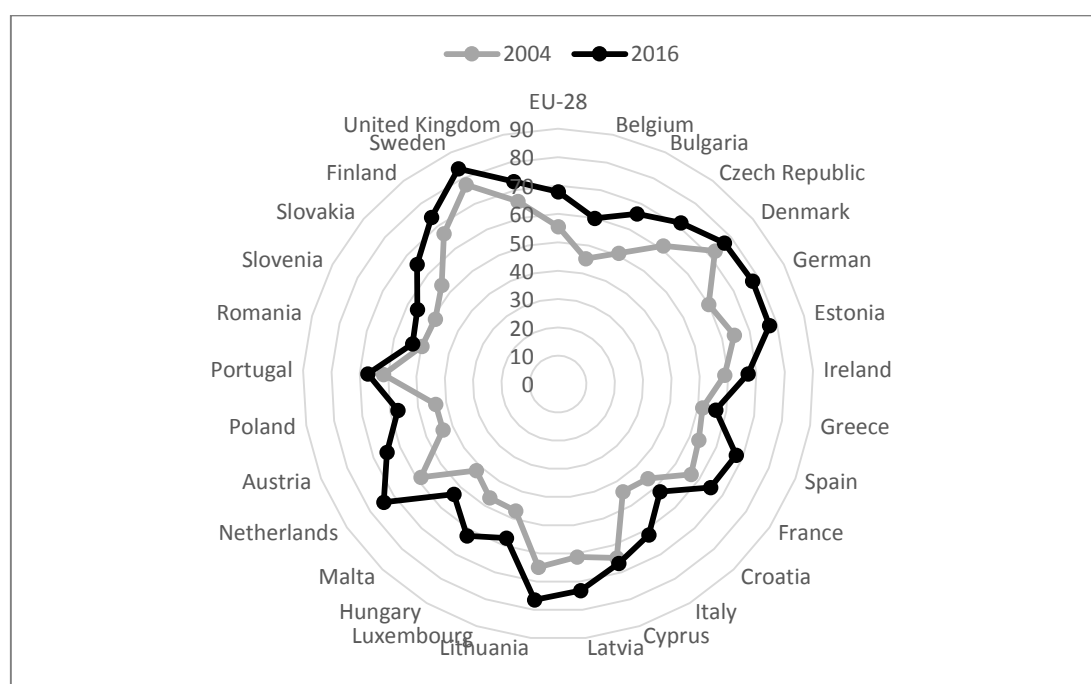
Source: Ibidem.

Considerable disparity in professional activity of people aged 50-64 results from overlapping of many factors that favour staying active on labour market, or fast deactivation of this social group. Determinants observed in broadly understood financial, infrastructural, social, legal and institutional environment, but also internal factors, i.e. individual personality features, sex, education, qualifications, experience, attitudes towards work, having children or non-wage sources of income perform a significant role in this process.

Individual decisions are made on the basis of statement of profit and loss resulting from staying professionally active. Effective demand on labour and real level of wages are one of major factors affecting professional activity. This in turn is a result of economic situation of enterprises, implemented HR policy and work organisation, including the scope of application of flexible forms of employment. In the case of people aged over 50 (mostly women) family-related duties, especially the necessity to take care of incapacitated family members limit the possibility to continue professional activity. As a result, they are often called "*sandwich*

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generation" – the generation that on the one hand care for grandchildren, and on the other hand for their parents (Pierret, 2006, pp. 3-9, Wassel, Cutler, 2016, pp. 61-73, Wiemerss, Bianchi, 2015, pp. 127-176, Wang, Marcotte, 2007, pp. 1283-1296).

Fig. 4 Position of people aged over 15 on labour market in the European Union in 2016.
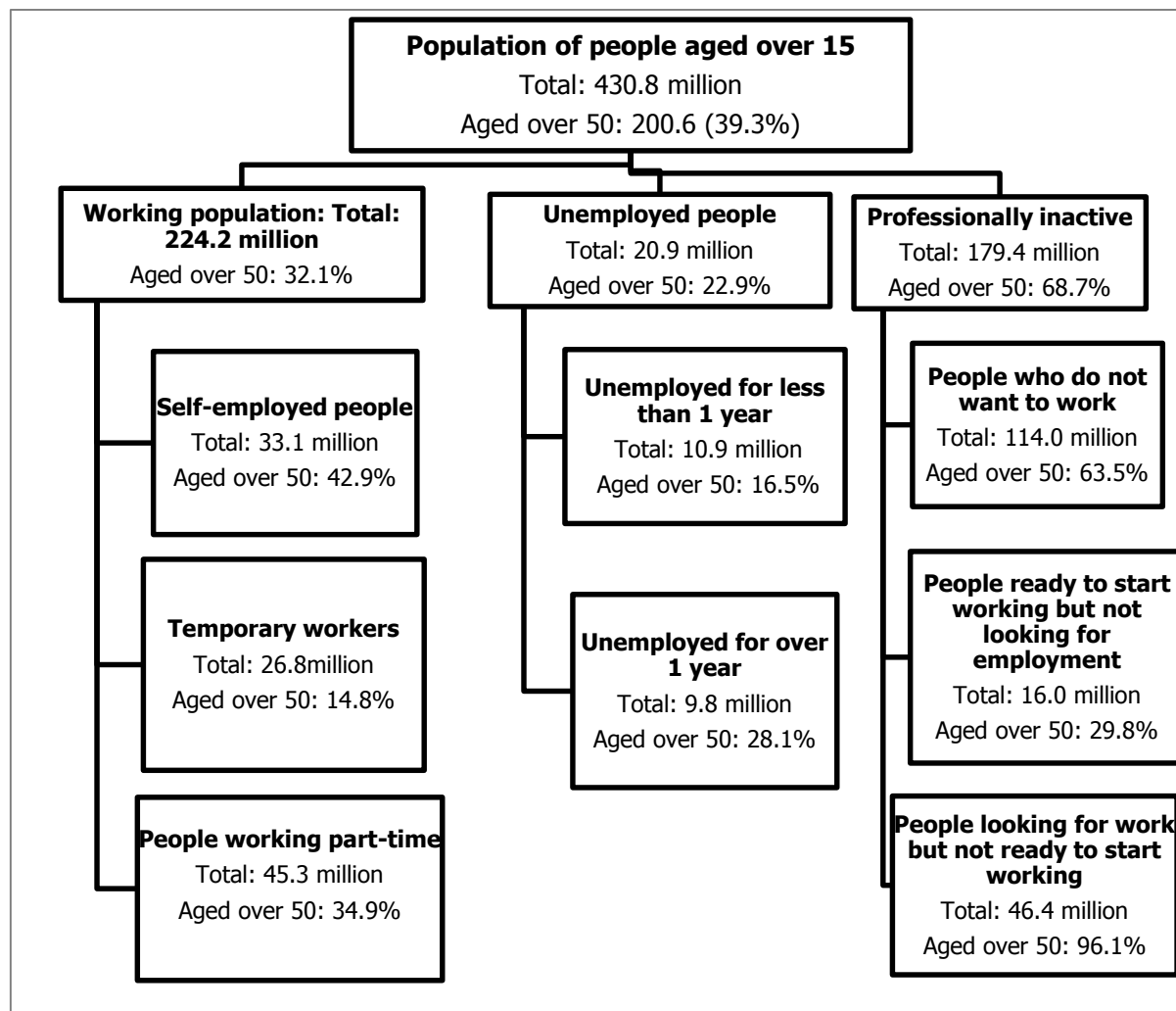
Source: own case study.

On the macro scale, beside economic situation of the state and implemented socio-economic policy, the forms and types of support and assistance aimed at people aged over 50 play a vital role. Development of social services, including care and nursing services conducted on the basis of the assumptions of the so-called *silver economy* are more and more frequently one of these areas (Pauhofova & Palenik, 2013, pp. 861-876).

Extending the scope of conducted discussions by other age groups (over 65 years) in the European Union population shows various positions adopted by the people on labour market. Among over 245 million of professionally active people aged over 50 in 2016, 224 million were working. This constituted slightly over 32% of the total working group aged over 15, whereas among unemployed people, the rate was not higher than 23%. It is presented in fig. 4. However, it is important that among the group of elderly people, professional activity is decreasing with age – the mean for the EU-28 is declining from 83.3% for people aged 50-54 to 5.4% for people aged 70-74. A comparable situation is observed with reference to

employment rate that was almost 78% in 2016 for people aged 50-54, whereas among people aged 70-74 it was only 5.5%. Decline in professional activity of elderly people with age concerns all analysed countries. However, individual countries are diversified with respect to the level of activity in specific age sub-groups and the pace of decline inactivity with age.

In this context extending the average period of professional career should be positively assessed. In the whole European Union this period has become longer of over 2 years for the last 11 years. In Malta this growth was higher than 5 years and in Hungary 4.5 years, in comparison with Cyprus and Portugal where this increase was insignificant. Sex is the quality obviously diversifying the period of professional career. In the case of men in 2015 it was almost 38 years, whereas in the case of women it was 5 years shorter, which is also associated with social roles performed by women and men in society, and retirement age. Both women and men living in Sweden are professionally active for the longest time (over 40 years and 42 years respectively), people living in Lithuania for the shortest (less than 35 years) and women living in Italy – slightly over 25 years.

Regardless of growing professional activity of the people aged over 50 it must be stated that their considerable rate remains outside the labour market. In 2016 among people remaining outside the labour market, people aged 50+ constituted almost 68%. This shows early process of deactivation and incomplete use of available labour resources.

The reasons for this phenomenon are multiple and diversified and their explicit identification remains a problematic issue. Furthermore, these determinants may have both individual as well as structural character. Their nature changes with transformations occurring in the whole economy. There are no doubts that consequences of insufficient use of available labour resources bring specific results both in macro as well as microeconomic dimension as well in material, health-related or psychological sphere of individuals (Skórska, 2016).

CONCLUSION

Population ageing brings many consequences for sustainable development and implementation of its assumptions. Among them, those of economic dimensions seem to be most important. This mainly concerns shrinking of labour resources and increase in the number of people professionally inactive (old age and disability pensioners) dependent on people at working age who care for them. Continuing shortage of labour resources brings serious consequences, especially in the long term, in the context of setback of economic growth. Furthermore, they directly affect the sectors of social and health services, the demand on which is the largest in the context of ageing population.

Similarly to many European countries, in Poland the growing longevity and improvement in health condition do not affect extension of professional activity. More and more people look for the possibility of early withdrawal from the labour market. However, it must be stated that low professional activity of people aged over 50 brings a lot of many negative consequences both on individual level and for the whole society. This is because work provides not only important and often necessary extra income for elderly people, but it also gives meaning to their life, motivates to maintain good physical and psychical condition, and allows for being in contact with the external world. The attitudes of employers and co-workers (stereotypes, ageism – age discrimination) and the very elderly people (out-dated qualifications, lack of willingness to change profession) seem to be a problem in this context.

Increase in professional activity of elderly people demands many coordinated actions, that include providing equal access to the labour market, promotion of good practices of age management in the place of employment, expansion of the scope of preventive, health-providing actions and increase in the level of elderly people's physical activity. For several

years these actions have been one of the priority of socio-economic policy, both on national and supranational level, even though the results of implemented actions are still unsatisfactory, which is significantly affected by discrimination of elderly people on labour market.

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Certain Legal Aspects of the Most Important Distinctions between the Administrative Procedure and the Procedure in Supervisory Matters

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Abstract: The financial market supervision in Slovakia is being performed by the National Bank of Slovakia. Within the financial market supervision, the National Bank of Slovakia conducts, among others, proceedings, grants licenses, imposes sanctions and remedies and issues other decisions. The legislation governing selected decision-making processes within financial market supervision has undergone a development, from the application of the Act No. 71/1967 Coll. On The Administrative Procedure (Administrative Procedure) as amended up to the Act No. 747/2004 Coll. On Financial Market Supervision and On Amendments to Certain Laws as amended, this excludes the application of general regulation on administrative procedures. The paper focuses on the most significant differences between the regulation of the administrative procedure and the procedure in supervisory matters.

Keywords: administrative procedure, procedure in supervisory matters, financial market supervision

JEL Classification codes: K4, K23

INTRODUCTION

The legislation regulating administrative proceedings related to selected decision-making processes on the financial market has undergone an evolution from a "double - track"-procedure into integration. There existed two public authorities - the National Bank of Slovakia and the Financial Market Authority. Until the date of 31 December 2005 the Financial Market Authority has carried out administrative procedures in the area of the capital market, insurance and pension savings, where the Act No. 71/1967 Coll. On The Administrative Procedure (Administrative Procedure) as amended (hereinafter "Administrative Procedure Act") has been applied, later only subsidiarily applied. The National Bank of Slovakia has been in charge of Bank supervision.

The abrogation of the Financial Market Authority took place and its powers were transferred to the National Bank of Slovakia. From the date of January 1, 2006 the integrated financial market supervision has been established in Slovakia. The organizational integration directly led to an integration of procedures. Previously two separate administrative proceedings were integrated into a single administrative procedure governed by one law - the Act No. 747/2004 Coll. On Financial Market Supervision and On Amendments to Certain Laws as amended (hereinafter "Financial Market Supervision Act").

1 LITERATURE REVIEW

The Financial Market Authority has performed state control as a state authority. Škultéty (2004) set the definition of a state authority. The term state control is associated with the

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Administrative Procedure Act. In 2006 the system of the integrated financial market supervision has been established. The Financial Market Supervision Act has introduced the term supervision. The National bank of Slovakia performs supervision. Differences exist between the terms state control and supervision. Hendrych et al. (2006) defines the term state control as an activity which essence lies in the observation of a certain state, followed by an evaluation. According to Sládeček (2005) the term state control means an activity consisting of observing and assessing the adequacy of the conduct, usually of a certain (natural) person, or activities aimed at correcting the deficiencies. Pomahač (2012) defines state control as an activity in which comparison and evaluation passes into influencing the managed subjects to behave in the required way. Kohajda (2007) states that state control is the conduct of an entity observing another entity on the basis of legal standards, consisting in monitoring of activities and comparing the performance of that particular activity with the performance of the activity as required by the legal rules.

According to Babčák et al. (2012), the supervision is exercised by the National Bank of Slovakia as a type of financial control. Radvan, Kyncl, Moždiáková (2010) distinguish the term state control, which is performed by the state administration and supervision carried out by a body independent from the state administration. According to Bakeš et al. (2006) supervision is specific in that, the exercise of this supervision is not carried out by the state, but is entrusted to entities other than the state, public and private corporations or self-governing bodies.

2 METHODOLOGY

In order to reach knowledge about the most important distinctions in the regulation of the administrative procedure and procedure in supervisory matters in the Slovak Republic, it is necessary to use the comparative method. The inductive method will be also applied. The various factors based on the knowledge of the general rules regulating the administrative procedure and the procedure in supervisory matters will be examined. The analysis of the distinctions includes that both of the procedures will be spread into elements. Then the interrelationships of these partial elements will be examined. The method will be used in examining and learning about the past and current state of regulation of the administrative procedure and procedure in supervisory matters.

3 RESULTS AND DISCUSSION

3.1 The administrative procedure and the procedure in supervisory matters

The procedures regulating the deciding on rights and obligations of legal and natural persons are implemented in the rules of administrative law, mainly in the Administrative Procedure Act.

The function of the scope of the Administrative Procedure Act is to regulate two sets of problems: firstly, it is a normative adjustment of the procedure of the administrative authorities in deciding on the parties' legal relations and, secondly, the status and rights of participants in the procedure (Sobihard, 2004). The administrative procedure is, in particular, the legal form of procedure in decision-making (Levit et al, 1965).

The Administrative Procedure Act is a general procedural regulation governing the conduct and decision-making in the field of public administration (Sobihard, 2004). The public administration is, in essence, the management of public affairs, which is realized as an expression of executive power in the state (Škultéty, 2001). This executive power is characterized by the fact that it is primarily a public power not only of the state, but also of other non-state entities that carry out the management of public affairs (Škultéty, 1995). The

public administration is an administration, which has as its object the provision of public affairs, carried out in the public interest (Vrabko et al., 2012). The entities that carry it out do so as a lawfully imposed duty, from their legal status (Škultéty, Andorová, Tóth, 2012).

According to the Administrative Procedure Act, the administrative procedure is preceded if two conditions are met, namely the subject matter of the proceedings, which is the decision on specific rights, legitimate interests and obligations of natural and legal persons, and secondly an administrative body, will decide in the proceedings (Kučerová, 2002). Under Article 3 par. (3) of the Administrative Procedure Act the basic rule of the administrative procedure is to rectify the matter subject to proceedings in a timely manner and without undue delay (Hašanová, 2010). Procedural rules are means of protecting and implementing substantive rules. Procedural law serves to implement the substantive law. In the area of financial market law, procedural rules are contained in the third part of the Financial Market Supervision Act ensuring the implementation of the principle of legality. According to Magurová (2010) the principle of legality is the immanent principle of the rule of law.

The procedure in supervisory matters represents a set of rules governing the procedure of the National Bank of Slovakia. We can characterize this proceeding as a procedure of the National Bank of Slovakia, the parties to the proceedings and third parties involved in the procedure for issuing, reviewing and implementing individual administrative acts, which is governed by procedural rules (Sidak, Duračinská et al., 2012). Such regulation allows the National Bank of Slovakia to fulfill the role of a certain corrective. This is done by means of proceedings which are being conducted and in which the central bank is empowered to decide, in particular, on the sanctioning of supervised entities and on the licensing or, respectively, not allowing the entity's activity on the financial market. Within proceedings in supervisory matters we can basically distinguish between the licensing and the sanction procedures.

In the licensing procedure, the National Bank of Slovakia expresses the will as a public authority in a particular matter related to an individually designated person. The public authority is competent to influence the legal position of a legal or natural person who is not in an equivalent position towards the public authority (Košičiarová, 2014).

The licensing procedure can be defined as a sui generis procedure conducted at the first instance generally by the Financial Market Supervision Unit of the National Bank of Slovakia, which results in an individual administrative act allowing or prohibiting the performance of a business or performing an action on the financial market.

Its output is a one-sided act issued by the executor of the public administration on the basis of the law, as well as an individual and unilateral binding rule issued as a reflection of administrative regulation of relations (Jemelka, Pondělíčková, Bohadlo, 2013). A first-instance decision by which a license is being granted has constitutive effects; it establishes the right to carry out certain activities in accordance with specific rules regulating the various financial market sectors. The licensing procedure reflects, among other things, the need to protect the market from subjects which are non-prepared for the performance of business activities on the financial market.

If there is a violation of legal norms, which display the specific feature - enforceability, it is possible to use state enforcement in accordance with law (Prášková, 2013). Sanctions exist because it is the only possible way to ensure that rules are effective. By imposing a sanction, a new legal obligation arises, that is a penalty (Prášková, 2013). Decisions setting sanctions are individual administrative acts. Their creation is necessary, since they affect entrepreneurs failing to take due account of their obligations set by law. According to Jakab, Molitoris, Jurko (2014) a certain process of securing public tasks can be regarded as a procedure, when its existence is based on rules and is directed to a legally significant result, having a certain legal form.

3.2 The most important distinctions between the administrative procedure and the procedure in supervisory matters

Practice has brought about the need for a special regulation of the procedure in which decisions are made about the rights and obligations of supervised entities. This procedure has "emancipated" from the Administrative Procedure Act and it also excludes the use of that law. The logical consequence of this development is the absence of certain legal institutes in the legal regulation of the third part of the Financial Market Supervision Act. In this context, the most important differences between the administrative procedure and the procedure in supervisory matters are being pointed out.

Reconciliation

The initial prerequisite for the application of this institute is the existence of an ongoing dispute between the two or more parties who have conflicting interests. They have agreed to resolve the issues, which form the subject of the administrative procedure. However, the parties may agree only if the nature of the case permits so. The administrative authority may approve their agreement only if it is not contrary to law or to the general interest. The statement of the individual administrative act must be approved by the administrative authority. It must include a statement of the fact that it is not contrary to law or to the general interest. The reconciliation is an optional institute terminating the administrative procedure. It is being confirmed by the administrative body. From a time perspective, it can be concluded at any stage, even during the second instance proceeding. If the agreement is not approved, the administrative body will decide on the case. An appeal cannot be filed against the approved reconciliation.

The absence of the legal institute in the third part of the Financial Market Supervision Act results from a number of factors. The objects of the proceeding in supervisory matters are not contrary legal interests of two or more participants, which the National Bank of Slovakia has to decide. In the licensing procedure, the party delivers a submission to the supervisory body in order to perform an activity on the financial market. A party to the proceedings is not entitled to conciliate with a public authority, the National Bank of Slovakia, empowered to decide on the rights and obligations of natural or legal persons. The National Bank of Slovakia is the authority applying the law. The authority shall decide whether the applicant fulfills the conditions, so that an approval or license can be issued. Logically, the party to the proceedings cannot conclude with the authority an agreement on reconciliation, in which it would be stated that the conditions for granting a license have been met. Such an agreement would be in contrary with regulation. The sanction procedure involves a penalty for the party to the proceedings. There can be no reconciliation between the National Bank of Slovakia and the parties to the proceedings, even if the party would voluntarily acknowledge the sanction. The National Bank of Slovakia in the sanction proceedings, which starts *ex offo*, is obliged to issue an individual administrative act.

Force summons

Force summons is a law instituted set by the Administrative Procedure Act, allowing the realization of the purpose of the proceedings by compelling. It constitutes a direct enforcement of the obligation of a person whose personal involvement is essential to the hearing of a case arising out of his summoning (Košičiarová, 2017). Only subjects defined by law - a party to proceedings and a witness - may be presented. Force summons will be carried out only if legal conditions are met. A party or a witness which failed to show up in spite of repeated summons and whose absence caused the impossibility to continue the proceedings without any due

excuse or without having serious reasons to do so, may be brought to the proceedings by force. The administrative authority shall ask the Police to bring the party or the witness to the proceedings by force. Force summons will not be realized in case those proceedings may be taken without the participation of a party or witness. The assessment of this fact lies with the administrative body. Similarly, the assessment of the administrative authority is whether the excuse is appropriate or whether there are serious reasons. This will depend on the individual case. We are confronted with opposing views on the need to issue a decision in the event of the use of this legal institute. According to one legal opinion there must exist a decision stating the duty of a person to summon (Košičiarová, 2004). According to another legal opinion, the force summons is a *de facto* coercive act and there is no need to issue a decision (Potásch, Hašanová, 2015). We agree with the second opinion group. The force summons is performed by the Police at the written request of the administrative authority. The legislator does not define the content of the written request. It should contain information to identify the party or the witness to be presented and also the date, place and reason for the force summons. The execution of the force summons is requested by the administrative body and performed by the Police, competent according to the person's permanent residence, but it is not excluded that the Police where the person is temporarily or where the employee is employed could perform this duty (Sobihard, 2013).

There exists no force summons in the regulatory frame of the proceeding in supervisory matters. The reason for the absence of the legislation of this institute is that the legislator incorporated into the third part of the Financial Market Supervision Act the obligation for the designated persons to appear for a summons.

Renewal of the proceeding and the absence of this extraordinary remedy in the proceeding in supervisory matters

The provisions of the Articles 62 to 64 of the Administrative Procedure Act regulate the renewal of the proceeding, the purpose of which is to examine a final individual administrative act. The institute of the renewal of the proceeding is based on the fact that, if there are legitimate reasons for its implementation, the proceeding which has taken place in the past and has ended with the issue of a meritorious decision on the matter will resume (Hašanová, 2010). This remedy is being used to change or revoke a final decision, if it is contrary to objective law or seriously undermines the parties' subjective rights. A party to the proceeding may file this remedy. The Administrative Procedure Act expressly sets out the grounds which, if they occur, the party is entitled to reapply the hearing of the case, which has already been adjudicated. However, not only the participant is entitled to initiate the renewal. If one of the reasons stated in the Article 62 par. (1) of the Administrative Procedure Act is being fulfilled and there exists a general interest, the administrative body shall order the renewal of the proceedings (Potásch, Hašanová, 2015). The general prerequisites for the renewal of the proceedings are:

- The existence of a lawful decision,
- The existence of at least one of the exhaustively established grounds for the renewal of proceedings,
- The existence of a qualified entity which has submitted an application for re-opening,
- Compliance with the time limit. (Sobihard, 2013). The specificity of the renewal procedure is that it distinguishes between two stages:
- Authorization procedure for renewal,
- The new action in the matter (Sobihard, 2004).

The renewal of the proceeding is not admissible if a decision has been given by a party to the proceedings in civil matters or if a decision has been taken in the matter of personal status and the party has acquired the rights in good faith (Hašanová, Dudor, 2013).

This remedy is not part of the regulation of the proceeding in supervisory matters in order to preserve the stability of the relations established by the decisions of the National Bank of Slovakia. The National Bank of Slovakia is an independent central bank, and there is no superior authority to supervise it. However, the absence of this remedy in the Third Part of the Financial Market Supervision Act does not deprive the parties of the right to seek review of a valid decision of the National Bank of Slovakia. The legislative environment entitles them to act in accordance with Act No. 162/2015 Coll. Administrative Court Code. The administrative justice allows any person who feels harmed to invoke the court as an independent authority and in this proceeding the administrative body has no longer an authoritative position, but will be a party to a proceeding with the same rights as the one to whom the right to proceed (Ševčík, 2009). The legal institute concerned is based on a material understanding of the rule of law, requiring the judicial power to control the public administration (Števček, Ficová et al., 2012). Administrative justice - always after exhaustion of remedies - resolves legal conflicts that may arise in the exercise of the powers of public authorities towards natural and legal persons (Hanzelová, Rumana, Šingliarová, 2016).

CONCLUSION

One of the sub-sectors of financial law is financial market law, consisting of a set of legal rules including the regulation and supervision of the financial market, the conditions for financial intermediaries' activities, the protection of financial consumers and financial instruments. A part of financial market supervision is the procedure in supervisory matters. The legislation regulating the procedure in supervisory matters has undergone a certain development. Firstly, the Administrative Procedure Act has been applied. Secondly, the Administrative Procedure Act has been applied only subsidiarily. Meaning, when a special law provides other regulation than the Administrative Procedure Act, this regulation is going to be applied. Finally, a special law has been adopted, the Financial Market Supervision Act, that excludes the application of the Administrative Procedure Act, which is being used when the National bank of Slovakia decides about rights and obligations of supervised entities. The procedure in supervisory matters has its "roots" in the administrative procedure. These two procedures therefore have many common features. But the procedure in supervisory matters has emancipated from the administrative procedure and the development of this regulation led to the existence of distinctions. The most important distinctions between the administrative procedure and the procedure in supervisory matters are the legal institute of reconciliation, the regulation of force summons and the renewal of the proceedings and the absence of this extraordinary remedy in supervisory matters.

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Dynamics in the Relationship between Headquarter and Subsidiaries and Identification of Potential Risk in Transfer Process of Organizational Culture to the Subsidiary

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Abstract: The aim of this article is to explore the relationship between headquarter and subsidiary in the area of organizational culture and explore ways of identifying potential risk arising from different national values and subsidiary set up. Company culture is usually heavily driven from headquarters and only limited research focuses on what are the results of this knowledge transfer and what impact it may have on the subsidiary branches. As these branches are located throughout the world and are often very diverse in national values as well as other various cultural aspect and dimensions when compared to the headquarter, potential risk arises from misalignment of organizational culture. For the purpose of exploring this topic further, relevant literature was reviewed, interviews with global managers conducted and the paper proposes conclusions and recommendations for companies whose global set up relies on doing business via global presence in key markets through national subsidiaries. It further introduces OCEMS evaluation as a tool to evaluate the amount of risk as well as proposes next possible steps in further research of this topic.

INTRODUCTION

Focus on company culture and its influence on the effectivity and productivity of the company has been at the center of research for many decades. Many researches have presented lately that within the areas of strategy and international business research, the assimilation of the act of organizational knowledge is a strong factor and can be a key to firm's sustainable competitive advantage (Easterby-Smith, Lyles & Tsang, 2008). Related research on strategic practices and the fact that it also serves as a basis for organizational identification or as a source of personal satisfaction for employees (Selznick, 1957) has been presented by institutional theorists already several decades earlier. MNCs (multinational companies) are faced with the challenge of doing business away from their home countries in other parts of the world, often encountering different cultures and national values while doing so. Orientation in these values and ability to transfer their company culture in most appropriate way to their subsidiaries in new as well as existing territories may very often be one of the key aspects of their success. One of the key components of this success is the ability of both the HQ (headquarter) and the subsidiary to deal with this situation in often very different cultural context as well as geographical settings, while the global environment keeps changing at frantic speed. Whether the change is happening due to technical possibilities that influenced our perception of the world, the speed of information or by effect of new generations such as millennials entering the workforce, the company faces variable environments and different

cultural settings. It has become customary to have a video conference with your colleagues from South America while sitting in an office of any European city thousands of kilometers away drinking new blend of African coffee that was just released by North American brand of coffee shops. The aim of this article is to firstly establish the importance of the organizational culture as one of the criteria for the success of the subsidiary and to further explore the transfer of the organizational culture between the HQ and subsidiary, while taking into consideration the status of the subsidiary branches and exploring this topic based on currently available research. I also conducted 6 short exploratory interviews as a follow up to the literature research and based on the combined research findings, I introduce basic model which takes into consideration factors that companies should be aware of when dealing with the transfer of their organizational culture to the subsidiaries.

1 LITERATURE REVIEW

Simply stated, organizational culture is "the way things are done around here" (Deal & Kennedy, 2000). Some early work that focused on organization and started to theorize on organization behavior and the motivational aspects and values of its employees can be seen as early as the 1950's with the work of March and Simon (1958) in their study *Organizations* (1958), where they attempted to develop a prescribed set of operating procedures to be used in analyzing and setting forth guidelines for effectiveness in organization. They further suggested that organizations use so called "performance programs" and define these programs as habitualized actions, routines and standard operation procedures which are at the core of company and influence its performance. The work in this field was further explored by researchers such as Edward T. Hall, Fons Trompenaars or Geert Hofstede, whose research on national values is one of the lyings cornerstones of research on this topic and has been refined since the first worldwide survey among the IBM employees that took place between 1967 and 1973. These findings were first published with the complete results in his book *Culture's Consequences* (1980), where he identified four basic national dimensions of values (individualism, power distance, masculinity and uncertainty avoidance). From there, he continued to gather further data and together with his son Gert Jan and colleague Michael Minkov presented updated model 6D model (Hosftede, Hofstede, Minkov, 2010) which added additional two dimensions of long term orientation and indulgence. While the above mentioned 6D model is one of the most known and taught theories, the field of organizational culture is subject to many other studies and research, where culture is looked at from different angles. Some of the insights and findings from other research lead to definition of organizational culture as set of the organization's vision, values, norms, systems, symbols, language, assumptions, beliefs, and habits (Needle, 2004) and express how the construct plays out in the workplace. Various other definitions stress employee behavioral components and how organizational culture directly influences the behaviors of employees within an organization and affects the way people and groups interact with each other, with clients, and with stakeholders. In the human resource area, studies show how organizational culture may influence how much employees identify with their organization (Schrodt, 2002). All of these findings arguably lead to assumption that organizational culture is an important building block of any MNC and can have significant influence on its performance. While there have been some studies previously conducted on the relationship between HQ and subsidiary covering the internal relationships and its effects as early as 1970's, the majority of them focused on exploring the area of subsidiary entrepreneurship (Burgelman, 1983) and finding evidence that subsidiaries who take active part in developing their own strategy can have impact on the overall corporate strategy (Burgelman, 1983; Bartlett and Ghoshal, 1989; Birkinshaw, 1997). More recent studies conclude that primary motivation for developing the strategy and initiatives on the subsidiary side is to enhance its own position (Taggart, 1997; Birkinshaw and Lingblad, 2005) and try to optimize their own agenda (Ghosla and Nohira, 1989; Andersson,

Forsgren & Holm, 2007). In last few decades, we have seen increase in research of this area, the focus being on the investigation of the role of business networks in subsidiary development and how it impacts the MNCs (Andersson, Forsgren & Holm, 2002; Ghauri, 1992; Holm & Pedersen, 2000). These studies have predominantly focused on investigation relating to "organizational performance" of the subsidiary that functions as a part of MNC to which it belongs. Definition of "organizational performance" can be defined as the impact of the subsidiary on the rest of the MNC through its knowledge development and knowledge sharing activities (Andersson, Forsgren, and Pedersen, 2001). For example, one of the impacts that the subsidiary can have within the MNC is to show its importance, whether in established KPIs (Key Performance Indicators) such as turnover, growth, EBIT or as a source of specific knowledge or capability to the other units of the organization. Desired outcome of this action, where HQ is the main addressee of this information, is to increase its own importance and the ability to increase its power in other aspect of conducting their daily activities.

2 METHODOLOGY

In order to get more insight and information on this topic, I have conducted six 10 minute phone interviews. As already established by research, interview can provide additional added value to investigations as it offers broad overviews of a title and its impacts (Sukamolson, 2007). Due to the limitations of time allotted for the conversation, I have decided for semi-structured interview, which can be referred to as "discovery interview" and which allows a "guided conversation" as it is more flexible when compared with structured interviews which are more similar to formal or job interviews (Saul, 2014). All of the six managers were (or currently are) in the position where they either directly manage region or company with global reach or are at HR functions at a global level. Three of the respondents came from consumer goods industry, with the rest of the respondents coming from software company, international law firm and global marketing agency. This selection of MNCs was done on purpose to achieve as wide variation of respondents across industries as possible.

3 RESULTS AND DISCUSSION

3.1 Research findings and proposition of evaluation process and model

The results obtained from the literature review (and in some cases lack of the research in this area) confirm that while research in the area of interaction and transfer of information between MNC and its subsidiaries has been a subject of increasing interest in last decades, the specific area of transfer of organizational culture between MNC and subsidiary in context of cultures with different national values can still be explored further. When discussing this matter during my interviews, all managers have agreed that they have not paid enough or any attention to the process of organizational culture transfer within their MNCs. They have also admitted that they were not a part of any research on this or any other relevant topic in this area. Most of them (four out of six) also agreed that it would be useful to look into this topic further as they see the value in knowledge that the subsidiaries have similar organizational culture as the HQ. They further confirmed that the possibility for misalignment between HQ and the subsidiary may present a potential threat for inter-company communication and achievement of goals. During the last part of the interview, they also admitted that they had no tools or guidance for starting such a project and they have no real way of starting a formal procedure aside from having casual discussions with their counterparts in subsidiaries. Four out of six mentioned that they would take closer look into this if they had such tools readily available, but also mentioned that the process would have to be very little time consuming for them to engage

in it. Taking these comments into consideration and looking into way how this can be transformed into a theoretical model which the companies could follow, I suggest a basic model which I call OCEMS (Organizational Culture Evaluation Model for Subsidiaries), which can be used as a quick self-rating tool for any manager in MNC who is either dealing with HR issues related to subsidiaries or responsible for direct management of subsidiaries. This model forms integral part of the three step process that could lead to identification of potential risks. While I am fully aware of the limitations of this evaluation model and the simplified nature of the overall process, I still believe that it offers quick and easy solution for the busy MNC managers of today and allows them to find out some basic results in timely manner with little effort, which was one of the key requests indicated during my interviews.

3.2 Description of the OCEMS Process

As promoted by research, there is a link between the importance of culture to the performance of subsidiaries (Lucas, 2006). Moreover, multinational corporations also tend to encourage subsidiaries to follow and integrate into one common organizational culture rather than allowing them to implement their own practice (Triandis & Hofstede, 1993), which can then lead to situation that MNCs need different control systems because of their diversities in national culture of their subsidiaries (Hamilton & Kashlak, 1999). The proposed model allows the manager to conduct evaluation of his or her territory using very simple tool which is based on findings presented in the section of Literature Review and start process of further investigation and possible corrective action if any potential risk is identified. Corrective actions can be taken in number of ways, for example using the Model of Success of Transnational Transfer of Organizational Practices (Kostova, 1999), which gives guideline that should lead to successful transfer of organizational practices thus ensuring alignment in organizational culture as well. The application of the model is represented by three steps, using graphs for evaluation in the first two steps and summary of the whole process in graphic format. While the process is based on subjective opinion in Step 1, it introduces the well documented scale of national values in Step 2 and in general proposes very straight forward solution based on the subjective opinion of the manager conducting the evaluation. I also argue, that the small amount of time which is needed for Step 1 and Step 2 is crucial for potential use by the managers.

As seen above, the variable of the graph includes two basic values- importance of the subsidiary and authority and self-management potential of the subsidiary. *Importance of the subsidiary*- this variable refers to perceived value of importance of the subsidiary to the evaluating manager. It can be based on KPIs such as proportion of turnover compared to other subsidiaries, level of profit, technological excellence or market importance. *Authority & self-management*- definition of this part of the graph is the perception of the manager about how much decision making ability as well as the scope of responsibility lies with the subsidiary and how much is the subsidiary to allowed to manage itself, without close supervision from the HQ. After plotting the subsidiaries into Graph 1, the manager divides the countries under this management into four sectors and in Step 2 works only with countries which were placed into the *Focus* sector due to the fact that these countries present potentially the highest risk and also for simplification of the whole process. However, regular re-evaluation should be done with the countries in the regular *Regular Check-up* sector to monitor any changes. The countries in the *Let It Be* sectors are assumed to have very low authority and as their importance to the MNC is also very low (compared to other subsidiary units in MNC), the potential risk coming from these countries is assumed to be negligible. Once Step 1 of the process is completed, the manager moves to Step 2 where the identified *Focus* group is subject to further evaluation.

Graph 1   Step 1 of the OCEMS process
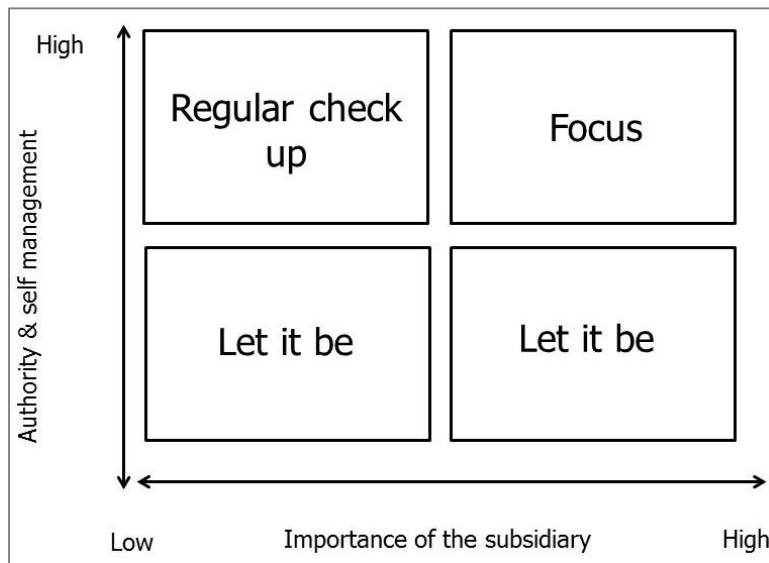
Source: author

Graph 2   Step 2 of the OCEMS process
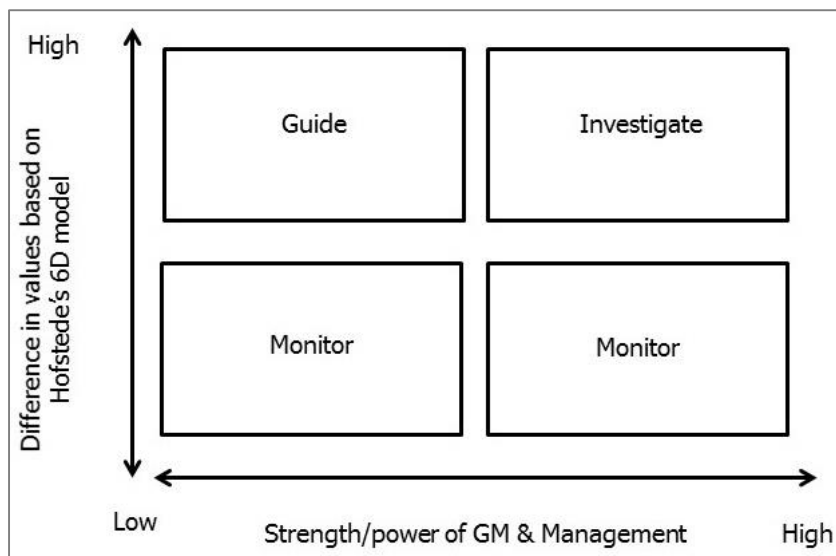
Source: author

Graph 2 works with variables based on difference of the subsidiaries' national culture from the HQ's home country and the perceived strength of the GM or management. *Country differences* - for clear qualification of difference in national culture in this category, I use 6D model (Hosftede, Hofstede, Minkov, 2010) as the data for this is readily available, can be obtained very quickly and would serve the managers as a basic indicator of differences between the subsidiary and HQ based on six national dimensions of values which have been quantified for most of the nations in the world. *Strength of GM/ management* - given the global structure of the MNC, the evaluating manager can decide to score either the country/general manager (in case that most of the information flow and decisions go through him) or the management team (in case of matrix structure set up where more subsidiaries' managers are involved in

key management decisions and control).Simplified description and flow of the OCEMS process is then represented in three stages with following actions taking place in each step.

Figure 1   OCEMS Process
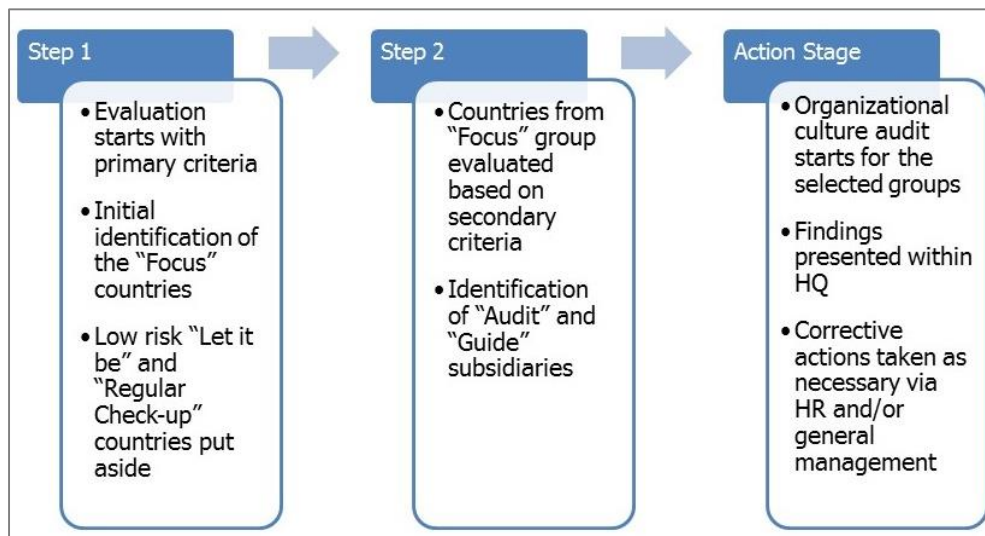
Source: author

Based on the completion of the Step 2, the manager has identified three different country baskets from the original *Focus* group and now should follow up based on the bellow proposed process and recommendations. Investigate - if a country falls into the *Investigate* sector, manager has identified this country as potential risk. My recommendation would be to organize culture audit to *investigate* the status quo. This can be done by reviewing already established practices and completed implementations in the area of training and HR practices to see whether the risk is real and then take corrective actions based on the findings of the audit. As the manager is dealing with powerful country management in very different cultural environment, he/she must ensure their buy-in before taking any corrective actions. The acting manager must ensure that the corrective actions are not seen as yet another new program or initiative from HQ that has no relevance in the subsidiary setting but rather as an action that will help the subsidiary gain more relevance with the HQ. *Guide* - I recommend additional guidance for the management and HR team for countries which would fall into this group. It can be the case that this is a new subsidiary which just started its operations and nobody paid attention to their progress on this front. Similar comment was also highlighted by one of the managers when having a discussion about the model during our interview, as he felt that newly opened subsidiaries are more prone to be in this group since they are still searching for who they are and often need guiding hand from the HQ. *Monitor* - countries in this group are culturally very similar to the HQ and the assumption is that they are more likely to conduct their business in alignment with the organizational culture of the HQ. One of the managers that I interviewed gave an example of their launch of the program for social responsibility. Even though they did not give any strict guidelines about what charity, program or event should be supported, he found that the subsidiaries in USA and Canada ended up joining together and participating in the same activity independently and without HQ's initiation of the process.

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CONCLUSION

While there are certain limitations to this study, especially the scope of the research as well as the use of interview method, and this topic needs more thorough exploratory research, I argue that the significance of the relationship between HQ and subsidiary on the level of transfer, reception and adaptation of the company culture is one of the key aspect of doing business today. While these facts are recognized as necessary for smooth operation for the MNC and are some of the factors which influence the productivity of subsidiary, the preliminary research shows that the managers are not currently paying much attention to this and have limited supply of readily available tools to make any evaluation. Based on my findings presented in this article and the introduction of the OCEMS process, I plan to conduct further research in this area which will be part of my dissertation study. Further research topics can include additional development and testing of the OCEMS process and its application on specific MNC conducting its business worldwide. Further to this, I propose to study the relationship within this MNC between its HQ and four diverse subsidiaries across Europe, Asia and Africa and the paradigm of how is the organizational culture transfer managed towards each of these subsidiaries and if this transfer has any influence on the score of national values under the 6D model (Hosftede, Hofstede, Minkov, 2010).

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The Role and Participation of Slovak Small Entrepreneurs in the Single Market

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Abstract: The European Charter for Small Enterprises is very important document of European Union, which gave the frame to national policies of its member states, related to small and medium enterprises. The main objective of our paper is to identify, on the basis of an analysis, the role and participation of Slovak small entrepreneurs in the European single market. As part of our research, we have analyzed answers of 130 selected small businesses, in order to get answers to the implementation of Charter's principles in Slovakia business environment. The reasons for the lower participation of Slovak small entrepreneurs in the Single Market as a result of the research are: language barriers, low awareness, high participation costs and low skill levels. Based on the results of the detailed analysis, we anticipate proposals for future changes that would contribute to growth of the effectiveness in these aspects of small entrepreneurship in Slovakia.

Keywords: European Charta for SME, Small Business Act, entrepreneurship, SME, business environment

JEL Classification codes: L26, L53, F15

INTRODUCTION

The importance of Small and medium-sized enterprises (SME) is confirmed by the fact, that they represent 99% of the companies in the European Union, and they employ up to two-thirds of all workers. For these reasons it is important to create and maintain sustainable SMEs in this region. Small and medium enterprises face the critical question of how to react to the changes caused by the process of globalization. Globalization creates new business environment with new challenges, but also with new threats (Lesáková, 2016). The support of SME is in the centre of interest of the European Union policies, because SMEs are meaningful for the prosperity of the European Union´s economy. Furthermore SMEs fulfil the needs of local markets (Czegledi, et al., 2015).

At present, one of the main economic policy priorities has been to create a favourable business environment for small and medium-sized enterprises. It is therefore obvious that the quality of business environment is the decisive element for the development of business sphere in Slovakia (Krošláková et al., 2017).

The main objective of our paper is to identify, on the basis of an analysis, the role and participation of Slovak small entrepreneurs in the European single market, which we consider to be a good place with many business opportunities for Slovak enterpreneurs.

1 LITERATURE REVIEW

Small and Medium Enterprises are presented by authors (Blau, 2009; Dilger, 2015; Stoian et al., 2016) as the appropriate solution to revive economies affected by the crisis. Within the EU, SMEs are expected to boost growth and fight against the phenomenon of unemployment; therefore there is a need for public policy to help the SMEs directly or indirectly. We can agree with Barkchatov et al. (2016), that small businesses have an important role not only in the economy, but also in social life since they compose our social fabric and can explain to us how our society is changing.

The fostering of SMEs, and in particular of entrepreneurship, are critical factors in driving economic development because of their impacts on wealth generation, innovation, skills and capabilities, the opening up of new markets, job creation and job satisfaction (Van Praag & Versloot, 2007; McCann & Ortega - Argile´s, 2016).

The beginning of the modern history of the Slovak economy development can be considered years 2004 - 2009. In 2004 Slovakia became a member of the European Union. In 2009 Slovakia entered the euro area. In this context, SME acquired a number of new processes and relationships. In particular, businesses have begun to develop under conditions of strong international and domestic activity and entrepreneurs have started to operate under conditions of strong international competition.

Small and medium-sized enterprises (SMEs) are increasingly aware of the benefits of closing loops and improving resource efficiency, such as saving material costs, creating competitive advantages, and accessing new markets. At the same time, however, various barriers pose challenges to small businesses in their transition to a circular economy, namely a lack of financial resources and lack of technical skills (Rizos, V. et al., 2016). This situation limits the scope of operations, level of marketing, research and development, investment activities and, as a result, the level of innovation (Matejun, 2016).

In March 19-20, 2000 at the EU summit approved the European Charter for Small Enterprises, on November 9, 2005, the Commission presented a new policy for SMEs - "Think Small First". The SBA pursued the unification of all existed initiatives into a single legislative document. The text was adopted in December 2008. From the point of view of development, the Small Business Act (2008) pursued the objective of modifying market conditions for SMEs and supporting the development of the economy.

The Small Business Act for Europe we can consider as the product of the political and economic context in which it was created. For example, Dilger (2015) claimed, that its emphasis on creating jobs and targeting SME assistance to industries deemed essential to Europe's competitive position in world commerce was largely a reaction to the growing realization that its economic futurewas no longer going to be primarily decided by how well its member statescompeted against one another, but by how well Europe as a whole competed against the rest of the world, particularly with the United States, Japan, and China.

Implementing Small Business Act for Europe (SBA) represents the key appeal for the European Union and its member countries within the support of small and medium entrepreneurial activity (Lesáková, 2016) On 20 January 2009, the European Parliament adopted the Statute for a European Limited Liability Company. This new legal form facilitates business at single European market.

The economy of the Slovak Republic is based on small and medium-sized enterprises (SME). The role played by SME is irreplaceable, especially in the areas of job creation, balancing regional development and the introduction of innovations into standard business practice. However, long-term problems of small and medium enterprises are not addressed (corruption,

lack of law enforcement, bureaucracy, large regional disparities, lack of support for emerging businesses (Bánciová, A., Raisová, M., 2012).

By introducing innovations, the enterprises try to achieve effects in different areas that increase their growth and competitiveness. But in Slovakia researchers Bánciová & Raisová, (2012), Kubíčková et al. (2016), Mihál (2018) confirm the thesis of under-average innovation environment in the Slovak economy that does not stimulate implementation of innovations with radical character that generate significant economic effects.

The development of small and medium-sized enterprises is perceived in the world, Europe and Slovakia as one of the priorities of the development of the country's economy. This is related to the need for an appropriate business environment. Especially in Slovakia it is about:

- longer-term legislation,
- reducing the administrative burden,
- reducing the tax burden,
- better access to capital,
- more comprehensive business support and more.

Slovakia's accession to the European Union meant respecting the range of economic characteristics and gradually adapting to the economic level of the European Community. The European Commission has issued a series of guidelines in line with the need to increase the effectiveness of their activities and results.

2 METHODOLOGY

The main objective of our paper is to identify, on the basis of an analysis, the role and the participation of small and medium-sized enterprises in Slovakia in the single European market. Our research was based on literature review and we have accomplished the primary research based on questionnaiers on the sample of selected respondents – entrepreneurs of small and medium businesses in Slovakia in 2016 and in 2017. 200 small entrepreneurs were approached. We used the questionnaire method. The return of the questionnaires was 65%, so we received 130 completed questionnaires in 2016 and 130 questionnaires in 2017. The results were evaluated in Stat-graphics and Microsoft Excel.

The analysis and evaluation of economic processes mainly required the use of economic statistics methods. Their choice was based on the objective of the text and was mainly focused on the knowledge process, which required a fairly simple imaging system. The choice of methods monitored the fulfillment of the chosen objective, which was aimed at evaluating the opinions of small entrepreneurs in Slovakia on the issues of economic processes and their management.

We have asked enterpreneurs 27 questions, 10 of them were related to implementation of European Charta for Small Entrepreneurs, 10 were related to implementation of Small Business Act and 7 were related to classiffication of respondents by region, size, age, etc. All data were placed in table in Excell and were processed by several statistical tools.

In 2016, 42 % of respondents were women and 58 % were men, in 2017, 58 % of respondents were women and 42 % were men. 53,8 % of respondents in 2017 were 35 – 54 years old. 75,4 % of them have got maturity and higher education, 53,9 % of them were physical entities and 34,6 % were legal entities. They operate mostly in trade (36,4 %) and construction (22,3 %). Majority of entrepreneurs (75 %) in our research group started to operate their businesses before 2013. The results showed, that many enterpreneurs are dissatisfied with conditions in

business environment of Slovak republic, and that there are still problems that have to be solved.

3 RESULTS AND DISCUSSION

In the case of small and medium-sized enterprises, there was a significant organizational change in the year 2005, when the criteria of their perception and the related management process were clarified. European Commission defined criteria for classification of enterprise size, as shown in table 1.

Tab. 1 Classification of enterprise size by selected criteria in the European Union

Indicator	Micro enterprises	Small enterprises	Medium-sized enterprises	Large businesses
Number of employees	1 - 9	10 - 49	50 - 249	over 250
Annual turnover of goods	less than 2 mil. €	2 – 10 mil. €	10 – 50 mil. €	over 50 mil. €
Annual balance sheet	less than 2 mil. €	2 – 10 mil. €	10 – 43 mil. €	over 43 mil. €

Source: European Comission, 2017.

In Slovakia, this meant starting to significantly differentiate and pay attention especially to micro-enterprises. In 2009, Slovakia entered the euro area. The number and structure of enterprises varied in each year as follows in table 2.

We can see, that since 2006, in Slovakia is decreesing the number of self-emloyed farmers. Crisis in 2008 and in 2014 caused a decrease in the number of legal persons and self employed persons, but number of trading companies is permanently growing and their number in 2016 was more than double than in 2007, and nearly 10 times higher, than in 1993.

The following facts were the starting points. There were two major phenomena with major consequences on the Slovak economy:

- global financial and economic crisis - a negative phenomenon,
- the entry of Slovakia into the euro area - a positive phenomenon.

It is well known that the economy of the country is more resilient thanks to SMEs, because it creates solid values and is capable of responding in a flexible and innovative way to market needs.

In Slovakia, in 2017 numerous changes in the SME area have occured. The most positive report was a reduction in the corporate tax rate from 22% to 21%, but this reduction still means that Slovakia has the highest corporate tax rate among the V4 countries. In Hungary there is 10%, in the Czech Republic and in Poland the rate of tax is 19% (Strážovská et al., 2017).

Let us recall the higher social charges - they are increased from 5 times the average wage (4,290 €) to 7 times the average wage (ie 6,181 €). Next, a new dividend tax of 7% was established. Dividends paid among legal entities in the Slovak Republic will not be taxed (Strážovská et al., 2017).

Also, the amount of the vehicle registration fee will also depend on the age of the vehicle and the fee will be payable on the first prepayment.

Tab. 2 Development of the number of legal and physical persons in Slovakia in the years 1993-2017

	1993	2006	2007	2008	2009	2014	2015	2016
Trading companies	20 850	86 317	93 732	111 294	119 268	184 258	193 531	200 104
Enterprises together	28 522	93 411	101 574	119 933	127 409	196 355	193 262	210 766
Non-profit organizations	160 743	45 829	48 198	50 027	51 943	162 700	14 393	17 344
Legal persons	45 265	139 240	194 772	169 960	179 352	259 055	207 655	228 110
Self-employed	264 090	364 185	374 382	392 641	387 876	337 182	316 460	322 968
Freelancers	1 172	15 175	16 725	17 189	17 974	24483	-	-
Self-employed farmers	17 632	8 886	8 534	8 191	8 017	7 849	-	-
Physical persons together	282 894	388246	399 641	418 221	413 867	369 514	338 467	346 992

Source: Strážovská, H. et al. 2017.

The law also brings new direct and indirect aid schemes - support that SMEs can apply for. Direct support types include a non-repayable financial contribution or subsidy; indirect forms of support and non-monetary forms include information, advice, training, organizing and supporting participation in traineeships, competitions, exhibitions, coaching and mentoring. Let's mention an interesting yet new legal form of business - a simple company for shares where there is only 1 euro minimum capital required.

We have chosen from the series of numerous changes only the most famous ones, which respect the participation of Slovakia in the European Union economy. In the following, we will focus on European documents related to business environment, as our research was based on statesments of these documents. We wanted to find out, how Slovak enterpreneurs perceive the implementation of these documents in Slovakia business environment, including their involvement in the single market and gaining benefits of it.

3.1 European Charter for SMEs and related categories

The basic principle of the European Charter for SMEs (2000) is: "Think small first..." It draws the attention of governments and their political and economic decisions and puts into focus the three priorities:

    1   consultations with small businesses,
    2   access to finance,

3   innovation and technology transfer.

In this context, it is necessary to talk about the new SME definition. An organization is considered to be an SME, if it fulfills these conditions:

1   it is an enterprise engaged in economic activity,
2   has less than 250 employees,
3   has an annual turnover not exceeding 50 mil. EUR, has a final balance not exceeding EUR 43 million euros.
4   The enterprise is autonomous, when:
    ➢ it does not own shares in other enterprises and other enterprises do not own its shares,
    ➢ when owning less than 25% of the shares of one or more other undertakings, the other undertakings own less than 25% of its shares.
    ➢ if other companies own between 25% and 50% of their unrecorded shares, and they belong to the following types:
        • public investment corporations, companies that invest capital in the joint venture or business an association with shares of less than EUR 1.25 million,
        • universities or non-profit research centers,
        • institutional investors, including regional development funds,
        • autonomous local organizations with an annual budget of less than EUR 10 million and less than 5 000 inhabitants. Autonomy of the enterprise should be checked in their payroll, turnover and balance compared to the limits. An enterprise that is not autonomous may still be qualified as an SME but must have an external shareholder.
5   The enterprise is a partner, when:
    ➢ if it owns between 25 and 50% of the shares of one or more other undertakings or owns between 25 and 50% of its shares acquired by those non-affiliated undertakings,
    ➢ if it owns a total of between 25 and 50% of the shares of the tied enterprises, or owns a total of between 25 and 50% of its own shares.
6   The enterprise is linked, when:
    ➢ owns more than 50% of the shares of one or more undertakings, or
    ➢ owns more than 50% of its shares. (European Charter for SMEs, 2000)

According to the EU, they may be called:

a) independent enterprises - they are not involved in partnerships or affiliated undertakings,
b) partnerships - are those which are not classified as "linked" undertakings and which are related; - a higher-standing enterprise owns either part of the capital or voting rights of another enterprise either alone or jointly with one or more affiliated undertakings.

The European Charter has approved the Member States and committed to work in accordance with the content of this document. Small businesses, in line with this document, are seen as the main driver of innovation, employment, social and regional integration.

The Government of the Slovak Republic also agreed the adoption of the European Charter and sought to respect the principles of the European Charter for Small Enterprises through individual state authorities. We present them:

1   Acknowledge the dynamic capacities of small enterprises in answering to new market needs and in providing jobs;

2 Stress the importance of small enterprises in fostering social and regional development, while behaving as examples of initiative and commitment;
3 Recognise entrepreneurship as a valuable and productive life skill, at all levels of responsibility;
4 Applaud successful enterprise, which deserves to be fairly rewarded;
5 Consider that some failure is concomitant with responsible initiative and risk-takingand must be mainly envisaged as a learning opportunity;
6 Recognise the values of knowledge, commitment and flexibility in the new economy. (European Commission, 2017)

Selected Priority Areas of the Charter

In our research we have selected from European Charter (2000) three priority areas:

1 Business education processes,
2 Better regulation in the sense of "think small first",
3 Support for small businesses in terms of aid to penetrate international markets.

We very briefly recall the results of the research on these issues.

ad 1. In the field of education, entrepreneurs think that their education is adequate, but about half of respondents consider their education to be inadequate.

ad 2. The legislation satisfied only 12 - 18% of respondents. The legislation often changes, in their opinion, to their disadvantage.

ad 3. Participation in the single market is confirmed by around 40% of our respondents. Most respondents do not feel the benefits of participating in the single market. Significant is the process of creating a new SME Act.

3.2 Ten Major Principles of Small Business Act (SBA) and the perception of the fulfillment of their content by Slovak SMEs

Small Business Act (2008) defined following major principles for government policies in EU:

1 Create an environment in which entrepreneurs and family businesses can thrive and entrepreneurship is rewarded;
2 Ensure that honest entrepreneurs who have faced bankruptcy quickly get a second chance;
3 Design rules according to the "Think Small First" principle;
4 Make public administrations responsive to SMEs' needs;
5 Adapt public policy tools to SME needs: facilitate SMEs' participation in public procurement and better use State Aid possibilities for SMEs;
6 Facilitate SMEs' access to finance and develop a legal and business environment supportive to timely payments in commercial transactions;
7 Help SMEs to benefit more from the opportunities offered by the Single Market;
8 Promote the upgrading of skills in SMEs and all forms of innovation;
9 Enable SMEs to turn environmental challenges into opportunities;
10 Encourage and support SMEs to benefit from the growth of markets. (SBA, 2008)

These principles have been subjected to research as perceived by Slovak small and medium-sized enterprises. The results are given in the following text.

The business environment in Slovakia was considered suitable for growth of entrepreneurial activity only by 28% of the respondents in 2016, and also in 2017. The

problems are seen by entrepreneurs mainly in the unstable legislation and in the changes in the content of economic instruments. Particularly this was accentuated by women.

Have a chance once again, and almost doing business after bankruptcy is a natural requirement. It is noteworthy that while in 2016, nearly 60% of respondents admit that such a chance is, a year later, only 35% of entrepreneurs have admitted that they have such a chance. We see the cause in complicated financial relationships (Strážovská et al., 2017). Both men and women were of the same opinion.

The European Commission has set the **"think small first"** role a long time ago. In both years 2016 and 2017, small businesses in Slovakia (31%) did not see such a change in the long term (71% of respondents claim this in 2017). Here, however, it is necessary to repeat and underline a number of positive changes done by the government. It turns out that SMEs are inclined to see mainly negative changes that unfortunately also accompany economic development. Both men and women were of the same opinion.

A low level of positive responses was obtained on the question of **responding promptly to SME needs by public authorities**. In both periods, the responses are close to negative attitudes (both men and women) (72/82% of respondents are not satisfied with the speed of resolution of their serious problems by the competent authorities, even though the EC has a permanent effect on the reducing of the business-related times.

In the area of **facilitating participation in public procurement** and the use of State aid, SMEs expressed dissatisfaction (71% and 82%). Shares of declining levels of satisfaction in 2017 indicate an increase in the difficulty in obtaining State aid that the SME is not always able to meet. There are not great differences between men and women.

Financial problems are a source of permanent discontent for SMEs. Only 26% of respondents expressed satisfaction with financial relations, respectively, only 15% of respondents in 2017. Similarly to the previous ones, the position of businessmen in 2017 has deteriorated. Even 20% of respondents were completely dissatisfied in both years. Men as well as women - businesswomen.

The relationship to the single market has not changed significantly over the years under review. With some satisfaction, the share of men who have taken advantage of the opportunities offered by the single market has increased. On the other hand, there is still a high rate of entrepreneurs (55% to 58%) that do not work in the single market and do not even know enough about it. Here too, disagreement must be expressed. Information is enough, rather busyness of SMEs, and their lack of linguistic and commercial readiness is the reason for the low level of their participation in the Single Market.

Skills are, of course, the necessary and welcome side of every entrepreneur. From the point of view of the duration of the development and development of business activities in Slovakia (not even 30 years), it was not possible to expect better results than 39%, respectively. 51% in year 2017 those who are trying to do so with the rising level. The most important aspect of the business process is innovation. A positive relationship with them (39% to 51% in 2017) now has an overpopulation of the SME. That's glad. On the other hand, the lack of resources for the introduction of innovation (55% and 48% in 2017) has been a problem for years. Men are more interested in and active in innovation. The positive thing is that in 2017 this activity was reflected in 51% of entrepreneurs. Notwithstanding the entrepreneurs' comments on the lack of innovation funding. Men represent a faster pace of growth in relation to innovations than women.

The results in the priciple „**translating environmental challenges into opportunities**" were progressive, especially in the men group. Unfortunately, the problem of lack of time is still reflected in the detailed discussion of this issue. Rather, men's interest in this activity grows.

Small and medium-sized businesses need **support to benefit from rising markets**. The results of our research show that more women and men expect more support and encouragement. However, in general, 2016 felt 36.9% of respondents. On the contrary, 2017 support and encouragement were felt by only 24% of respondents. These feelings for entrepreneurs also change depending on the changes in the content of economic instruments, which were evident as in the year. 2016, more pronounced in 2017.

In evaluating the activities of Slovak small enterprises in selected European structures, we conclude that respect for the content of individual economic instruments created and recommended by the EC is not yet fully respected in Slovakia. It can be seen from the results of our research. The reasons for the lower participation of Slovak small entrepreneurs in the Single Market as a result of the research are:

- language barriers,
- low awareness,
- high participation costs
- and low skill levels.

We in accordance with Dellot & Thompson (2013) see the challenge in encouraging more young people (and not only them) to think about starting a new business, and to bridge the gap between aspirations and reality, and further, to make sure that those individuals who do start trading have the greatest opportunity for success. In doing so, it is vital that all those involved in stimulating entrepreneurship – government, support organisations, the corporate industry and others – have a thorough understanding of what helps and what hinders young enterprise, rooted in the needs and experiences of the entrepreneurs themselves.

In 2018, as claimed by Mihál (2018), major changes are coming to Slovakia:

- further growth of slovakia's economy is expected,
- the unemployment rate is expected to decline,
- wage growth is projected,
- increased participation of labor forces from 3rd countries is expected,
- the positive relationship to older workers will change in the sense of their need in work processes,
- the importance of research activity for businesses will grow,
- the need to increase innovation will be emphasized,
- greater attention will be paid to the business environment,
- extensive investment in manufacturing and industry is expected,
- a welcome issue will be the reform of the state administration,
- changing needs of employees will be a challenge,
- the creation of competitiveness in the digital industry must be highlighted, education and health must be resolved,
- it is neccessary to introduce discipline into the use of eurofunds,
- still must be resolved the issues of corruption,
- it is important to reflect on the regional differences between eastern and western Slovakia,
- still unsolved is the roma issue,
- the retraining of the labor force is expected,
- all these expectations need to create a clear vision.

Based on the results of the detailed analysis, we have anticipated proposals and challenges for future changes that would contribute to growth the effectiveness of this aspect of small entrepreneurship in Slovakia. It should be stressed that our results can not be completely generalized, because they were achieved on the sample of 130 respondents, but it is significant

that they are small entrepreneurs, mostly in micro-businesses. In Slovakia, such results represent almost half of micro-enterprises

CONCLUSION

In evaluating the activities of Slovak small enterprises in selected European structures, we conclude that respect for the content of individual economic instruments created and recommended by the EC is not yet fully respected in Slovakia. It results from the results of our research. The reasons for the lower participation of Slovak small entrepreneurs in the Single Market as a result of the research are: language barriers, low awareness, high participation costs and low skill levels.

Further efforts are required in the area of access to market as regards creating better synergies between existing programmes, especially EU programmes. Promoting entrepreneurship at an "early stage", (e.g. entrepreneurship education, Erasmus for Young Entrepreneurs) and supporting youth start-ups are also key actions (European Commission, 2017).

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The Significance of Thin Slice Judgments and Non-verbal Impressions in Personal Sales (A Preliminary Study)

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Abstract: The salesperson plays an important role in the overall sales process due to the varying need to explain the products and/or services offered. Factors such as professional competence or the demeanour of a salesperson can be decisive. Previous research has shown that the first impression influences a multitude of daily decisions. This phenomenon is described by the theory of thin slices. A situation is unconsciously divided into slices, based on which the brain makes a decision. Thirty seconds is often sufficient time to assess a situation or a person. This also applies to sales situations. In the present scientific preliminary study, a laboratory experiment was conducted in which sales pitches were re-enacted with professional salespersons. The results of the present study indicate that interpersonal qualities and task-oriented qualities have a positive effect on the purchase intention. On the other hand, anxiety has a negative effect. However, it is also evident that additional variables need to be taken into account. As a result, theoretical, as well as practical recommendations, can be offered in addition to suggestions for future research.

Keywords: personal sales, first impression, interpersonal qualities, task-oriented qualities, anxiety, purchase intention

INTRODUCTION

The first impression made on other people occurs very quickly and shapes decisions that can have a lasting influence Carney et al. (2007); Gladwell (2007); Williams and Senior (2001); Willis and Todorov (2006). As one proverb states: "You never get a second chance to make a first impression". In personal sales, the perception of the salesperson has a decisive influence on the success of the sale and Ambady and her colleagues Ambady and Krabbenhoft (2006) have investigated this phenomenon was Their study showed that judgments about salespersons by means of "thin slices" could yield exact predictions as to their sales efficiency. Independent observers assessed a multitude of parameters from the 30-second-long recorded conversations with sales personnel. The method of "thin slicing" was followed and parameters, such as anxiety, analytical behaviour and emotion, were assessed. These assessments demonstrated a high degree of correlation with current sales efficiency, as rated by the supervisor of the salesperson.

In personal sales, the interaction between the customer and the salesperson plays a central role. Consequently, in this context, the importance of the "thin slices" method and the influencing factors are relevant for researchers in theoretical terms and for marketers in

practical terms. As a result, this research will explore the relevant factor of a successful sales person.

1 LITERATURE REVIEW

First impression judgments affect consumer decision-making when interacting with a salesperson. In general, the interaction between a customer and a service employee or salesperson is considered to have a big impact on the customer's assessment of the service quality and relationship Gwinner et al. (1998). Connection to the consumer is thus an overriding goal of marketing activities. Personal selling, as a direct interaction between salesperson and purchaser, therefore comprises a central instrument for the relationship with the consumer. The sales pitch is thereby increasingly understood to be a process of social interaction that has as its goal the development of a relationship with the consumer Kotler et al. (2009). In personal selling (face-to-face contact), the perception and physical proximity (interaction) between the salesperson and the purchaser during a sales call or in the retail store are significant. Furthermore, if one proceeds on the basis that the "first impression" is often decisive for the purchaser/consumer, then in order to produce a positive decision to make the purchase, it is of great importance to know which non-verbal components are especially important for a salesperson to be able to create this positive first impression. Based on this conclusion, the following model of the significance of non-verbal impressions in personal sales was deduced (cf. Fig. 1).

Figure 1 Proposed model of the influence of non-verbal impressions on intention to buy
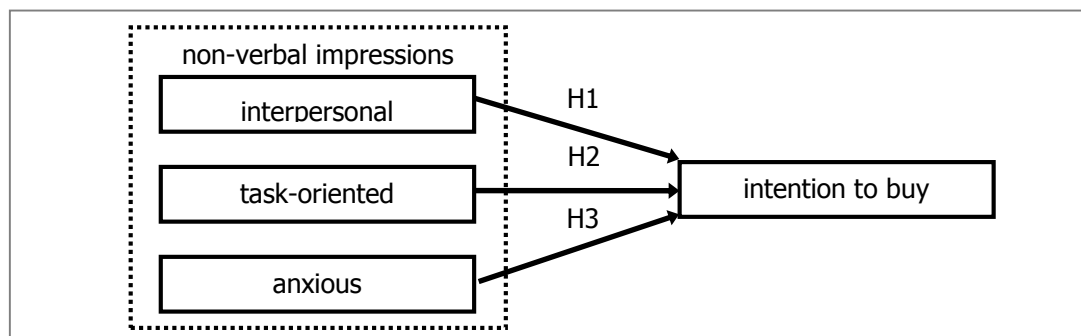
Source: Authors

Based on the presented model and the research question, the following hypotheses were formulated:

- H1: The interpersonal perception of the salesperson has a positive influence on the intention to buy.
- H2: The task-orientation of the salesperson has a positive influence on the intention to buy.
- H3: Anxiety on the part of the salesperson has a negative influence on the intention to buy.

Based on these hypotheses, variables (and their items) for the ascertainment of the non-verbal influence of salespersons were defined, as well those for the purchase decision. Since these variables have already been used in previous research Ambady et al. (2006), Hari and Stros (2008), they can be considered as being validated:

- The independent variable, interpersonal perception, consists of the following six items: cooperative (caters to the customer), emotional, enthusiastic, supportive (supports the customer in his/her decision, is interested and concerned with the development of others), understanding, sympathetic.
- The independent variable, task-oriented, consists of the following six items: self-confident, goal-oriented (guides the conversation), professional (competent), reserved, dominant, convincing.
- The independent variable, anxiety (uneasiness).
- The dependent variable, intention to buy: "Would you buy a product from this person?"

2 METHODOLOGY

An experimental approach was chosen as the appropriate method for this study. This method enables the research issue or process to be investigated under well-planned, simplified conditions Lee and Lings (2008).

Since every industry features special characteristics with respect to the type and method of practising personal sales, a balanced mix of various industries was sought in the selection of test subjects. The investigators identified potential research subjects from their acquaintance circles and personally invited them to participate in the study. In total, 13 people agreed to participate.

The characteristic of a sales pitch is the specific dialogue between a salesperson and a potential customer, which is aimed at coming to an agreement. Since each customer, and also each salesperson, comprises a discrete personality with his or her individual characteristics, each sales pitch is different from all others. In addition, each of the sales pitches filmed in this study focused on the different products and services offered by the various salespersons. Thus, it was not possible to design an exact plan for the sales pitches in advance.

The preliminary information for the participants in the experiment was provided via e-mail. The test persons received the same information in advance of the experiment in order to establish the same initial situation for all. In order to ensure the anonymity of the participants in the investigation and the reliability of the data received in the scope of the sales experiment, a confidentiality agreement was signed by all participants in the study.

The sales pitches were performed in the participating institution and an experimental room was prepared for the purpose. The sales pitches were made at a round table with two chairs, at which two microphones were placed. The recording equipment and the place for the producer were set up behind a "dividing wall" (filing cabinets). Locating the producer behind a dividing wall was intended to reduce to a minimum any potential distractions. The conversations were filmed from two different camera perspectives.

The director of the experiment greeted the participants in a waiting room next to the experiment room. Here the test subjects were briefed again and all persons involved signed a confidentiality agreement.

In total, seven sales pitches were filmed with professional salespersons from various industries and three "actor-customers". The director of the experiment played the role of the "false" customer. So doing ensured that the "customer" was not known personally to the salesperson.

Following the completion of the video experiment, the participants were asked to fill out a pretested questionnaire. Thus, it was possible to ascertain their still-fresh impressions, as well as their opinion of the test subjects regarding the sales pitches that had just taken place. The questionnaire was intended as a means to determine whether or not some unconsciously

perceived factors could have had an influence on the recorded sales pitch and, thus, have falsified the results.

Seven short films (30 seconds) were pieced together from all of the filmed material of each of the sales pitches. The selection of the sequences was made by the salesperson together with the producer. The content of the seven short films consists of three sequences of ten seconds each. The first sequence represents the greeting during the sales pitch. The second sequence begins at the point at which the salesperson addresses the purchaser with the product in his or her hand and the third sequence contains the end phase (conclusion) of the sales pitch. The tone of the short films was altered in a particular way and manner so that, on the one hand, one hears the voices of the people involved but, on the other hand, does not understand the content of the conversation.

The questionnaire contains 14 questions, 13 of which are questions regarding the non-verbal behaviour of the salesperson. The items (listed in Table 1) were measured. The questions were ordered in a random fashion within the questionnaire (see Lee and Lings (2008)) for the formulation of research questionnaires). The respondents were required to evaluate the films on the basis of a scale Likert (1993) from one to seven (where 1 = clear rejection; 4 = neutral; 7 = complete agreement). (see Ambady and Krabbenhoft (2006); Hari and Stros 2008)).

Table 1 Questionnaire items

1) anxious	9) sympathetic
2) self-confident	10) professional (competent)
3) cooperative (caters to the customer)	11) reserved
4) goal-oriented, directs the conversation	12) dominant
5) emotional	13) understanding
6) persuasive	14) Would you purchase a product from such a salesperson?
7) enthusiastic	
8) convincing	

Source: Authors

The videos were then shown to 25 people who were asked to assess the filmed sales pitches. The assessment took place via a questionnaire, which the test subjects were required to fill out after each short film. Those surveyed consisted of friends and acquaintances, colleagues and supervisors of the experiment director. This meant that the assessors had a range of ages and social backgrounds. The test subjects received no compensation.

3 RESULTS AND DISCUSSION

For the evaluation of data, the coded answers to the 25 questionnaires were entered into SPSS. The quality of the data was assessed and a correlation analysis, analysis of variance (ANOVA) and a regression analysis were performed.

Table 2 shows the correlations between the different variables. The three independent variables —interpersonal, task-oriented and anxious—are correlated with each other and all strongly correlate with the intention to buy the product. The Cronbach's Alpha for the multi-item variable, interpersonal, was 0.824 and for the variable, task-oriented, was 0.900.

Table 2   Conventional correlation matrix (Pearson correlation)

** p<0.01		anxious	intention to buy	interpersonal	task-oriented
anxious	Pearson correlation	1	-.254(**)	-0.147	-.309(**)
	significance (2-tailed)		0.001	0.052	0.000
intention to buy	Pearson correlation	-.254(**)	1	.704(**)	.559(**)
	significance (2-tailed)	0.001		0.000	0.000
interpersonal	Pearson correlation	-0.147	.704(**)	1	.637(**)
	significance (2-tailed)	0.052	0.000		0.000
task-oriented	Pearson correlation	-.309(**)	.559(**)	.637(**)	1
	significance (2-tailed)	0.000	0.000	0.000	

Source: Authors

A regression model (regressing the three affective variables, interpersonal, task-oriented and anxious, on the intention to buy the product) is presented in Table 3. The model explains 72.8% of the total variance and has a high explanatory power (F (3,174)=64.314; p=0.000). All three variables show statistical significance on the intention to buy, thus confirming H1, H2 and H3.

Table 3   Regression model with dependent variable "intention to buy"

	non-standardized coefficients		standardized coefficients		
	B	**standard error**	**Beta**	**T**	**significance**
(constant)	-0.104	0.464		-0.224	0.823
anxious	-0.113	0.050	-0.123	-2.229	0.027
interpersonal	0.929	0.106	0.596	8.741	0.000
task-oriented	0.201	0.101	0.142	2.000	0.047

Source: Authors

CONCLUSIONS AND RECOMMENDATIONS

The results of the present study indicate that interpersonal qualities and task-oriented qualities have a positive effect on the purchase intention. On the other hand, anxiety has a negative effect. These results also add to the validity of the model shown in Figure 1. However, it is also evident that additional variables need to be included. This interpretation of the findings is in line with the results of a recent study by Ambady and Krabbenhoft (2006). As a result, the following conceptual model of the significance of non-verbal impressions in personal sales is proposed (cf. Fig. 2).

Given that sales decisions are partly made on the basis of unconscious impressions and their resulting impact, the scientific findings of research on thin-slice judgements will have a significant impact for retailers, marketing managers and human resource executives in their daily work. The methodology of thin-slice judgements also seems to be a feasible tool for the

selection and training of sales personnel. Furthermore, it implies that non-verbal behaviour plays an important, perhaps even more important, role than does competence. This study, therefore, confirms both the phenomena of "thin-slice judgments" Ambady and Krabbenhoft (2006) and Ambady and Rosenthal's (1993) conclusion that thin-slice judgments are often valid predictors of formal evaluations. Hence, a theoretical foundation is provided for the use of the current study's methodology as an appropriate instrument for training and selection (see also Ahearne et al., 1999). A possible training and analysis instrument could be combined with this theoretical construct. Taking into consideration the sample size of 25 participants, this work is viewed as a preliminary study for future research. In addition to this, it should be noted that a future study might consider employing non-parametric statistical methods due to the rather small sample size and measurement scale.

Figure 2 Conceptual model
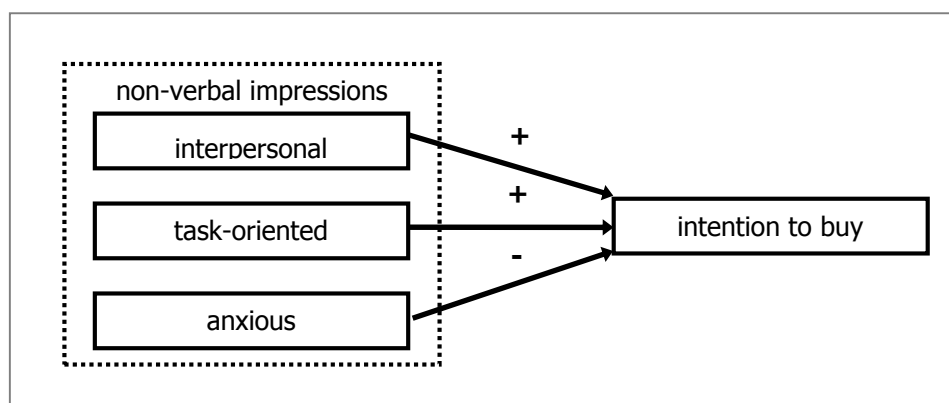
Source: Authors

The phenomenon of thin-slices appears to be an automatic process and individuals are usually unaware of the cues they use in forming their judgements of others Ambady and Krabbenhoft (2006). In an interaction between a salesperson and a customer, this will apply to both parties. The customer will assess the salesperson and the salesperson will assess the customer. This immediately raises three avenues for further research. First, can salespeople be trained to achieve better judgments from their customers or, second, can salespeople be selected on the basis of naïve judgements? A third alternative would be that some salespeople can be trained (or again selected) to quickly assess the customer's willingness to buy. Not wasting too much time on the wrong prospect is a mantra in business-to-business sales situations.

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On-line Reviews of Products and Factors Affecting Their Usefulness within Russia

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Abstract: With the development of various technologies and products, the most actively used source of information about products is the feedback of other buyers on the Internet. The key elements to which readers pay attention cannot be identical for all types of goods and consumer groups for a number of reasons. The purpose of this research is to create an "ideal feedback", which will be most favorably received by the potential buyer and will affect the decision to purchase a good. Within the framework of this research, we carried out a semantic analysis and content analysis of texts on the reviews on the Yandex. Market website. Basing on selected keywords and using the methods of binary regression, we have constructed the model of "ideal feedback". On the example of the "refrigerator" group, we identified differences in reviews in the sex of the author and the price category of the product, reveal the key elements that consumers of refrigerators pay attention to, and model an "ideal review" positively evaluated by most buyers. This research will be interesting to companies that are actively promoting their products on the Internet.

Keywords: consumer behavior, electronic Word-of-Mouth, online review, review helpful

JEL Classification codes: M 31, D 91, L 68

INTRODUCTION

Nowadays, a customer can get information from different sources while choosing a product. In the course of modeling, it was defined that a positive review rating is influenced by the number of words in a customer review, the combination of such words as "compressor", "quiet", "noisy", "box", and the recommendations on position improvement. The factors of a negative review rating include the combination of words "design" and "style" and the indication of defects that could be revealed before the appliance purchase at a visual examination.

1 LITERATURE REVIEW

Word-of-Mouth research has been conducted since long ago. Initially, it concerned only traditional (offline) Word of Mouth. The research showed that Word of Mouth recommendations, generated by customers, were considered to be more trustworthy and got more attention in the market (Korelina, 2016; Altunin, 2014; Arndt, 1967). The reason is that customers, giving recommendations, are treated as people having no personal financial interests related to a specific brand or product. Electronic WOM is a more powerful instrument due to its ability to cover a great number of people immediately (Haywood, 1989; Hennig-Thurau et al., 2004), even though intentions of people, who provide online reviews, are put in question (Christodoulides et al., 2012). Companies are aware of WOM power of influence on customers, and sometimes one can come across a "pre-programmed review" for one or another product, which is, by the way, often revealed by customers themselves.

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WOM research, conducted to date, raises a wide range of issues including the rating of the influence of obtained information on customer decisions (Chevalier, & Mayzlin, 2006), and the analysis of differences in perception of a negative and positive review (Forman et al., 2008). In the last decades, the scientists have studied the influence on review helpfulness and its perception of different factors: membership level, review rating, review depth, interval days (Lee, 2009; Fu, & Wang, 2013), review length, average stars, average number of helpfulness ratings, average number of typed characters, average review lifetime (in days) (Zhang et al., 2010), influence of completeness and relevance of messages on their perceptible information helpfulness (Cheung et al., 2008). Some studies underlined that among other things, the social component of online reviews (Racherla et al., 2012), reviewer demographic background and manager response (Kwok & Xie, 2016) are equally important.

Not only the analysis of reviews and their helpfulness is important. Different models are often constructed to understand customer behavior better. Review helpful modelling is conducted, as a rule, referring to specific groups of products and services: books (Korfiatis et al., 2012; Chevalier, & Mayzlin, 2016), tourist services (Kwok, & Xie, 2016) audio and video players, digital cameras (Ghose, & Ipeirotis, 2007).

We conducted our research based on electronic WOM data in Russia with regard to household appliances using the review base at Yandex.market site (https://market.yandex.ru/). It promotes studies in cross-cultural features of customer behavior conducted by the scientists from different countries (Cheung et al., 2007; Christodoulides et al., 2012; Hidayanto et al., 2014), enabling international companies to understand customers better.

The choice of refrigerators from household appliances is connected with the peculiarities of purchasing this durable product. Studies conducted by us before have shown that in case of refrigerator breakdown customers shop within a limited period of time. Sometimes, customers buy a new refrigerator on the day of breakdown, wishing to save food from the old one. In such situation, product information is reviewed quickly, and it can negatively influence the post-purchase satisfaction (Dubovik et al., 2017).

2 METHODOLOGY

In the frames of this research, conducted in the second half of 2017, we applied different analysis methods as follows:

Semantic analysis means the definition of term and phrase frequencies. The advantages of this method: it enables, using only qualitative data, to define key elements that arouse customers' outstanding interest and concern and to determine the features of the cause-and-effect relationship between them.

The goal of the analysis is to determine key features that are of concern to refrigerator buyers (designers), disclosed in reviews, in the context of authors' gender and well-being.

The stages of the analysis:

- a sampling of refrigerator models with the biggest number of reviews allowing for their price;
- creation of text files with customer reviews and evaluation of term and phrase frequencies therein;
- definition of review shares (based on gender, wellbeing, ratings);
- definition of relationships.

To analyze information messages (reviews), we have chosen the site Yandex.market (https://market.yandex.ru/), as it is a rather producer independent source of information.

Trade networks are anyway specialized indefinite product brands and it increases the frequency of reviews on some brands. It restricts possibilities of using reviews from their sites.

Information sources (reviews) were sampled as follows:

- definition of three price groups of refrigerators: below RUB 30,000 (low-price segment), RUB 30,000 to 200,000 (mid-price segment) and above RUB 200,000 (high-price segment).
- ranking of refrigerator models based on the number of reviews in the context of price segments;
- a sampling of the first 10 refrigerator models with the highest number of reviews within each price segment.

Only two-compartment refrigerators have been sampled due to different functions of one-compartment, two-compartment refrigerators, and deep-freezers. Thus, sampling includes 30 the most talked about refrigerator models from three price groups. The reason for price grouping is related to an attempt to segment a market by product purchase zones based on consumers wellbeing, as the poorer population buys cheaper refrigerator models. The drawback of such grouping is that it does not allow for errors due to purchasing by the poorer population of more expensive models in pursuit of status.

Text files were created based on the gender of all review authors within three price groups. As a result, we sampled reviews by men, women, as well as users, who hid their data. If a user hid his data, his gender was determined by analyzing verbs gender in the text. And a review was rejected when it was impossible to identify the author's gender.

Content analysis means a qualitative-quantitative method of analysis of text content aiming at defining or measuring social factors and tendencies indicated therein. In this particular case, we conducted the reviews content analysis. The content analysis covered only one model that had the highest number of reviews on Yandex.market at the moment of data collection: LG GA-B409 SVQA. 106 reviews were provided for this model.

The following features were identified in the course of review coding:

- author's gender;
- author's rating;
- emotional factor of a review (positive, neutral, negative);
- author's activity in terms of reviews on other appliances;
- review helpfulness rating (likes/dislikes);
- an indication of defects in a review;
- an indication of defects that could be revealed before the appliance purchase (at the visual examination, attentive reading of the instruction manual);
- improvement recommendations;
- appliance operation period by the author;
- an interval between the present and previous review dates;
- number of words in a review;
- words: no, big, capacious, convenient, doors, compressor, beautiful, freezing, shelf, quiet, price, noisy, box, eggs, design, style;
- city of residence.

The analysis shows that some negative reviews cover complaints about elements, which could be found during the initial examination of a refrigerator, or from the instruction manual, or initial reading of customer reviews. To our opinion, such defects include "lack of handles on the door", "too "slim", "we'd better buy 2 meters high", "shelf spacing is rather big", "egg rack is only for 8 pcs.", etc. That's why, these reviews were grouped separately as reviews covering defects, which could be revealed before the appliance purchase.

Cluster analysis. The results of the semantic analysis were processed by the cluster analysis method in the program Statistica 6.0. The method provides for construction of a dendrogram (cluster tree) with the purpose of grouping the authors by their topics. Classification is based upon the hierarchical cluster analysis by Ward's method with a square Euclidian metric on z-transformed variables (z-transformation aims at balancing dynamics indices; this reduces to centering indices to AA values with further standard deviation valuation). Taking into account the number of clusters identified at this stage, the iterative cluster analysis by the k-means method was conducted. The decision on stability was taken based on a comparison of results of clusterization by these two methods.

2.1 Regression analysis

Binary regression means the dependency of the endogenous variable, taking only two values from the other variables. With this method, we tried to model "an ideal review" and to define constructs impacting the positive review rating. While modeling, we were guided by the following reasoning.

It is not correct to identify the number of positive reviews without taking into account the number of negative reviews, as having more than 50 positive ratings, a review can have app. 100 negative ones, and it will distort the model. Moreover, the number of likes itself (absolute value) is a time variable. The longer a review is on the Internet, the more likes/dislikes it gets.

It is not always correct just to define the share of positive likes in the general structure. If there is only one like, then the share of positive like amounts to 100% and it will influence the model. So, one should take into account both the share and number of positive likes. In our opinion, the formation of the following value of a dependent variable is a way out of this situation:

$$Y = \begin{cases} 1, if \ \frac{L^+}{L^+ + L^-} \geq 70\%, (L^+ + L^-) \geq 10 \ , \\ 0 \end{cases} \tag{1}$$

where L^+ and L^- – the number of positive (like) and negative (dislike) ratings of a review, left by readers.

Thus, Y has only two values – 1 – "a review got more than 10 feedbacks and positive ones amount to 70%", and 0, if conversely. Most often, while constructing binary models, the functions of a normal distribution (Probit), logistic distribution (Logit) and Gompertz distribution (Gompit) are used. For calculations, we used features provided in the package Econometric Views 8 (REVIEWS).

Assuming that the dependent variable has only two values, the probability that it will have a proper value can be shown as a function of some factors:

$$P(Y = 1 \mid X_k) = F(X_k \ \beta) \tag{2}$$

$$P(Y = 0 \mid X_k) = 1 - F(X_k \ \beta) \tag{3}$$

Thus, the probability that 70% and more readers will rate a review as positive $P(Y = 1 \mid X_k)$ or less $P(Y = 0 \mid X_k)$ depends on a collection of variables (X_k), which can be both qualitative and quantitative.

The best model (Logit, Probit or Gompit) was chosen based on the minimum values of information criteria Akaike (AIC), Schwartz (SC) and Hannan-Quinn (HQ). To evaluate the quality of model fitting to actual data, we used the determination coefficient McFadden R^2, Prob (LR statistic), log likelihood and Hosmer-Lemeshow test.

A set of parameters shows the influence of changes of each factor on the final probability. In our case, variables were determined on the basis of the previous analysis:

- author's gender;
- author's rating;
- emotional factor of a review (positive, neutral, negative);
- an indication of defects in a review;
- an indication of defects that could be revealed before the appliance purchase;
- improvement recommendations;
- appliance operation period by the author;
- an interval between the present and previous review dates;
- number of words in a review;
- words: no, big, capacious, convenient, doors, compressor, beautiful, freezing, shelf, quiet, price, noisy, box, eggs, design, style.

The stepwise selection method was involved to have only statistically significant variables in the models.

3 RESULTS AND DISCUSSION

This research solves some issues, including identification of differences in reviews made by different groups of consumers. The differences are the most vivid in the context of gender and well-being. The analysis enabled to define the following features.

First, men provided reviews more often than women. Only three models of refrigerators out of thirty had more reviews provided by women than by men. These were mid- and high-price segment refrigerators.

Second, the number of reviews for expensive models is less than for cheap models. Even in the mid-price segment, one can notice lower activity starting from refrigerators at the cost of minimum RUB 100 thous. (Fig. 1).

Fig. 1 Number of reviews by refrigerator consumers
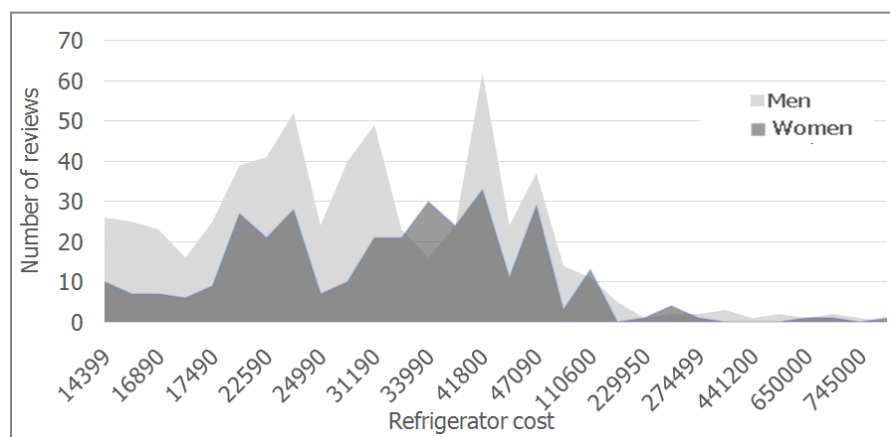
Source: Yandex.market data, authors' construction

Third, women's average refrigerator ratings are higher than the same of men. Only two models have lower women's ratings than men's ones: Biryusa 129S (RUB 23,990), and Indesit SB 185 (RUB 16,890). Both models belong to consumer-grade refrigerators. Thus, women's

expectations with regard to cheap models were probably met more seldom than men's expectations (Fig. 2).

Fourth, Fig. 2 and Table 1 show that ratings of expensive refrigerators are either excellent or significantly negative or missing. Certainly, the limited number of reviews impacts such distribution and does not make it possible to state distinctly that satisfaction with the model depends on refrigerator cost growth. But when reading reviews, one cannot pass over such phrases as "A refrigerator at the cost of € 23 thous. can't have drawbacks. Such things are bought because they have no drawbacks". Reasons for negative reviews on cheap models are related to unsatisfactory information on the goods, namely "unclear description in broken Russian".

Fig. 2 Average refrigerator ratings by review authors
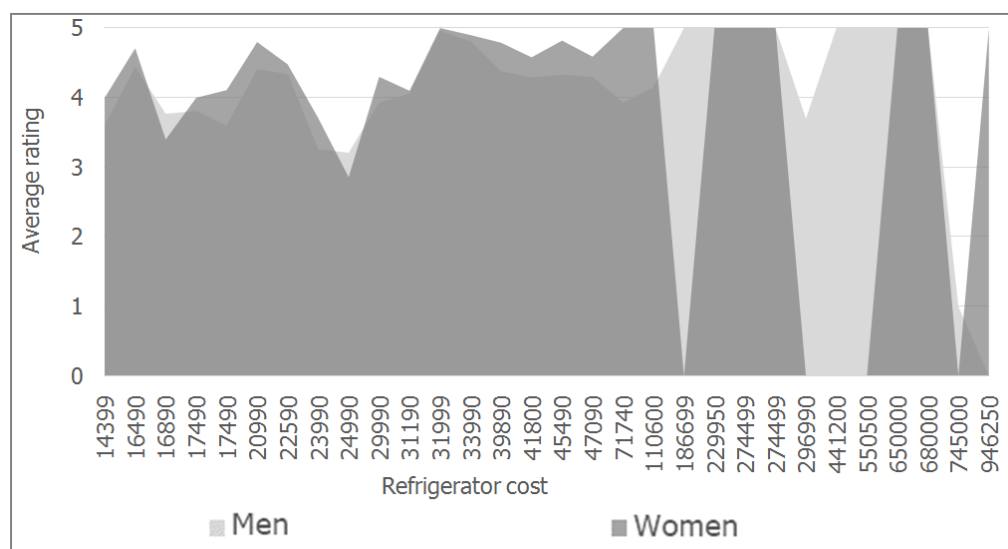
Source: Yandex.market data, authors' construction

Fifth, men are more often inclined to put negative ratings. Men's average rating is lower than the same of women because women almost do not put such ratings as 1 and 2. They are more often satisfied with goods. The share of such rating as 1, put by men within price segments, is in the range of 6-7%, and by women 0-2% (Fig. 3). With refrigerator cost growth, one can notice a decrease in the number such ratings as three and four in favor of excellent ratings.

Sixth, it is peculiar to men to provide longer reviews. Within price segments, the relation between men and women with regard to the average number of words in reviews is as follows:

- expensive models: men 48.6 words/women 48.8 words;
- average cost models: men 90.8 words/women 77 words (Table 2);
- cheap models: men 85.8 words/women 74.9 words (Table 3).

It follows from the reviews studied on Yandex.market that the longest review consisting of 632 words was provided by a man, and the longest woman's review consisted of only 373 words. But, we should underline that on other sites one can notice record-holders among women's reviews. For example, a woman's review on the site of the largest Russian trade network Eldorado contained 889 words. As for reviews studied on Yandex.market, the man's review contained complaints about shelves, boxes, and doors, while the woman's one included instructions how to turn on a refrigerator for the first time to avoid noise. So, the first author's rating was "good", and the second rating was "excellent". The woman wrote that she was

satisfied with a purchase. Short reviews consisting of 5-6 words are provided by both men and women.

Table 1   Number and average rating of consumers of refrigerators at the cost of minimum RUB 200,000

Denomination	Price	Men		Women	
		Number of reviews	Average rating	Number of reviews	Average rating
Mitsubishi Electric MR-ZR692W-DB-R	274,499	2	5	4	5
Mitsubishi Electric MR-ZR692W-CW-R	274,499	2	5	1	5
Liebherr SBSes	296,990	3	3.7	0	-
Asko RWF2826S	680,000	2	5	1	5
Hitachi R-E6200UXK	229,950	1	5	1	5
Asko RF2826S	650,000	1	5	1	5
Miele F 1811 Vi	745,000	1	1	0	-
De Dietrich PSS 312	441,200	1	5	0	-
Restart FRR022	946,250	0	-	1	5
De Dietrich DKA 866 M	550,500	2	5	0	-
Average number of words per a review		48.6		48.8	

Source: Yandex.market data, authors' calculations

Fig. 3 Review groups by authors' ratings
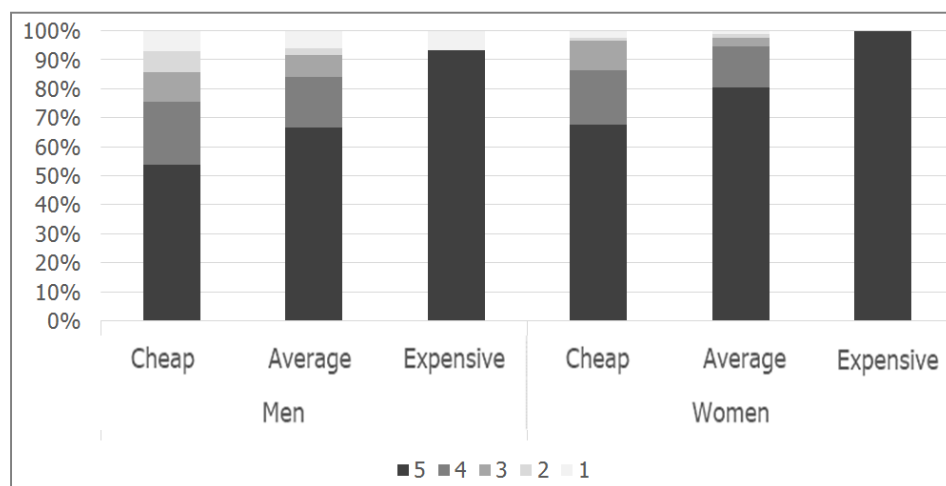
Source: Yandex.market data, authors' construction

Table 2   Number and average rating of consumers of refrigerators at the cost of RUB 30,000 to 199,999

Denomination	Price	Men		Women	
		Number of reviews	Average rating	Number of reviews	Average rating
LG GA-B489 TGDF	71,740	14	3.93	3	5.00
LG GA-B489 YEQZ	47,090	37	4.30	29	4.59
Bosch KGS39XW20	31,190	49	4.06	21	4.10
LG GA-B489 YMQZ	45,490	24	4.33	11	4.82
Hotpoint-Ariston HF 6201 X R	31,999	23	4.96	21	5.00
Hotpoint-Ariston HF 8181 S O	33,990	16	4.81	30	4.90
LG GA-B409 SEQA	39,890	24	4.38	24	4.79
LG GA-B409 SVQA	41,800	62	4.29	33	4.58
Siemens KG49NSW21	110,600	11	4.15	13	5
Panasonic NR-F555TX-N8	186,699	5	5	0	-
Average number of words per a review		90.78		76.97	

Source: Yandex.market data, authors' calculations

Table 3   Number and average rating of consumers of refrigerators at the cost of maximum RUB 30,000

Denomination	Price	Men		Women	
		Number of reviews	Average rating	Number of reviews	Average rating
Indesit DF 5200 W	23,990	52	3.26	28	3.71
Gorenje RK 41200 W	17,490	16	3.81	6	4.0
Biryusa 129S	24,990	24	3.21	7	2.86
Pozis RK-102 W	16,490	25	4.44	7	4.71
BEKO CN 327120	17,490	25	3.6	9	4.11
Indesit SB 167	14,399	26	3.6	10	4.0
Bosch KGS39XL20	29,990	40	3.93	10	4.3
ATLANT XM 6025-031	22,590	41	4.34	21	4.48
Indesit DF 4180 W	20,990	39	4.41	27	4.8
Indesit SB 185	16,890	23	3.77	7	3.4
Average number of words per a review		85.8		74.9	

Source: Yandex.market data, authors' calculations

Seventh, one can come across "pre-programmed reviews" on Yandex.market. The analysis of likes and dislikes shows that they are not always recognized by the population. In some cases, they get a lot of likes before any consumer will notice a trick and write that it's a "pre-programmed review".

3.1 Semantic analysis results

The semantic analysis enables to determine general and different aspects in reviews (Table 4).

Within all price segments, both men and women often pay attention to the refrigerator capacity and size ("big"). Reviews on expensive and mid-price refrigerators more often contain such

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adjective as "quiet", while reviews on models from the cheap segment contain its antonym "noisy". Women more often pay attention to the refrigerator design and use a word "beautiful". Men are concerned about "compressors". Rich people are interested in wine sections and fingerprints on the door, other people care about doors, shelves, boxes, egg racks. The word "money" is often mentioned in expensive model reviews in the context "it is worth its money". Cheap model reviews more often contain a word "price" in the context: acceptable, proper, low price.

Table 4   The first 10 descriptive words ranked by frequency in reviews

Price segment	Men	Women
Refrigerators at the cost of maximum RUB 30,000	Doors, freezing, noisy, compressor, big, operates, good, shelf, chamber, capacious	Freezing, noisy, doors, chamber, big, capacious, price, good, box, satisfied
Refrigerators at the cost of RUB 30,000 to 199,999	Compressor, capacious, big, quiet, shelves, doors, beautiful, design, frost, box	Capacious, design, beautiful, a lot of, quiet, convenient, frost, shelves, big, chamber
Refrigerators at the cost of minimum RUB 200,000	Quiet, capacious, big, convenient, a lot of, wine, favorite, money, food, freezer	Capacious, big, quiet, ideal, good, prints, external, family, a lot of, beautiful

Source: Yandex.market data, authors' construction

3.2 Content analysis results

In the frames of this analysis, we studied only one refrigerator model with the maximum number of reviews (106) on Yandex.market: LG GA-B409 SVQA. The characteristics of review authors are as follows:

- the geography of review authors is rather wide: European part of Russia and Siberia. 19 authors did not specify their place of residence (17.9%), 45 authors live in large cities with a population over 1 mln people (42.4%);
- 15 authors (13.2%) hid their personal data. We did not manage to determine authors' gender in 11 reviews. There were 33 women among other authors (31.1% authors);
- 51 authors placed their reviews on other household appliances on Yandex.market (48.1%);
- 52 authors (49%) identified defects, including 16 authors (15.1%) specifying defects that could be revealed before the appliance purchase;
- as for the emotional aspect, 7 persons (6.6%) provided rather negative reviews on the refrigerator, and 33 persons (31.1%) were delighted, the rest were neutral stating positive and negative features or just describing advantages without emotions. 5 persons gave recommendations on improvement (4.7%). Other characteristics are shown in Table 5.

The rating of review authors averages to 4.4 (including, men 4.29 and women 4.58). At that, the share of men, who put negative ratings (2 and 1) is higher than the same of women. The share of "excellent" ratings is higher by women than by men.

As for review ratings by the other people, 27 reviews had no marks on their helpfulness (likes and dislikes). All reviews with a large number of likes were provided by men, and 1 – by a user, who hid his settings. The maximum number of likes to a woman's review is 13. By

contrast, just a woman's review got the maximum number of dislikes – 59. The next two places as for dislikes are taken by men's reviews (39 and 19 dislikes).

We divided reviews by the appliance operation period into three groups:

- up to 1 month – 46 persons, average number of likes – 7.7, dislikes – 3, average authors' rating – 4.5 (including men 4.4, women 4.8);
- 1 month to 1 year - 43 persons, average number of likes – 6.1, dislikes – 3.6, average authors' rating – 4.1 (including men 4.04, women 4.23);
- 1 year and more – 19 persons, average number of likes – 3.5, dislikes – 1.16, average authors' rating – 4.5 (including men 4.28, women 4.75).

Table 5   Descriptive statistics

Denomination	Author's activity	Author's ratings	Likes	Dislikes	Number of months since the last review	The share of positive likes	Number of words in a review (total)
Average	2.3	4.4	6.4	2.9	1.3	74.9	58.7
Median	0	5	2	0	1	75.4	40.5
Mode	0	5	2	0	1	100	46
Standard deviation	3.9	1.0	12.2	7.3	1.2	23.3	58.7
Sample variance	15.6	1.1	147.8	53.7	1.5	541.3	3,439.8
Kurtosis	9.0	3.2	19.9	36.1	40.4	-1.1	6.5
Asymmetry	2.8	-1.9	4.1	5.4	5.9	-0.3	2.5
Interval	22	4	84	59	11	85.5	305
Minimum	0	1	0	0	0	14.5	9
Maximum	22	5	84	59	11	100	314
Level of reliability (95.0%)	0.8	0.2	2.3	1.4	0.2	4.5	11.3

Source: Yandex.market data, authors' construction

As a result, we can say that people like reviews provided just after the purchase most of all. The peculiarity of these reviews is that they are highly positive. Besides, when comparing the operation period with consumers' ratings, we can say that key drawbacks, which influence a low refrigerator rating, are revealed within a year, not within the first month of operation. Namely these reviews have most negative ratings both among men and women.

The average number of words in a review is 58.7, including men – 66.8 words, women – 52.6 words. So, average men's reviews are longer than women's ones. Reviews with a large number of words, as a rule, have more likes.

The city of residence is also important. 45 authors live in million cities. The average rating of their reviews is 4.3; they have 7.7 likes and 5.3 dislikes. 43 authors live in smaller cities, having a average rating of their reviews 4.4, 5.6 likes and 4.3 dislikes. 19 authors did not specify their place of residence. Thus, residents of big cities rate purchased household appliances a bit less than residents of small towns.

Fig. 4 The share of authors using the mentioned words by gender. Rating distribution
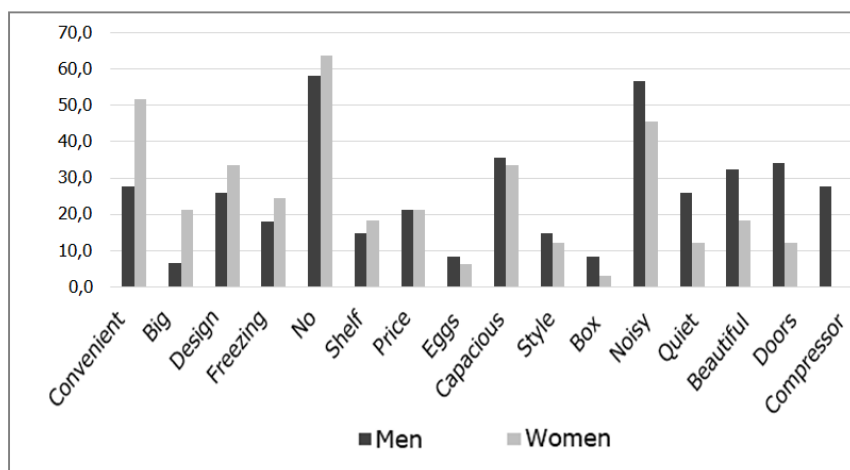
Source: Yandex.market data, author's calculations

The analysis of mentioning model constructs in reviews showed that more often men bring up a concern with regard to noise, capacity and doors rehanging, and women – convenience, noise, capacity. These results are typical of this model allowing for its price segment (Fig. 4). The biggest word difference refers to a word "compressor" (women do not speak about it at all) and "convenience" (men speak about convenience twice less than women). And, the price is discussed equally.

3.3 Cluster analysis results

The results of the semantic analysis were processed by the cluster analysis method. The results of dendrogram construction (cluster tree) are shown in Fig. 5. It enabled to define three groups of authors by their topics. The iterative cluster analysis by the k-means method, where k=3, showed identical results. So, the resulting three-cluster decision can be considered as stable one.

According to the submitted data, we can identify three groups of review authors on their key topics:

- group 1 – does not focus on any issue, but gives general a description of the used refrigerator: noisy (N), technological (T);
- group 2 – focuses on the technical aspects and convenience of the model. Words containing roots of the following words are used within this group: door (DO), shelf (SH), box (BO), frost (FR), compressor (COM), convenient (CON).
- group 3 – focuses on size and outside parameters: big (BI), capacious (CAP), beautiful (BE), stylish (ST), design (DE).

Attempts to relate group data to gender failed. The groups have almost equal gender ratio. That is, both men and women are equally prone to focus on some accents.

Likes distribution by the identified groups is interesting. Reviews from the 2nd group got the most likes. In average, 13 likes are attributable to each review in this group, while in the 1st group – 5 likes, and in the 3d group – 3 likes. Thus, one can talk about the influence of some constructs on review helpfulness determined by readers.

Fig. 5 The dendrogram of the authors of the reviews
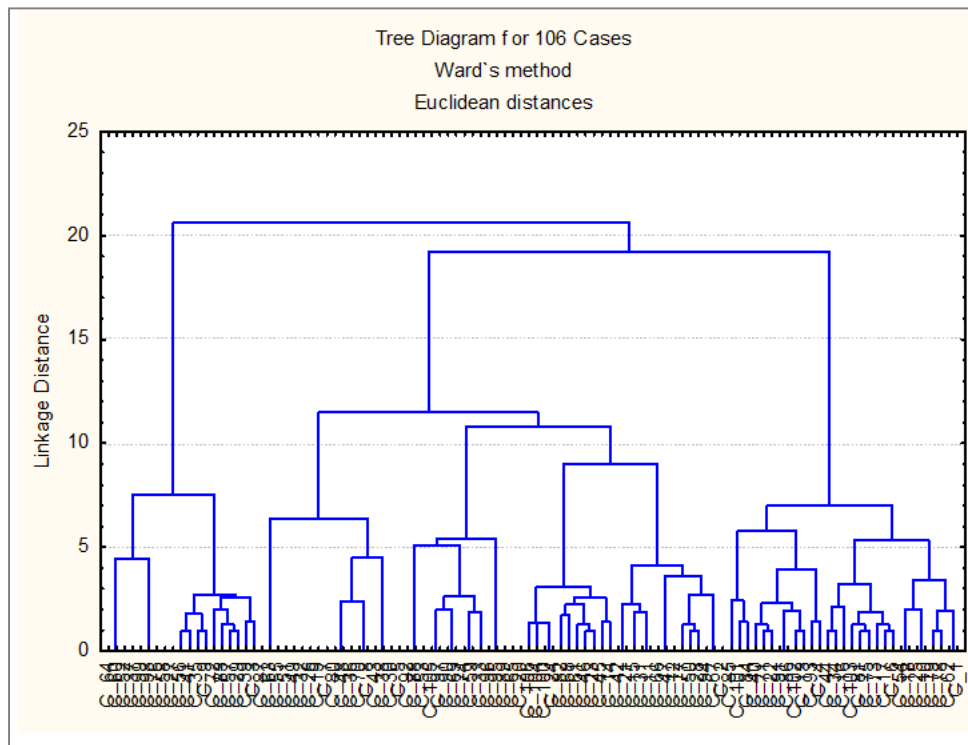
Source: built by authors according to the site "Yandex.market"

3.4 Results of "ideal review modeling"

People rate helpfulness in a different way. In our work, we decided to model a review and to determine constructs influencing the positive review rating.

The analysis enabled to distinguish some keywords. By series insertion of factors to the model, we have determined the main factors impacting review rating by readers:

- the number of words in a review (SERIES1);
- the combination of words "compressor", "quiet", "noisy", "box" in recommendations on arrangement improvement (SERIES2+SERIES3+SERIES4+SERIES5);
- the combination of words "design", "stylish" in reviews containing drawbacks that could be revealed before the appliance purchase (SERIES6+SERIES7+SERIES8).

Based on the minimum values of information criteria Akaike (AIC), Schwartz (SC) and Hannan-Quinn (HQ) we chose Gompertz distribution as an extreme value distribution function, according to which the probability that Y (SERIES0 variable in Figures) will take on a value 1, that is, more than 70% readers will rate a review as positive P{Y = 1} is calculated as follows:

$$p(x) = 1 - (1 - e^{e - x^T b}) = e^{e - x^T b}$$

$$(4)$$

The results of model construction and selection can be found in Table 6.

For all indices, the p-values of coefficients (Prob.) are close to zero (less than 0.05). So, we can reject a null hypothesis that a coefficient with this factor equals to zero. The determination coefficient McFadden R^2 equals to 0.435. Prob (LR statistics) is low (amounts to 0.00). Thus, the model is significant. The likelihood criterion (Log-likelihood = -24.38) shows a good fit of the model to initial data. The results of the Hosmer-Lemeshow test are provided in Table 7. The test shows that the description of actual data is rather exact (Prob. Chi-Sq(8)=0.753).

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Fig. 6 The linear graph of groups

Plot of Means for Each Cluster
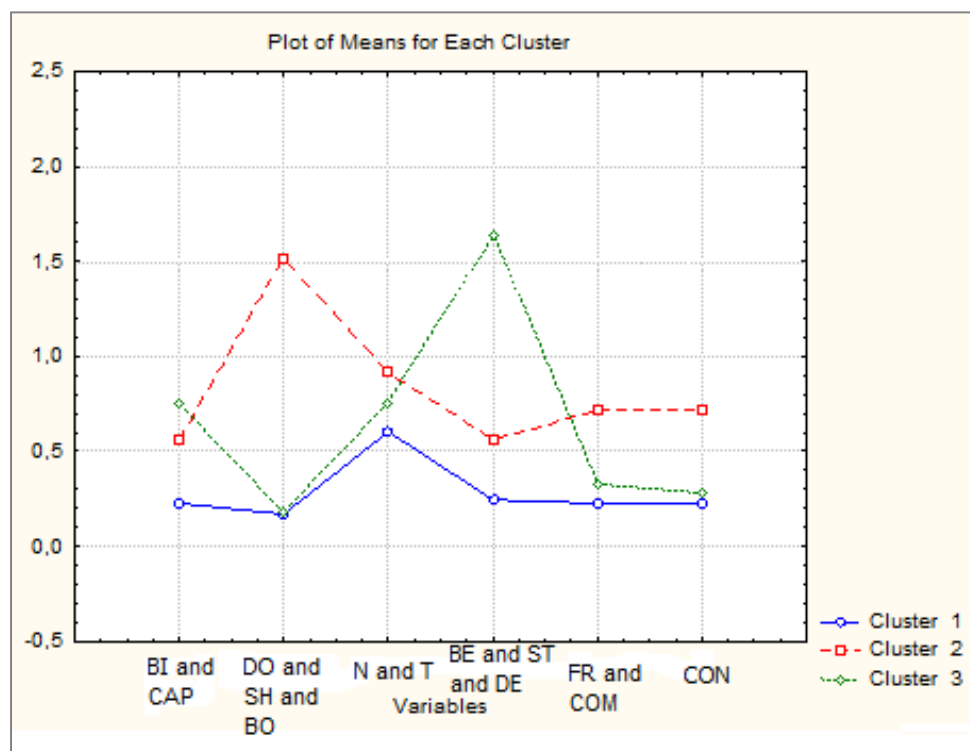
Source: built by authors according to the site "Yandex.market"

Table 6   Feedback simulation results

Dependent Variable: SERIES0			
Method: ML - Binary Extreme Value (Quadratic hill climbing)			
Date: 06/22/17 Time: 19:42			
Sample: 1 106			
Included observations: 106			
Convergence achieved after 6 iterations			
Covariance matrix computed using second derivatives			

Variable	Coefficient	Std. Error	z-Statistic	Prob.
SERIES1	0.014195	0.005916	2.399426	0.0164
SERIES2+SERIES3+SERIES4+SERIES5	0.686710	0.270580	2.537923	0.0112
SERIES6+SERIES7+SERIES8	-2.275922	0.949824	-2.396151	0.0166
C	-1.945336	0.442329	-4.397939	0.0000

McFadden R-squared	0.435818	Mean dependent var	0.141509
S.D. dependent var	0.350202	S.E. of regression	0.276385
Akaike info criterion	0.535499	Sum squared resid	7.791650
Schwarz criterion	0.636007	Log likelihood	-24.38147
Hannan-Quinn criter.	0.576236	Deviance	48.76294
Restr. deviance	86.43115	Restr. log likelihood	-43.21558
LR statistic	37.66821	Avg. log likelihood	-0.230014
Prob(LR statistic)	0.000000		
Obs with Dep=0	91	Total obs	106
Obs with Dep=1	15		

Source: built by authors according to the site "Yandex.market"

Table 7   Results of the Hosmer-Lemeshow test

	Quantile of Risk			Dep=0		Dep=1	Total	H-L
	Low	High	Actual	Expect	Actual	Expect	Obs	Value
Goodness-of-Fit Evaluation for Binary Specification								
Andrews and Hosmer-Lemeshow Tests								
Equation: EQ06								
Date: 06/26/17 Time: 19:45								
Grouping based upon predicted risk (randomize ties)								
1	0.0000	6.E-48	10	10.0000	0	5.9E-48	10	5.9E-48
2	1.E-27	3.E-15	11	11.0000	0	6.3E-15	11	6.3E-15
3	3.E-14	6.E-09	10	10.0000	0	1.4E-08	10	1.4E-08
4	2.E-08	0.0069	11	10.9844	0	0.01557	11	0.01560
5	0.0079	0.0424	11	10.7885	0	0.21151	11	0.21566
6	0.0471	0.0836	10	9.28691	0	0.71309	10	0.76784
7	0.0847	0.1174	8	9.90427	3	1.09573	11	3.67554
8	0.1198	0.1993	9	8.42014	1	1.57986	10	0.25276
9	0.2039	0.4442	8	7.48026	3	3.51974	11	0.11286
10	0.5220	0.9679	3	3.05758	8	7.94242	11	0.00150
		Total	91	90.9221	15	15.0779	106	5.04177
H-L Statistic		5.0418			Prob. Chi-Sq(8)		0.7531	
Andrews Statistic		29.3282			Prob. Chi-Sq(10)		0.0011	

Source: built by authors according to the site "Yandex.market"

The diagram of actual and predicted model values also demonstrates a rather high probability of obtained results (Fig. 7).

Fig. 7   Graph of the actual, predicted values and residuals of the model
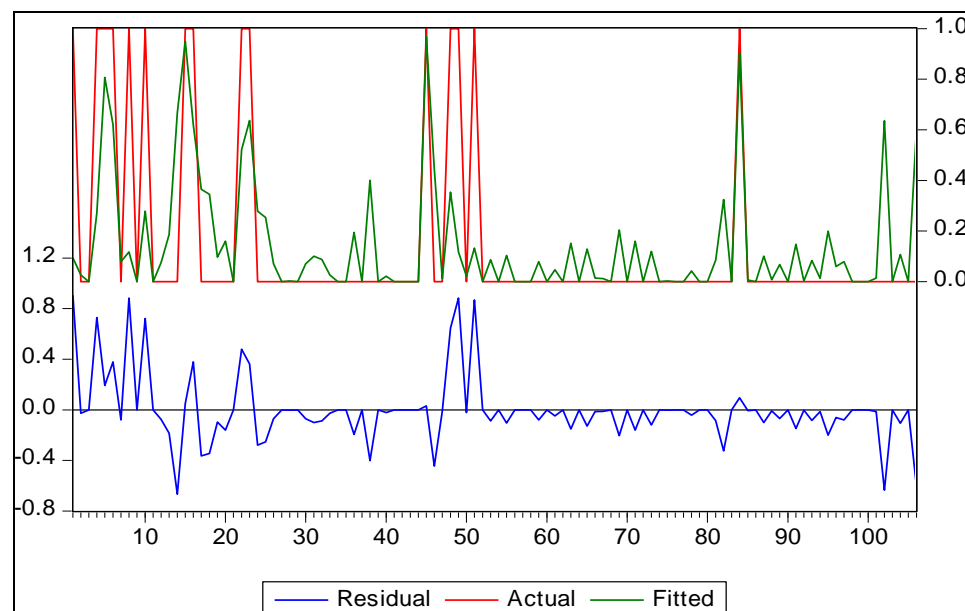
Source: built by authors according to the site "Yandex.market"

As Gompit models are nonlinear models, the interpretation of the estimated coefficients in this models differs from the linear regression model. The marginal effect of this variable is

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determined by derivative calculation. The resulting coefficients enable to say that review helpfulness is influenced:

a positively by the combination of words "compressor", "quiet", "noisy", "box", when improvement recommendations are available (SERIES2+SERIES3+SERIES4+ SERIES5), and volume of a review itself (SERIES1);

b negatively by the combination of words "design", "stylish", when a defect that could be revealed before the appliance purchase is indicated in a review (SERIES6+SERIES7+SERIES8).

CONCLUSION

The cluster analysis enabled to define three groups of consumers by key refrigerator specifications of their interest in the mid-price segment. The analysis showed differences in the content and structure of reviews provided by men and women by models in different price segments. Consumers of expensive refrigerators are less active in terms of both the number of reviews and their volume. Financial standing and gender define consumer focuses and, thus, information content needed to take a decision.

The analysis of mentioning model constructs in reviews showed that more often men bring up a concern with regard to noise, capacity and doors rehanging, and women – convenience, noise, and capacity. The biggest word difference refers to a word "compressor" (women do not speak about it at all) and "convenience" (men speak about convenience twice less than women). The results of the semantic analysis have been processed by the cluster analysis method enabling to identify three groups of consumers: no focus on any issue, focus on technical aspects and convenience, focus on the size and outside parameters of refrigerators.

A binary model is constructed in the work. Although its forecast ability is not too high, it enables to fix that the availability of some constructs in a review results in an increased rating of its helpfulness. The identified relationships between the used constructs and the share of positive ratings (likes) suggest that amendment of refrigerator descriptions on the sites of trade companies in favor of some constructs of consumers' interest will promote growth and quality of information field of consumer behavior at taking decisions on purchase.

A company that produces and/or sells products is interested in product reviews. Based on these reviews, a company can assess which products are doing well and why some are difficult to sell. Assessments also make an analysis possible, enabling improvements to the item and calculations of future developments.

Based on findings of this research, one can quickly define reviews, which will be accepted by consumers as helpful, and display them on sites and newlines, first of all, improving the helpfulness of the review mechanism for household appliance consumers (in our case, refrigerators).

The development of the research in this line provides for search of additional data to increase the volume of our conclusions, as well as a study of reviews on other household appliances.

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The Role and Importance of Manufacturing Trade Cooperation of the Visegrad Group Countries

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Abstract: The Visegrad group was established as a regional platform for cooperation between four Central European countries. Owing to their economic transformation and proximity to Western European markets, the countries have become an important export platform, especially for the German market. Considering the genesis of the creation of the group, including the pace of development of the participating economies and the geographical and cultural proximity of the markets, it seems reasonable to analyse the mutual trade ties. Bearing in mind the large share of manufacturing in creating GDP in these economies and their participation in global value chains, it is interesting to present an analysis of the Visegrad cooperation in the field of trade flows in the manufacturing sector. The study is based on a descriptive and analytical method using literature and statistical database sources. The research allows us to draw conclusions on the dominant share of manufacturing in the exports of the analysed countries and the increasing intensity of trade relations within the V4 group in the area of industrial production.

Keywords: foreign trade, manufacturing, Visegrad group countries

JEL Classification codes: F41, L10

INTRODUCTION

Twenty five years ago a system transformation was initiated in Central and Eastern Europe. Post-socialist economies faced the challenges of structural adjustments resulting from their relatively low competitiveness in confrontation with a dynamically changing global economy. These new conditions and common aspirations of the region's countries to join the European Union gave impetus to the establishment of the Visegrad group (V4) as a regional platform for economic cooperation. Necessary structural transformations and the application of free market principles as the basis of the functioning of entities resulted in the need to implement reforms, also in the area of the organisation of industrial production. These changes included technical and employment restructuring as well as ownership transformations. As a result, a steady increase in industrial production and exports was observed in all four countries of the Visegrad group, which is an indisputable achievement in the conditions of an open and highly competitive global economy. Nevertheless, over the years the V4 group was a geographical term rather than a real platform for economic cooperation. Consequently, previous analyses of the development of V4 countries' cooperation focused on trade with third countries. However, there is a gap in empirical research on quantitative processes of the development of mutual connections. In addition, current challenges facing the EU, i.e. the migration crisis, the issue of energy security, or the concept of reindustrialization have revived the cooperation of the V4 group and it has started to play a more practical role. For this reason, the study attempts to analyse the intensity of mutual trade relations and determine the geographical structure of flows in the manufacturing sector. For this purpose, the article structure focuses on identifying the determinants of the cooperation of V4 countries and their description on the

basis of the literature studies. While in the empirical part statistical data were aggregated in order to examine the significance of industrial production for the V4 countries and to estimate the volume of intra-regional trade in manufacturing.

1 LITERATURE REVIEW

1.1 Conditions of cooperation of the Visegrad Group countries in the context of functioning within the framework of the European Union single market

Political changes that took place in post-socialist countries in the late 1980s allowed a political transformation which included the economic sphere. The economic transformation meant a transition from a centrally managed economy to a market economy, in accordance with the belief of most economists that democracy can only become a permanent form of political governance where the economy operates within a capitalist system (Kornai, 2006). The informal Visegrad group established in 1991 reflected the efforts of the Central European countries in the field of cooperation aimed at a full European integration. The idea of the group was initiated by the presidents of Poland and then still Czechoslovakia and the Prime Minister of Hungary. After the breakup of Czechoslovakia in 1992, the Visegrad triangle turned into a quadrangle. In the Visegrad Declaration the signatories stressed their will to intensify economic relations in the region: "in order to support free flow of labour force and capital, they shall develop economic cooperation, based on the principles of the free market and mutually beneficial trade in goods and services. Moreover they shall strive to create favourable conditions for direct cooperation of enterprises and foreign capital investments, aimed at improving economic effectiveness" (The Visegrad Declaration, 1991). Although the main objective of the group was to deepen the mutual cooperation, it also stressed the belief that the declaration of regional cooperation and its development is an important step on the road to European integration. The aspiration of all countries belonging to the V4 group was to enter the EU structures. Adjustments resulting from institutional arrangements functioning on the single market sped up the transformation process in the candidate countries. It should be remembered that the declining years of the centrally planned economy was marked by economic stagnation. The velvet revolution of 1989 initiated in Poland and the political, social and economic changes introduced at that time integrated Central and Eastern Europe with the world economy once again. One of the components of this process was intensive industrial restructuring (Bukowski & Śniegocki, 2017). In the early phase of internationalisation of the V4 countries in the early 1990s, there was a lack of sufficient capital accumulation by enterprises, which resulted from the adjustment of business entities to the operation in market economy conditions and their thorough restructuring. The system prevailing until then distorted the operation of market mechanisms, which was manifested by often irrational production. As a result, the level of competitiveness of industrial production in the countries of Central and Eastern Europe was low, and in addition the cooperation ties with existing importers from the eastern markets were broken. This situation was deepened by the collapse of these markets and the decline in demand. The situation changed significantly over time owing to economic stability, increasing levels of GDP, a rapidly growing internal market and the prospect of accession to the European Union (Pawłowska & Wojciechowski, 2015). Aggregated data in table 1 show the current demographic and economic potential of the V4 group countries and in the year of accession to the EU. The EU population living in the analysed countries is 12.5% and it generates disproportionately less, i.e. 5.3% of the EU GDP. However, an improvement is visible in this area because in 2004 this proportion was 3.8%. Due to the base effect, V4 economies in the period of 2004-2016 developed at a higher rate (3.04%) than the EU average (1.28%) owing to which the catching-up process was observed. As a result,

GDP per capita measured in purchasing power parity increased by 17 percentage points on average.

Tab. 1 Selected indicators for V4 group countries in relation to EU size

Economies	Population (% of total EU population)		GDP (% of total EU GDP in current prices)		GDP per capita (PPS)		Average real GDP growth rate 2004-2016
	2004	2016	2004	2016	2004 UE25=100	2016 UE28=100	
Czech R.	2.07	2.07	0.9	1.2	72	88	2.70
Hungary	2.05	1.93	0.8	0.8	61	67	1.57
Poland	7.75	7.44	1.9	2.9	47	68	3.88
Slovakia	1.09	1.06	0.3	0.5	52	77	4.02
V4	12.97	12.50	3.8	5.3	58	75	3.04

Source: own study based on Eurostat: [demo_pjan], [t_nama_10_gdp], [tec00115], [Retrieved February 5, 2018].

Consequently, the analysed countries have become an attractive place for foreign investors to invest capital. An analysis of data summarised in figure 1 for all V4 countries shows a consistent increase in the inflow of foreign direct investments (FDI) until the global financial crisis. Then, the deceleration and return to the growth path occurred, however since 2013 a decline has been observed again. Consequently, the share of FDI in GDP in all analysed economies decreased. The largest decrease in the analysed property between 2016 and 2013 occurred in Hungary and Slovakia (17.8 and 12.4 percentage points respectively).

Fig. 1 Inflow of foreign direct investments to the V4 group countries in 1994-2016 (stock, USD at current prices per capita)
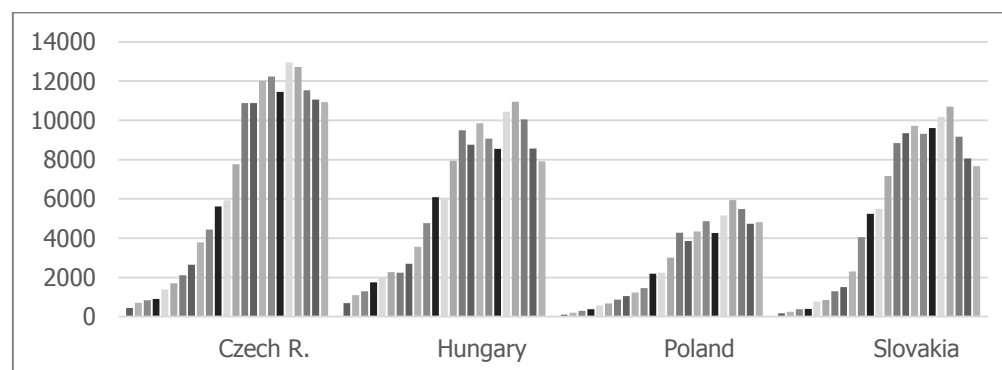
Source: Own study based on Unctad: http://unctadstat.unctad.org/wds/TableViewer/tableView.aspx, [Retrieved February 5, 2018].

The development of the industry of V4 countries was driven by foreign direct investments and export orientation in accordance with the concept of big push of Rosenstein-Rodan and Murphy, which stresses that poor economies need some sort of large demand expansion, to expand the size of the market, so that entrepreneurs will find it profitable to incur the fixed costs of industrialisation (Sachs & Warner, 1999). These phenomena were stimulated by the integration of the region with European markets, which meant the adjustment of production structures to the needs of the single market, the main destination of exports and the source of components for final production. The big push concept recommended industrialisation to

Central and Eastern European countries by integrating with the global market, while discouraging the autarkic development based on a slow capital formation and gradual growth of native companies. Big push was to be based on the import of capital and opening up to the world using the comparative advantage of the region, i.e. abundant and relatively cheap labour force (Bukowski & Śniegocki, 2017). The development driven by trade liberalisation enabled domestic companies to participate in global production and distribution networks. However, globalisation leads to the integration of trade, accompanied by the simultaneous disintegration of the production process (Kaminski & Ng, 2001). The intensification of interactions and connections in the contemporary global economic system and the high degree of internationalisation of production determine development opportunities of industrial companies which commonly take advantage of the opportunities and benefits of fragmentation and relocation. This in turn implies and dynamises the development of vertical trade. The literature on the subject developed theoretical foundations indicating the relationship between the liberalisation of trade and the internationalisation of production. In this regard the model developed by McLaren should be mentioned. It is based on the transaction cost approach to vertical integration, in which trade liberalisation opens up the economy to international trade, lowers trade costs, and stimulates a firm's ability to find an alternative partner (Chongvilaivan & Hur, 2012).

Fig. 2 Dynamics of MVA changes (left axis) and manufacturing exports (right axis) in V4 countries (1994=100)
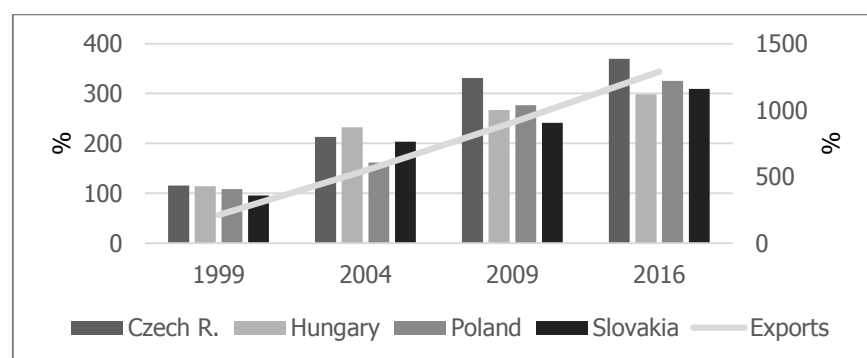
Source: Own study based on World Bank: NV.IND.MANF.CD, TX.VAL.MRCH.CD.WT, TX.VAL.MANF.ZS.UN, [Retrieved February 10, 2018].

Figure 2 shows a percentage change (against 1994) of the value of exports and manufacturing value added (MVA). The increase in value added was generated by increased domestic demand, however access to the absorbent EU market was an equally important determinant that boosted the development of industrial production in the V4 countries. As a consequence, a dynamic increase in the value of exports of manufacturing was recorded — thirteen times on average in the analysed period. Taking into consideration the above, the increase in V4 foreign trade has been enabled by several factors, including FDI inflow, EU accession and reorganisation of global value chains. The FDI inflows have been associated with an increasing participation in global value chains (GVCs). The concept of the GVC is a key reference point for understanding and analysing the dynamics of the organisation of industrial production and international trade. The key assumption of the model is a division of the production process or business operations into strategically important activities. Therefore, the value chain is a sequential presentation of subsequent functions and links, each of which generates added value (Ulbrych, 2015). The V4 economies are highly integrated within the European manufacturing value chain with the high share of total exports reflecting foreign content, respectively: Czech Republic – 52.34%; Hungary – 57.85%; Poland – 40.08%; Slovakia –

54.76% (OECD, 2018). Active participation in the processes of fragmentation of industrial production and the growing index of participation in GVCs constitute proof of positive structural changes and modernisation of the industrial base. The decreasing share of domestic value added in gross exports indicates however an increase in import intensity of exports. The issue of benefits arising from the participation in GVCs is the subject of numerous analyses, also devoted to the V4 countries (Vlčková, 2015).

2 METHODOLOGY

The research methodology is based on two techniques: a review of literature on the subject as well as the aggregation and analysis of relevant statistical data of Eurostat, the World Bank, the United Nations Industrial Development Organization (UNIDO) and the United Nations Conference on Trade and Development (UNCTAD). The study used basic statistical tools to describe the structure of the series and dynamics of the analysed values. In general, the time range of the study focuses on the years after the political transformation, however in some analyses it is limited by the availability of statistical data and covers selected years from the period of 1994-2016. The basic objective of the analysis of data sets is to designate trends and study the dependencies that occur between the collected data in order to establish the scale of trade relations in the area of manufacturing between the V4 group countries. For the purpose of the analysis of the volume of trade between the V4 countries, a modified international flows ratio was used in the form of:

$$Pmij = \frac{x_{ij}}{x} \tag{1}$$

where:

Pm_{ij} – share of trade between the countries i,j in total exports of the V4 group

x_{ij} – exports of country i to country j

X – total exports in V4 group
In this study, the World Bank's World Integrated Trade Solution (WITS) database was used. Products are classified according to the Standard International Trade Classification (SITC Rev2 Group).

3 RESULTS AND DISCUSSION

3.1 Importance of industrial production for V4 group countries

A characteristic feature of structural changes in developed economies is the recession of manufacturing to the advantage of the services sector. The simultaneous decline in the importance of industrial production in generating value added and the employment in the economy is tantamount to deindustrialisation. However, this process is not observed in the analysed economies for which the industrial sector is important for economic stability and employment.

An analysis of data collected in Figure 3 shows a declining trend of the share of manufacturing value added in the creation of GDP in the EU continually until 2009. In subsequent years, as a result of post-crisis economic recovery and intensified discussion on the need for reindustrialisation, MVA in the EU began increasing and reached 16% in 2016. In the same year, the V4 economies were responsible for generating 7.4% of the total EU value added in manufacturing adjusted for current prices. This is not an impressive share if the contribution of Germany of approximately 30% is taken into account, however it is greater than at the

beginning of the analysed period when it amounted to 3.1%. The value of the analysed feature in all economies of the region is higher than the EU average, the relatively largest share of industrial production in GDP generation is recorded in the Czech Republic (27%), Hungary (23.5%), Slovakia (21.9%) and Poland (20.4%).

Fig. 3 Share of MVA in GDP in V4 countries and UE
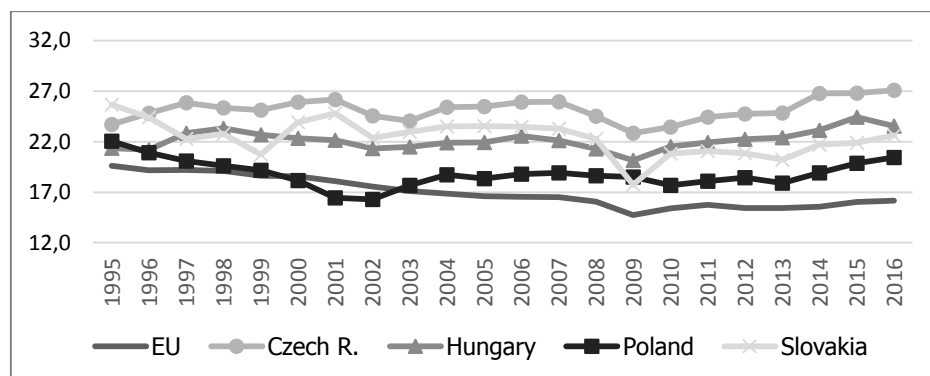
Source: Own study based on Eurostat [naida_10_a10], [Retrieved February 5, 2018].

Tab. 2 Selected indicators describing manufacturing in V4 countries in 2016

Indicator	Czech R.	Hungary	Poland	Slovakia
MVA per capita (USD)	5341	2798	2619	4109
Major manufacturing activities (VA in % to total MVA)	1. Motor vehicles, trailers, semi-trailers (20%) 2. Fabricated metal products (12%) 3. Machinery and equipment n.e.c. (11%)	1. Motor vehicles, trailers, semi-trailers (19%) 2. Machinery and equipment n.e.c. (16%) 3. Chemicals and chemical products (11%)	1. Food and beverages (16%) 2. Fabricated metal products (11%) 3. Machinery and equipment n.e.c. (10%)	1. Motor vehicles, trailers, semi-trailers (22%) 2. Machinery and equipment n.e.c. (13%) 3. Fabricated metal products (12%)
Manufactured exports share in total exports (2015)	93%	90%	88%	94%
Manufacturing exports per capita (USD, 2015)	13930.5	9223.6	4445.3	13105.1

Source: Own study based on UNIDO: https://www.unido.org/data1/Statistics/Research/cip.html, [Retrieved February 8, 2018].

The role of manufacturing in the V4 economies is also stressed by the data in table 2. Higher levels of MVA per capita are recorded in economies with lower population potential, i.e. in the Czech Republic (USD 5341) and Slovakia (USD 4109). However, this value is much lower in Hungary (USD 2798), and the lowest in Poland (USD 2,619). A high degree of

internationalisation of production is demonstrated by the share of exports of industrial production in total exports (90% on average) and a high level of manufacturing exports per capita in the Czech Republic, Slovakia and Hungary. In addition, taking into account the structure of value added of Slovakia, the Czech Republic and Hungary, a high 20% share of the "motor vehicles, trailers, semi-trailers" item is visible, which shows the involvement of these countries in the fragmentation of production in the automotive sector.

3.2 Intra-regional trade

Referring to the international flows ratio the level of intensity of manufacturing exports of V4 group countries in 1994 and 2016 was tested. The results of the calculations are presented synthetically in the form of tables number 3 and 4. The general conclusion from the analysis performed can be as follows: the most intense trade relations within the V4 group in 1994 were between the Czech Republic and Slovakia, which was a natural consequence of the production relations existing in Czechoslovakia. The trade between the remaining countries was clearly less intense.

Tab. 3 Level of intensity of manufacturing exports of V4 group countries in 1994

Reporter name	Partner name			
	Czech R.	Hungary	Poland	Slovakia
Czech R.	X	3.6	8.4	32.7
Hungary	1.7	X	2.4	1.6
Poland	3.9	1.6	X	1.2
Slovakia	36.4	3.5	3.0	X

Source: Own study based on World Bank: https://wits.worldbank.org/, [Retrieved February 10, 2018].

Tab. 4 Level of intensity of manufacturing exports of V4 group countries in 2016

Reporter name	Partner name			
	Czech R.	Hungary	Poland	Slovakia
Czech R.	X	6.1	11.7	15.5
Hungary	5.6	X	5.5	6.0
Poland	13.9	6.4	X	5.5
Slovakia	11.2	4.8	7.6	X

Source: Own study based on World Bank: https://wits.worldbank.org/, [Retrieved February 10, 2018].

However, after the analysis of the directions of changes in the intensity of trade over time it should be emphasised that the mutual export in 2016 in real terms was twelve times higher than in 1994 (increase from USD 5.43 billion to USD 65.21 billion). It was Slovakia and the Czech Republic where the lowest rate of growth in this period was observed between those countries. Consequently, the distribution of shares is currently more proportional. Exports from the Czech Republic to Slovakia which constitute 15.5% of total exports in the V4 group are still very important, but relations between Poland and the Czech Republic are also significant. The lowest share is generated by Hungary — 5.7% on average.

Fig. 4 Commodity structure of exports in the V4 group in 1994
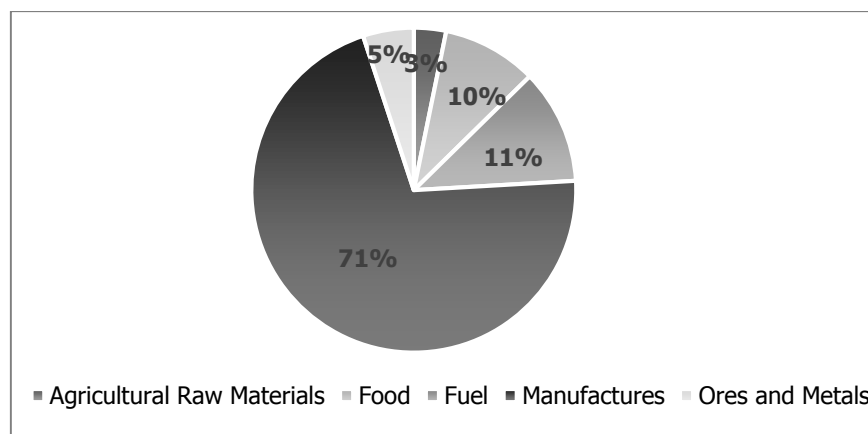
Source: Own study based on World Bank: https://wits.worldbank.org/, [Retrieved February 10, 2018].

The correctness of the choice of manufacturing sector for the analysis is confirmed in the summary presented in figures 4 and 5. Both in 1994 and 2016, manufacturing products predominated in mutual trade, accounting for 71% and 79% of total exports of the group respectively. The next two groups: fuel and food accounted for 21% of total exports value, while agricultural raw materials and ores and metals played a relatively smaller role. When comparing the commodity structure of exports in 2016 with 1994, it is necessary to emphasise the declining role of the above-mentioned groups. Thus, a trend to limit the role of agricultural commodities and fuels to the advantage of manufacturing is visible.

Fig. 5 Commodity structure of exports in the V4 group in 2016
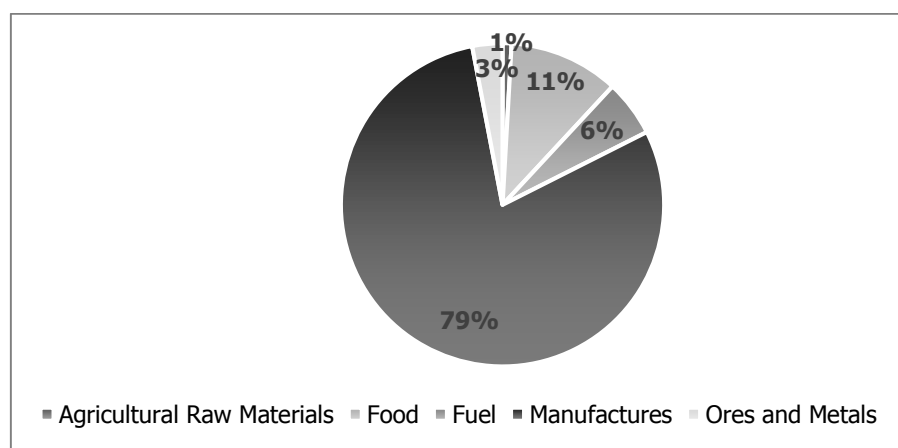
Source: Own study based on World Bank: https://wits.worldbank.org/, [Retrieved February 10, 2018].

In addition, it should be stressed that nearly a half of the last item was the "machinery and transport equipment" group (in 1994 this share was 30%). A large share was also recorded by chemicals, although their share decreased from 25% in 1994 to 13% in 2016. The highest value of exports to the other three partners in 2016 was recorded in the Czech Republic - USD 21.79 billion. This accounted for 15% of total exports of Czech industrial production (fig. 6). From the point of view of other EU countries, relations with Germany which absorb approximately one-third of the Czech trade on average are of fundamental importance, and

this situation does not change over time. On the other hand, the share of Slovakia in exports and imports declined — in 1994 it was 15.7% on average, while in 2016 — 5.7%.

Fig. 6   Czech Republic manufacturing trade partner share in 1994 and 2016
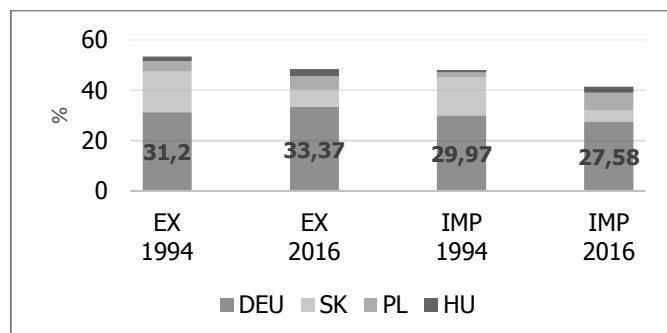
Source: Own study based on World Bank: https://wits.worldbank.org/, [Retrieved February 10, 2018].

The second country in terms of the value of exports to other partners of the V4 group is Poland which in 2016 exported manufacturing goods worth USD 16.84 billion. While in 1994 Poland recorded a trade deficit with all partners from the V4 group, in 2016 it made a surplus. Thus, 7.6% of Polish imports come from the V4 countries and 10.7% of the total exports of Polish manufacturing were directed to the V4 markets, and in this case a considerable increase in the export penetration of these markets is visible because in 1994 this share was 3.1%. The Czech Republic is Poland's third partner in the export of manufacturing goods (5.8% of total exports). However, this does not change the fact that Germany remains the main trade partner of Poland in terms of manufacturing as 28.1% of total exports are directed to this market and 24.8% of imports come from this country (these shares in 1994 were respectively 40.8% and 33.3% — fig. 7).

Fig. 7   Poland manufacturing trade partner share in 1994 and 2016
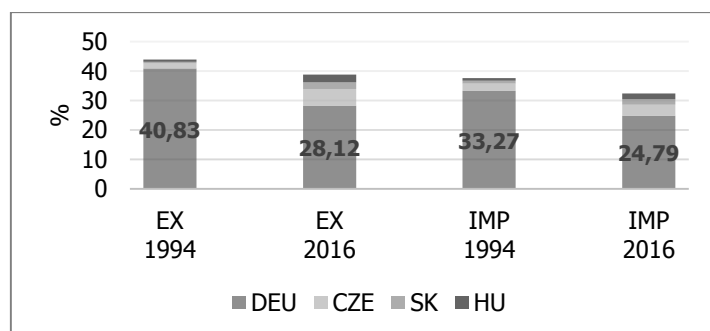
Source: Own study based on World Bank: https://wits.worldbank.org/, [Retrieved February 10, 2018].

The V4 countries as trade partners are most important to Slovakia. In 2016, 22.1% of the total Slovak manufacturing exports were directed to the V4 group markets (fig. 8). In 1994, this share was almost twice as large due to the relations with the Czech Republic which decreased. In the case of the other two partners, the share of both exports and imports increased. However, as usual, the Czech market absorbs the largest share (10.5%). Similarly, as in the case of the Czech Republic and Poland, the largest share of exports goes to Germany (23.5%).

Fig. 8 Slovakia manufacturing trade partner share in 1994 and 2016
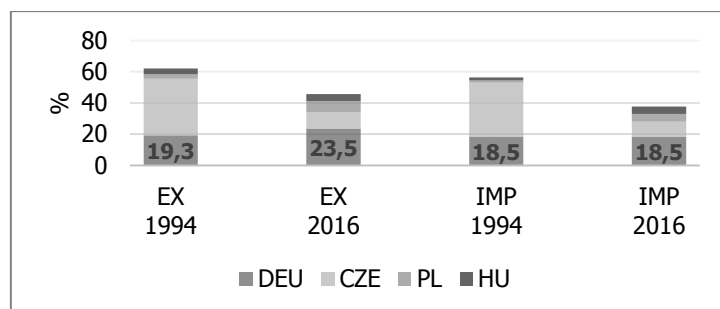
Source: Own study based on World Bank: https://wits.worldbank.org/, [Retrieved February 10, 2018].

The value of Hungarian exports to other countries of the V4 group in 2016 amounted to USD 11.17 billion, which accounted for 12.6% of the total Hungarian exports of manufacturing (fig. 9). In relation to imports, the proportion is even higher and amounts to 14.4%. In 1994, this percentage was 4.6% and 4.4% (fig. 9).

Fig. 9 Hungary manufacturing trade partner share in 1994 and 2016
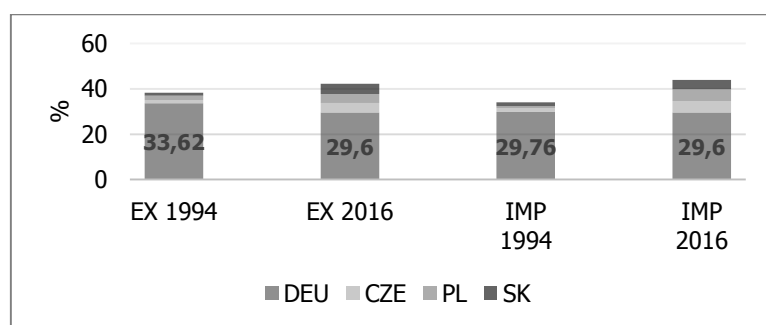
Source: Own study based on World Bank: https://wits.worldbank.org/, [Retrieved February 10, 2018].

Noteworthy is also the very balanced participation of other V4 partners, both on the side of Hungarian exports and imports. However, the indisputable leader in Hungarian trade is Germany which delivers about one third of Hungarian imports and receives 30% of Hungarian exports.

CONCLUSION

According to the Visegrad Declaration, one of the determinants of the development of regional cooperation within the V4 group was the development of mutual trade relations. In order to verify this assumption, research was conducted on the intensity of trade ties in the manufacturing sector. The quantitative analysis performed in this study on the basis of the collected statistical materials allows to draw the following conclusions:

- manufacturing is an important sector of the V4 economies; it is of the greatest importance for the Czech Republic in terms of its share in generating national added value and export potential;
- nearly 80% of the total mutual exports of the V4 group is represented by manufacturing and this share increased by 8 percentage points compared to 1994;

- taking into account the value of manufacturing exports of each country to the remaining countries of the V4 group, the most important are: 1. the Czech Republic, 2. Poland, 3. Slovakia, 4. Hungary;
- in 1994, the strongest trade relations in the field of manufacturing occurred between the Czech Republic and Slovakia. Despite still significant connections between these countries, this share was reduced;
- leaving aside the above-mentioned connections, the intensity of V4 relations in other cases in 2016 was stronger than in 1994;
- although Germany is the main trade partner of all four countries, the role of the remaining recipients of the industrial production of each V4 group country is evident: 22.1% of the Slovak exports of manufacturing go to the markets of other countries of the group. In the case of other economies, this proportion is as follows: Czech —14.9%, Hungary — 12.6%, Poland — 10.7%. When analysing the share on the import side, the following values should be indicated: Slovakia: 19.1%, Hungary: 14.4%, the Czech Republic: 13.9% and Poland: 7.6%.

The results of the analysis in terms of commodities and geography confirm the existence of ever stronger trade relations between the V4 group countries in the area of manufacturing.

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Generation Y – Health Related Attitudes and Behaviour

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Abstract: Literature describes generation Y in contradictory ways. Some authors characterize young people as too confident, whose main meaning of life is to enjoy, travel and have fun. Others describe them as sensitive young people who are interested in a course of events around them and who try to live responsibly towards themselves and the others. The aim of this paper is to present survey done by the author. Survey focused on the attitudes of Generation Y towards healthy lifestyle. The results show that it is very important for young people to be healthy and happy. Even though if they try to live healthy their actual behaviour doesn´t match in some way with healthy and responsible lifestyle.

INTRODUCTION

Some authors state, that Generation Y, often called Millennials, is made of people born approximately from 1980 to 2000 (Cutler, 2015; DeVaney, 2015), alternatively from 1977 to 1996 (Valentine & Powers, 2013). There are studies that describe the Generation Y in very different ways. In many aspects they correspond, but they also bring us different or even contradictory characteristics. In this paper we focused on Generation Y especially their values, health attitudes and behaviour.

1 LITERATURE REVIEW

Attitudes and behaviour of certain age cohorts are studied because specific life events experienced collectively by this cohort generate conformity in values and attitudes for that cohort. A Generation is part of the historical process that people of the same age and social class share during their youth (Cordeiro & Albuquerque, 2017). Even the birth day is important factor it cannot define the Generation. Generation refers to the experiential essence of a group of people born in a certain period but defined more by their shared experiences (Cutler, 2015).

There are two elements defining a Generation: life experience of age group during socializing process and the presence of events that break the historical continuity (Cordeiro & Albuquerque, 2017). These two critical elements predisposes the Generation to certain experiences which lead to a formation of values, opinion, attitudes and ways of thinking. Life experiences create who they are and what they value. Although an individual´s opinion changes as a part of maturation, many values and attitudes remain stable over the life reflecting the context in which they were developed (Cutler, 2015).

According to Vincent (2005) the sociological concept of Generation can be identified by three components:

(A) a sequence of collectivities – people defined around specific historical experiences

(B) the product of time – experience of social change or historical chronology or part of the realm of collective memory

(C) a set of continuing relationships between the groups through time – a social structural relationship or division of social responsibilities and normative roles.

Generations may vary according to national context because people in different countries live different cultural, economic, social and historical backgrounds. The members of the Generation Y are individualists, controvert, flexible, wishing to have autonomy and fast career growth (Cordeiro & Albuquerque, 2017).

Generation Y is self-confident, optimistic group having multitasking capacities because of their rapid and vitality (Israfilzade, 2017) and is more oriented towards hedonic success and status and less oriented towards social values (Dlačič & Kadič-Maglajlič, 2013). This Generation is the most technically literate generation and has very short-term orientation towards gratification (Voelker & Pentina, 2011). They are the first "digital natives" and "always on Generation" expected to have information instantly and always available (Gewald et al., 2017). Lynn Lancaster described Generation Y as digital generation, globally concerned, cyber literate, media and technology savvy, acknowledge diversity and expect others to do so, environmentally conscious, will try anything (Lancaster, 2004). Generation Y consumers have a good command of technology and when it comes to the adoption of smart phone applications Millennials are leading the way (Mostert, Petzer & Weideman, 2016).

Regarding health, Millennials are exercising more, eating smarter and smoking less than previous generations. They are using apps to track training data (Goldman Sachs). Results of a research, conducted by Nielsen in 60 countries show, that from all of the Generations, it´s Milleninals who give the biggest emphasis on health attributes when they make purchases. The survey also showed that a willingness to pay a premium for health attributes declines with age. Generations Z (born from 1995) and Y are willing to pay a premium for functional foods that reduce disease risk or promote good health and for socially/environmentally responsible foods, for example sustainably sourced ingredients or gluten-free products (Nielsen, 2015).

US statistic portal Statista states, that in 2016 77% Millennials in USA rated their general health condition as excellent or good, with depression, being overweight, and anxiety disorders among the most common health condition Millenials were diagnosed with. On average, over o third of them exercise two to three day per week, but one quarter still smoke cigarettes.

Research from Nielsen (2014) and Natural Marketing Institute sheds light on what multigeneration consumers say they need for their health and what healthy aging means to them. Millennials are much more open to alternative medicine, they are more likely to use acupuncture, herbal remedies and massage therapy are less likely to use prescription drugs.

In Slovakia, for Generation Y (TNS Slovakia, 2014) in the field of technology - smartphone, online shopping and social networks are in. Geolocation applications, console video games or online games for a single player are out. In the field of health - exercise is in and plastic surgery, vegetarianism and for one quarter also diet are out. Overall, we could say, that eating healthy, not taking drugs and taking care of the environment is important for Slovak Millennials.

2 METHODOLOGY

We conducted an online survey that focused on health and which aim was to explore what is important in the life of Generation Y, their opinion and behaviour. The survey was realized among students of Faculty of Commerce in December 2017. To determine the extent of importance or satisfaction we used a 7-item scale where higher rating means lower importance

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or satisfaction. We obtained 188 properly completed questionnaires. Students were from 20 to 26 years old, their average age was 22,3 years and 62,7% of them were women. For the analysis of data were used contingence tables with χ2-goodness of fit test and for mean comparison t-test or Kruskal-Wallis test.

3 RESULTS AND DISCUSSION

In the first part of the questionnaire, we were investigating what is important for young people in their life and how satisfied they are in some fields (we used 7-item scale where higher rating means lower satisfaction). We tried to create a ranking which would reflect only significant differences in the order among examined fields (Tab. 1, Column "All"). In the first place are things that are related to well-being and in the next place are mostly things connected to a successful life without problems and the least important are for young people to be attractive and live long. We can notice an inconsistence in the field of health, because being healthy is the most important, but live in a healthy way isn´t considered as very important.

We were also trying to find out if there are some significant differences between men and women in the order of importance (Tab. 1). Even though their order doesn´t quite match, significant difference was only in the item "be healthy". To be healthy is more important for women than for men (p=0,01).

Tab. 1 Importance - examined fields (average)

	All		Male		Female	
	Rank sig. dif.	Mean	Rank	Mean	Rank	Mean
be healthy	1	1,31	3	1,62	1	1,22
be happy	1	1,34	1	1,48	2	1,30
be clever	2	2,00	4	1,91	4	2,03
be successful in the school/job	2	2,10	1	1,48	2	1,30
live a calm life	2	2,10	5	2,05	5	2,11
to have enough time for yourself	3	2,31	6	2,10	7	2,37
to live healthy	3	2,31	7	2,48	6	2,26
to live a ripe old age	4	2,81	8	2,67	8	2,85
be attractive	4	2,83	8	2,67	9	2,88

Source: research data

In the next part of the questionnaire, we were investigating health related behavior such as eating habits, sleep or doctor´s visit. Young people eat 4 times a day on average, while men eat more often, on average 4,5 times and women 3,9 times (p=0,10).

Young Generation usually doesn´t skip main meal, because most of them never (or very rarely) skip a main meal. On the other hand, skipping breakfast isn´t that uncommon, because 1/3 skips it often and 7,4% always (Fig. 1). Significant differences between men and women are

only in skipping dinner (p=0,05). More than a half of men (52,4%) never skips it, but only 1/3 of women (32,9%).

Fig. 1 Skipping meal (%)
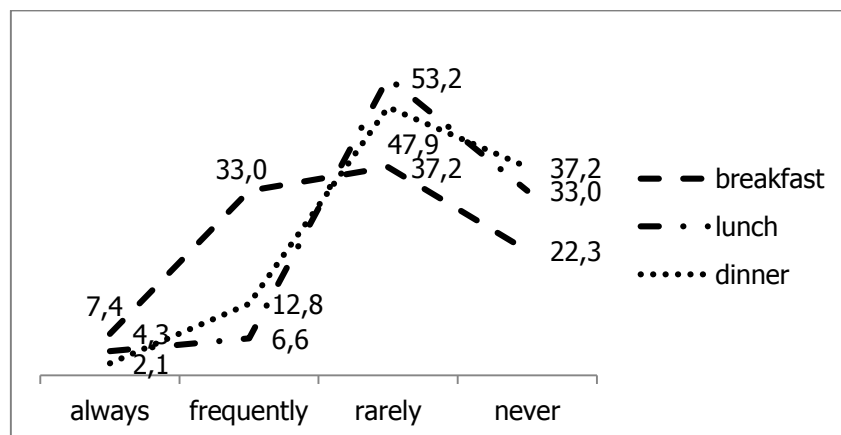
Source: research data

American National Sleep Foundation mentions, that for young adult 18-25 years old recommended amount of sleep is 7-9 hours and may be appropriate to not sleep less than 6 and more than 10-11 hours. We investigated how many hours sleep our students during work days and weekend. During the week they sleep on average 7,18 hours (men 7,21 and women 7,17 hours) and during the weekend 9,20 hours (men 9,10 and women 9,23 hours). We can see, that comparing to the week, young people sleep 2 hours more during the weekend. These figures are on the edge of recommended amount of sleep. Less than a half (47,9%) of young respondents, don´t have problems with falling asleep, more than 2/5 (43,6%) have sometimes and the rest (8,5%) have these problems often. Main reasons are stress, caffeine and too much thinking.

Some of the questions focused on the satisfaction with different aspects, that are a part of the life of Generation Y fields (we used 7-item scale where higher rating means lower satisfaction).

Tab. 2 Satisfaction with different aspects (average)

	Male	**Female**	**sig. level**
What they have accomplished	2,0	2,2	
Recognition of friends	2,0	2,2	
Recognition of family	2,3	2,1	
Health	2,5	2,5	
Life	2,5	2,5	
Appearance	2,6	3,1	0,01

Source: research data

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Young people (Tab. 2) are the most satisfied with what they have accomplished and how they are recognized by the community. They are less satisfied with their health and life. They are the least satisfied with their appearance, while women significantly more unsatisfied than men. As the weight is related to appearance, we also examined satisfaction with their weight (Tab. 3).

Tab. 3 Satisfaction with weight (%)

	Male	Female
Satisfied	38,1	37,0
A little bit unsatisfied	42,9	54,8
Very unsatisfied	9,5	6,8
I don´t care about my weight	9,5	1,4

Source: research data

The biggest part of young people is a little bit unsatisfied with their weight, whereas women form the bigger part than men (p=0,05). Almost 2/5 are satisfied and just a small part is very unsatisfied or doesn´t care about weight.

It´s mostly men that have the experience with supplements that adjust weight (p=0,01), and all men but only half of women, had a positive experience (Tab. 4). Men use supplements which help to gain muscles and therefore increase the overall volume and weight. On the other hand, women use supplements to lose weight. More than 2/5 of young people think, that they need to adjust their weight but they don´t want to use any of these supplements. More than a quarter of men and almost 2/5 of women don´t need to adjust their weight.

Tab. 4 Experience with supplements that adjust weight (%)

	Male	Female
Yes, and it was a good experience	23,8	6,8
Yes, and it wasn´t a good experience		6,8
No, but I´m planning to try		6,8
No and I´m not even planning to try, even though it would be useful	47,6	41,1
No and I´m not even planning to try, because I don´t need to adjust my weight	28,6	38,4

Source: research data

We also examined different aspects of personal fitness (Tab. 5). The most important (we used 7-item scale where higher rating means lower importance) for the Generation Y are apparently contradictory aspects such as feeling full of energy and having peace. But it´s these two aspects that create appropriate conditions to concentrate, act and stamina. Having enough of movement is more important for men than women. Having the right weight is not the priority,

but this aspect is more important for women than men. This could be related to the finding that women are less satisfied with their appearance than men.

Tab. 5 Importance of personal fitness and health (average)

	Male	Female	sig. level
Feeling full of energy	1,9	1,8	
Having peace	2,0	1,9	
Being in a good physical form	2,3	2,2	
Being in a good fitness (condition)	2,4	2,6	
Having enough movement	2,2	2,7	0,05
Eating healthy	2,8	2,5	
Having the right weight	3,1	2,5	0,05
Knowing that you have the right weight	3,1	2,7	

Source: research data

In the next part, we focused on smoking, alcohol and drugs. Three quarters (75,3%) of young people don´t smoke, whereas 71,4% of men and 76,4% of women don´t smoke. Smokers smoke on average 7 cigarettes a day, men a little bit more than women (men 8,5, women 6,5).

Fig. 2 Drinking different types of alcohol (%)
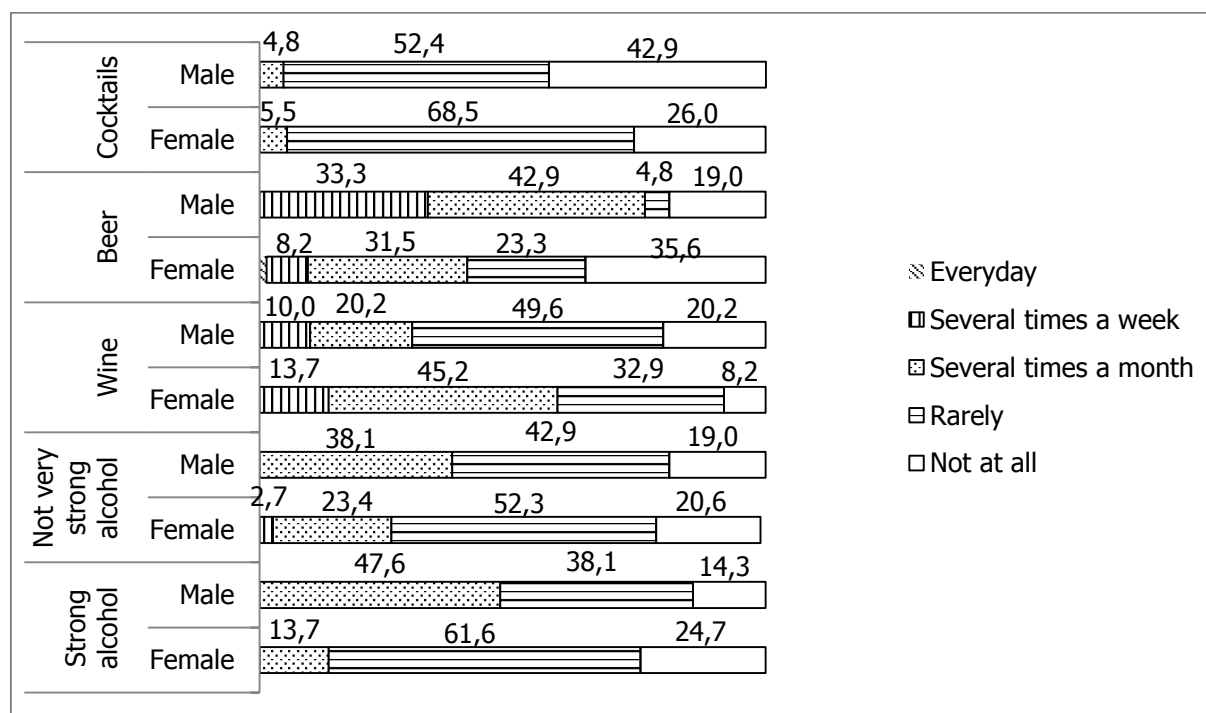
Source: research data

Drinking alcohol is part of the life of Generation Y and there are some differences between men and women in the frequency of drinking different types of alcohol (Fig. 2). The most favorite for men is beer and strong alcohol with more than 40%. They also like to drink less strong alcohol or wine. Women drink wine the most frequently but they also like beer or weaker alcohol. Young people drink cocktails rarely. Only 5,32% of respondents have never drunk any alcohol.

We wanted to find out if young people have drinking of alcohol under control. That´s why we asked those, who have already drunk some alcohol, if they have ever been drunk (Fig. 3).

Fig. 3 Ever been drunk (%)
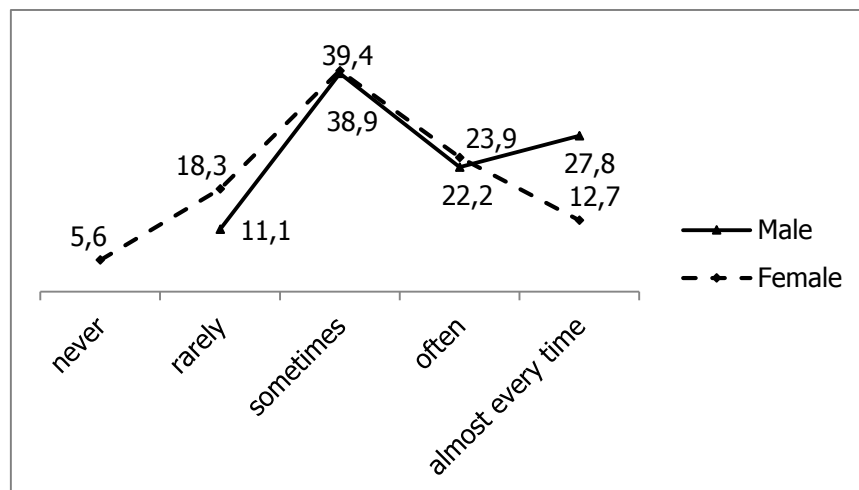
Source: research data

The majority of young people has already been drunk, whilst all of the men. Alarming fact is, that more than a 1/4 of men always get drunk and more than 10% of women does. Two fifths of asked young people get drunk sometimes and 1/4 often. It happens rarely for less than 1/5 of women and for more than 10% of men.

We were also interested in a more sensitive topic, such as drugs. We wanted to know if the young Generation has some experience with drugs and if so, with which (Tab. 6). We found out, that men have more experience than women (p=0,01). Nowadays more than 10% of men use some drugs and a very small part of women.

Tab. 6 Experience with drugs (%)

	Male	Female
None	38,1	47,9
Only one time	38,1	27,4
A few times but not anymore	9,5	23,3
Yes and I´m using also nowadays	14,3	1,4

Source: research data

Those respondents, who have at least a onetime experience with drugs, were asked to specify with which drugs. Almost everybody has an experience with marijuana and nobody has ever tried heroin. More than 10% of men have already tried ecstasy and cocaine and none of them meth. Less than 10% of women have already tried other drugs.

At the end, we focused on the health care and prevention. At first, we asked if they go to preventive examination (Tab. 7). In Slovakia, preventive examinations are fully covered by health insurance and at the dentist there are some fines. A patient, who hasn´t gone to the preventive examination, has to pay for the treatment of tooth decay effected in the next year. Despite this fact, according to the National Health Information Center (2017), only half of the patients over 19 years old effected the preventive examination in 2016. In such situation would be appropriate for healthcare organizations to be more proactive (Hanuláková, 2013) in order to persuade young people to undergo the preventive examination regularly.

Tab. 7 Preventive examination at the doctor (%)

	regularly		sometimes		never		sig. level
	Male	**Female**	**Male**	**Female**	**Male**	**Female**	
General practitioner	38,1	46,6	61,9	45,2		8,2	0,05
dentist	61,9	78,1	38,1	20,5		1,4	0,05
gynecologist		50,7		26,0		23,3	

Source: research data

Unlike women, all the young men effect preventive examinations at least sometimes. But women effect them more regularly. Two fifths of men and more than three quarters of women go to preventive examinations regularly, which is above the national average. Half of the young women effect preventive examinations at the gynecologist´s regularly and almost a quarter of them doesn´t go at all. 1/5 of the respondents has some disease while 1/5 of them has heart problems. Others have problems for example with thyroid or digestion.

We asked young people if they check their health or physical condition. Two thirds (64,9%) don´t check their condition. Those who do, they mainly check their weight (45,5%) and pressure (33,3%).

We described to the respondents a situation, where they could monitor their health or physical condition by an application or other device. Then we asked them with what probability would they use this way of monitoring. Men would use it with a 55,6% and women with 65,9% probability.

We also asked them to imagine the possibility of receiving advice about health care, nutrition or exercise through this application. This kind of application would men use with a 47,5% probability and women with 56,6%.

Based on a t-test, we can state, that young people would use monitoring with a bigger probability (p=0,01), than an application that gives advice. At the end, we asked them if they have ever heard about these applications which give advice. Men have a bigger overview (p=0,01), because almost three fifths (57,1%) of them have already heard about them, while only one third of women has. They are mainly applications focused on correct exercise and nutrition.

CONCLUSION

The research showed, that Millennials are satisfied with what they have accomplished and how the society recognizes them. They find appearance less important, most of them aren´t satisfied with it and some of them use supplements to adjust their weight. Young people sleep enough, but sometimes they have problems with falling asleep. They eat several times a day, but it can happen that they start the day without breakfast. It´s important for them to be healthy and happy, but they don´t always behave accordingly. Common part of their life is alcohol, which they don´t always have under control. Most of them have already tried marijuana, but it was mainly a onetime experience. Maybe the reason, why they don´t normally go to preventive examinations to the general practitioner as regularly as to the dentist is, that most of them are healthy. Even though most of them don´t usually check their health and physical condition, if there was a suitable and available application, they would try it. They prefer an application that would monitor them, rather than an application which would give them advice about nutrition and exercise.

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Positioning of CEE countries in international trade and FDI: differentiation of post-crisis dynamics

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Abstract: The economies of Central and Eastern Europe (CEE) have undergone a major transformation over the past 26 years, especially after the accession of their national markets to the EU. Based on a differentiated approach to the CEE countries, their groups are singled out, depending on the date of membership and status in the EU, as well as on the impact of a significant external environment factor - the 2008 crisis. As a result of the study, it was concluded that the role of foreign trade and FDI in GDP is increasing and that the economic growth of the CEE countries is ensured. It is established that the global financial and economic crisis of 2008 had a multi-vector impact on the macroeconomic dynamics of all the CEE countries groups' economies. At the same time, synchronization of crisis processes in groups of countries in the region indicates the dominating role of external factors in the development of CEE economies over internal (integration) ones. An analysis of intergroup dynamics revealed that the best results for GDP were achieved by a group of candidate countries in the EU, and the least developed countries are those that were the first to join the EU. Prospects for a significant excess of the pre-crisis level of GDP in the groups of CEE countries are related to the search for internal integration and external (out-integration) sources of growth, which can be foreign trade and foreign direct investment with partners outside the EU.

Keywords: economic integration, the EU, the countries of Central and Eastern Europe, exports, imports, FDI, GDP, the global financial and economic crisis.

JEL Classification codes: F15, F10, F21

INTRODUCTION

Since the 1990s of the XX century to the present, the economies of the Central and Eastern Europe countries are characterized by a process of continuous and profound transformation, related to: 1) the transition from an administrative command to a more efficient market system; 2) the destruction of the integrity of common economic mechanisms and the disintegration of states (Czechoslovakia, Yugoslavia); 3) integration into the global economy and WTO membership; 4) preparation for accession and membership in the EU and the Eurozone (Slovenia); 5) overcoming the consequences of the global financial and economic crisis.

The main economic and political changes in the CEE countries in the 1990s were related to the reform of the public administration system, privatization policy, private sector development, and the external economic openness of economies in order to improve the competitiveness of national economies and their integration into the global economy and international financial markets.

Integration into the global economy was carried out in parallel with the active involvement of multidimensional international economic integration in the process. However, despite the

multi-vector nature of foreign economic relations of the CEE countries and participation in various international economic and political organizations, the absolute priority of their foreign economic strategies was membership in the EU.

The effective integration of the countries of the region into the EU was facilitated by geographical, historical, cultural, and economic prerequisites. And accession of their national markets to a powerful integration association is one of the factors of the region's accelerated economic development. The CEE countries have increased the volume of foreign trade, are recipients of financial resources from EU structural funds, recipients of FDI from "old EU countries", their attractiveness for investors from other countries of the world has increased, and new employment and income opportunities have opened up for labor migrants.

It is obvious that the state of the macroeconomic dynamics of the CEE countries open national economies is determined by external factors (the conjuncture of world markets, the global financial and economic crisis of 2008) and internal factors related to membership in the EU/ Eurozone or preparation for accession to the EU, as well as specific national economic reforms).

The goal of the research was to identify the post-crisis dynamics of the macroeconomic indicators of CEE states, differentiated by group depending on the date of membership and status in the EU.

According to the authors, the synchronism of the macroeconomic dynamics in all groups of countries was significantly disrupted by the crisis. The best results for GDP were achieved by a group of candidate countries in the EU, and the least developed countries are the countries that first joined the EU (G2004). The authors see the reason for this in the following: 1) the economies of the G2004 countries were deeper integrated into the common EU market and, in this connection, experienced an additional transformational shock; 2) insufficient consideration of the differentiated state of the economies of the CEE-member countries in the EU anti-crisis policy; 3) the relatively greater independence and flexibility in the economic regulation of groups of candidate countries in the EU (GCand).

1 LITERATURE REVIEW

The problem of integration processes from the point of view of the CEE states in the EU, discussed in scientific research over the past 15-25 years, includes a wide range of aspects of their impact on economic growth, the dynamics and quality of foreign trade flows beyond the EU borders and within it, investment cooperation, scientific and educational and humanitarian ties. However, in order to better understand the modern specifics of the CEE countries and their positions in the international economy, it is necessary to refer to the period of the 1990s when a change in economic systems began from the administrative-command economy system to the market economy.

A large number of publications devoted to the study of the past and present state of the Eastern Europe and the Balkans economies, note the countries' economic differentiation of the region, which has determined the uneven effectiveness and scale of economic and social reforms.

The main reasons for the differences in the results of the Central and Eastern European Countries transformation, according to M. Swatek, are the unequal readiness of society to perceive market principles and competition in the economy and politics. At the same time, countries with economies in transition that are members of the EU demonstrate better institutional changes. This is due to their international obligations stemming from membership in international organizations such as the World Bank, IMF, WTO, OECD and the EU (Swatek, 2008).

In the context of the differentiation and specificity of the CEE countries, the work on justifying the development models of their economies deserves attention: the Baltic, the higher than the Hungarian, the Slovenian (Bohle, Greskovits, 2007), the Balkan model (The Visegrad four in the European Union: Dilemmas of Convergen, 2017).

The existing differences of the Central and Eastern Europe countries in the geohistory context, democratic regimes and institutions that affect the specifics and depth of integration with the EU are indicated by the study of Balázs P., Bozóki A., Catrina Şt., Gotseva A. et al. (Balázs P., Bozóki A., Catrina Şt., Gotseva A. and others, 2014)

The heterogeneity of the CEE countries development confirms the classification of countries in the region, taking into account their level of economic development and relations with the EU (Reiljan J., Reiljan E., Andresson K., 2001). According to the position of scientists, CEE countries are divided into "successful" (Visegrad Group, Estonia, Latvia, Lithuania, Slovenia); "Countries with intermediate results" (Bulgaria, Romania, Croatia); "Less successful countries" (the rest of the Balkans and the countries of the post-Soviet region).

Another classification of countries in Central and Eastern Europe in terms of geographical location, similarities in the levels of development of countries, the commonality of political relations and the historical past is suggested by Balázs P., Bozóki A., Catrina Şt., Gotseva A. and others. (Balázs P., Bozóki A ., Catrina Şt., Gotseva A. and others, 2014). According to the authers the CEE countries are divided into: 1) Visegrád + group (Hungary, Poland, Slovakia, Czech Republic, Slovenia); 2) the Baltic States (Lithuania, Latvia, Estonia); 3) Romania and Bulgaria

Recognizing the heterogeneity of the CEE countries, a number of researches are focused on their common problems and development factors. In the period of 1990-2000s, low competitiveness of goods, underdeveloped industrial and social infrastructure, high unemployment, poverty were considered as the main problems of the Central and Eastern European Countries development. As a result of reforms and active cooperation with the EU, countries have moved to a new level of development, their foreign trade and investment flows have increased, but economic differentiation has been preserved (The Economies of the Balkan and Eastern Europe Countries in the Changed World, 2011).

Some authors point to the economies development of the CEE countries as: orientation to external sources of economic growth, reorientation of industrial production from the domestic market to external, high level of the economy openness, inclusion of CEE enterprises in European value chains through European multinational corporations. As a result, the CEE countries have a high dependence of economies on external factors: the conjuncture of world markets, the phases of the economic cycle of the EU core countries, which is especially evident during the economic crisis (Habarta, 2013).

The results of other authors researches (Kalaitzoglou, Durgheu, 2016) show that not political but financial integration (introduction of the euro) has a direct and indirect impact on the economic growth of CEE countries in the EU.

Recognizing the importance of international economic integration in the Central and Eastern European Countries economies development, it is necessary to address to researches of the states participation consequences in the integration unions. Participation in integration associations provides countries with a number of advantages: access to resources, joint solution of economic problems, increasing role in the international economy. Joining the free trade agreement can stimulate intraregional trade between countries (Balassa, 1962).

Membership in a customs union is associated with static and dynamic effects, as a direct result of integration (Viner, 1950, Lipsey & Lancaster, 1957). Static effects arise in short-term period as a direct result of the trade barriers elimination, but dynamic effects in the medium and long term period. In the framework of static effects, trade flows can change their direction: the

domestic market needs start to be provided by cheaper domestic goods of the participating countries instead of purchases outside the borders of the integration group (the effect of creating a trade); as a result of integration, there is a reorientation of imports from cheaper external sources of goods supply to relatively more expensive domestic sources of supply from the countries of the integration association (the effect of trade rejection). Consequently, certain risks also arise during integration process, so it is important at the EU candidate stage to foresee negative integration outcomes. Holzner M. (Holzner, 2012) reveals the potential risks after the signing of the Association Agreement with the EU (SAA) in the form of a loss of budget revenue from trade liberalization, a reduction in the profits of local firms and a reduction in their production.

Participation in Central and Eastern European Countries economic integration is determined by the world trends of the integration process and acquires a multilevel, multidimensional, multivector character (Voronina, 2014). This is confirmed by the fact that some of Central and Eastern European Countries within the EU form subregional unions, such as the Visegrad Group, and also participate in the CEFTA, the Black Sea Economic Cooperation Organization (BSEC) and other associations. The positive role of the Visegrad Group (V4) and CEFTA for the CEE countries development and preparation for accession to the EU is noted by Lambova T., Voronina T. (the Institute of Europe, 2017; Lambova, 2011; Voronina, 2013).

Some scientists put forward the thesis of a unilateral, to a greater extent, the nature of integration in the EU and its advantages for the more developed countries and the largest and most competitive companies of the EU (Voronkov, 2014). However, the above scientific hypothesis is not confirmed by decisions of CEE states or by other researchers.

The contribution of the CEE countries to the economic heterogeneity of the EU is indicated by studies of Rozmahel P., Kouba L., Grochová L., Najman N., (Rozmahel P., Kouba L., Grochová L., Najman N., 2013). The differences in the speed of convergence of the CEE countries in different areas of integration are influenced by such factors as political stability, the quality of formal institutions, the maturity and compatibility of informal institutions, the initial level of economic development. At the same time, the authors substantiate the existence of significant progress in achieving macroeconomic convergence, but note the slow progress in the institutional sphere in the CEE countries. As a result of the global financial and economic crisis, the negative consequences of the countries heterogeneity in the EU have intensified, which casts doubt on the stability of the economic and monetary union in the long term.

The research of Bussière M., Fidrmuc J., Schnatz is devoted to the prospects of trade integration of the Central and Eastern European countries (CEECs) in the first years of EU membership. Scientists have proved that the euro area countries are the main trading partner of the CEE countries. Against the background of trade barriers elimination and accession to the European Union, the main factors that stimulate the trade integration of the CEE countries with the euro area were geographic proximity, a capacious market and stable growth rates of the economies of the euro area countries. Based on the model of commercial gravity, the authors conclude that trade integration between the majority of the largest CEE countries and the euro area in the first years of integration reached significant volumes, unlike in the Baltic and South-Eastern Europe, which did not exhaust the growth potential (Bussière M., Fidrmuc J., Schnatz B., 2005).

Issues of Regional Integration and Foreign Direct Investment are explored by Schiff & Winters (Schiff & Winters, 2003). For a foreign investor, access to the capacious market of the integration union member countries is an important factor in the placement of FDI. The investor also takes advantage of access to local production factors of all the countries of the integration group in order to create export platforms. This is confirmed by the experience of other integration associations, for example, MERCOSUR, ASEAN, and others.

Di Mauro F. justifies the hypothesis that foreign direct investment is the main channel for integration of CEE candidate countries into the EU (Di Mauro, 2001). To attract more FDI, European transition economies need to improve the macroeconomic situation, pay special attention to combating corruption and bureaucracy (Dauti, 2015), corporate taxation (Kersan-Škabić, 2015).

After the global financial and economic crisis, the focus of the CEE research has shifted towards identifying its economic consequences for the countries of the region, as well as the determinants of economic growth in the context of EU membership or its prospects. Albulescu C. assesses the financial instability in CEE, cites evidence of the negative impact of the crisis on the economic and financial integration of the CEE countries in the EU, points to the growing gap between the core countries and the periphery of the EU (Albulescu, 2011).

In the context of post-crisis development, the factors of economic growth include foreign trade, foreign direct investment, domestic lending (Florin, 2015). Based on econometric analysis, the relationship between Croatia's international trade and financial stability in the short term is confirmed (Bilas, Bošnjak, Novak, 2017). However, Mikulić D., Nagyszombaty G. substantiate the hypothesis that for Croatia, international trade is not a key factor in growth and regional convergence. Botrić V., Broz T. also do not find confirmation of the positive influence of exports of the Western Balkan states in the EU on the creation of new jobs during the crisis (Mikulić D., Nagyszombaty G., 2015).

In the scientific literature of the Russian Federation, interest to the problems of CEE states and their role in the EU was active during the periods of discussion and adoption of key decisions by the countries of the region on joining the EU, forecasting their consequences taking into account the global financial and economic crisis (Yevchenko, 2011). Given the growing geopolitical tensions and volatility of the world economic and foreign trade processes in recent years, there is a new level of attention to the CEE countries, the dynamics of their development in the period after getting membership in the EU (Glinkina, Kulikova, Sinitsina, 2014, Glinkina, Kulikova, 2016; Gusev, 2014). For the CIS countries, the prospect of rapprochement between the EU and Ukraine, including lessons that can be learned for Ukraine from the experience of the CEE countries, was a catalyst for attention to these studies (Kalita, 2010; Yatsenko, 2010).

Thus, the scientific literature reveals the heterogeneity of the CEE countries, which requires a differentiated approach to their analysis, divides the external (out-integration) and internal (integration) factors that determine the development of the economies of the CEE countries. However, in the economic literature, the dependence of macroeconomic indicators on the groups of CEE countries in the post-crisis period is not sufficiently understood.

2 METHODOLOGY

Based on the monographic survey, the first part of the paper reviews the scientific literature on the issues related to the positions of the CEE countries in the world economy, their participation in trade and investment flows; the results of the previous studies are discussed.

Based on the methods of grouping, analytical calculations and intergroup comparisons, the second part of the paper reveals the dynamics, structure of trade and investment flows in the countries of Central and Eastern Europe with an emphasis on the post-crisis period.

In the conclusion section, the results of the study and the main inferences are formulated.

In this paper, Estonia, Latvia, Lithuania, Poland, Czech Republic, Slovakia, Hungary, Slovenia, Romania, Bulgaria, Croatia, Albania, Montenegro, Macedonia, Serbia, Bosnia and Herzegovina, Kosovo, are referred to as the CEE countries.

The research object is the macroeconomic dynamics of group indicators (GDP, exports, imports, FDI) of the CEE countries from 2000 to 2016.

Taking into account the leading role of the European integration in the development of the CEE countries, the criterion of the relation formalisation between CEE and the EU has been used as a criterion for grouping countries of the region. Several groups have been identified: 1) The countries of the first wave of EU expansion - G2004: Visegrad Four (the Czech Republic, Slovakia, Hungary, Poland), the Baltic countries (Estonia, Latvia, Lithuania), Slovenia; 2) The countries of the second wave of EU expansion - G2007: (Bulgaria, Romania (2007) and Croatia (2013), 3) EU candidate countries - GCand - Albania; Montenegro; Macedonia; Serbia, as well as Bosnia, Herzegovina and Kosovo.

Particular attention is paid to the post-crisis development dynamics of the economies of the CEE group of countries, as the global financial and economic crisis of 2008 has had a multi-vector impact on their economies.

Degree of the impact of the 2008 global financial and economic crisis has been made on the criterion of "achieving the maximum value of GDP" in 2000-2016. As a result, the first group G2004 has been divided into two subgroups: G2004-1 (the maximum GDP was reached in 2008) includes Slovenia, the Czech Republic, Hungary and Latvia; G2004-2 (maximum GDP was reached in 2014) includes the Republic of Slovakia, Poland, Estonia and Lithuania.

Data on the volume of GDP, exports and imports of goods and services are presented in current prices in US dollars. The investment flow of FDI is based on data on the net balance in current US dollars, which includes the difference between incoming and outgoing FDI. The positive balance and its volume characterize the investment attractiveness of the researched groups and single CEE countries.

3 RESULTS AND DISCUSSION

The research has revealed that indicators of GDP and foreign trade in 2000-2016 had a synchronous dynamics: a continuous growth in 2000-2008 and a volatile multi-directional movement in 2009-2016. The fact that foreign direct investments (net-flow) in 2000-2016 had a dynamics different from the specified indicators requires special analysis in a separate section of the research.

The trend direction of macroeconomic indicators in 2009-2016 in CEE countries is characterized as: slightly declining GDP (from 0 to -4%); medium-growing export (from +12 to + 30%); constant import (from -1% to + 1%) (Fig. 1, 2, 3).

The markedly growing foreign trade openness of CEE countries should be stressed, as it characterizes the importance of exports in the formation of GDP. It is indicative that it is growing among all the analyzed countries. The growth rate of the foreign trade of the G2004-2 countries and the candidate countries for membership in the EU is the fastest among all the analyzed countries (Tab.1).

Significant interrelation between the dynamics (growth rates) of GDP and exports for the research object is observed. For the CEE-member countries of the EU, there is a complete synchronization of GDP and exports dynamics before and after the crisis in 2008. For the EU candidate countries, decline in a very high growth rate of GDP and exports (an annual increase of 10% to 50%) is recorded in the pre-crisis period. After the crisis, the dynamics of their GDP and exports fully coincide with the ones of the EU member states that indicates the identity of the impact of exports as a factor in ensuring economic growth of GDP for all states of the analyzed sample in the post-crisis period.

Fig. 1 GDP Dynamics in groups of CEE countries, 2000-2016, 2008=100, %
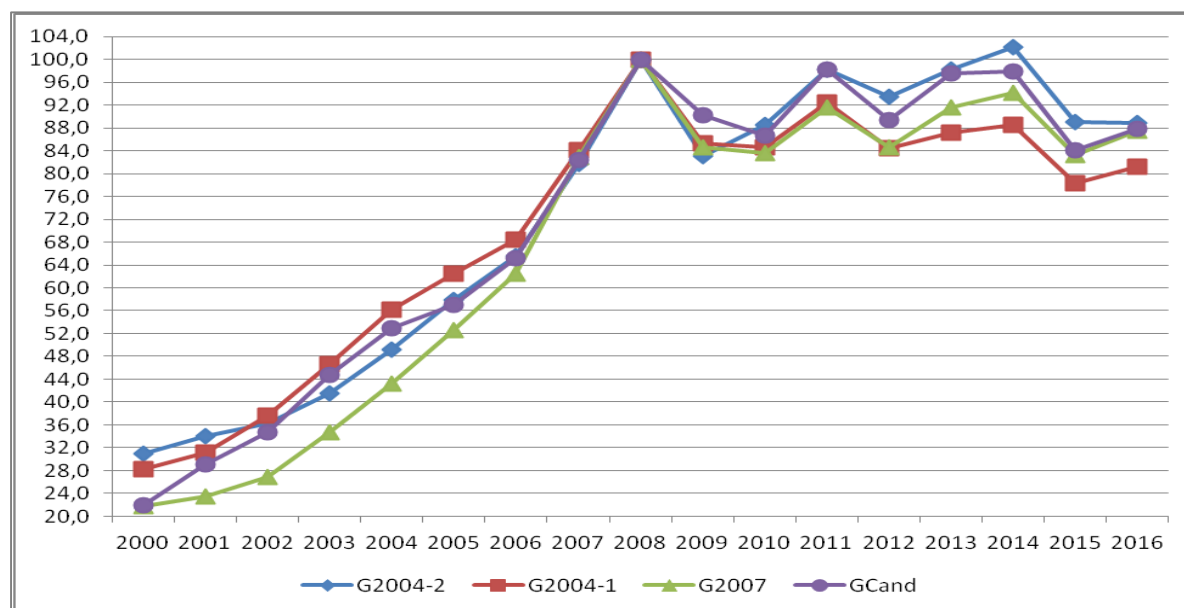
* Calculated by the authors according to: World Bank Indicators Online Database (Retrieved December 24, 2017, from http://databank.worldbank.org/data/reports.aspx).

Tab.1 Share of exports in GDP by groups of CEE countries, 2000-2016, %

	2000	2008	2009	2014	2016	2016/2000
G2004-1	54,2	67,1	62,5	81,8	81,2	149,8
G2004-2	32,3	46,1	43,5	57,3	60,8	188,3
G2007	34,5	33,6	31,7	46,5	47,0	135,9
GCand	20,1	29,3	26,6	38,4	41,8	208,1

* Calculated by the authors according to: World Bank Indicators Online Database (Retrieved December 24, 2017, from http://databank.worldbank.org/data/reports.aspx).

Coefficient of coverage of imports by exports, defined as the ratio of export earnings to import costs, indicates the surplus of the foreign trade balance of all EU member countries of CEE, which by 2016 remains negative only for the GCand group (Fig.4).

In 2000-2016, exports of CEE-11 countries increased 5,3 times: from $ 139 billion to $ 731 billion, which significantly stimulated economic growth. In the course of trade integration, there were significant changes in the commodity structure of the CEE countries' exports. In the mid-1990s, raw materials (wood), textiles and clothing, metallurgy amounted to up to 45% of the value of exports from CEE countries, 20% belonged to agricultural produce and some kinds of fuels with a low degree of processing.

A key role in the formation of a new export structure was the massive transfer by transnational corporations of production processes from the "old" EU countries to the CEE countries, due to lower production costs and the immediate availability of the largest European markets. This led to the dominance of TNCs in the foreign trade of the CEE countries. Strengthening of TNCs' positions, supported by the use of modern information and communication technologies, caused acceleration in the dynamics of foreign trade in CEE and increased the share of the region in world trade: the share of CEE countries in world exports that had fallen in the nineties due to transformational shock reached 4.6% in 2016 (2,2% in 2000). In 2016, the highest

growth rates of exports were in Romania with almost 5%, Hungary (3,48%), Slovakia (3,17%) and the Czech Republic (3,12%) in comparison to the all-Union share of 0,22% and the global one of 3,04%.

Fig.2   Dynamics and trends of GDP, exports, imports in group G2004-1, 2008-2016, 2008=100, %

* Calculated by the authors according to: World Bank Indicators Online Database (Retrieved December 24, 2017, from http://databank.worldbank.org/data/reports.aspx).

Fig.3   Dynamics and trends of GDP, exports, imports in group G2004-2, 2008-2016, 2008=100, %
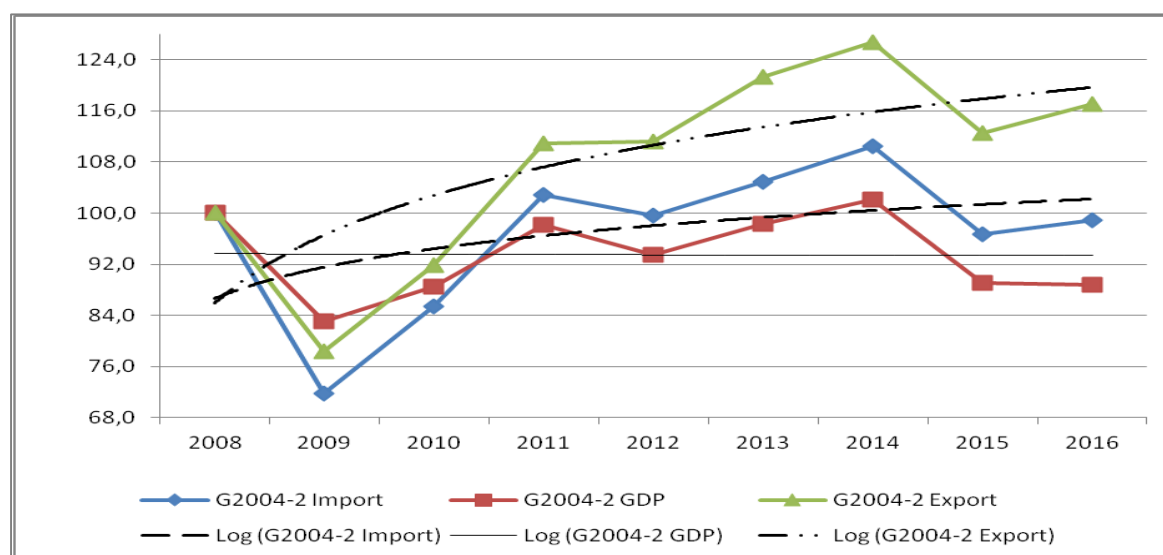
* Calculated by the authors according to: World Bank Indicators Online Database (Retrieved December 24, 2017, from http://databank.worldbank.org/data/reports.aspx).

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Fig. 4 Coverage imports by exports in groups of CEE countries, 2000-2016, %

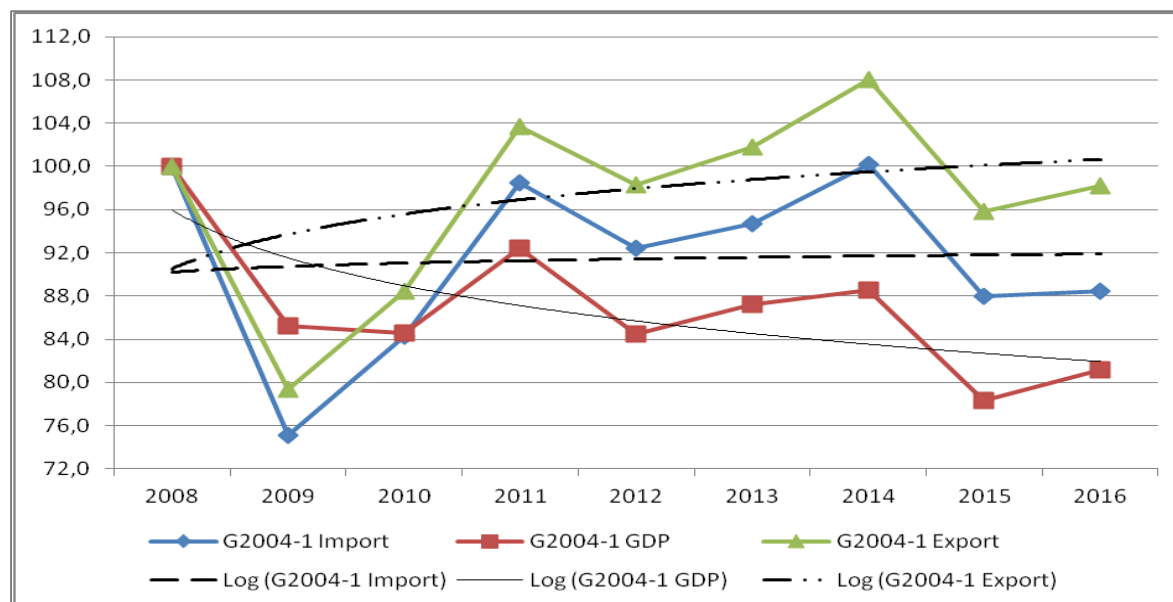Calculated by the authors according to: World Bank Indicators Online Database (Retrieved December 24, 2017, from http://databank.worldbank.org/data/reports.aspx).

The growth of foreign direct investment inflows from European TNCs into the mechanical engineering and automotive industries of the CEE countries led to a significant increase in share of high-tech component export, i.e. machinery and transport equipment.

An important change in the structure of exports was the increase in the share of finished products, including investment and consumer goods, and diversification of exports. An export platform for the production of cheap substitutes for products, previously offered by Western European countries, has been created in the CEE countries by transnational corporations. The export of CEE countries is largely focused on the EU countries. In all countries of the group, except Lithuania, the share of exports to the EU countries of its total volume in 2016 exceeded the average European level (64,1%). The highest indicator of the intra-European share in exports was in Slovakia (85,5%) and the Czech Republic (83,7%).

The role of the EU in the export of CEE countries G2004 is reduced due to the exhaustion of the integration effect. The maximum share of the EU in the exports of CEE countries G2004 was observed in the late 90s after the complete liberalization of trade in manufactured goods. The share of countries G2007, as a result of the elimination of trade barriers, is still under the influence of the effect of the reorientation of commodity flows to the domestic market of the integration association, which led to an increase in the share of exports to the EU in the total exports of these countries.

Outside the EU, the most important trading partners of the CEE countries are the CIS countries, which are geographically close. Before the emergence of political problems with the Russian Federation and the beginning of the sanctions confrontation in 2014, Poland accounted for the largest share in exports to the CIS countries (10% of the total value of exports), while in other countries the indicator fluctuated from 5% to 6%. The share of the former USSR countries in the export of CEE is much higher than in the EU-15, which reflects high degree of specialization of CEE exporters in the eastern markets.

Thus, the exports of the CEE countries concentrate mainly on the markets of the European region, since the transfer of production from Western Europe to CEE mainly concerned products destined for European markets, including CIS countries. A small share of distant markets in CEE exports may indicate a relatively low degree of product diversification, which makes them insufficiently competitive in markets located outside the EU.

Foreign direct investments (hereinafter referred to as FDI) is regarded by scientists as an important indicator of competitiveness resulting in successful positioning of a state at the

international capital market and sustainability of long-term positive macroeconomic trends and return on investment forecasts. Research presented in literature review sometimes relies on short-term 3-5 year trends as a result of which conclusions not taking into account the long-term economic cycles may be made, and taking into account the response time of economic processes, tendencies and trends are more true to fact for the intervals starting from 10 years. It appears that the analysis of long-term trends in foreign direct investment (FDI) allows providing a proper picture of ongoing international investment processes and taking into account FDI correlation with macroeconomic indicators allows getting data for forecasts.

Analysis of net FDI dynamics for CEE EU Member States suggests that countries of the first wave of accession (G2004) are characterized by an extremely high degree of volatility of the total FDI volume in comparison with the countries which acceded three years later – G2007 (fig. 5).

Fig. 5   Net FDI and the trend line in groups of CEE countries – EU Member States, 2000-2016, billion USD.
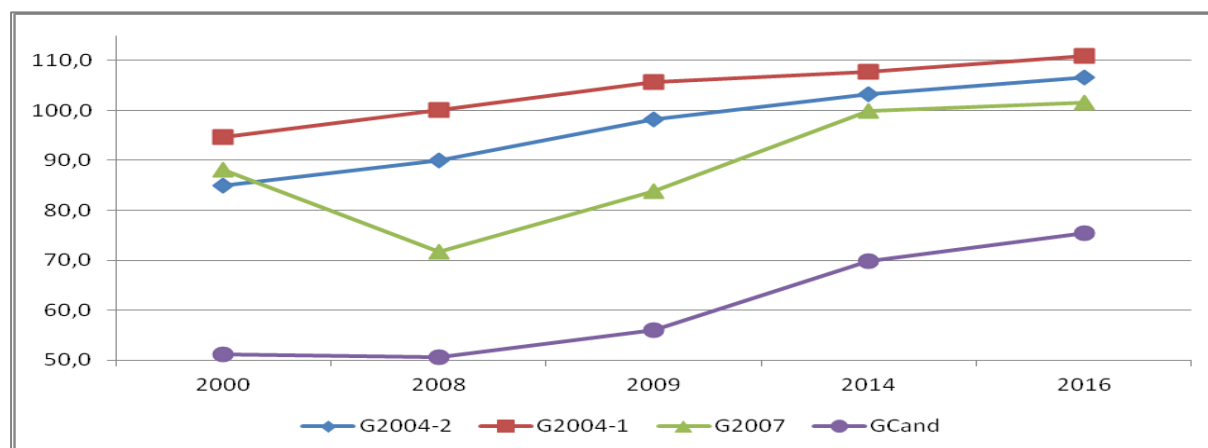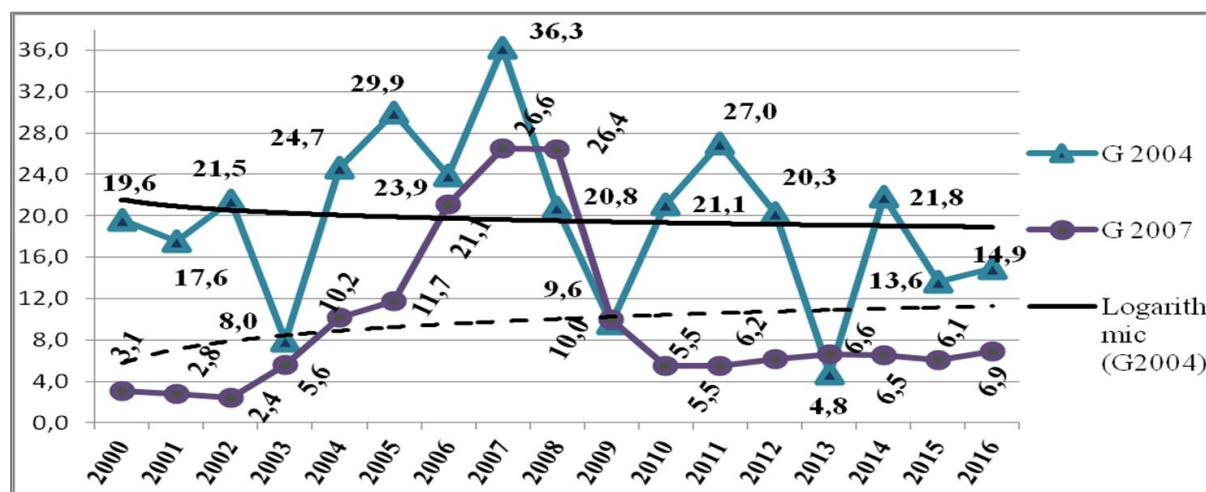

* Calculated by the authors according to: World Bank Indicators Online Database (Retrieved December 24, 2017, from http://databank.worldbank.org/data/reports.aspx).

It is important that during the analyzed period a group of G2004 countries has a slightly downward FDI volume trend. For G2007, on the contrary, FDI flow is increasing, which proves more positive dynamics of FDI attraction by that group compared with G2004.

The most positive FDI trend in 2000-2016 among the analyzed groups is observed in EU candidate countries. However, this group is significantly inferior to the groups of EU Member States (G2004 and G2007) in terms of annual volume of attracted FDI taking into account the average indicator per country in the group (fig. 6).

The study of the ratio of the amount of received FDI to GDP, which characterizes the importance of FDI as one of the important factors of GDP formation, appears to be an important section of the analysis of FDI influence on the economy of CEE states.

The results of the analysis show that logically three periods are distinguished: before the beginning of EU membership analyzed FDI share was at the level of 4-8% of GDP for all groups; subsequently, it has grown to 12-16%; from 2010, there has been a sharp decline in "FDI/GDP" amount ratio, especially for G2004 group (fig. 7).

Fig. 6   Net FDI and the trend line in groups of CEE countries – EU candidate countries, 2000-2016, billion USD.
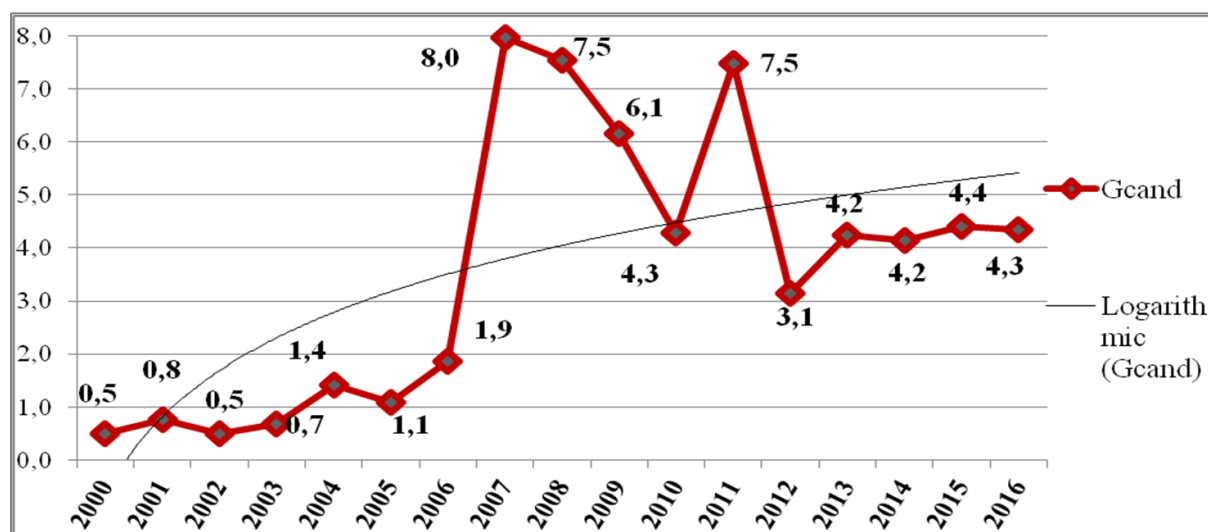
* Calculated by the authors according to: World Bank Indicators Online Database (Retrieved December 24, 2017, from http://databank.worldbank.org/data/reports.aspx).

Fig. 7   Net ratio of FDI to GDP in CEE countries (in current prices), the average for each group, 2000-2016, %
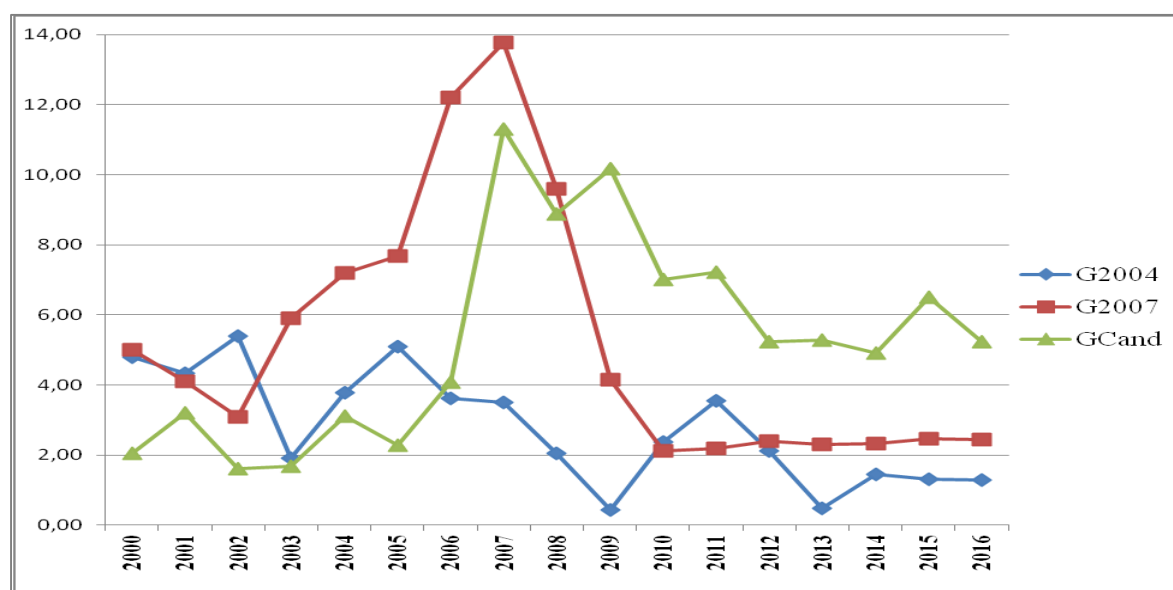
* Calculated by the authors according to: World Bank Indicators Online Database (Retrieved December 24, 2017, from http://databank.worldbank.org/data/reports.aspx).

In addition, for groups of CEE EU Member States, "FDI/GDP" amount ratio in 2010-2016 decreased to the level which was observed during the period when they were preparing to become EU members (2000-2003).

FDI volume per inhabitant per year (fig. 8) is a generalizing indicator of investment attractiveness. According to calculations, the states of G2007 group were the most attractive for foreign investors in 2000-2016 – USD 294 per capita annually. G2004 EU members received

FDI in the amount of USD 272 per capita annually, while the group of EU candidate countries – USD 193 per capita FDI annually.

Fig.8   Net FDI per capita in CEE countries (in current prices), the average for the period of 2000-2016, USD per capita
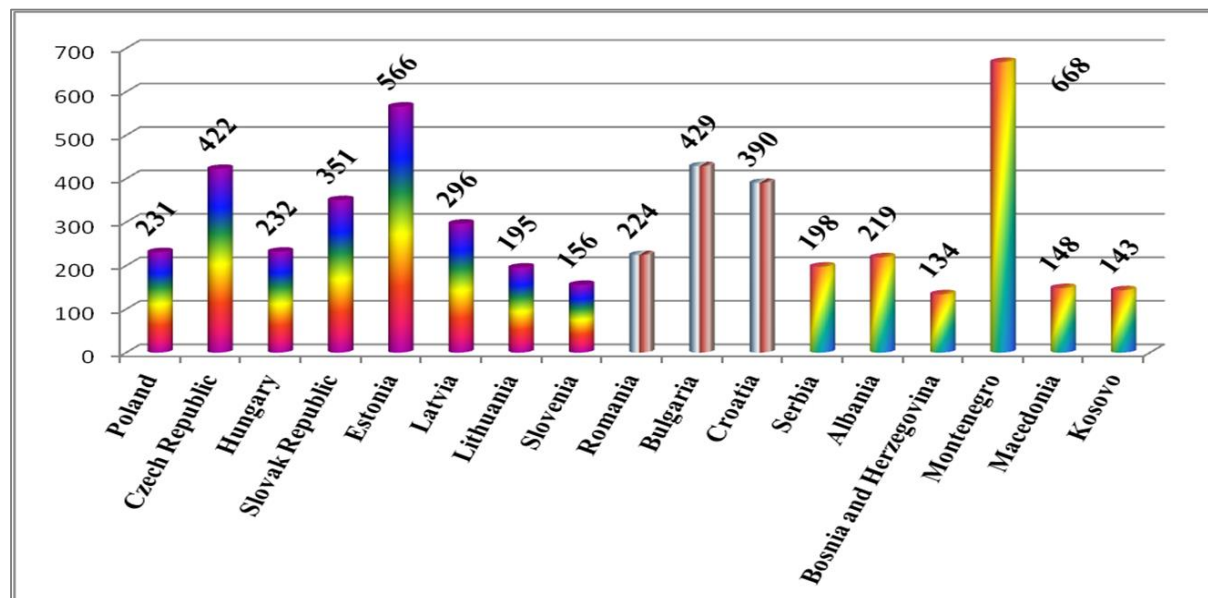
* Calculated by the authors according to: World Bank Indicators Online Database (Retrieved December 24, 2017, from http://databank.worldbank.org/data/reports.aspx).

In conclusion, it should be noted that membership of the CEE countries in the EU has a positive effect on the investment climate in most member states and EU candidates for membership. Based on the research, it may be assumed that positive trend of increasing FDI and its role in GDP formation will remain in the countries of the group in the medium-term perspective as well. However, in view of the trend of declining "FDI/GDP" ratio, FDI growth rate will slow down.

Thus, this research shows that FDI growth in CEE countries depends to a greater extent on the government's strategy of interaction with foreign investors and formal membership in the EU and not on the year of accession or duration of the period of being within the Union.

In general, it should be noted that forecast trends indicate that G2007 CEE states demonstrate a greater attraction for foreign investment and more positive dynamics of this process and its results.

CONCLUSION

As a result of the research, the authors found that:

The sustainability of economic development, measured by GDP dynamics, characterizes the change of the leading group in the CEE region: before crisis-2008, the G2004 states were leading among the CEE countries, and after the crisis, they demonstrate minimal growth rates, not reaching its pre-crisis volume by 2016.

The degree of openness of the EU member states (G2004, G2007) economies in general is higher than of the candidate countries (GCand). It is established that the economies of a less

open group of states (GCand) proved more resilient to the negative manifestations of the global financial and economic crisis of 2008.

The unquestionable achievement of the integration and monetary policy of the EU in relation to the CEE-member states is the achievement of a positive foreign trade balance, but the speed of its achievement turned out to be different: G2004-1 group reached by 2008; G2004-2 group achieved by 2012; G2007 obtained it by 2015; the candidate countries have trade deficit (-24.7% in 2016).

Export orientation and foreign direct investment are the important factors of economic development in the countries of the region. The CEE countries' share in international trade during 2000-2016 increased from 2.2% to 4.6%.

Exports of CEE countries are concentrated mainly in European markets, since the transfer of production from Western Europe to CEE concerned mainly the products intended for European markets (including the CIS countries). A small share of markets outside the EU in CEE exports may indicate a relatively low degree of diversification of commodity structure of exports, which makes them relatively non-competitive in the markets outside the EU.

In the course of trade integration of 2000-2016 significant changes occurred in commodity structure of exports of CEE countries. A key role in the formation of a new structure of exports was played by mass transfer of the manufacturing activities from the "old" EU countries to CEE countries by transnational corporations due to lower production costs and close proximity of major European markets. As a result of the presence of EU countries' transnational corporations in CEE the share of finished products in the commodity structure of their exports increased significantly from 8.0% to 27.6%.

FDI growth in CEE countries depends to a greater extent on the government's strategy of interaction with foreign investors and formal membership in the EU and not on the year of accession or duration of the period of being within the Union. Positive trend of increasing FDI and its role in CEE countries' GDP formation will remain in the medium-term perspective. However, in view of the trend of declining "FDI/GDP" ratio, FDI growth rate will slow down.

In general, in the post-crisis period for G2004 and G2007 groups, the growth of foreign trade balanced the decline in investment activity, which led to the stabilization of GDP, so that it did not reach the pre-crisis level by 2016. Thus, it is important to note that the internal integration sources of GDP growth of the EU-member countries of CEE are close to exhaustion, it is necessary to search for non-integration sources of growth, which can be foreign trade and investments, related to partners of states outside the EU.

This study can be useful for governing bodies in the formation of regional macroeconomic development strategies for CEE countries, taking into account the group features.

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Taxonomic Analysis of Changes on Labor Markets in Central and Eastern Europe Countries

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Abstract: The entry to European Union by the countries of Central and Eastern Europe (CEE) initiated their activity on much broader market. It led to processes of deep changes reflected in various economic areas, one of which is the labor market. The key objective of this article was the analysis and evaluation of the crucial changes on the labor markets of CEE countries. The analysis became a basis to verify the hypothesis that in the research period, the economic integration with EU did not contribute evenly to the improvement in labor markets functioning in CEE countries. Making use of taxonomic analysis, there was a division of Central and Eastern Europe countries into the groups with similar situation on labor markets according to chosen indicators. Moreover, the level of implementation of national objectives in the researched Central and European countries was verified (objectives connected with labor market and set in the Europe 2020 Strategy). The research took place between 2005 – 2016.

Keywords: Central and Eastern Europe, labor market, Europe 2020 Strategy, taxonomic analysis, Hellwig's measure of development

JEL Classification codes: C38; E24; N30

INTRODUCTION

European Union countries are distinguished on the international market by high quality and standard of life which is an effect of achieved high economic level and developed social systems. The European Union entry made by countries of Central and Eastern Europe (CEE) initiated the processes of deep changes in those countries reflected in various economic areas, and in the labor market among them, which in further consequence lead to the necessity to match this market to EU requirements. The economic crisis between 2008-2009 was the reason to create long-term social and economic program of growth and development for 2010-2020 – in other words, the Europe 2020 Strategy. What was especially emphasized in the strategy was the necessity of cooperation between the member countries to emerge from the crisis and to conduct reforms which will enable facing the challenges connected with globalization, ageing of societies and the growing need of rational resources use.

Europe 2020 Strategy is a specific program of actions focused on five objectives, among which we can find innovation, education, social inclusion, climate change and employment rate.

The European Commission formulated for community countries the recommendations which are connected with the labor market, they are among others:

- reduction of structural unemployment and the increase of employment of people aged 20-64 (target: the increase of global indicator to 75%);
- effective investing in education through the improvement of quality and efficiency of training (target: the decrease of percentage of people aged 18-24 who leave school

too early to 10% and the increase of percentage of people aged 30-34 with tertiary education degree to at least 40%);

- the development of scientific research and innovation through the higher expenditure on research (target: 3% GDP allocated for R&D).

1 LITERATURE REVIEW

The subject literature as regards labor markets concentrates around various subject areas, because the labor market is a complex and multifaceted issue. Those areas are connected with, among others:

- the results of financial and economic crisis for the European labor markets (Wąsowicz, 2013; Zieliński, 2012; Supiot, 2010)
- the system of labor market policy – active or passive policy (Franz, 1995; Boeri et al., 2006)
- the Europe 2020 Strategy and the level of implementation of its key targets, where the labor market targets can be found among others (Renda, 2014)
- the financial migration of European Union residents (Balcerowicz-Szkutnik & Skórska, 2017; Schreiner, 2008)
- the employment in economy sectors of European Union countries (Wąsowicz & Warzecha, 2017; Łopatka & Matuszczak, 2014)
- the generation of NEET young people (Not in Employment, Education or Training)- meaning young people who do not work, study and train in the European Union countries. NEET concerns people aged 15-24 (Skórska, 2016; Balcerowicz-Szkutnik & Wąsowicz, 2017; Furlong, 2007)
- the policy of equality of rights on the labor market (Dach, 2012; Grzega, 2017)
- the globalization and technology and information advance, meaning the factors having the influence on the creation of new demand for jobs, especially for the high class specialists in the area of computer technology, telecommunications, biotechnology or genetic engineering (Skórska & Wójcik, 2017).

2 AIM OF THE ARTICLE AND RESEARCH METHODS

The main objective of the present study was the evaluation of Poland's position on the background of Central and Eastern Europe countries and on the basis of chosen indicators which describe the labor market and are connected with the implementation of objectives of Europe 2020 Strategy in this area.

In the research, the following questions were answered:

- Has the Poland's position in the aspect of labor market situation changed significantly over a span of researched 12 years?
- Are the CEE countries similar as regards the analyzed indicators describing the labor market, if yes, what is the division of similar countries aggregations?

The subject of research was all of the countries of CEE and the research took place in 2005 and in 2016 (2016 – as the year of the most recent statistical data and 2005 – just after Poland joined European Union).

The labor market can be described as complex and multifaceted, this is why the multidimensional comparative analysis was used to conduct the research. Hellwig's taxonomic measure of development was used in the research- it helped to put researched objects in linear order (create countries rank) as regards the situation on labor market (the description of method in, among others: Zeliaś, 2000; Szkutnik et al., 2015; Mościbrodzka, 2014). The

synthetic taxonomic measure of development is based on the Euclidean distance and is standardized, meaning, it takes values within the range [0,1]. The smaller the difference of measure value from 1, the more developed the specific object is as regards the level of multi-feature phenomenon, in other words, the more approximate to standard object. The development pattern is an abstract point with standardized coordinates, the coordinates of this point are the most favorable values of diagnostic variables.

One of the nonhierarchical agglomerating methods was used to define the groups of countries similar according to the diagnostic features describing the labor market – a method of k-means, where the collection of objects is divided for k groups (aggregations) and the number of groups is defined a priori. The Euclidean distance was taken as unit of distance. The number of aggregations, necessary to k-means method, was defined on the basis of dendrogram achieved by Ward's method (in the research, the CEE countries were divided into 3 aggregations, meaning disjoint and nonempty subsets called classes due to the similarity on the labor market).

The choice of variables for research

The choice of indicators for research which describe the labor market was partially connected with the implementation of Europe 2020 Strategy objectives in the researched area.

The main problem of present Europe in the employment field is the high level of unemployment which severely afflicts young people (15-24 years old) and females (which is visible in the Fig.1)

Fig. 1 Unemployment rate in total and according to chosen groups in CEE countries in 2005 and 2016
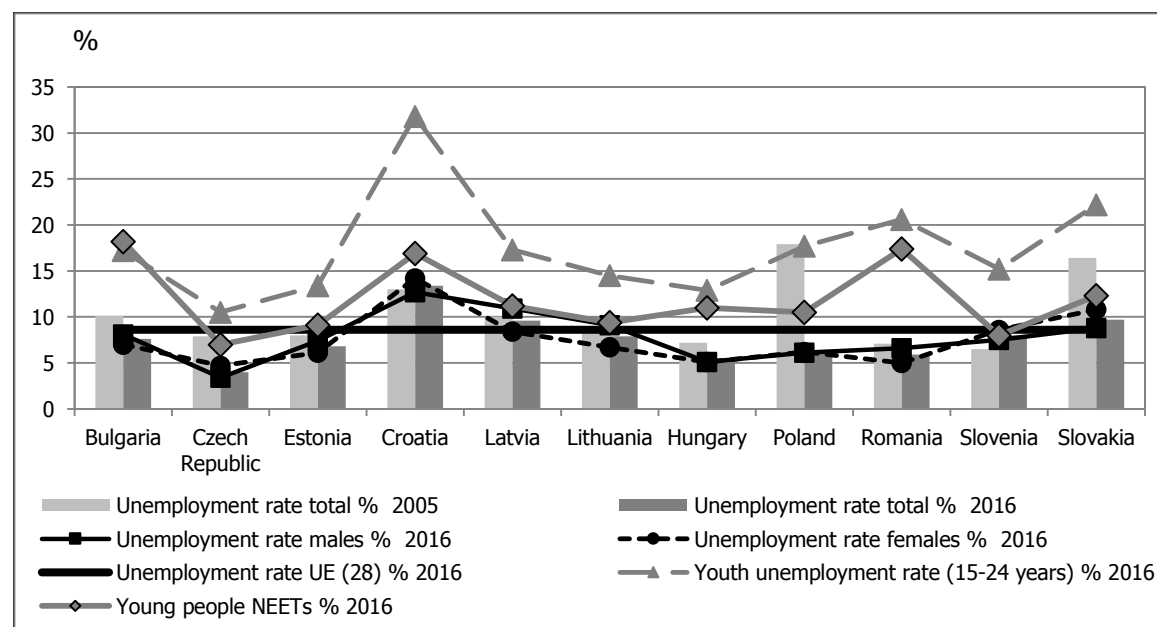
Source: Own analysis on the basis of Eurostat data.

According to Eurostat's 2016 data the unemployment rate in European Union (28) reached 8,6%. This means, that in 28 member countries 26,6 million of women and men remained unemployed, including 5,5 million people up to 25 years old. Despite the insignificant improvement in relation to previous years, the situation still remains unfavorable, especially

among such countries as: Greece or Spain, which have noted the highest indicators of unemployment (the unemployment rate equaled in 2016 23,6% and 19,6% accordingly).

Fig. 2 Indicator of employment of people aged 20-64 and the indicator of research & development expenditures in % of GDP in EU countries in 2005 and 2016

Employment rate age group 20-64 in %	Gross domestic expenditure on R&D% of GDP
Legend ■ 0.8029 – 0.9999 ■ 0.9999 – 1.0001 ■ 1.0000 Minimum value:0.803 Maximum value:1.033	Legend ■ 0.24 – 0.9999 ■ 0.9999 – 1.0001 ■ 1.0000 Minimum value:0.24 Maximum value:1.68
The countries of European Union which fulfilled the national Europe 2020 Strategy objectives concerning the indicator of employment of people aged 20-64 (7 countries in total, including 4 CEE countries): Germany, the Czech Republic, Estonia, Lithuania, Latvia, Ireland and Sweden). In 2005 only Ireland fulfilled the conditions.	The countries of European Union which fulfilled the national Europe 2020 Strategy objectives concerning the indicator of the level of research & development expenditures in % of GDP (2 countries): the Czech Republic and Cyprus. In 2005 only the Czech Republic fulfilled the conditions.

*-the dark color in the maps was used to mark countries which fulfilled the Europe 2020 Strategy objectives in a particular year.

Source: Own analysis on the basis of Eurostat data.

Whereas in the group of CEE countries in 2016, in comparison to 2005, the rate of unemployment decreased in almost all of the countries (with the exception of Croatia and Slovenia), with the most significant decreases for Poland (11,7 of percentage point decrease-from 17,9% to 6,2%); Slovakia (6,7 percentage point decrease - from 16,4% to 9,7%); the Czech Republic (3,9 percentage point decrease - from 7,9% to 4,0%).

The rate of unemployment of young people aged 15-24 in 2016 achieved the highest level in Croatia (31,8%), Slovakia (22,2%) and Romania (20,6%). The alarming problem observed in recent years in the Union countries is the increase of percentage of young people, so called NEET generation. The highest number of young people who do not work, study or train in 2016 could be found in Bulgaria (18,2%), Romania (17,4%) and Croatia (16,9%).

Below, the analysis of the stage of implementation of objectives connected with the labor market and established in the Europe 2020 Strategy for every country of European Union (Fig. 2 and Fig. 3). The researched period included 2005 and 2016.

From the data in Table 1 results, that the level of implementation of objectives connected with labor market and presented in Europe 2020 Strategy is diverse among the CEE countries. None of the CEE countries fulfilled the analyzed 4 targets of Strategy in 2016. Three countries (Lithuania, Latvia and the Czech Republic) fulfilled three objectives and two countries (Estonia and Slovenia) fulfilled two objectives of Strategy connected with the labor market. Croatia

fulfilled only one Europe 2020 Strategy objective. Whereas, five CEE countries (Bulgaria, Hungary, Romania, Slovakia and Poland) did not fulfill any of the analyzed objectives of Strategy. However, as it results from the data in Table 1, Poland, Croatia and Slovakia are very close to fulfill their national targets concerning the rate of employment of people aged 20-64 and again, Poland, Hungary and Romania are very close to fulfill their national targets concerning the percentage of people aged 30-34 with tertiary education attainment.

Fig. 3 Percentage of young people aged 30-34 with tertiary education attainment; the percentage of young people aged 18-24 with lower secondary education at most and not in further education or training in EU countries in 2005 and 2016

Tertiary educational attainment, age group 30-34	Early leavers from education and training % of the population aged 18-24 with lower secondary education at most and not in further education or training
The countries of European Union which fulfilled the national Europe 2020 Strategy objectives concerning the significance of percentage of people aged 30-34 with tertiary educational attainment (13 countries in total, including 5 CEE countries): Sweden, Denmark, the Czech Republic, the Netherlands, Estonia, Lithuania, Latvia, Austria, Slovenia, Italy, Greece, Finland, Cyprus. In 2005 the objectives were fulfilled only by Finland and Denmark.	The countries of European Union which fulfilled the national Europe 2020 Strategy objectives concerning the percentage of early leavers of education and training aged 18-24 (14 countries in total, including 4 CEE countries): Austria, Belgium, Denmark, Ireland, Greece, France, Croatia, Cyprus, Latvia, Lithuania, Luxembourg, the Netherlands, Slovenia, Finland. In 2005 the objectives were fulfilled only by Finland and Denmark.

*-the dark color in the maps was used to mark countries which fulfilled the Europe 2020 Strategy objectives in a particular year.

Source: Own analysis on the basis of Eurostat data.

The final diagnostic variables describing the labor market are presented in Table 2 together with the division of those variables for Stimulants (S) and Destimulants (D) and chosen statistic characteristics. In the research there were accepted only the variables, describing the labor market, with suitably high variability (the variability coefficient above 10%) and those insignificantly correlated with each other (the correlation coefficient below 0,5). From the data in Table 2 results that CEE countries differ the most as regards the gross national expenditures for research & development in % of GDP and the percentage of early leavers from education and training aged 18-24.

Tab. 1 Particular indicator of current situation on labor market in relations to national target levels established for year 2020 in CEE countries and the final number of fulfilled national targets (condition as taken in 2016)

No.	CEE country	A	B	C	D	Achieved national targets
	Estonia	1,0	0,43	1,14	1,15	2
	Lithuania	1,0	0,39	1,21	0,53	3
	Slovenia	0,9	0,67	1,11	0,98	2
	Hungary	0,9	0,67	0,97	1,24	0
	Romania	0,9	0,24	0,96	1,64	0
	Croatia	0,9	0,60	0,84	0,70	1
	the Czech	1,0	1,68	1,03	1,20	3
	Latvia	1,0	0,29	1,26	1,00	3
	Poland	0,9	0,57	0,99	1,16	0
	Bulgaria	0,8	0,52	0,94	1,25	0
	Slovakia	0,9	0,66	0,79	1,23	0

A - Employment rate, age group 20-64 in %
B - Gross domestic expenditure on R&D % of GDP
C - Tertiary educational attainment, age group 30-34
D - Early leavers from education and training % of the population, aged 18-24
Source: Own analysis on the basis of Eurostat data.

Tab. 2 Diagnostic variables to evaluate the labor market situation in CEE countries and their characteristics

Variable name and its symbol	2005	2016	2005	2016
	Mean		**Variability coefficient in %**	
X_1 – **Early leavers from education and training, age group 18-24, % (D)**	10,74	8,85	54,99%	53,61%
X_2 – **Tertiary educational attainment, age group 30-34, % (S)**	21,28	38,34	37,98%	25,13%
X_3 - **Employment rate of older workers, age group 55-64, % (S)**	38,68	51,69	24,43%	19,12%
X_4 – **Employment rate of low skilled people, age group 20-64, % (S)**	43,50	45,78	20,25%	17,79%
X_5 – **Part-time employment rate, % (S)**	5,94	6,43	41,50%	33,20%
X_6 – **Unemployment rate, total, % (D)**	10,22	7,65	38,11%	33,81%
X_7 – **Young people neither in employment nor in education and training - NEET, % (D)**	13,04	11,95	20,47%	33,63%
X_8 – **Gross domestic expenditure on R&D (% of GDP) (S)**	1,28	1,59	62,96%	63,26%

Source: Own analysis on the basis of Eurostat data.

3 RESULTS AND DISCUSSION

On the basis of the data included in Table 3 and in the Fig. 4, it is visible that in the CEE countries rank connected with the situation on labor market and obtained with the use of Hellwig's development pattern, the leading positions with the highest values of zi measure

were taken by following countries: Estonia (in 2005 and 2016), Lithuania (only in 2005), Poland (only in 2016). Whereas the end of rank list was occupied by countries with the lowest values of zi measure and they are: Bulgaria (in 2005), Croatia (in 2016), Slovakia (in 2005 and 2016). Analyzing the positions of particular countries in the rank (Table 3) it is visible that the positions taken by the particular countries are different in researched years. The highest change of rank position (7 positions up) can be noted for Poland, which advanced from position 9 in 2005 to position 2 in 2016.

And the same, the most favorable changes (connected with the improvement of situation on labor market and achieving much higher position in the rank) can be noted also in following countries: Latvia, Bulgaria and the Czech Republic (advancement in the rank by 2 positions up). While the most unfavorable changes (connected with the worsening situation on labor market and as a result obtaining much lower position in the rank) could be observed in Romania and Croatia (the position loss by 5 places down in the rank), Lithuania and Hungary (the position loss by 3 places down in the rank).

Moreover, the mean value of Hellwig's zi measure is higher in 2016 in comparison to 2005 (mean- 0,265 in 2005 and 0,297 in 2016) which indicates that the situation on labor market in CEE countries improved.

The decrease of variability coefficient value- 51,7% in 2005 and 49,8% in 2016 indicates that the discrepancies between CEE countries decreased as regards the researched phenomenon. In 2005 and 2016, the distribution of synthetic coefficient value was characterized by right-side asymmetry which indicates that there were more values lower than the mean Hellwig's zi coefficient value (which means that the significant number of countries was characterized by the state of development of labor market lower than the average state).

Tab. 3 Hellwig's synthetic measure values for CEE countries in 2005 and 2016 and its descriptive characteristics

2005			2016			Descriptive characteristics of synthetic variable	
Country	**Zi**	**Rank**	**Country**	**Zi**	**Rank**	**2005**	**2016**
Estonia	0,595	1	**Estonia**	0,652	1	**Mean**	
Lithuania	0,365	2	**Poland**	0,390	2	0,265	0,297
Slovenia	0,326	3	**Slovenia**	0,360	3	**Standard deviation**	
Hungary	0,280	4	**Lithuania**	0,355	4	0,137	0,148
Romania	0,273	5	**the Czech Republic**	0,276	5	**Variability coefficient(%)**	
Croatia	0,261	6	**Latvia**	0,264	6	51,7	49,8
the Czech Republic	0,249	7	**Hungary**	0,261	7	**Asymmetry**	
Latvia	0,234	8	**Bulgaria**	0,232	8	0,79	1,18
Poland	0,227	9	**Romania**	0,225	9		
Bulgaria	0,192	10	**Croatia**	0,185	10		
Slovakia	0,022	11	**Slovakia**	0,066	11		

Source: Own analysis on the basis of Eurostat data.

Fig. 4 Hellwig's measure of development in CEE countries in 2005 and 2016
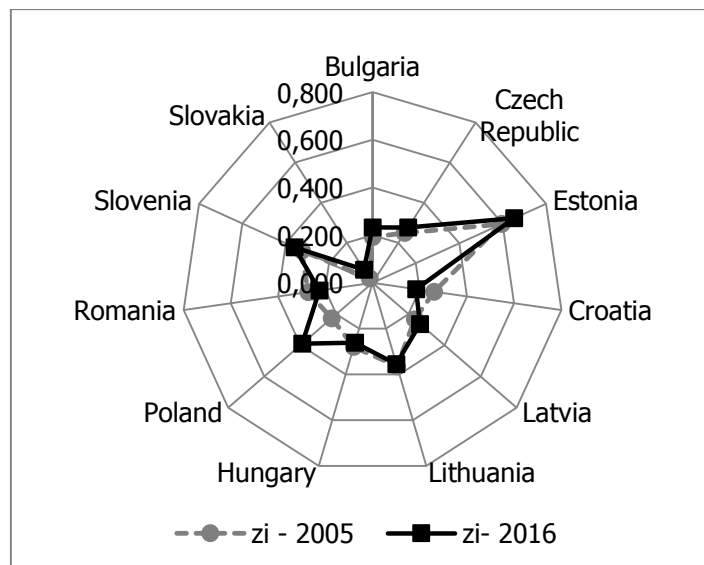
Source: Own analysis on the basis of Eurostat data.

As a result of using the k-means method, three groups of CEE countries were distinguished. They were similar according to researched diagnostic characteristics which describe the situation on labor market. Among the researched countries in 2005 and 2016 only Estonia changed its aggregation from group 1 to 2. The countries classified to particular groups are presented below.

- aggregation I was created by following countries: Bulgaria, the Czech Republic, Estonia, Hungary, Romania (in 2016). In 2005, Estonia was included into the aggregation II countries. This group of countries obtained the most favorable variable measures, significantly above national mean for all of the 11 CEE countries in the following: X_2 (the percentage of people with tertiary degree attainment), X_8 (Gross domestic expenditure on R&D, % of GDP). Moreover, this group obtained unfavorable values of X_1 variable (the percentage of early leavers from education or training)- significantly above the national mean for all of the 11 CEE countries; the unfavorable indicators, significantly below the national mean for all of the 11 CEE countries for X_5 variable (part time employment rate) and the favorable indicators with the lowest variable values for: X_6 (unemployment rate in total) and X_7 (the percentage of NEET generation young people)- significantly below the national mean for all of the 11 CEE countries.

- aggregation II includes such countries as: Latvia, Lithuania and Slovenia- which obtained the most favorable variable measures, significantly above the national mean for all of the 11 CEE countries and they are as follows: X_2 (the percentage of people with tertiary educational attainment) and X_5 (part time employment rate). The unfavorable variable values were found for X_6 (unemployment rate in total) and X_7 (the percentage of NEET generation young people)- significantly below the national mean for all of the 11 CEE countries. The favorable indicators, significantly below the national mean for all of the 11 countries were for X_1 variable (the percentage of early leavers from education or training). X_8 (Gross domestic expenditure on R&D, % of GDP) obtained in this group unfavorable variable value, significantly below the national mean for all of the 11 CEE countries.

- aggregation III was created by Croatia, Poland and Slovakia with the most favorable in this countries' group variable value: X_8 (Gross domestic expenditure on R&D, % of

GDP)- significantly above the national mean for all of the 11 CEE countries and also with the favorable, lowest indicator values for X_1 (the percentage of early leavers from education or training). When it comes to unfavorable, highest indicator values, it was achieved by X_6 (unemployment rate in total) - significantly above the national mean for all of the 11 CEE countries.

CONCLUSION

To sum up, the analysis of basic indicators of labor market indicates that there is a great diversity between the CEE countries in the researched area, which means that the positive influence of integration processes is still to come (meaning the unification of conditions on EU labor markets).

The research methods, which were used, enabled the classification of which CEE countries are in the worst and which are in the best position to fulfill the objectives connected with labor market and the Europe 2020 Strategy. Moreover, the groups of CEE countries were created according to their similarity as regards the chosen indicators describing the situation on labor market.

In the light of chosen indicators describing the situation on labor market there are countries (such as: Poland, Bulgaria, Slovakia, Hungary, Romania) which have to intensify their actions to obtain the level of indicators outlined in the Europe 2020 Strategy (because they still did not fulfill any of the national targets). While three countries (Lithuania, Latvia and the Czech Republic) fulfilled three out of four national targets connected with labor market. It results from the analysis that for the CEE countries the most problematic objective to fulfill is the increase of expenditures for research & development, the level and condition of implementation of this objective in 2016 (only the Czech Republic reached the national goal) shows that unfortunately there is no possibility for the researched countries to fulfill the national targets in this area till 2020 (the most difficult situation is manifested in Romania, Latvia and Lithuania).

The considerable problem for CEE countries is young people unemployment rate, which is significantly higher than general unemployment rate in all of the analyzed countries. To improve the situation on the labor market it is necessary to take into consideration the long-term actions aiming at the decrease of young unemployed people rate, especially those who do not study nor train (namely, NEET generation).

We should hope though, that the policy of labor markets of member countries, including CEE, (active or passive) implemented individually by European Union countries will contribute to improvement of the local labor markets situation, which should be regularly monitored to evaluate the changes in a given period of time.

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Development of Energy from Renewable Sources and Energy Intensity of the Economies of Central European Countries in the Context of the Europe 2020 Strategy

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Abstract: The hypothesis resulting from Europe 2020 Strategy was examined in the present article. It concerns the reduction of greenhouse gas emissions through decrease of energy consumption of economies and the increase of share of renewable energy sources. The econometric models were used to calculate the forecast of greenhouse gas emissions for 2020. Due to the fact that explanatory variables of models reveal the collinearity, the ridge regression was used to estimate parameters. However, the achieved results indicate to too low target definition. Through the statistic and econometric methods it will be possible to do it more thoroughly and as a result it will enable better control over the realization.

Keywords: Europe 2020 strategy, greenhouse gas emissions, econometric models

JEL Classification codes: C13, Q43, Q54

INTRODUCTION

The issue of environment protection has been taken into consideration for many years now. In 1972, during the United Nations Conference in Stockholm the environment protection was a very particular issue- the conference may be treated as the turning point in developing international policy concerning the environment protection. In 1987, the World Commission on Environment and Development of G.H. Brundtland published the report entitled: *Our Common Future* (1987) in which we can find the issues concerning the sustainable development. The sustainable development was defined as the process of changes which fulfills the needs of a present generation without decreasing developmental chances of future generations, thanks to among others integrated actions in the range of economic and social development and in the range of environment as well.

Answering to the necessity of introduction of sustainable development in the EU countries, the European Commission adopted Europe 2020 Strategy (2010). Its five main targets concern employment, research and innovation, climate change and energy, education and combating the poverty and social exclusion.

In the present article it was examined whether, according to EU Commission assumptions, the increase of share of renewable energy sources and the reduction of energy consumption of economies favorably influence the decrease of greenhouse gas emissions and whether this influence is the same as the one assumed in the Strategy.

The data comes from the GUS website from 2004 - 2015. The analyses were carried out at the significance level of 0.05.

1 LITERATURE REVIEW

The issue of Europe 2020 Strategy frequently appears in the literature. The Europe 2020 Strategy assumptions can be analyzed from different points of view: the European Commission view, the view of governments of particular EU member countries and from the point of view of independent researchers.

The European Commission issues reports concerning the Strategy every year. So far, there are reports concerning such issues as: progress in achieving the stated targets (European Commission, 2014) and the guide concerning the Europe 2020 initiative (European Commission, 2013). Each year, the national statistics data is updated as well, in 2014 the report entitled On the way to 2020: data for vocational education and training policies (CEDEFOP, 2014) was issued.

The different attitude to Europe 2020 Strategy may be noticed in the member states governments. They equally issue reports on the Europe 2020 Strategy target implementation (Government of Ireland, 2014).

Another point of view is presented by statistic offices, national (Statistics Poland 2016) as well as international. Eurostat issues every year the report entitled *Sustainable development in the European Union* (Eurostat 2015, 2016, 2017).

The reports of completely different nature can be found among the researchers who are independent of governments or of the European Commission. The majority of the studies is of descriptive type and their authors describe the current situation with statistical data (Gasz, 2014; Hoedl, 2011; Lucja, 2015; Skórska, 2015). The studies, in which authors use statistic and econometric methods to verify the assumptions of particular countries and European Commission, are only the small part of the total existing (Warzecha, 2017; Wójcik, 2017).

In the present study, the author examined the implementation of assumptions of Europe 2020 Strategy from the statistic and econometric point of view.

2 METHODOLOGY

In the article, the econometric models were estimated. Those models explain the formation of greenhouse gas emissions (million tons carbon dioxide equivalent) depending on the renewable energy share in gross final energy consumption and the energy consumption of economy (kgoe / 1000 EUR) in chosen countries of Central Europe. To estimate the parameters the least-squares method was used (Biolik, 2013; Maddala, 2006). The criterion of the least-squares in the form of matrix may be recorded as it is shown below:

$$\Psi = (y - Xa)^T(y - Xa) \rightarrow min \tag{1}$$

When the following condition is fulfilled: $det|X^TX| \neq 0$ it implies:

$$a = (X^TX)^{-1}X^Ty \tag{2}$$

The models were verified, taking into particular consideration the significance of parameters, heteroscedasticity, autocorrelation and the normality of distribution of random measures.

To examine heteroscedasticity, White's test (1980) was used. However it required the auxiliary model:

$$\sigma_t^2 = \beta_1 + \sum_{j=2}^{k} \beta_j X_{jt} + \sum_{j=k+1} \beta_j X_{it} X_{rt} + \xi_t \tag{3}$$

where: i, r = 1, 2, ..., k,

ξ_t means random measure of the model.

The existence of autocorrelation of random measure was excluded with the use of Durbin Watson's test (1950) (DW), where test statistics is relevant to pattern:

$$d = \frac{\sum_{t=2}^{n}(u_t - u_{t-1})^{-1}}{\sum_{t-1}^{n} u_t^2}$$

(4)

If the DW test does not give the unambiguous answer, the Lagrange multipliers test will be used to explore autocorrelation (Osińska, 2007).

Shapiro-Wilk's test was used to verify the hypothesis on the normality of distribution of random measure- it was broadly described in the article by S.S. Shapiro and M.B. Wilk (1965).

Next step included the examination of variables collinearity with the use of D.E. Farrar and R.R. Glauber's method (Zeliaś, 1997). In order to verify the zero hypothesis the following statistics was calculated:

$$\chi_{|R|}^2 = -[n - 1 - \frac{1}{6(2k+5)}]lg|R|$$

(5)

Where n means the number of observations on each variable, and k is the number of explanatory variables which are included in the regression model.

To delete negative results of variables collinearity, the ridge regression method was used to estimate the model. This method was prepared by A.E. Hoerl and R.W. Kennard and it is based on the theory that it is better to use the biased estimators of model parameters than estimators with higher variance. The estimators of ridge regression may be calculated with the use of following pattern:

$$\hat{\beta}_g = (X^T X + W)^{-1} X^T y$$

(6)

where: $W = wI$.

It is assumed that w is the small value from the range (0; 1).

3 RESULTS AND DISCUSSION

With the use of least-squares method the explanatory models of greenhouse gas emission in the Czech Republic, Poland and Slovakia were estimated. The model for all of the member countries of European Union was estimated as well. The explanatory variables are renewable energy share in gross final energy consumption (ERS) and energy consumption in economy (kgoe / 1000 EUR) (EC). In the article, the hypothesis consistent with the European Commission assumptions was verified (the increase of renewable energy share by 20% and the reduction of energy consumption of industry by 20% which result in the decrease of greenhouse gas emission by 20% as well, in comparison to 1990).

Tab. 1 Model 1 - LSR estimated for the Czech Republic (dependent variable: greenhouse gas emissions)

	Coefficients	Standard Error	t Stat	P-value
Intercept	178,173	15,384	11,582	<0,0001
Ec	-0,025	0,041	-0,603	0,5614
Ers	-2,968	0,380	-7,803	<0,0001
Autocorrelation	DW=1,896	dl=0,812	du=1,579	
Heteroscedasticity	LM=3,188	P-value:0,671		
Normality of distribution	W=0,915	P-value:0,244		

Source: own calculation

In Tables 1-4 the estimation results were presented for chosen countries and the whole EU along with the verification of models.

Tab. 2 Model 2 – LSR estimated for Poland (dependent variable: greenhouse gas emissions)

	Coefficients	Standard Error	t Stat	P-value
Intercept	399,299	108,486	3,681	0,005
Ec	0,069	0,254	0,271	0,793
Ers	-1,904	4,310	-0,442	0,669
Autocorrelation	DW=1,441	dl=0,812	du=1,579	
	LM=0,534	P-value:0,465		
Heteroscedasticity	LM=5,87	P-value:0,319		
Normality of distribution	W=0,876	P-value:0,078		

Source: own calculation

Tab. 3 Model 3 – LSR estimated for Slovakia (dependent variable: greenhouse gas emissions)

	Coefficients	Standard Error	t Stat	P-value
Intercept	61,801	7,850	7,873	<0,0001
Ec	0,0035	0,016	0,214	0,836
Ers	-1,764	0,390	-4,528	0,001
Autocorrelation	DW=1,515	dl=0,812	du=1,579	
	LM=0,324	P-value:0,569		
Heteroscedasticity	LM=7,555	P-value:0,183		
Normality of distribution	W=0,997	P-value:0,970		

Source: own calculation

Tab. 4 Model 4 – LSR estimated for the EU28 (dependent variable: greenhouse gas emissions)

	Coefficients	Standard Error	t Stat	P-value
Intercept	3591,35	1599,87	2,245	0,051
Ec	12,582	10,597	1,187	0,266
Ers	-97,438	45,490	-2,142	0,061
Autocorrelation	DW=1,286	dl=0,812	du=1,579	
	LM=1,313	P-value:0,252		
Heteroscedasticity	LM=5,696	P-value:0,336		
Normality of distribution	W=0,942	P-value:0,819		

Source: own calculation

In all of the models, the EC variable (energy consumption of economy) is not statistically significant. In Models 1-4 there is no autocorrelation of random measures, the residuals do not reveal heteroscedasticity and they possess normal distribution. Those results may indicate the existence of explanatory variables collinearity, to exclude this assumption Farrar-Glauber's test was conducted. The result is presented in Table 5.

Tab. 5 Farrar-Glauber's test of variable collinearity

	Statistics value $\chi^2_{|R|}$
Model 1	6,393
Model 2	11,261
Model 3	8,541
Model 4	11,202

Source: own calculation

The critical value interpreted from table distribution χ^2 equals to 3,841 so in all of the models the explanatory variables are collinear. In next step, the ridge regression method was used to estimate the models parameters and the results were presented in Table 6.

Tab. 6 The models estimated with the use of ridge regression method for the Czech Republic, Poland, Slovakia and the EU28. (dependent variable: greenhouse gas emissions)

the Czech Republic				Poland			
	Coefficients	St. Error	t Stat		Coefficients	St. Error	t Stat
Intercept	140,868	12,163	11,582	**Intercept**	211,275	57,334	3,685
Ec	0,073	0,032	2,262	**Ec**	0,506	0,136	3,709
Ers	-2,120	0,314	-6,744	**Ers**	5,413	2,393	2,262
Slovakia				**EU28**			
	Coefficients	St. Error	t Stat		Coefficients	St. Error	t Stat
Intercept	49,019	6,225	7,875	**Intercept**	3021,947	1346,191	2,245
Ec	0,030	0,013	2,262	**Ec**	16,351	8,920	1,833
Ers	-1,148	0,314	-3,655	**Ers**	-81,885	38,881	-2,106

Source: own calculation

The model parameters for the Czech Republic, Poland and the EU28 are statistically significant on the significance level 0,05, while for Slovakia they are significant on the level of 0,1. In all cases, significant improvement for the models estimation is visible. Additionally, for the Czech republic, Slovakia and the EU28 the parameters next to the variables possess different signs. This means that alongside with the increase of energy consumption of economy, the greenhouse gas emission increases and alongside with the increase of the share of renewable energy sources in gross final energy consumption, the emission of greenhouse gases decreases. Only in the case of Poland, alongside with the increase of the share of renewable

energy sources in gross final energy consumption, the emission of greenhouse gases is still rising. It is an alarming situation which should be particularly taken into consideration.

To answer the question whether in 2020 the greenhouse gas emission will be decreased to expected level, the forecast of explanatory variables for 2020 was calculated. The forecasts were calculated with the use of linear trends, and in the case of ERS for the EU28 the multidimensional trend of second level was used. The forecasts for Poland were not calculated as regards the positive sign next to ERS variable.

In Table 7 the forecasts of greenhouse gas emissions for the Czech Republic, Slovakia and the EU28 were presented alongside with 80% of greenhouse gas emission from 1990 (for the EU28 it was the target indicated by European Commission).

Tab. 7 The forecast of greenhouse gas emission in 2020 in the Czech Republic, Slovakia and the EU28

	Forecast for 2020	**80% of value from 1990**
the Czech Republic	115,474	157,808
Slovakia	35,697	59,622
EU28	3577,598	4571,29

Source: own calculation

It results from Table 7 that in the Czech Republic, Slovakia and in the whole European Union as well, the level of 80% of greenhouse gas emissions (in comparison to 2020) was established undoubtedly as overly low. It is worth noting that the forecasts assume that energy consumption in economy as well as the share of renewable energy sources will be changing according to set trend.

It can be assumed that to define the level of renewable energy share in gross final energy consumption (Ers), the energy consumption of economy (Ec) as well as greenhouse gas emissions, the gross domestic product at purchasing power parity per capita in current prices can be used. This variable is strongly correlated with all of the above mentioned variables and this is why it can explain their development.

The coefficients of Pearson's linear correlation between GDP at purchasing power parity per capita and the variables connected with the environment protection in the Czech Republic and Slovakia are presented in Table 8.

Tab. 8 The coefficients of Pearson's linear correlation for the Czech Republic and Slovakia

	the Czech Republic	**Slovakia**
	GDP per capita	
Gge*	-0,889	-0,922
Ec	-0,972	-0,980
Ers	0,936	0,939

*greenhouse gas emissions

Source: own calculation

Additionally, GDP per capita is strongly negatively correlated with the greenhouse gas emissions and with the energy consumption of economy, while the positive correlation can be noticed between GDP and the renewable energy share in gross final energy consumption. This means that alongside with the increase of GDP per capita, there is a decrease in greenhouse gas emissions as well as in the energy consumption of economy. In turn, the renewable energy share in gross final energy consumption increases while there is an increase of GDP per capita – meaning that the directions of dependence are logical.

CONCLUSION

The issue of environment protection is extremely important. The target to which countries should strive for is as much important. It concerns not only the European Union countries but also other countries because we all live on the same planet. The EU countries are undoubtedly involved the most in the environment protection. The Europe 2020 Strategy is a significant document in which European Commission indicates the direction in which Europe should go. However, the sustainable development is the United Nations priority as well. Transforming our world: the 2030 Agenda for Sustainable Development is a plan including the whole world.

Establishing the plans - ambitious, but possible to realize is absolutely necessary. The targets which are not ambitious enough may result in the inadequate use of countries potential. In turn, too ambitious plans imposed on the particular countries may lead to their objection and they may reduce the desire to realize them.

The Europe 2020 Strategy targets concerning the greenhouse gas emissions were established on definitely too low level. Probably, the target establishment was not preceded by the in-depth statistic and econometric analysis which resulted in the target fulfillment long before the deadline. The reliable target establishment as well as constant verification of those targets and possible correction would enable the examination of actual progress of particular countries.

It results from the analysis that in Poland the increase of the share of renewable energy sources does not influence favorably the greenhouse gas emission. This situation is alarming and it requires in-depth examination.

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International Trade in Proprietary Technologies in Post-Socialist Countries

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Abstract: At present, the economic growth of countries is determined by the quality of the technologies used, among which a special place is occupied by technologies with objects of intellectual property or proprietary technologies (P-technologies). To study trends in international trade in P-technologies a comparative analysis was carried out for the countries of the Visegrad Group (VG), the European CIS countries, the largest developed countries. For all the countries the state and dynamics of trade in P-technologies were considered; the interconnections of flows of P-technologies attraction, GDP, exports and technological imports was analyzed for the post-socialist countries. This allowed: to indicate the place of countries in the world economy (a group of developed countries net exporters of technology and three groups of catching up net importers with more or less intensive volumes of technological trade); to summarize the experience of successful leaders from VG and identify the strategic stages of their technological trade: this is the way from importing P-techno-logies to their exports as the main trend of the influence of P-technologies on the economy.

INTRODUCTION

At present time the economic growth of countries is determined by the quality of the technologies used, among which a special place is occupied by technologies with objects of intellectual property (in the form of patents, licenses, trademarks, etc.) that are accepted in international law (TRIPS, etc.) called proprietary technologies (hereinafter P-technologies). In general, the proprietary approach to technology research makes it possible to allocate proprietary technologies and treat them separately from the rest (non-proprietary) technologies. So, for example, in the most advanced global innovative sphere of software development there are two main types of software products: proprietary software, connected with the use of copyright and intellectual property, and other free software.

1 LITERATURE REVIEW

Unfortunately, there is no such a clear separation of technologies based on the proprietary approach in statistics and economic publications. So, for example, in the Russian statistics of innovations (Goskomstat, 2016-2017; Oslo Manual, 2005), we do not find the cost indicators of the presence of world P-technologies. At best we see fragmentary data (for example, the number of acquired or the sold patents, but without an estimation of their cost, etc.). As for

scientific publications many types of technologies are distinguished here, and as a rule, their connection with intellectual property is not clearly traced and / or ignored altogether (an analysis of these publications was carried out in Yurik S. (2013, 2014).

For example, the typical error of almost all research on technological trade between countries (international transfer of technology) is the equation of proprietary and non-proprietary technologies when using statistics specifically for P-technologies. From our point of view this unreasonably narrows the field of research, reduces the economic value of conclusions and practical recommendations which, of course, will be different for proprietary and other technologies especially in the field of trade policy

In the quantitative study of international trade, it is customary to use the method of grouping statistical data called the Technological Payment Balance (TPB). For the first time, recommendations on the compilation of the TBP were submitted to the OECD in 1990 in the TPB Manual "Proposed Standard Method of Compiling and Interpreting Technology Balance of Payments Data". This approach has been further developed in the OECD project "Measuring Globalization" and is reflected in the OECD Handbook on Economic Globalization Indicators.

In accordance with the definition of OECD, The technology balance of payments (TBP) registers the commercial transactions related to international technology and know-how transfers. It consists of money paid or received for the use of patents, licences, know-how, trademarks, patterns, designs, technical services (including technical assistance) and for industrial research and development (R&D) carried out abroad, etc. The coverage may vary from country to country and the TBP data should be considered as only partial measures of international technology flows (OECD, 2006). Let us note that from the context of the definition it follows that we are talking about P-technologies. In addition, at the end of this definition, developers emphasize that the TBP reflects only part of the technological flows - it's P-technology, and the rest (non-proprietary) technologies remain outside the framework of the TBP.

Currently, statistics on the TPB (with a delay of two to three years) for the OECD countries can be found in the OECD database and reports (OECD, 2018; OECD, 2017). For CIS countries (except Russia), the OECD does not publish statistics on the TBP.

In general, scientific publications including international organizations do not include research on trends in technological trade between countries over long time intervals; the comparative analysis of the country's TPB is not presented in a visual format; benchmarking is not conducted to study the experience of leaders and spread the best business practices. These issues are especially relevant for post-socialist economies, some of which (the new members of the EU, especially the countries of the Visegrad Group) were able to take advantage of international technological trade, while the rest of the countries (primarily the CIS) are without a coherent choice of technological development strategy based on international P-technologies . All of the above determines the relevance of the selected topic.

The subject of the research is P-technologies and their international trade in post-socialist economies The purpose of the research was to study the patterns of international trade in P-technologies in post-socialist countries and to generalize the experience of their successful use in the economy to improve the technological level of production and product competitiveness.

2 MATERIALS AND METHODS

Groups of counties selection. The selected countries were included: Visegrad Group (VG) Countries – Czech Republic, Hungary, Slovakia (new EU members); CIS countries – Belarus, Russia, Ukraine. Developed EU countries, United States, Japan and, in some cases, China were included for comparison

Primary statistics and information preparation. For the purposes of the study we selected The technology balance of payments (TBP) method – TBP Manual, 1990; OECD, 2006.

Information and statistical basis for the formation of the Technology balance of payments is Balance of payments statistics of countries. The data of the Technology balance of payments were formed within the framework of the methodology of the 5th and the 6th edition of Balance of payments manual – BPM5 and BPM6 (IMF, 1993–2004). For example, in BPM5, P-technology data sources are represented by payments and receipts in the following three articles: 1) Royalties and license fees (Article 260); 2) Acquisition or Disposal of Nonproduced, Nonfinancial Assets (Article 358); 3) Miscellaneous business, professional, and technical services covers (Article 264). The rules for forming the TPB streams in BPM6 are the same as in BPM5, excluding the article "Royalties and license fees" which was renamed into the article "Charges for the use of intellectual property" in BPM6.

Using the IMF's balance of payments database (IMF, 2017) primary statistics of the TBP by countries for the period 2000-2017 were formed. Taking into account the discontinuity of the trajectories of the TPB flows over the years, for the visualization of these tables and figures, the TPB data sets were smoothed over the average annual values at the three-year intervals 2000-2002, 2003-2005, 2006-2008, 2009-2011, 2012-2014, 2015-2017.

The remaining statistical data series for analytical tables were formed using the UN Comtrade statistical bases (UN, 2017), World Development Indicators (WB, 2017), International Monetary Fund (IMF, 2017). In addition, for purposes of comparative analysis, all primary statistics by countries were reduced to a single comparative standard - the indicators are in "per capita" units, using the World Bank information (WB, 2017) for determining the counties' population.

3 RESULTS AND DISCUSSION

3.1 Data mapping and preliminary adaptation for analysis

The analysis involved 15 countries, including 7 developed countries and 8 countries with transitional economies. The countries were united in groups by volumes of technology trade per capita and by its quantity – surplus or deficit of TBP (Technology Balance of Payments). Groups of countries are presented on Fig. 1 (static figure) which type is known from the reports of OECD.

As follows form Fig. 1 the group of lead countries with surplus of TBP consists of the USA, Belgium, Germany, Japan, Great Britain, France, and also Hungary. These countries are actively using international trade in P-technologies. Among the remaining countries with a deficit of the TBP three other groups can be identified (depending on the volume of technological trade). The 1st group (followers) included 2 countries (Czech Republic and Estonia) with trade volumes comparable with the leading countries. The 2nd group (moderate participants) include 4 countries (Spain, Portugal, Poland, Russia) with little smaller volumes of trade than in the previous group. The 3rd group (the lagging participants) included 4 countries with insignificant volumes of trade (Ukraine, Belarus, Slovakia and China).

As we noted above the indicators of the TBP in Fig. 1 are presented in the static form for the years 2012-2014 by the average annual values. However as follows from Fig.2 the country's TBP in 2000-2017 did not always record a surplus of the TBP for Belgium, Germany, Japan. It can also be noted that the TBP of countries such as Hungary and Estonia from the group of net importers of P-technologies in some years had a surplus.

Figure 1 Technology balance of payments in the countries in 2012-2014
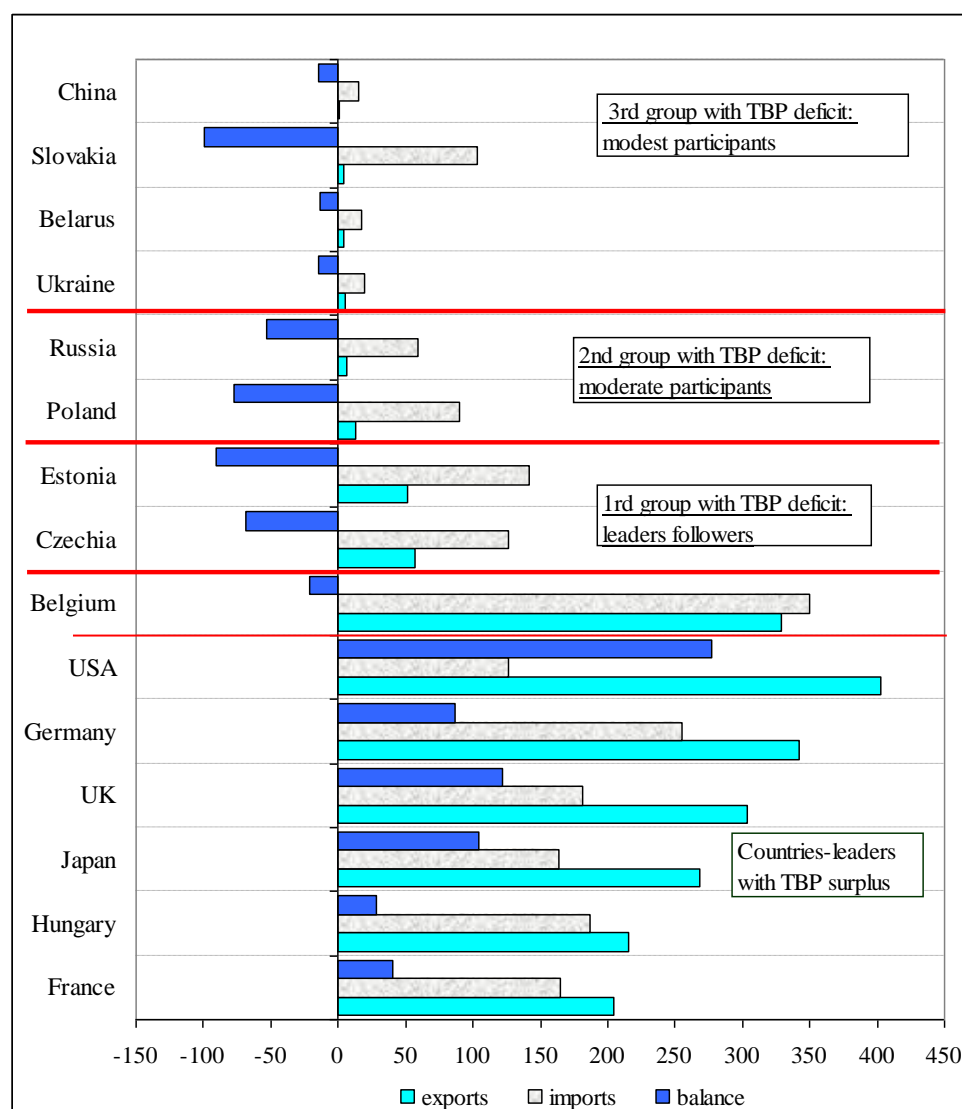
Source: IMF, 2017

Note: Annual average volumes for the specified period are given in dollars per capita. Countries in groups are located on decrease of export volumes.

Such a voluminous and complex structure of information required the development of modern methods of its dynamic mapping (2D-visualization), which are used when working with Big Data. In (Yurik, 2013; Yurik, 2014) the first template of the dynamic visualization of TBP data was published which allowed to obtain data paths (export, import, balance) at long intervals range. 2D-visualization of TBP by country for our research is presented in Figure 2.

In Figure 2, the TPB balance points of the country with a surplus are located above the Zero balance line (dotted diagonal line), and with the deficit of the TPB below the line. Movement of the trajectory along the X axis to the right signifies an increase in imports, along the Y axis, an upward increase in exports. The of the trajectory crossing through the diagonal Zero balance line from the bottom up means the change in the value of the TPB balance from the deficit to the surplus. Data on the TBP of the leading countries are presented in Table 1.

3.2 P-technology in world trade

Countries with TBP surplus. It is generally accepted that developed countries, including representatives of a selected group of leading countries, have a stable TBP surplus and an ever-growing amount of p-technology trade. As follows from Figure 2, these statements are only partially true. Thus, in early 2000th, Japan had a deficit of TBP and only since 2004 was able to switch to a TBP surplus.

In the beginning of 2003 Germany was also in the TBP deficit zone. Only in 2009 it crossed the Zero balance line and settled in the TBP surplus zone (Table 1).

Figure 2   Countries net exporters and net importers of the P-technologies (2000-2017)
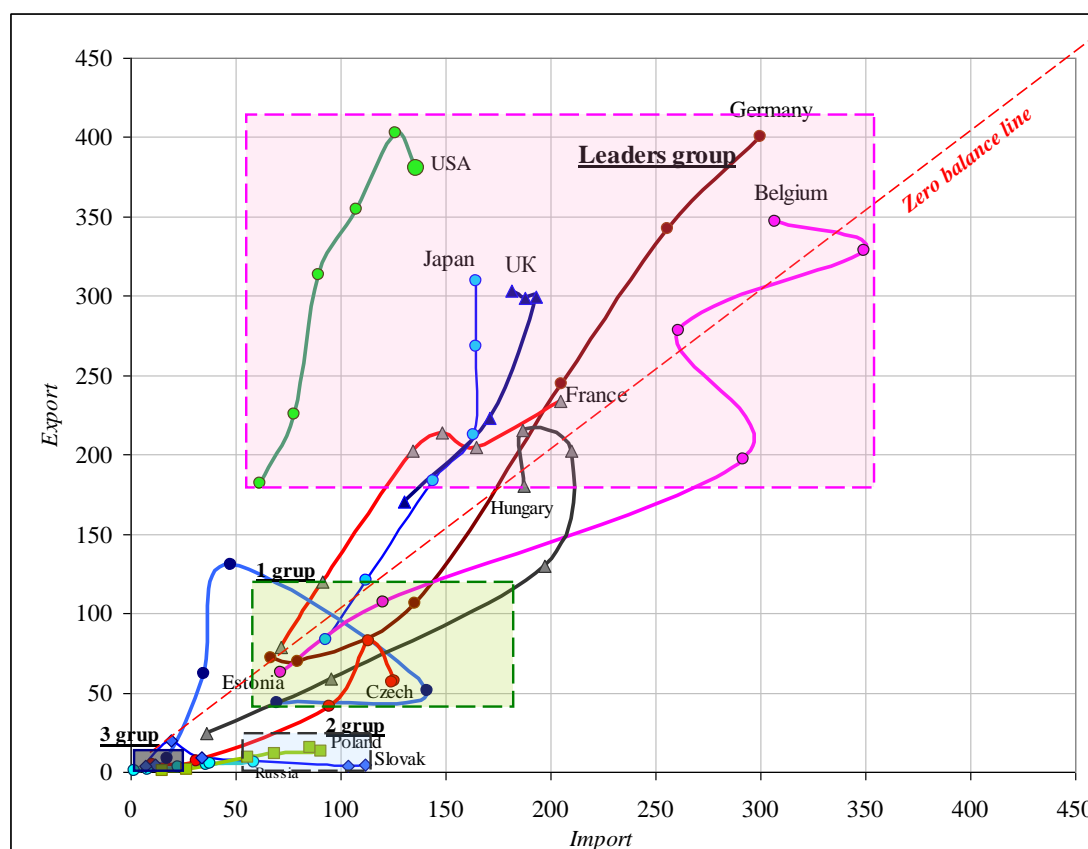
Source: self-design of the figure on the basis of the IMF, 2017.

Note: Five markers on a curve of each country present arithmetic-mean value of the corresponding indicators of TBP by three-year periods 2000-2002, 2003-2005, 2006-2008, 2009-2011, 2012-2014, 2015-2017. Figures are given in dollars per capita.

At the same time, the powerful growth in trade in p-technologies (we see in Figure 2 and Table 1 how intensively the volumes of technological trade are growing: during the period under review imports grew 4.3 times, exports - 5.5 times) enabled Germany at the end of the period to become a leader and in 2015-2017 overtake the US in terms of technological trade per capita. It can also be noted that the technological trade of Belgium is rather intensively and distinctively developing, the trajectory of which was periodically crossed by the Zero balance line, but in 2015-2017 it stopped in the zone of a small surplus of the TBP. At the same time, the volume of Belgian imports of p-technologies was the largest among the countries under

consideration and in respect of technological exports Belgium was second only to Germany and the United States.

Tab. 1 Technology Balance of Payments – group of leading countries

		average for the periods in dollars per capita						(15-17)/
		2000-2002	2003-2005	2006-2008	2009-2011	2012-2014	2015-2017	(00-02),%
Belgium	+ export	62,8	107,2	197,2	278,1	328,7	347,1	553%
Belgium	- import	71,7	120,3	291,7	261,2	349,7	306,8	428%
Belgium	balance	-8,9	-13,1	-94,5	16,8	-20,9	40,2	-
Germany	+ export	71,8	69,4	106,6	244,1	342,2	400,0	557%
Germany	- import	66,7	79,5	135,3	205,2	255,5	300,0	449%
Germany	balance	5,1	-10,1	-28,7	38,9	86,7	112,2	-
Japan	+ export	83,1	120,6	183,0	212,4	268,2	309,7	373%
Japan	- import	93,2	112,2	144,1	163,1	164,3	164,4	176%
Japan	balance	-10,1	8,4	38,9	49,3	103,9	145,3	-
France	+ export	78,6	120,2	202,7	213,5	205,0	233,4	297%
France	- import	71,5	91,6	134,4	148,4	164,4	204,4	286%
France	balance	7,1	28,6	68,3	65,1	40,5	29,1	-
UK	+ export	170,6	223,1	299,4	298,6	303,6	288,9	169%
UK	- import	130,2	171,0	193,2	187,9	181,5	201,7	155%
UK	balance	40,3	52,1	106,2	110,6	122,0	87,3	-
USA	+ export	181,5	225,6	313,5	354,7	402,8	380,6	210%
USA	- import	61,7	77,9	89,7	107,7	125,9	136,1	221%
USA	balance	119,8	147,7	223,8	247,0	276,9	244,5	-
Estonia	+ export	2,1	8,4	61,6	130,9	50,9	43,6	2106%
Estonia	- import	8,0	17,3	35,0	47,5	141,4	69,5	869%
Estonia	balance	-5,9	-8,8	26,6	83,5	-90,5	-25,9	-
Hungary	+ export	24,6	58,9	130,2	202,2	215,4	179,9	731%
Hungary	- import	36,0	95,5	196,9	210,0	186,5	187,2	520%
Hungary	balance	-11,4	-36,6	-66,8	-7,8	28,9	-7,3	-
Slovak	+ export	4,7	4,1	20,1	9,1	3,7	4,9	106%
Slovak	- import	11,5	6,9	19,5	33,9	103,4	111,5	972%
Slovak	balance	-6,8	-2,7	0,6	-24,8	-99,8	-106,5	-

Source: data – IMF, WB; table of authors

Here is an example of Slovakia (VG), which in 2006-2008 also had a TBP surplus, although in terms of technological trade it is included in the most weak 3rd group (the lagging participants).

On the other hand, among the countries with a deficit of TBP from groups 1-3 (Figure 1), there are cases when their TBP in separate intervals had a surplus. For example, Estonia was able to generate a TPB surplus due to the intensification of technological trade and exports in 2006-2011 (Figure 2, Table 1). In general, in the period under review, Estonia has dramatically increased the volume of technological exports and imports by 21 and 87 times respectively, and in these years has moved to the 1st group of countries with TBP deficit. Here is an example of Slovakia (VG), which in 2006-2008 also had a TBP surplus, although in terms of technological trade it is included in the most recent group 3.

Hungary deserves a separate consideration as a country of VG and as a full participant in world technological trade. This country was able, ahead of her neighbours in the 1st group with TBP deficit, to move to the group of leaders in 2012-2014, coming very close to France. Hungary's surplus at that time was due to a small drop in imports and an increase in exports to over $ 200 per capita for the period 2009-2014. This phenomenon was caused by selling the Hungarian branch of Nokia manufacturing company to Microsoft in 2013. As a result of the transaction, according to press reports, Nokia has granted Microsoft licenses for its 38,500 patents for development and design solutions for the next 10 years from the close of the deal. Microsoft received a license to use the Nokia brand, although the last one will continue to own it. All these agreements are reflected in the export part of Hungary's TBP. In this case the growth of export of P-technologies was connected with the international business process of

mergers and acquisitions (M&A), as a result of which Hungary receives income from Microsoft in the form of licensing payments for the sold Nokia patents and brand management.

In general, it can be noted that developed countries from the group of leaders are unconditional innovators: they monitor technological innovations and, in their circle, are the first to gain access to P-technologies before they are widely appeared on the market. For the reliable protection of their intellectual rights, the creators and leading manufacturers of the newest technologies simultaneously patent their novelties in the main industrial countries, where the patent period, depending on the object of patenting, ranges from 10 to 20-25 years. An example is the so-called "triadic patent families", a patent for an invention simultaneously registered with the European Patent Office (EPO), the United States Patent and Trademark Office (USPTO) and the Japanese Patent Office (JPO). In addition, in the leading countries of the P-technological developments, often there are restrictions on the transfer of appropriate technologies to prevent their possible copying and / or imitation adaptation, which also limits the transfer of P-technologies to other countries. Here you can mention the export control of dual-use goods as well as political sanctions against Russia, limiting its access to p-technologies. In addition, the volume of the TBP surplus of economically developed countries is growing rapidly due to the increase in the export of new goods and/or the development of key technologies for their production, as well as the provision of knowledge-intensive services (primarily in financial, scientific and technical consulting, business consulting, etc.). Together, this allows the economically developed countries to confidently occupy leading positions and dominate the international market of innovation-technological trade.

Table 2 Technology Balance of Payments – groups with TBP deficit

| | | average for the periods in dollars per capita | | | | | | (15-17)/ |
		2000-2002	2003-2005	2006-2008	2009-2011	2012-2014	2015-2017	(00-02),%
Belarus	+ export	0,1	0,2	0,5	1,4	3,8	3,3	4423%
Belarus	- import	0,3	1,2	6,2	9,4	17,4	13,9	4276%
Belarus	balance	-0,3	-1,0	-5,7	-8,0	-13,7	-10,7	-
China	+ export	0,1	0,1	0,3	0,5	0,6	1,6	1899%
China	- import	1,7	3,4	6,4	9,7	15,1	18,1	1091%
China	balance	-1,6	-3,3	-6,1	-9,2	-14,4	-16,5	-
Czech	+ export	4,4	6,6	41,4	82,5	57,4	56,7	1278%
Czech	- import	10,2	31,3	95,0	113,1	125,9	124,5	1222%
Czech	balance	-5,8	-24,6	-53,6	-30,6	-68,4	-67,8	-
Poland	+ export	1,0	1,3	9,2	11,6	13,2	15,3	1473%
Poland	- import	14,9	26,6	55,5	68,4	90,4	85,5	575%
Poland	balance	-13,8	-25,3	-46,3	-56,7	-77,2	-70,2	-
Russia	+ export	0,7	1,5	2,7	4,6	6,0	5,2	764%
Russia	- import	1,7	7,9	22,5	36,1	59,0	38,0	2217%
Russia	balance	-1,0	-6,4	-19,8	-31,5	-52,9	-32,8	-
Ukraine	+ export	0,1	0,5	1,2	9,1	5,5	3,3	3205%
Ukraine	- import	6,5	7,3	12,6	16,8	19,8	8,5	130%
Ukraine	balance	-6,4	-6,8	-11,4	-7,7	-14,3	-5,2	-
Slovak	+ export	4,7	4,1	20,1	9,1	3,7	4,9	106%
Slovak	- import	11,5	6,9	19,5	33,9	103,4	111,5	972%
Slovak	balance	-6,8	-2,7	0,6	-24,8	-99,8	-106,5	-
Estonia	+ export	2,1	8,4	61,6	130,9	50,9	43,6	2106%
Estonia	- import	8,0	17,3	35,0	47,5	141,4	69,5	869%
Estonia	balance	-5,9	-8,8	26,6	83,5	-90,5	-25,9	-
Hungary	+ export	24,6	58,9	130,2	202,2	215,4	179,9	731%
Hungary	- import	36,0	95,5	196,9	210,0	186,5	187,2	520%
Hungary	balance	-11,4	-36,6	-66,8	-7,8	28,9	-7,3	-

Source: data – IMF, WB; table of authors

Countries with a deficit of the TBP were divided into three groups (Figures 1-2) by differences in the volume of technological trade. The VG countries are located in all three groups, and the selected CIS countries are in groups 2 and 3. Thus, Group 1 includes two countries: Czech Republic (VG) and Hungary which in the middle of the period was in a group of leading countries as well as post-socialist Estonia, which we included for comparison. Group 2 includes Poland (VG) and Russia. In group 3 are Ukraine, Belarus, Slovakia (VG), and China (for comparison). Data for the listed countries are given in Table 2, and the dynamics of the trajectories of the TBP is shown in Figure 2.

In general, during the years of the movement to the market transitional economies showed examples of both active and passive use of P-technologies for the purposes of economic growth on the basis of the latest scientific and technical developments.

So, the countries for the 1st group show high speed of technology exchange due to cooperation with businesses of developed countries that allows to be built in the international production chains, to develop and adapt the P-technologies, creatively improving them, taking into account requirements of foreign markets on the basis of creation of the so-called enriched centers of production including production lines and workshops, and also own research centers performing R&D (Research and Technologies Development). Transitional economies with deficit of TBP from the 2nd group (Poland and Russia) generally are consumers of standard technologies which already well proved themselves in the market. These countries perform the P-technology researches, as a rule, in narrow segments that is not followed by the noticeable growth of their technology export. In the countries of the 3rd group of net importers (Ukraine, Belarus, Slovakia and China) technology trade per capita is hardly noticeable and is concentrated generally on small (comparing to world's level) import of P-technologies.

3.3 Influence of P-technologies on the main result indicators

Within the framework of this study in the period of 2000-2016 we analyzed the impact of: 1) P-technology on the factor technological capacity of exports and 2) imports of technological equipment (TE) for high-tech exports (HT exports) and GDP.

Dynamics of factor and technology knowledge intensity (factor intensity) of export was analyzed with use of the European Commission methods (EK, 2009) by groups of raw materials and material goods, labor, capital and knowledge-rich goods. For our study the data for selected countries are presented in Table 3.

Table 3 Export of the countries to groups of the technology knowledge intensity

	Raw Materials and Intensive Goods					Labor-Intensive Goods					Capital-Intensive Goods					Knowledge-Intensive Goods				
	(% of manufactured exports)																			
	1999	2004	2006	2009	2012	1999	2004	2006	2009	2012	1999	2004	2006	2009	2012	1999	2004	2006	2009	2012
Hungary	11	10	9	10	13	18	12	10	11	11	15	13	16	14	16	56	65	65	59	55
Czech	10	8	8	8	9	26	20	18	21	20	27	27	29	27	27	37	45	45	42	44
Poland	18	16	16	14	18	34	25	22	24	24	21	25	27	26	25	28	33	35	34	34
Estonia	32	21	32	30	28	30	32	23	25	21	10	12	14	17	13	27	34	31	24	32
Old EU	12	13	15	...	...	19	17	15	...	...	22	23	23	...	...	48	47	47	...	...
World	17	19	22	...	...	19	17	15	...	...	18	18	18	...	...	47	45	45	...	...
Belarus	...	...	52	56	52	...	...	15	14	10	...	...	15	13	18	...	...	16	15	15
Russia	...	...	69	70	77	...	...	3	3	2	...	...	14	11	9	...	...	6	5	5
Ukraine	...	...	24	35	39	...	...	9	9	7	...	...	45	35	30	...	...	20	19	22
China	9	...	...	5	5	45			33	34	8	...	...	7	8	37	...	...	55	52

Source: data from (Yurik, 2014, table 2.8).

As can be seen from Table 3 the new VG countries over the years of preparation and accession to the EU, have been able to deepen the processing of raw materials and reduce the share of Raw Materials and Material-Intensive Goods as well as Labor-Intensive Goods in exports and simultaneously increase the shares of Capital-Intensive Goods and Knowledge-Intensive Goods.

However, in each case depending on structure of economy, a share of capital-intensive and knowledge-intensive goods in VG countries differed (and sometimes essentially) in connection with new specialization of economies in the framework of EU.

So, for example, in Czech Republic where in the late 1990th and at the beginning of 2000th years the automotive industry ("Volkswagen", "Skoda") was intensively transformed, the share of capital-intensive goods was rather stable (27% in average), and knowledge-intensive goods grew from 37% to 44-45%. On the other hand, in Hungary the share of capital-intensive goods was almost twice lower Czech and rather stable (15-16%). But at the same time the share of the knowledge-intensive goods for this period increased from 56% to 65% (2006), i.e. made nearly two thirds of export (first of all, NOKIA has opened new production of mobile communication equipment for the European region). Therefore, despite the beginning of crisis in 2009-2012, the share of the knowledge-intensive products of Hungary by 2012, though decreased from 65% to 55%, but continued to remain the highest among indicators of VG countries. Let's note that indicators of a share of knowledge-intensive goods in export for the first years of entrance into EU in 2006 Hungary exceeded the world level, and Czech Republic – reached it.

As for Poland and Estonia, as well as Slovakia, the technological structure of their exports has also changed towards the growth of science intensive exports, confidently breaking the average level of 30 percent. This, although less than the Czech Republic and Hungary, but much more than in the CIS countries. Here (as follows from Table 3) in the structure of exports of Belarus, Russia and Ukraine CIS practically nothing changes and no significant structural changes are observed.

Thus, during the time of entrance and the first years of stay in European Union VG countries could adapt significantly their structure of export to the structure of old EU countries. VG countries consistently reduced raw materials share of export as well as the share of material- and labor-intensive goods. At the same time technology complexity of products was increased. A degree of raw and host materials processing on the basis technologies use (including new and P-technologies) for production of export products was also increased.

Table 4 GDP, exports of high technology, imports of technological equipment

	GDP per capita (current US$)				High-technology exports, % of manufactured exports						Tech. equipment (gr.HS 84-85,90) % of manufactured imports					
	2000	2014	2015	2016	2000	2006	2009	2012	2014	2015	2000	2006	2009	2012	2014	2015
Czechia	5 995	19 745	17 716	18 492	8,5	14,3	14,6	16,1	14,9	14,9	34	34	35	36	36	38
Slovakia	5 403	18 630	16 133	16 536	3,6	6,7	5,7	9,2	10,2	10,3	26	33	34	35	34	35
Hungary	4 623	14 201	12 484	12 815	26,5	24,1	24,9	18,1	13,7	13,0	46	42	41	37	37	46
Poland	4 493	14 340	12 564	12 421	3,4	3,7	6,1	7,0	8,7	8,8	29	27	28	26	24	28
Russia	1 772	14 126	9 329	8 748	16,1	7,8	9,2	8,4	11,5	13,8	21	29	30	33	33	30
Belarus	1 273	8 319	5 949	4 986	3,8	2,8	3,1	2,9	3,9	4,3	15	18	17	18	17	18
Ukraine	636	3 105	2 125	2 186	5,2	3,4	5,6	6,3	6,5	7,3	15	19	15	17	17	15
China	959	7 684	8 069	8 123	19,0	30,5	27,5	26,3	25,4	25,8	41	49	43	37	36	41

Source: data – WB/WDI, UN/COMTRADE; table of authors

Table 4 shows the resulting indicators for the development of the VG and CIS countries: GDP and the share of high-tech exports (WB / WDI), as well as the dynamics of import of the TE

for the period (COMTRADE). Let's continue the analysis and consider the interrelations of import of TE, GDP and HT exports. Table 4 shows the resulting indicators for the development of the VG and CIS countries - GDP and the share of high-tech exports in total exports (WB/ WDI), as well as the dynamics of the import of TE for the period (COMTRADE). Import of technology equipment integrates commodity groups of HS 84-85, 90 (the equipment and mechanical, electric machines, and also medical and optical equipment and devices are provided).

As follows from Table 3, among the VG countries, Hungary and the Czech Republic rank first in terms of the share of HT exports. In 2000-2011 the share of Hungarian NT exports was just outstanding (24-27%) but after 2014 it began to decline sharply down to 13% in 2015. This year Czech Republic became first on this indicator.

It is known that in the fall of 2013 Nokia closed the production of mobile phones and sold the business and related patents to Microsoft. This fact of the sale of intangible assets with the closure of production immediately caused a decrease in the share of HT exports in total exports to 13.7% in 2014 and further to 13% in 2015. As a result, since 2014, Hungary has moved to the second place in terms of the share of HT exports having passed the Czech Republic with a share of 14.9% to the firs place. The third and fourth place in VG in 2014-2015 with a significant margin occupied Slovakia (10.2-10.3%) and Poland (8.7-8.8%).

Further concerning the CIS countries we note that in 2015 the share of HT-exports of Russia has become higher than the Hungarian (13.8% vs. 13%). The share of Ukraine's HT exports has been consistently increasing (from 5.6% in 2009 to 7.3 in 2015), but this figure has not yet reached the level of Poland (8.8% in 2015). And the last place is taken by the share of HT exports of Belarus (4% in 2015), which is a personal record of the country and this is much lower than that of other CIS countries. As a reference it should be noted that the share of HT exports of China exceeds the indicators of the leading VG countries (Hungary and Czech Republic): after 2005 it was the highest among these countries (Table 4).

It is obvious that the basis for the growth of HT exports is the import first of all of technological equipment. Here, as follows from Table 4, during the period under review, VG countries increased the share of technological equipment (TE) imports. The leader here in the years 200-2011 was Hungary with a share on average above 40% while the share of its HT exports was about 25% (also the first place among the VG countries). The Czech Republic (35% and higher in 2009-2015) with a share of HT exports of 15-16% is in the second place. Slovakia had a high import of technological equipment (33-35%) in 2006-2015 while in these years the share of its HT exports exceeded the level of 10% - this is the third place. Among seven countries under review Russia ranked fourth in terms of import of TE with a share of more than 30% while the share of its HT exports was also the fourth largest among the countries (13,8%). Regularity "the higher the share of technological imports is the higher the shares of HT exports are" is traceable for all countries from Table 4.

It may seem that Ukraine and Belarus do not confirm this rule since Belarus has a higher share of technological imports than Ukraine. However, as part of Ukrainian imports, there were more P-technologies than in Belarus (in 2006-2014, on average, Ukraine imported P-technologies 1.5 times more than Belarus). As a result, in the considered interval Ukraine, on the basis of expanding use of p-technologies to increase the competitiveness of products, was able to increase the volume of high-tech exports and outstripped Belarus considerably in its share in exports (Table 4).

As for GDP per capita figures, here the VG mills have higher rates compared to the CIS countries: Hungary and Poland overcame the $ 12,000 per capita mark, while the Czech Republic and Slovakia - $ 16,000 per capita.

CONCLUSION

As follows from the analysis, VG countries in their technological development in the early 2000th (in the preparation to accession and the first years of accession to the EU) were able to successfully use the import of P-technologies. This allowed them to adapt the structure of their economies to the standards of the developed countries of the EU consistently reduce the share of raw materials and material consuming products and increase the technical complexity and science intensity of products based on the use of modern equipment and technologies. Obviously, membership in the EU has significantly simplified and accelerated the intensity of technological exchange within the European Union, which undoubtedly served as the basis for their successful development. In general VG countries increased their technological power through cooperation with developed countries, successfully mastered a large-scale import of technologies and organized an effective production system that created the basis for sustainable innovative growth of the economy up to the level of developed countries.

CIS countries are at the beginning of their stage of transformation. They will either use traditional technologies from time to time updating them for trade in undemanding external markets (or even on the domestic one) or they will more actively start to monitor the appearing of p-technologies for qualitative modernization based on increasing participation in international technology trade.

The main conclusion of the carried-out analysis for the post-socialist countries is as follows: only qualitative, especially the P-technology import can form a material basis of export growth. The above-noted countries need to use more actively the benefit of lag from leaders of the international innovation and technology trade having the possibility of loan of already created institutes, methods of management and production technologies (Polterovich, 2008, 2016). Belarus and Russia retained a rather high level of education and R&D as a competitive advantage. They must increase innovative and technological imports, creatively adapt and modify the acquired equipment so that access to the latest technologies could become the basis for the future growth of their own innovations with a possible prospect of their export. Otherwise, as many experts note, achievement of new technology heights can drag on for many years or not take place in general.

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The Effect of Wet Market Attributes on Consumers' Emotion and Retail Patronage Behavior in Indonesia Wet Markets Settings

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Abstract: The objective of this study is to investigate the effect ofwet market attributes on consumer emotion and retail patronage behaviorsof traditional markets in Indonesia.Mixed methods were used in this study. A mix of deep interview/focus group discussion to 10 shoppers and survey to 180 respondents were conducted.Research found that food quality and relational benefit and social environments influence positive emotion and behavioral intentions.This study will provide information on factors that influence positive emotion and behavioral intentions in traditionalwet markets.The study population is limited to faculty member and staffs of a university in Jakarta. It was not represent the whole population of traditional market customers. Little research has been done on understanding factors that influence positive emotion on traditional markets in the era of modern retailing.

Keywords: traditional market, food quality, customer loyalty, relational benefit

JEL Classification codes: M31

INTRODUCTION

As one of the main channels in the food industry in Indonesia, traditional wet market also known as pasar has been facing tight competition and serious challenges from foreign retailers specifically super markets and convenience stores. However these traditional markets are still become one of the most popular retail formats for many Asian families especially when they purchase daily convenience products such as foods and basic household goods (Davis, 2013; Dholakia et al., 2012). Modern retail's share of grocery sales is expected to grow from 32 percent in 2013 to 43 percent by 2018. Leading the way are convenience stores and minimarkets, whose sales have tripled over the past five years (www.atkearney.com, 2014).

A study conducted by Huang et al (2015) in Taiwan, found that food quality and relational benefit positively affect consumers' satisfaction. Social factors were the key forces by which Taiwanese consumers build their relationships with sellers at wet markets, and the opportunity to establish the interpersonal interactions is obviously become the attractiveness of that markets.Other findings showed that ambience and employee service were also influence satisfaction to shop in the wet markets.

The objective of this study is to explore factors that influence consumers' positive emotion and behavioral intention s in Indonesia wet market settings.

1 LITERATURE REVIEW

Several factors predicted could influence positive emotion and behavioral intentions such as food quality, physical environments, social environments, relational benefit and price fairness depicted in Figure 1.

Figure 1 Conceptual framework
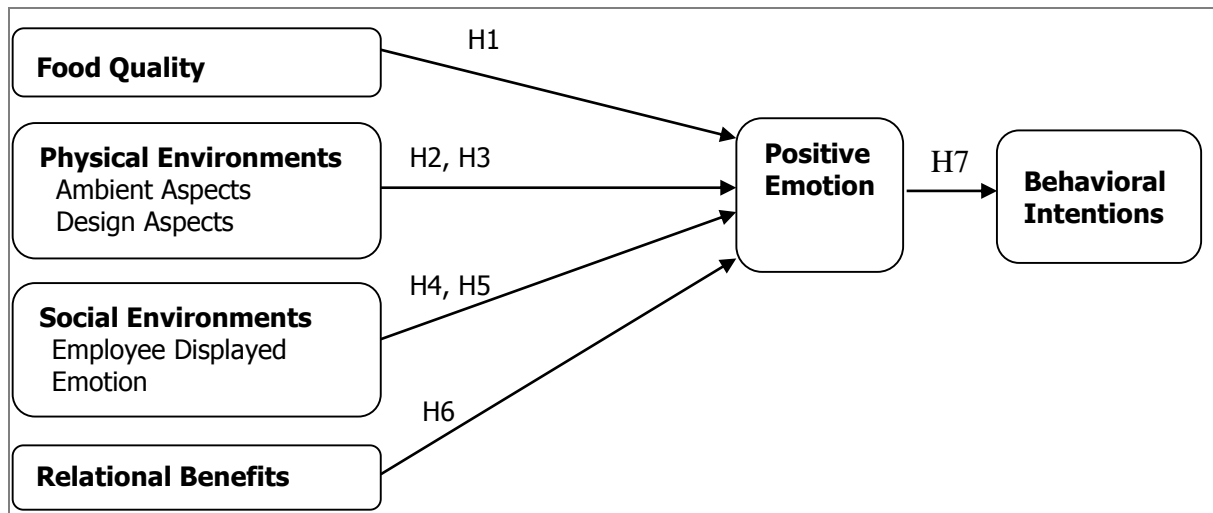
1.1 Food Quality, Positive Emotion

Food quality is a customer's perception regarding the food quality offered in traditional wet markets. Food quality has been generally accepted as the main factor influencing customer satisfaction (Liu and Jang, 2009).Food quality influences consumer evaluations of a shopping experience therefore affect satisfaction (Davis, 2012). Research found that fresh fruits and vegetables and prepared foods are the main advantages of wet markets compared to western style retailers in Asian countries (Goldman et al., 2002; Gorton et al., 2011).Sulek and Hensley (2004) found that food quality was the most important factor that influence customer satisfaction and the only factor influencing behavioral intentions. Huang et al. (2015) found that food quality positively affect customers satisfaction in wet markets in Taiwan.Jang and Namkung (2009) found a positive relationship between products quality and positive emotions in restaurant setting. Hence the following hypotheses wereproposed:

H1:   Food Quality influences Positive Emotion

1.2 Physical Environments, Positive Emotion and Behavioral Intentions

Physical environments play an important role in service delivery because it can foster emotional reactions, while enhancing customer perception and retention (Tsai and Huang, 2002; Bitner, 1992; Baker et al, 2002). Research found that customers respond emotionally to various physical environments (e.g. Bitner, 1992; Wakefield and Baker, 1998), included design and ambient factors (Baker et al, 1994; Sheng et al, 2011). Kim and Moon (2009) found that customers' perceptions of the physical servicescape in a theme restaurant positively affect customers' pleasure feeling. Another study conducted by Slatten et al (2009) found that design factors and interaction or social factors had a positive effect on customers' feeling of joy. Previous studies establish the relationship of atmospherics and behavioral intentions (Jang & Namkung, 2009, Kincaid et al., 2010) based on review of the literature, the following hypotheses were proposed:

H2:   Ambient Factors will influence Positive Emotion

H3:   Design Factors will have a positive effect on Positive Emotion

1.3 Social Environment, Positive Emotion and Behavioral Intentions

Lin, J. C et al.(2011) found that both social and physical environments have positive effect on customer emotion and satisfaction that lead to behavioral intentions. Service employees' expression of emotion can result in customers' emotional state (Pugh, 2001;Tsai and Huang,2002).Several studies have shown the importance of friendly employee's in improving service outcomes (Hurley, 1998., Bitner et al, 1990., Sheng et al., 2011., Henig Thurau et al., 2006).

In many service contexts, fellow customers are present in the service environment and can influence the nature of the service outcome processes (Zeithaml et al., 2013). Lin, J. C et al (2011) found that customer climate i.e. customer's perception of the environment shared by other customers receiving the service influenced customer positive emotion. Furthermore, Moore et al (2005) indicated that interaction among customers within service environment influences emotion. The following hypotheses were proposed:

H4:   Employee Displayed Emotion influences Positive Emotion

H5:   Customer Climate influences Positive Emotion

1.4 Relational Benefits, Positive Emotion and Behavioral Intentions

Relational benefits include confidence benefits, social benefits, and special treatment benefits (Gwinner et al., 1998).Confidence benefits refer to perceptions of reduced anxiety and comfort in knowing what to expect in the service encounter; social benefits, related to the emotional part of the relationship and are characterized by personal recognition of customers by employees, the customer's own familiarity with employees, and the creation of friendships between customers and employees; and special treatment

Benefits, which take the form of relational consumers receiving price breaks, faster service, or individualized additional services (Hennig-Thurau et al., 2002).

A review of literature has revealed that relational benefits positively influence customer satisfaction (e.g. Mittal et al., 1999; Hennig-Thurau et al., 2002; Huang et al., 2014; Brady et al, 2012).

Most satisfaction studies have focused mainly on cognitive aspect, while seemingly important affective aspect has been largely ignored (Stauss and Neuhaus (1997).

Researchers comment that it is inappropriate to ignore the emotional aspect of satisfaction (Liljander and Strandvik, 1997; Stauss and Neuhaus, 1997; Wirtz and Bateson, 1999).

Shopping has been attributed as a joyful retail experience (Jin and Sternquist, 2004). Enjoyment has been found to be a source of motivation in retail shopping and characterized as personal in nature (Ballantine et al., 2012).Therefore we propose hypothesis:

H6:   Relational Benefits influence positive Emotion

1.5 Positive Emotion and Behavioral Intentions

Previous studies have shown a relationship of customer positive emotions and behavioral intentions (Lin, J. C et al., 2011; Jang and Namkung, 2009; Kincaid et al., 2010).

Oliver et al (1997) found that positive emotion led to higher levels of customer satisfaction and increase repurchase intentions. Liljander and Strandvik (1997; Stauss and Neuhaus, 1997) found that there was a positive relationship between emotion and loyalty behavior. Yu and

Dean (2001) found that affective component of satisfaction serves as a better predictor of customer loyalty. A recent study (Prayag et al., 2014) found that positive emotion has a direct effect on behavioral intentions. Thus we propose:

H7:   Positive Emotion Influence Behavioral intentions

2 METHODOLOGY

Staffs of private university in Jakarta participated in this study. A purposive sample was used in term of regular shopping in wet markets. From. The questioner was distributed among 200 respondents in Jakarta. These respondents are selected based on their understanding of green purchase. Before distributing the questioner the object of study and questions were explain to the respondents. From 200 responses collected, 180 valid responses were used for further analysis.

Deep interview has been performed to 10 respondents. We conducted interviews with shoppers from 30-50 years old. Each interview was audio-taped and lasted between 30-45 minutes. The interviews were conducted at respondents' offices.

Measures

a   Food Quality

Four items, were adapted from Huang et al. (2015):

1) The foods sold in this market is fresher than in supermarkets.
2) The food sold in this market is safer than in supermarkets.
3) The food sold in this market better meets my demands than that sold in super markets.

b   Physical Environments

It consists of 2 dimensions, i.e. ambient and design.

Ambient

Two items were adapted from Huang et al. (2015):

1) This market is full of shoppers.
2) This market is very exciting.

Design

Two items were adapted from Huang et al.(2015):

1) The layout at this store makes it easy for customers to move around.
2) Materials associated with this store's service are visually appealing.

c   Social environment (Employee displayed emotion and customer climate)

Employee displayed emotion

1) Greeting
2) Speaking in a rhythmic vocal tone
3) Smiling

4) Making eye contact
5) Thanking
6) Talking actively

Customer climate

Eight items were adapted from Lin et al. (2011) and Huang et al. (2014):

1) I find that this company's other customers leave me with a good impression of itsservice.
2) This company's other customers do not affect its ability to provide me with goodservice.
3) This company understands that other customers affect my perception of its service.

d   Relational Benefits

It was measured using 6 items, adapted from Hennig-Thurau (2002):

1) I am recognized by the sellers.
2) I enjoy certain social aspects of the relationship.
3) I get faster service than most customers.
4) I get better prices than most customers.
5) I know what to expect when I go to this market.
6) This company's employees are perfectly honest.
7) This company's employees can be trusted completely.

e   Behavioral Intentions

Four items were adapted from Lin et al. (2011):

1) I will say positive things about this company.
2) I will recommend this company to other consumers.
3) I will remain loyal to this company.
4) I will spend more with this company.

3 RESULTS AND DISCUSSION

3.1 Results of Quantitative Analysis

Following the two-step approach, a measurement model was first estimated using a confirmatory factor analysis (CFA).Each measurement item was loaded on its prior construct. The instrument reliability was assessed using Cronbach's alpha. The alpha values range from 0.69-0.88 .

Convergent validity meets the requirements in this study all the items had relatively high factor loadings on the underlying construct, the values range from 0.77 to 0.89.Overall model fit for CFA was asses using the Chi-square test and goodness of-fit-indices. Others indices of fit were assessed i.e. Comparative Fit Index (CFI),the Normed Fit Index (NFI), Root Mean Square Error (RMSEA) indicated the measurement model fit the data well (CFI=0.960), NFI=0.911, RMSEA=0.05).

As the second step, the proposed structural model was assessed, on the basis of CFI=0.98, NFI=0.93, RMSEA=0.03) indicated that the model fit was acceptable. Results of estimated structural coefficients were presented in Table1.

All predictor variables were found to be significantly and positively influenced positive emotion. H1 was supported that food quality influenced positive emotion (β=0.48, t=5.87, p-value<0.05). The results of the study was consistent with the study of Huang et al. (2015) who found that food quality positively affect customers satisfaction in wet markets. It was also consistent with the study of Jang and Namkung (2009) who found a positive relationship between products quality and positive emotions in restaurant setting.

Tab. 1 Structural model results

Hypothesized relationship	Standardized coefficient	t-value	Results
H1 Food Quality ⟶ Positive emotion	0.48	5.87*	supported
H2 Ambience ⟶ Positive Emotion	0.37	5.88**	Supported
H3 Design ⟶ Positive Emotion	0.22	3.72**	Supported
H4 Employee DisplayEmotion ⟶ Positive Emotion	0.37	4.68**	Supported
H5 Customer Climate ⟶ Positive Emotion	0.33	4.76*	Supported
H6 Relational Benefit Behavioral ⟶ Positive Emotion	0.45	4.21*	Supported
H7 Positive Emotion ⟶ Behavioral Intentions	0,52	5.03*	Supported

*p<.05   **p<.01

Ambience and design were also influenced positive emotion (β=0.37, t=5.85; β=0.22, t=3.72), therebyconfirming H2 and H3.

The results of this study was consistent with the study of previous study who found that customers respond emotionally to various physical environments (e.g. Bitner, 1992; Wakefield and Baker, 1998), included design and ambient factors (Baker et al, 1994; Sheng et al, 2011). It was also consistent with the study of Kim and Moon (2009) who found that customers' perceptions of the physical servicescape in a theme restaurant positively affect customers' pleasure feeling. This study also supports the study conducted by Slatten et al (2009) who found that design factors and interaction or social factors had a positive effect on customers' feeling of joy, the study of Jang & Namkung, 2009, Kincaid et al., 2010 who found the relationship of atmospherics and behavioral intentions.

Social environments which consist of employee displayed emotion and customer climate were positively related to positive emotion (β=0.37, t=4.68; β=0.33, t=4.76), supporting H4 and H5.

The study was consistent with findings of Lin, J. C et al.(2011) who found that both social and physical environments have positive effect on customer emotion and satisfaction that lead to behavioral intentions. Several studies have also support the result of this study who found the importance of friendly employee's in improving service outcomes (Hurley, 1998., Bitner et al, 1990., Sheng et al., 2011., Henig Thurau et al., 2006).

The results of this study were also consistent with the findings of Lin, J. C et al (2011) who found that customer climate i.e. customer's perception of the environment shared by other customers receiving the service influenced customer positive emotion.

Relational benefits was also positively related to positive emotions (β=0.45, t=4.21), supporting H6. Results also supported H7 where positive emotion had a positive relationship with behavioral intentions (β=0.52, t=5.03).

The results of the study were consistent with findings of Oliver et al (1997) who found that positive emotion led to higher levels of customer satisfaction and increase repurchase intentions.This study was also consistent with the study of Liljander and Strandvik (1997), Stauss and Neuhaus, 1997) who found that there was a positive relationship between emotion and loyalty behavior. It was also consistent with the study of Prayag et al (2014) who found that positive emotion has a direct effect on behavioral intentions.

3.2 Results of Interviews

All of respondents told us that main reason they are loyal to shop at the wet markets was because of the relational benefits, cheaper prices and freshness of the products. Products that usually they buy are food items such as chicken, egg, meat, vegetables and some local fruits,as one interviewee commented:

I am happy to shop some food items in wet market regularly. Besides the foods were fresh, the sellers are really recognized me, they now my name and sometimes I got special treatments such as price breaks….. I have developed a good relationship with the sellers, when I shop, they greet cheerfully with warm welcome…. Every week we shop at the wet market close to my house…..

I have no problem with the physical environments of the market except when it is raining….the only problem for me that it was hard to find rest rooms…..

CONCLUSION

The present study validated a model that predicts the antecedents and consequents of positive emotion in wet market settings. Research found that food quality is important for customers who shop I wet markets. This finding supports finding of Huang et al., (2014) in Taiwan that food quality had a positive relationship with customer satisfaction. This is also in line with the study of Prayag et al (2014) that food quality had a strong direct effect to positive emotion. Freshness of food has been the competitive advantage of wet markets (Goldman et al., 1999). This finding was also supported by interviews conducted to shoppers.

This study was also found that physical environments specifically ambient factor was related to positive emotion, supporting previous studies that customers experience more positive emotion when environmental stimuli are perceived as more attractive (Yoo et al., 1998, Sherman., 1997). Findings indicate that design factor was also related to positive emotion but the contribution was not strong. It supports findings of Huang et al (2014) that design factor is not as important as more modern food retailers such as supermarket. In terms of social environments, current results showed that employee displayed emotion and customer climate were positively related to positive emotion, supporting past research (Sheng et al., 2011).

Results was also found that relational benefits was related to positive emotion. This is in line with findings of Huang et al (2014) that social benefits were the key reasons why Taiwanese consumers go to traditional markets. They feel that they are comfortable with sellers who recognize them and have been establishing long term friendship. Our interviews with shoppers supported these findings.

Findings showed that positive emotion had a positive relationship with behavioral intentions i.e. repatronage intention and word of mouth recommendations. These findings supported

previous studies (Sheng et al., 2011; Prayag 2014; Jang and Namkung, 2009). This finding was also supported by interviews to shoppers, indicating that customers experiencing more positive emotion during a service encounter are more likely to visit and spreading positive word of mouth.

This research provides insights for traditional markets managers as well as food retailers. Our results suggest that food quality and relational benefits were the major factors influencing customer positive emotion that lead to behavioral intentions. Food retailers and wet market managers should focus on these factors.

There are several limitations of this study. First, the respondents in this study were only staffs of a private university in Jakarta. Since the consumers are fragmented into several segments, future research is recommended to consider demographics aspect of respondents.

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